Working Draft of AICPA Accounting and Valuation Guide

Business Combinations

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Prepared by the Business Combinations Task Force

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Preface

About This AICPA Accounting and Valuation Guide

This AICPA Accounting and Valuation Guide has been developed by the AICPA Business Combinations Task Force (task force) and AICPA staff. This guide provides guidance and illustrations for preparers of financial statements, independent auditors, and *valuation specialists*[1, 2] regarding the accounting and valuation considerations for *business combination* transactions.[3] This guide also addresses certain disclosure considerations but it does not discuss all the disclosure requirements related to business combinations. The valuation guidance in this guide is focused on measuring *fair value* for financial reporting purposes.

The financial accounting and reporting guidance contained in this guide has been reviewed and approved by the affirmative vote of at least two-thirds of the members of the Financial Reporting Executive Committee (FinREC), which is the designated senior committee of the AICPA authorized to speak for the AICPA in the areas of financial accounting and reporting. Conforming changes made to the financial accounting and reporting guidance contained in this guide will be approved by the FinREC chair (or the FinREC chair's designee). Updates made to the financial accounting and reporting guidance in this guide exceeding that of conforming changes will be approved by the affirmative vote of at least two-thirds of the members of FinREC.

This guide does the following:

- Identifies certain requirements set forth in *FASB Accounting Standards Codification*® (ASC).

- Describes FinREC's understanding of prevalent or sole practice concerning certain issues. In addition, this guide may indicate that FinREC expresses a preference for the prevalent or sole practice, or it may indicate that FinREC

[1] Words or terms defined in the glossary are set in italicized type the first time they appear in this guide.

[2] Although this guide uses the term *valuation specialist*, VS section 100, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset*, which is part of AICPA *Professional Standards*, defines a member who performs valuation services as a *valuation analyst*. Furthermore, the Mandatory Performance Framework (MPF) and Application of the MPF (collectively referred to as *MPF documents*) that were jointly developed by the AICPA, the Royal Institution of Chartered Surveyors (RICS), and the American Society of Appraisers (ASA), in conjunction with the Certified in Entity and Intangible Valuations (CEIV) credential, define an individual who conducts valuation services for financial reporting purposes as a *valuation professional*. The term *valuation specialist*, as used in this guide, is synonymous with the term *valuation analyst*, as used in AICPA Professional Standards, and the term *valuation professional*, as used in MPF documents.

When referring to the *valuation specialist* within this guide, it is generally presumed that the valuation specialist is an external party. However, if individuals within the entity possess the abilities, skills, and experience to perform valuations, they can also serve in the capacity of a valuation specialist.

[3] This guide does not address transactions or other events in which a not-for-profit entity (NFP) that is the reporting entity combines with one or more other NFPs, businesses, or nonprofit activities in a transaction that meets the definition of a merger of not-for-profit entities or an acquisition by a not-for-profit entity. See FASB ASC 958-805 for the guidance on combinations involving NFPs.

expresses a preference for another practice that is not the prevalent or sole practice; alternatively, FinREC may express no view on the matter.

- Identifies certain other, but not necessarily all, practices concerning certain accounting issues without expressing FinREC's views on them.

- Provides guidance that has been supported by FinREC on the accounting, reporting, or disclosure treatment of transactions or events that are not set forth in FASB ASC.

Accounting guidance for nongovernmental entities included in this AICPA Accounting and Valuation Guide is a source of nonauthoritative accounting guidance. FASB ASC is the authoritative source of U.S. accounting and reporting standards for nongovernmental entities, in addition to guidance issued by the SEC. AICPA members should be prepared to justify departures from U.S. generally accepted accounting principles (GAAP), as discussed in the "Accounting Principles Rule" (ET sec. 1.320.001 and 2.320.001).[4]

This guide is considered to be *technical literature* for purposes of the Mandatory Performance Framework (MPF) and Application of the MPF (collectively referred to as *MPF documents*), that were developed in conjunction with the Certified in Entity and Intangible Valuations™ (CEIV™) credential.[5] In addition, AICPA members who perform engagements to estimate value that culminate in the expression of a conclusion of value or a calculated value are subject to the requirements of VS section 100, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset*, which is part of AICPA *Professional Standards*.

This guide does not include auditing guidance;[6] however, auditors may use it to obtain an understanding of the accounting requirements and the valuation process applicable to business combinations.

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[4] All ET sections can be found in AICPA *Professional Standards*.

[5] Additional information about the CEIV credential and MPF documents is available at www.aicpa.org/membership/join/credentials.html?tab-1=5.

[6] AU-C section 540, *Auditing Accounting Estimates and Related Disclosures*, in AICPA *Professional Standards* addresses the auditor's responsibilities relating to accounting estimates, including fair value accounting estimates and related disclosures, in an audit of financial statements.

Auditors may also find it helpful to refer to the AICPA Audit Guide *Special Considerations in Auditing Financial Instruments*, which, among other things, addresses the auditor's responsibilities relating to auditing accounting estimates, including fair value accounting estimates, and related disclosures.

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Introduction

Background

.01 Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 805, *Business Combinations*, provides guidance on the accounting and reporting for transactions that represent business combinations to be accounted for under the acquisition method. FASB ASC 805-20-25-1 requires that at the *acquisition date*, the *acquirer* "recognize, separately from *goodwill*, the *identifiable* assets acquired, the liabilities assumed, and any *noncontrolling interest* in the *acquiree*." FASB ASC 820, *Fair Value Measurement*, defines *fair value* and establishes a framework for measuring fair value for financial reporting purposes.

.02 This guide provides nonauthoritative accounting and valuation guidance for business combination transactions focusing on initial accounting and valuation considerations. This guide addresses such issues as identifying business combination transactions (chapter 2), identifying the acquirer (chapter 3), determining the acquisition date (chapter 4), measuring the consideration transferred (chapter 5), recognizing and measuring the identifiable assets acquired and liabilities assumed, and any noncontrolling interests in the acquiree (chapter 6), recognizing and measuring goodwill or a gain from a *bargain purchase* (chapter 7) and other accounting topics (chapter 8). It also discusses certain FASB ASC 820 considerations that are relevant to valuations in a business combination (chapter 9); provides guidance for assessing *prospective financial information*, *discount rate* and *transaction operating value* of the acquiree (chapter 10); addresses valuation approaches and methods (chapter 12) as well as their application to a variety of assets acquired and liabilities assumed (chapter 13). This guide also discusses the valuation method selection process for acquired *intangible assets* and addresses why certain methods, particularly the inputs to those methods, are appropriate given the circumstances (chapter 11). This guide also includes a number of illustrative examples demonstrating, among other things, the *business enterprise value* and *internal rate of return* analyses, the valuation method selection process, the application of valuation methods most commonly used in practice to value a particular asset or liability.

.03 Measuring fair value requires a specialized skill either within the entity or by using an external valuation specialist. Regardless of whether fair value measurements are developed by management or a third party, management is responsible for the fair value measurements that are used to prepare the financial statements and for underlying assumptions used in developing these fair value measurements. Auditors are expected to understand how the valuation techniques used for measuring fair value comply with the requirements of FASB ASC 820, assess reasonableness of the inputs, assumptions and valuations, and evaluate adequateness of the related disclosures. This guide will help preparers, auditors, and valuation specialists understand the requirements of FASB ASC 805 and FASB ASC 820.

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Income Taxes

.04 This guide was developed in the context of U.S. GAAP; however, that does not infer that income tax rates applied in the valuation analyses are limited to U.S. tax law. The acquiree may have operations in a variety of tax jurisdictions and due care should be exercised to properly align the acquiree's taxable income with the appropriate tax jurisdiction. The appropriate understanding and implementation of the tax principles is a key element of accounting and valuation in any business combination.

.05 In general, the task force believes that the appropriate tax rate would generally represent statutory rates adjusted for *market participant* assumptions that are observable and applicable to the acquiree or the asset being valued. When choosing the appropriate tax rate, it is important to ensure that it does not reflect specific tax circumstances of the acquiree, acquirer, or both, which may occur by consideration of net operating loss carryforwards, tax penalties, special payments, and so forth.[1]

.06 Although the examples are intended to be agnostic as to a specific tax jurisdiction, certain specific elements of U.S. tax have been incorporated in the examples for demonstration purposes only. No other country-specific tax components have been considered in the examples. For purposes of this guide, an assumed tax rate of 25% has been applied in all relevant examples.

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[1] Such assets and liabilities may require separate recognition (assuming they are part of the business combination transaction) rather than impacting the market participant tax rate.

Chapter 1

Business Combinations – Accounting Overview

Introduction

1.01 Financial Accounting Standards Board (*FASB*) *Accounting Standards Codification* (ASC) 805, *Business Combinations*, provides guidance on the accounting and reporting for business combinations to be accounted for under the acquisition method. This chapter provides an overview of the concepts of FASB ASC 805 and is intended to provide background for the more detailed discussions in the chapters that follow. The chapters that follow provide guidance and observations on the application of the accounting and reporting for transactions that represent business combinations under FASB ASC 805 and do not address accounting and reporting for formations of joint ventures, asset acquisitions or common control transactions.

1.02 FASB ASC 805 reflects the overall principle that when an entity (the acquirer) obtains control of a business (the acquiree), the acquirer generally recognizes and measures the assets acquired and liabilities assumed at their fair values as of the date that control is obtained, thereby establishing a new accounting basis for the acquiree. FASB ASC 805 refers to this as *the acquisition method*.

Identifying Business Combination Transactions

1.03 A business combination occurs when an entity obtains control of a business. Obtaining control typically occurs when an entity purchases the net assets or a majority of the voting equity interests of another entity. However, a business combination could also occur without the transfer of consideration from the buyer to the seller (including, but not limited to, the acquiree repurchases a sufficient number of its own shares for an existing investor to obtain control, acquisition by contract alone, or a change in the primary beneficiary of a variable interest entity). The accounting for a change in control would be the same regardless of how the control is obtained.

Definition of a Business

1.04 For a transaction to be a business combination, the acquired set should meet the definition of a business. A business is an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs, or other economic benefits directly to investors or other owners, members, or participants. To be considered a business, an integrated set must meet certain requirements that involve consideration of the initial screen for assessing when a set is not a business and the evaluation of whether an input and a substantive process exist. A business consists of inputs and a substantive process applied to those inputs that have the ability to contribute to the creation of outputs. Although businesses usually have outputs, outputs are not required for an integrated set to qualify as a

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business. For the purpose of determining whether a transaction is a business combination, it is irrelevant whether the acquirer meets the definition of a business.

Identifying the Acquirer

1.05 The acquirer is the entity which obtains control of the acquiree. In some circumstances the determination of the acquirer will require the exercise of professional judgment based on facts and circumstances.

Determining the Acquisition Date

1.06 The date the acquirer obtains control of the acquired business is the acquisition date. This date is generally the date when the assets are acquired and the liabilities are assumed, which typically occurs on the closing date. However, in some instances the acquirer may obtain control either earlier or later than the closing date. When determining the acquisition date, all pertinent facts and circumstances should be considered. The acquisition date is the date used to measure and recognize a business combination.

Measuring the Consideration Transferred

1.07 Consideration transferred by the acquirer to the former owners of the acquiree in a business combination should be measured at fair value and recognized as of the acquisition date. However, any portion of the acquirer's share-based payment awards issued in exchange for awards held by the acquiree's grantees that is included in consideration transferred should be measured according to the fair-value-based measurement principles of FASB ASC 718, *Compensation–Stock Compensation*, rather than at fair value. Consideration transferred includes assets transferred, liabilities incurred by the acquirer to former owners of the acquiree (including *contingent consideration* obligations), and equity interests issued by the acquirer to former owners of the acquiree in exchange for the business. Consideration transferred can take many forms, including cash, other assets such as tangible and intangible assets, a business or a subsidiary of the acquirer, common or preferred equity instruments, options, warrants, contingent consideration, or other promised future payments. FASB ASC 805 also addresses the accounting for contingent consideration after the acquisition date.

1.08 The acquirer and the acquiree may have entered into other arrangements before negotiations for the business combination began, or they may enter into an arrangement during the negotiations that would not form part of consideration transferred. The FASB ASC 805 principle is based on the concept of who receives the primary benefits from the transaction. Generally, any portion of the transaction price that is not for the benefit of the acquiree is unlikely to be consideration transferred and should be accounted for separately from the business combination.

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Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree

1.09 As of the acquisition date, the acquirer recognizes separately from goodwill the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at their acquisition-date fair values. There are limited exceptions to the acquisition-date fair value measurement and recognition principle. Some of the most significant exceptions are as follows:

- Preacquisition contingencies
- Income taxes
- Employee benefits
- Indemnification assets
- Leases (if accounted for under FASB ASC 842, *Leases*)
- Reacquired rights
- Share based payment awards

Recognize and Measure Goodwill or a Gain from a Bargain Purchase

1.10 The acquirer measures and recognizes either goodwill or a gain on a bargain purchase as a residual amount based on the difference between (a) and (b):

(a) The consideration transferred measured at the acquisition-date fair value, including the fair value of any noncontrolling interests in the acquiree, and for a business combination achieved in stages, the acquisition-date fair value of the acquirer's previously held equity interests in the acquiree.

(b) The net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed generally measured at their acquisition-date fair values.

1.11 To the extent (a) exceeds (b), goodwill will be recorded by the acquirer. Goodwill previously recorded by an acquiree is not recorded as a separate asset by the acquirer.

1.12 To the extent (b) exceeds (a), a bargain purchase gain will be recorded by the acquirer. Before recognizing a bargain purchase gain the acquirer should reassess whether all of the elements of the business combination have been properly identified, recognized, and measured. Bargain purchase gains occur infrequently because an owner of a business generally will not knowingly sell assets or businesses at prices below their fair values. When a business combination transaction results in such a gain, the acquirer recognizes the bargain purchase gain in earnings.

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Other Business Combination Topics

Determining What is Part of the Business Combination Transaction

1.13 An acquirer is required to identify and separate any amounts that are not part of what the acquirer and the acquiree exchanged in the business combination. A transaction entered into by or on behalf of the acquirer, or primarily for the benefit of the acquirer or the combined entity, rather than primarily for the benefit of the acquiree (or its former owners), is likely to be a separate transaction. Separate transactions should be accounted for apart from the business combination in accordance with other relevant guidance.

1.14 The following are examples of separate transactions that are not to be included in applying the acquisition method:

- payments that effectively settle preexisting relationships between the acquirer and the acquiree
- payments to compensate employees or former owners of the acquiree for future services
- acquirer share-based payments exchanged for acquiree awards that are determined to not be part of the consideration transferred
- costs incurred in connection with a business combination including transaction costs.

Business Combination Achieved in Stages

1.15 An acquirer sometimes obtains control of an acquiree in which it held a noncontrolling equity interest immediately before obtaining control, which is referred to as a *business combination achieved in stages* in FASB ASC 805. The acquirer in this type of transaction will remeasure its previously held equity investment at fair value as of the acquisition date. Any remeasurement gains or losses are recognized in earnings. After control is achieved, any further acquisitions of noncontrolling interests in the acquiree by the acquirer are accounted for as transactions among shareholders which are outside the business combination accounting guidance and, as such, are not discussed in this guide.

Measurement Period

1.16 The measurement period is the period after the acquisition date (not to exceed one year) during which the acquirer adjusts the provisional amounts recognized for a business combination to reflect new information obtained about facts and circumstances that existed as of the acquisition date. If measurement period adjustments are identified, the acquirer is required to recognize the adjustments as part of its acquisition accounting in the period the adjustments are determined.

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Private Company Considerations

1.17 A private company (a company that does not meet the definition of *a public business entity* as defined in the FASB ASC Master Glossary) may elect an accounting alternative to include in goodwill certain intangible assets related to customer relationships and noncompetition agreements, as opposed to being recognized as separate intangible assets in the business combination.

1.18 A private entity that elects the accounting alternative for intangible assets must adopt the private company accounting alternative to amortize goodwill in FASB ASC 350-20.[1] However, an entity that elects the accounting alternative to amortize goodwill in FASB ASC 350-20 is not required to adopt the accounting alternative for intangible assets.

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[1] To alleviate the cost and complexities associated with the goodwill impairment test, the private company accounting alternative for goodwill under FASB ASC 350-20 allows private companies the option (1) to amortize goodwill on a straight-line basis over a useful life of 10 years or less than 10 years if the entity is able to demonstrate that a shorter useful life is more appropriate, (2) to test goodwill for impairment only when a triggering event occurs instead of having to perform the test at least annually, and (3) to test goodwill for impairment at either the entity level or the reporting-unit level.

Chapter 2

Identifying Business Combination Transactions

Introduction

2.01 A business combination occurs when an entity obtains control of a business. Obtaining control typically occurs when an entity purchases the net assets or a majority of the voting equity interests of another entity. The acquirer will need to determine whether the acquired set meets the definition of a business or whether it is a set of assets.

2.02 A business combination could occur without the transfer of consideration (for example, the acquiree repurchases a sufficient number of its own shares for an existing investor to obtain control, acquisition by contract alone, or a change in the primary beneficiary of a variable interest entity). An acquirer may also purchase a business or businesses through a series of two or more stages. Depending on the facts and circumstances of each transaction, these transactions may need to be combined.

Definition of a Business

2.03 Determining whether the acquired set is a business or a set of assets is important given the different accounting for the acquisition of a business versus a group of assets. Some of the key differences in the accounting for business combinations and asset acquisitions relate to:

	Treatment in a	
	Business Combination	*Asset Acquisition**
Initial measurement	Fair value with limited exceptions	Allocation of cost (including transaction costs) on a relative fair value basis
Goodwill	May be recognized	Not recognized
Bargain purchase gain	May be recognized	Generally not recognized
Transaction costs	Expensed as incurred	Direct costs are capitalized
Contingencies	Recognized as an asset or a liability at fair value at the acquisition date to the extent determinable. If fair value is not determinable, recognized if both probable and reasonably estimable, using the guidance in FASB ASC 450, *Contingencies*	Accounted for in accordance with FASB ASC 450
Contingent consideration	Recognized at its acquisition-date fair value as part of the consideration transferred	Accounted for in accordance with applicable GAAP

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In-process research and development (IPR&D) assets	Recognized as an indefinite-lived intangible asset at fair value	Expensed unless the IPR&D asset has an alternative future use
Assembled workforce	Not recognized as a separate intangible asset but rather subsumed into goodwill	Recognized as an asset if the asset recognition criteria in FASB Concepts Statement No. 5, *Recognition and Measurement in Financial Statements of Business Enterprises*, are met.

* Note that the discussion in this table does not apply to an acquisition of assets and liabilities of a variable interest entity (VIE) when the VIE does not constitute a business. Guidance for such a VIE is provided in FASB ASC 810-10-30.

2.04 The evaluation of whether an acquired set of assets and activities qualifies as a business also affects many other areas of accounting, including disposals, goodwill, and consolidation (for example, the disposal of a business will include the allocation of goodwill whereas the disposal of an asset will not).

Key Aspects of the Model

2.05 FASB ASC 805-10-55 provides a model to determine if the acquired set meets the definition of a business. Specifically, it:

- Provides an "initial screen" for assessing when a set is not a business. The initial screen requires a determination that when substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets, the set is not a business. See the "Applying the Initial Screen" section of this chapter for a detailed discussion.

- Specifies that if the initial screen's threshold is not met, further assessment is necessary to determine whether the set includes an input and a substantive process that together significantly contribute to the ability to create output.[1] FASB ASC 805-10-55 provides a framework to assist entities in the evaluation of whether both an input and a substantive process are present. See the "Framework for Determining

[1] The definition of the term "output" used in FASB ASC 805-10-55 is generally consistent with the description of outputs in FASB ASC 606, *Revenue from Contracts with Customers.* However, as indicated in paragraph BC59 in the "Background Information and Basis for Conclusions" section of ASU No. 2017-01, *Business Combinations (Topic 805) - Clarifying the Definition of a Business*:

> the Board noted that not all entities have revenues within the scope of Topic 606 and, therefore, decided to incorporate other types of revenues in the definition. For example, the Board decided to include the reference to investment income in the definition of outputs in the amendments in this Update to ensure that the purchase of an investment company can still qualify as a business combination.

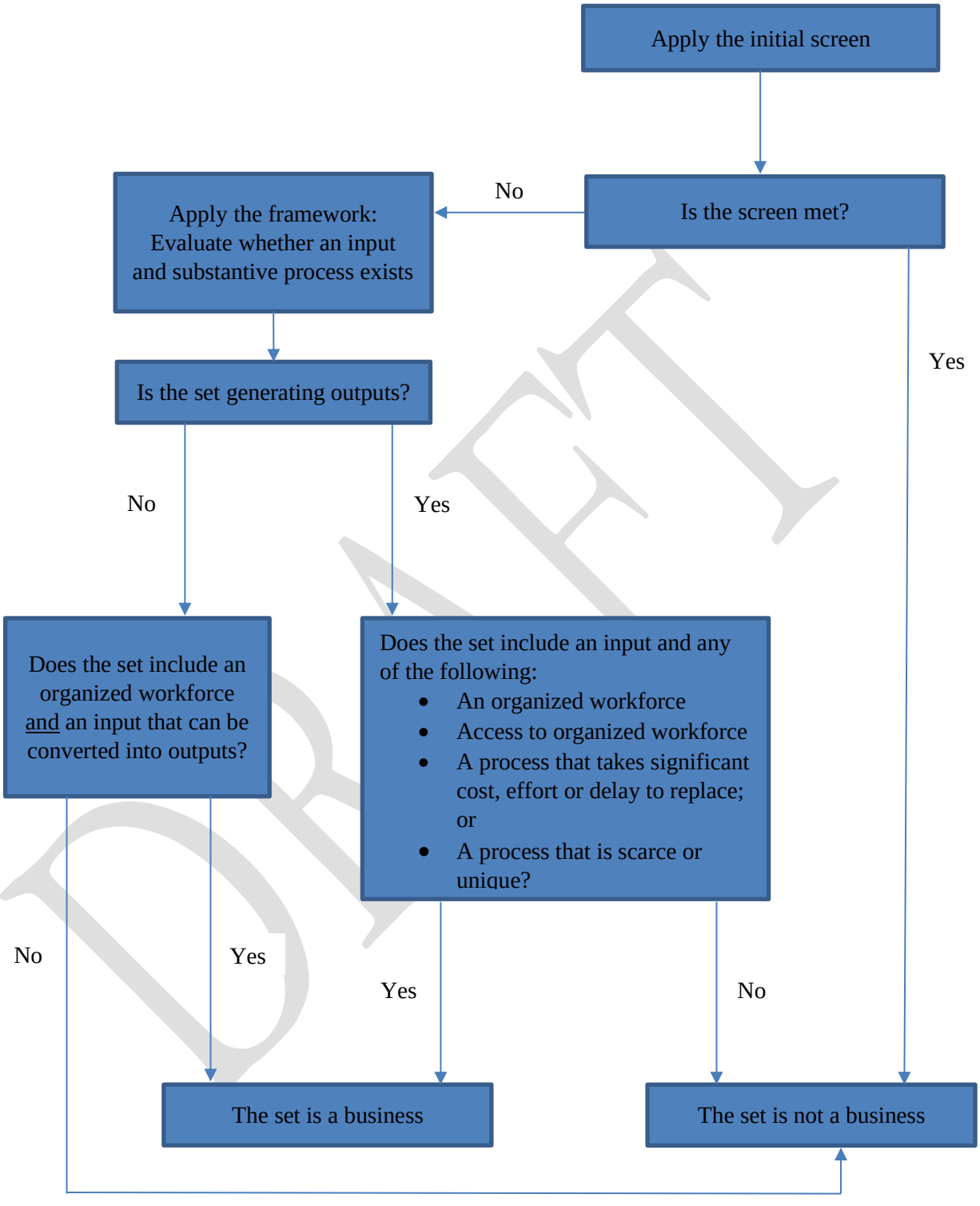
This and other paragraphs from the "Background Information and Basis for Conclusions" section of ASU No. 2017-01 were not codified in FASB ASC; however, the Business Combinations Task Force (task force) believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

Whether an Input and a Substantive Process Exist" section of this chapter for a detailed discussion of the framework.

- Specifies that the evaluation of whether a set is a business should be based on whether the set is capable of being conducted and managed as a business by a market participant. However, the model focuses on the substance of what was acquired and does not require the evaluation of whether a market participant could replace the missing elements.

2.06 The following summary flowchart illustrates the application of the initial screen and the framework:

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2.07 FASB ASC 805-10-55 includes examples that illustrate how an entity should apply the guidance in determining whether a set is a business. See the "Summary of Illustrations of

the Definition of a Business Included in FASB ASC 805-10-55" section of this chapter for a brief summary of these examples.

Elements of a Business

2.08 According to FASB ASC 805-10-55-3A

> A business is an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs, or other economic benefits directly to investors or other owners, members, or participants. To be considered a business, an integrated set must meet the requirements in paragraphs 805-10-55-4 through 55- 6 and 805-10-55-8 through 55-9.

2.09 FASB ASC 805-10-55-4 states that

> A business consists of inputs and processes applied to those inputs that have the ability to contribute to the creation of outputs. Although businesses usually have outputs, outputs are not required for an integrated set to qualify as a business. The three elements of a business are defined as follows:
>
> a. *Input*. Any economic resource that creates, or has the ability to contribute to the creation of, outputs when one or more processes are applied to it. Examples include long-lived assets (including intangible assets or rights to use long-lived assets), intellectual property, the ability to obtain access to necessary materials or rights, and employees.
>
> b. *Process*. Any system, standard, protocol, convention, or rule that when applied to an input or inputs, creates or has the ability to contribute to the creation of outputs. Examples include strategic management processes, operational processes, and resource management processes. These processes typically are documented, but the intellectual capacity of an organized workforce having the necessary skills and experience following rules and conventions may provide the necessary processes that are capable of being applied to inputs to create outputs. Accounting, billing, payroll, and other administrative systems typically are not processes used to create outputs.
>
> c. *Output*. The result of inputs and processes applied to those inputs that provide goods or services to customers, investment income (such as dividends or interest) or other revenues.

Inputs

2.10 Inputs generally are the assets in the acquired set and include the following:

- ❖ Inventory
- ❖ Long–lived tangible assets
  - o Real estate
  - o Machinery and equipment
- ❖ Intangible assets
  - o Intellectual property
  - o Customer lists
  - o Trade names
  - o Patents
  - o Recipes
  - o Drug formulas
- ❖ Contracts
  - o Distribution rights
  - o Mineral interests
  - o Broadcast rights
  - o Supply contracts
  - o Certain service contracts
  - o Leases of real and tangible property
- ❖ Employees

Processes

2.11 The following processes are included in FASB ASC 805-10-55-4 (b):

- Strategic management processes such as the overall plan and direction of the acquired set that contributes to the creation of outputs and obtaining customers
- Operational processes such as the fulfillment, production, development, or customer acquisition process that contribute to creating outputs
- Resource management processes such as processes involved in deploying resources, such as raw materials and employees, to produce outputs.

2.12 An entity could acquire a process even if it is not documented. While employees are an input, when they form an organized workforce, the intellectual capacity of that workforce (their knowledge, skills and experience) to perform a process is acquired even if the process is not documented. Said differently, the workforce itself is an input but the knowledge of the activities the workforce performs can be a process. In addition, a process may be automated, which does not require a workforce to operate it.

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Significantly Contribute to the Ability to Generate Outputs

2.13 According to FASB ASC 805-10-55-5

> To be capable of being conducted and managed for the purposes described in paragraph 805-10-55-3A, an integrated set of activities and assets requires two essential elements – inputs and processes applied to those inputs. A business need not include all the inputs or processes that the seller used in operating that business. However, to be considered a business, the set must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create output.

For example, a set could qualify as a business if it was a division, product or service line, geographic region, or subsidiary of another entity. As indicated in paragraph BC37 in the "Background Information and Basis for Conclusions" section of ASU No. 2017-01, *Business Combinations (Topic 805) - Clarifying the Definition of a Business*, the evaluation requires an entity to consider the substance of what was acquired regardless of whether the missing elements could be replaced by a market participant. Furthermore, paragraph BC35 of ASU No. 2017-01 provides that such processes must be important to the ability to create outputs and not ancillary.

Determining What is Part of the Acquired Set

2.14 An entity should determine what is part of the acquired set prior to applying the initial screen. While this analysis may not be straightforward and significant judgment may be required, it is important because the initial screen requires the entity to evaluate whether substantially all of the fair value of gross assets acquired is concentrated in a single asset or group of similar assets.

2.15 In some transactions, the buyer will not acquire a legal entity of the seller (for tax, legal, or other reasons, the acquirer may purchase individual assets rather than the stock of the target). In order for the buyer to acquire employees of the seller, the employees are terminated by the seller and hired by the buyer. In this case, the Business Combinations Task Force (task force) believes the employees would generally be considered part of the acquired set and the form of the transaction would not be relevant. However, all facts and circumstances would need to be considered in determining whether employees or a contract that provides access to an organized workforce are part of the acquired set. For example, when the acquirer hires a few former employees of the seller after undergoing a thorough search and interview process involving other potential employees, it may be appropriate to exclude the former employees of the seller from the acquired set.

2.16 An entity may enter into multiple transactions to acquire a group of assets or a business. Refer to the "Businesses Transferred Over Time" section of this chapter for guidance on determining whether multiple transactions should be combined for accounting purposes.

2.17 For further discussion regarding what should be accounted for as a part of the acquisition, see the "Determining What is Part of the Business Combination Transaction" section in chapter 8, "Other Accounting Topics."

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Applying the Initial Screen

2.18 FASB ASC 805-10-55-5A provides that under the initial screen, when substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or a group of similar identifiable assets, the set is not a business. If the initial screen is not met, the entity will need to apply a framework which evaluates inputs, substantive process(es), and other considerations (e.g., the presence of outputs, goodwill, etc.) to determine if the set is a business.

2.19 There could be facts and circumstances in which the initial screen could be completed solely on a qualitative basis. Paragraph BC19 of ASU No. 2017-01 states that

> The assessment could be qualitative if, for example, an entity concludes that all of the fair value will be assigned to one element of the acquisition. For example, if the acquisition includes a license for a drug candidate and an at-market contract and the entity concludes that the at-market contract has at the date of assessment little or no fair value assigned to it or the fair value of a single identifiable asset or group of similar identifiable assets is so significant that it is very clear that the threshold will be met, the entity may conclude that the threshold has been met. If there are multiple assets that the entity concludes will have more than an insignificant value assigned, the entity may be able to qualitatively conclude that there is clearly significant value in assets that are not similar and that the threshold is not met and go on to the rest of the framework. However, an entity must determine the fair value of each asset to allocate the consideration to assets recognized in both an asset acquisition and a business combination. Therefore, the Board does not expect that any quantitative analysis for acquisitions will result in incremental costs or complexity.

2.20 Entities are required to determine the fair value of assets acquired regardless of the conclusion reached in the initial screen.

2.21 The task force developed the following steps to assist with the application of the initial screen:

Step 1. Determine all identifiable assets in the set
Step 2. Combine identifiable assets that meet the conditions in FASB ASC 805-10-55-5B
Step 3. Evaluate whether assets from Step 1 and Step 2 are similar assets
Step 4. Determine the fair value of the gross assets acquired
Step 5. Perform the "substantially all" test and conclude

Step 1: Determine all identifiable assets in the set

2.22 FASB ASC 805-10-55-5B states that "[a] single identifiable asset includes any individual asset or group of assets that could be recognized and measured as a single identifiable asset in a business combination." In Step 1 of the initial screen, an entity would determine all assets in the set that would be identifiable in a business combination. As a

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result, some assets may be identified for purposes of applying the initial screen that would not be separately recognized if the set is an asset acquisition.

2.23 For example, an entity would recognize and measure an in-process research and development asset (IPR&D) in a business combination. Therefore, the IPR&D asset would be considered a single identifiable asset for purposes of applying Step 1, even though in an asset acquisition it would be expensed unless it had an alternative future use.

2.24 Significant judgment may be required to determine the unit of account in certain circumstances. For example, a single drug compound may be recognized as a single IPR&D asset or as separate IPR&D assets (see AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities,* which provides guidance and illustrations regarding the initial and subsequent accounting for, valuation of, and disclosures related to acquired IPR&D assets). If there are multiple assets recognized for a single drug compound, the entity should consider whether these assets are similar in Step 3 of the initial screen.

2.25 An assembled workforce, however, is not an *identifiable asset* that could be recognized in a business combination, even though it could be recognized in an asset acquisition. Therefore, an assembled workforce intangible asset would not be considered a single identifiable asset for purposes of applying Step 1.

Step 2: Combine identifiable assets that meet the conditions in FASB ASC 805-10-55-5B

2.26 FASB ASC 805-10-55-5B provides two conditions that require an entity to combine certain assets that would be considered separately identifiable in a business combination as a single asset for purposes of applying the initial screen. Those conditions include:

A tangible asset that is attached to and cannot be physically removed and used separately from another tangible asset (or an intangible asset representing the right to use a tangible asset) without incurring significant cost or significant diminution in utility or fair value to either asset (for example, land and building); and

In-place lease intangibles, including favorable and unfavorable intangible assets or liabilities, and the related leased assets should be identified as a single identifiable asset.

2.27 These conditions are included to allow practical application of the initial screen in certain transactions. For example, in real estate transactions, land and buildings are often transferred together but are considered separate identifiable assets for accounting purposes. Without the first condition that allows the combination of tangible assets, these transactions would rarely meet the initial screen. The second condition is included primarily to promote consistency among real estate transactions in the initial screen so that an entity would not get a different outcome solely because the value of the leases were different or the lease had above or below market rents.

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2.28 The conditions in this step are only applied for the purposes of the initial screen. This guidance does *not* change the requirements to separately recognize and measure identifiable assets in a business combination or asset acquisition (e.g. a building and an in-place lease should be measured and recorded separately regardless of whether an acquisition meets the definition of a business).

Step 3: Evaluate whether assets from Step 1 and Step 2 are similar assets

2.29 In Step 3, an entity evaluates whether any single assets that have been identified in the previous steps, including any combined single assets identified in Step 2, are similar. Any combined single asset identified in Step 2 (e.g., land, building and leases) would be considered a single asset for purposes of evaluating similarity. FASB ASC 805-10-55-5C states that "when evaluating whether assets are similar, an entity should consider the nature of each single identifiable asset and the risks associated with managing and creating outputs from the assets (that is, the risk characteristics)." In addition, that paragraph identifies types of assets that should not be considered similar, which include:

a. a tangible asset and an intangible asset,
b. identifiable intangible assets in different major intangible asset classes (for example, customer-related intangibles, trademarks, and in-process research and development),
c. a financial asset and a nonfinancial asset,
d. different major classes of financial assets (for example, accounts receivable and marketable securities),
e. different major classes of tangible assets (for example, inventory, manufacturing equipment, and automobiles), and
f. identifiable assets within the same major asset class that have significantly different risk characteristics.

2.30 FASB ASC 805-10-55-5-5C(a) provides that a tangible asset and an intangible asset should not be considered similar. This guidance is applied only after assets are combined in accordance with FASB ASC 805-10-55-5B in Step 2. Accordingly, an entity would not need to separate a tangible and an intangible asset (e.g. real estate asset and related lease intangible) in Step 3 when applying the preceding guidance. Furthermore, the individual combined assets (e.g. real estate asset and related lease intangible) could be considered similar to other combined assets identified in Step 2. For example, a combined apartment complex and related leases would be compared to other assets to determine if they are similar assets and may be grouped with other similar combined assets (e.g. other combined apartment complexes and related leases) if the other criteria to be a similar asset are met. Also, an apartment complex that is combined with lease intangibles in Step 2 may be combined with a similar apartment complex without leases if there are similar risks associated with managing and creating outputs from the assets.

2.31 FASB ASC Master Glossary does not define a major asset class and judgment will be required to apply subparagraphs b, d, and e of FASB ASC 805-10-55-5C. However, these subparagraphs do provide examples of major asset classes for tangible, intangible and

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financial assets. FASB ASC 805-10-55 also includes examples that address major asset classes, including:

- Case B, Scenario 2 (single drug compound that treats diabetes and single drug compound that treats Alzheimer's disease are identifiable assets in the same major intangible asset class),
- Case E (equipment and building are tangible assets in different major tangible asset classes), and
- Case F (license to distribute a product and customer contracts are found to be in different major classes of identifiable intangible assets).

2.32 The FASB ASC Master Glossary defines an *intangible asset class* as "[a] group of intangible assets that are similar, either by their nature or by their use in the operations of an entity." This definition is used in determining the disclosure requirements of FASB ASC 350-30. The examples provided in FASB ASC 805-10-55-5C of different major asset classes and the definition of an intangible asset class may assist entities in determining major asset classes.

2.33 Significant judgment also will be required to determine if single assets within a major asset class have significantly different risk characteristics (factor (f)). Paragraph BC31 of ASU No. 2017-01 states that

> The Board clarified that the risks to be evaluated should be linked to the risks associated with the management of the assets and creation of outputs because this assessment may be instructive on whether an integrated set of assets and activities has been acquired. That is, when the risks associated with managing and creating outputs from the assets are significantly different, the set would need more sophisticated processes to manage and create outputs.

As a result, the relevant analysis is whether the risks associated with managing and creating outputs is significantly different.

2.34 Consistent with FASB ASC 805-10-55-8, an entity would consider the risks associated with the management of the assets and creation of outputs from the perspective of a market participant. That is, it would not necessarily be relevant how the buyer intends to operate the set or the seller operated the set when determining the risks associated with the assets.

2.35 An entity should consider the different risk characteristics specific to the nature of the asset. For example, real estate and intellectual property would have different risk characteristics to analyze. Entities may also need to consider different types of risks for assets within a particular industry. For example, in the real estate industry, an entity may consider risk characteristics which may include but are not limited to geographic location, class of customers, size of the properties, market risk and types of assets. The different risk characteristics identified would need to be *significant* to affect the

conclusion of whether assets are similar and all facts and circumstances should be evaluated.

Step 4: Determine the fair value of the gross assets acquired

2.36 In Step 4, the entity determines the fair value of gross assets acquired (i.e. the "denominator"). The gross assets acquired generally include all assets that would be recognized in a business combination *including* goodwill. According to FASB ASC 805-10-55-5A, "any consideration transferred (plus the fair value of any noncontrolling interest and previously held interest, if any) in excess of the fair value of net identifiable assets acquired" should be included in the gross assets acquired (which is the denominator). The consideration transferred would include contingent consideration determined in accordance with FASB ASC 805. This is because contingent consideration may affect the value of goodwill, which is included in gross assets. In the rare case that the transaction would result in a bargain purchase gain in accordance with FASB ASC 805, the task force believes the gain would be excluded from the fair value of gross assets acquired (i.e., it would not reduce the fair value of gross assets acquired). This is because FASB ASC 805-10-55-5A states that gross assets should include any consideration transferred in excess of the fair value of net identifiable assets acquired (with no mention of *shortfall*).

2.37 FASB ASC 805-10-55-5A specifically excludes cash and cash equivalents, deferred tax assets, and goodwill resulting from the effects of deferred tax liabilities (see the "Comprehensive Example of Applying the Screen" later in this section) from the fair value of gross assets acquired. Cash and cash equivalents are excluded so entities cannot increase the purchase price with no economic substance in order to avoid a conclusion that substantially all of the fair value is concentrated in a single asset (or group of similar assets). The deferred tax items are excluded because those items are a reflection of the legal or tax form of the transaction rather than the substance of what was acquired. Similarly, the numerator and denominator (see Step 5) exclude debt and other liabilities because the assumption of those liabilities may simply be a financing mechanism for the transaction. However, unfavorable lease intangibles (the only liabilities included in the initial screen) associated with leased assets would be a part of the numerator and denominator when applying the initial screen by virtue of being included in the combined real estate asset.

Step 5: Perform the "substantially all" test and conclude

2.38 In Step 5, an entity compares the fair value of the largest single identifiable asset (or group of similar assets) to the fair value of the gross assets acquired as determined in Step 4. If the fair value of that single identifiable asset or group of similar identifiable assets (the numerator) represents substantially all of the fair value of the gross assets acquired (the denominator), then the initial screen is met and the set is not a business.

2.39 FASB ASC 805-10-55 does not specify a quantitative threshold for what *"substantially all"* means in the context of the initial screen. The task force has observed that, in the application of other U.S. GAAP (e.g., FASB ASC 842, *Leases*), "substantially all" is

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generally interpreted to mean at least 90 percent. However, the task force believes "substantially all" should not be interpreted as a bright line, particularly when the valuation of some or all assets acquired is based on unobservable (Level 3) fair value measurement inputs that are susceptible to significant measurement uncertainty.

Comprehensive Example of Applying the Screen

Note: Given the assumptions used in this example, the task force acknowledges that the initial screen could be completed solely on a qualitative basis. However, the task force included the quantitative analysis in order to illustrate the previously described steps that may be used in applying the initial screen.

Company A acquires 100% of Company T for $20,000,000 in a nontaxable transaction. Company T's real estate operations include a single office building that it leases to tenants. No employees are included in the set. The enacted tax rate is 25%.

The identifiable assets acquired and liabilities assumed have the following fair values and tax bases.

	Estimated Fair Value	**Tax Basis**	**Temporary Difference**
Cash	$150,000	$150,000	$0
Office building	$18,000,000	$12,000,000	$6,000,000
Furniture	$200,000	$200,000	$0
Land	$6,000,000	$5,000,000	$1,000,000
Unfavorable lease intangible	($200,000)	$0	($200,000)
Debt	($4,200,000)	($4,200,000)	$0
Current liabilities	($150,000)	($150,000)	$0
Identifiable net assets acquired	**$19,800,000**	**$13,000,000**	**$6,800,000**

Goodwill of $1,900,000 is calculated as the excess of the consideration transferred of $20,000,000 over the identifiable net assets acquired of $18,100,000 ($19,800,000 - $1,700,000[2] of deferred taxes).

[2] Taxable temporary differences of $6,800,000 multiplied by the 25% tax rate.

Applying Step 1

Company A first determines the identifiable assets that could be recognized separately in a business combination. As shown above, the identifiable assets in the set include cash, office building, furniture and land. Goodwill is not an identifiable asset in Step 1 of the initial screen.

Applying Step 2

Company A evaluates whether any of the conditions in FASB ASC 805-10-55-5B apply. Company A concludes that the office building, land and unfavorable lease intangible should be combined in Step 2. The furniture in the office building are not combined with the office building because the furniture is not attached and can be removed without incurring significant cost or significant diminution in utility or fair value to either asset.

Applying Step 3

In applying FASB ASC 805-10-55-5C, Company A concludes that none of the acquired identifiable assets (e.g. cash, combined asset (office building, land and unfavorable lease intangible), and furniture) are similar assets.

Applying Step 4

In applying Step 4, the gross assets acquired would not include cash and the goodwill associated with the deferred tax liabilities acquired in this transaction. The deferred tax liabilities acquired in this example generated $1,700,000 of goodwill, which would be excluded for purposes of applying the initial screen, leaving $200,000 of goodwill to be included for the purposes of applying the screen. The gross assets acquired in this example for purposes of the initial screen would be as follows:

Items Acquired / Assumed	**Value under FASB ASC 805**	**Gross Assets**
Cash	$150,000	Not included
Office building	$18,000,000	$18,000,000
Furniture	$200,000	$200,000
Land	$6,000,000	$6,000,000
Unfavorable lease intangible	($200,000)	($200,000)
Debt	($4,200,000)	Not included
Current liabilities	($150,000)	Not included
Deferred tax liabilities	($1,700,000)	Not included
Goodwill	$1,900,000	$200,000
Total	**$20,000,000**	**$24,200,000**

The fair value of gross assets acquired is $24,200,000 in this example. The unfavorable lease intangible is the only liability included in gross assets in Step 4 of the initial screen as it is part of the combined asset identified in Step 2.

Applying Step 5

Company A evaluates whether the fair value is concentrated in a single asset or group of similar assets.

In Step 4, the fair value of the gross assets acquired was determined to be $24,200,000. In Step 5, the largest acquired asset or combined asset had a value of $23,800,000 (sum of the fair value of the office building, land and unfavorable lease intangible) and would be compared to the fair value of gross assets acquired of $24,200,000.

This results in 98 percent of the value of the gross assets acquired being concentrated in a single asset (i.e., combined asset of office building, land and unfavorable lease intangible). As a result, Company A concludes that substantially all of the fair value is concentrated in a single asset and the set is not a business.

Framework for Determining Whether an Input and a Substantive Process Exist

2.40 If the initial screen is not met, FASB ASC 805-10-55 provides a framework for determining whether an input and a substantive process exist (including for early stage companies that have not generated outputs). Because outputs are a key element of a business, the criteria required to be met in order to be considered a business is more stringent for sets without outputs. (See the "Elements of a Business" section of this chapter for the definition of outputs.)

2.41 In addition, FASB ASC 805-10-55 requires an entity to consider whether a group of processes acquired is substantive in the aggregate. That is, although an individual process may be considered insignificant on its own, it may be a part of a group of processes acquired that are substantive in the aggregate.

When a Set is Not Generating Outputs

2.42 According to FASB ASC 805-10-55-5D, in order for a set without outputs to have both an input and substantive process that together significantly contribute to the ability to create outputs, it must include both:

(a) Employees that form an organized workforce and

(b) An input that the workforce could develop or convert into outputs.

2.43 Furthermore, consistent with FASB ASC 805-10-55-5D, when a set does not have outputs, the employees that form the organized workforce should be actively contributing to the development of outputs and must have the necessary skills, knowledge, or

experience to perform an acquired process that when applied to another acquired input is *critical* to the ability to develop or convert that acquired input into outputs.

2.44 If there are no outputs, an entity cannot consider an organized workforce provided by an acquired contract (i.e., an outsourced workforce) in its assessment of whether the set includes a substantive process. The Board concluded that an employee is needed to oversee an outsourced workforce. If a set without outputs includes both employees and an outsourced workforce, entities will have to apply judgment to determine whether the employees are an organized workforce that provides a substantive process. Paragraph BC48 of ASU No. 2017-01 states that

> The Board also noted that a critical process performed by employees could include the management of service providers. The Board stated that, as an example, an entity should come to consistent conclusions when evaluating a set that has 100 employees and a set that has 20 employees with the equivalent of 80 employees replaced by outsourced service providers because the 20 employees would be responsible for the management and performance of the outsourced employees.

2.45 The guidance in FASB ASC 805 does not include a definition of an employee. However, the task force believes it would be reasonable to use the definition of an employee included in the FASB guidance on stock compensation (FASB ASC 718). Therefore, an employee would be someone who will have an employer-employee relationship with the acquirer based on common law as a result of the acquisition. Depending on the nature of the process, the acquired workforce necessary to satisfy these requirements may consist of a small number of employees (e.g., scientists working on a research and development project) as long as they are critical to the ability to develop or convert that acquired input into outputs.

2.46 FASB ASC 805-10-55-5D provides that an entity should consider the following in evaluating whether the acquired workforce is performing a substantive process:

> a. A process (or group of processes) is not critical if, for example, it is considered ancillary or minor in the context of all the processes required to create outputs.
>
> b. Inputs that employees who form an organized workforce could develop (or are developing) or convert into outputs could include the following:
>
> 1. Intellectual property that could be used to develop a good or service
>
> 2. Resources that could be developed to create outputs
>
> 3. Access to necessary materials or rights that enable the creation of future outputs.
>
> Examples of inputs that could be developed include technology, mineral interests, real estate, and in-process research and development.

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2.47 Judgment will be required to determine whether the process performed by the organized workforce is critical to the ability to convert another acquired input into outputs. If it is unlikely that the output would be created without the acquired process, the task force believes the process is likely critical to the ability to convert an input into outputs.

2.48 Examples of an organized workforce that may be performing a substantive process include:

- Engineers developing software in the technology sector
- Employees overseeing the manufacturing of products in the automotive sector
- Scientists developing drugs in the life sciences sector
- Leasing and management personnel in the real estate sector

2.49 Entities also should evaluate the nature of inputs included in a set that is not generating outputs. A set might include elements that do not create or have the ability to contribute to the creation of outputs. For example, while office furniture may be acquired as part of a set, it would likely not be considered an input in the analysis of whether a set that focuses on the development of technology is a business.

When a Set is Generating Outputs

2.50 When the set has outputs (e.g., there is a continuation of revenue before and after the transaction), only one of the following factors in FASB ASC 805-10-55-5E needs to be present for a set to have a substantive process:

> (a) Employees that form an organized workforce that has the necessary skills, knowledge, or experience to perform an acquired process (or group of processes) that when applied to an acquired input or inputs is critical to the ability to continue producing outputs;
>
> (b) An acquired contract that provides access to an organized workforce that has the necessary skills, knowledge, or experience to perform an acquired process (or group of processes) that when applied to an acquired input or inputs is critical to the ability to continue producing outputs;
>
> (c) The acquired process (or group of processes) when applied to an acquired input or inputs significantly contributes to the ability to continue producing outputs and cannot be replaced without significant cost, effort, or delay in the ability to continue producing outputs; or
>
> (d) The acquired process (or group of processes) when applied to an acquired input or inputs significantly contributes to the ability to continue producing outputs and is considered unique or scarce.

2.51 Paragraph BC51 of ASU No. 2017-01 states that "The Board concluded that when a set is generating outputs before and after the transaction, it is more likely that the set includes

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both an input and a substantive process when compared with a set that is not generating outputs." Therefore, the criteria for identifying a substantive process are not as strict as those for a set that is not producing outputs. Further, FASB ASC 805-10-55-5E does not specifically state the types of inputs that must be acquired because, by definition, a set that has outputs would have an input (or inputs) that could be converted into outputs.

2.52 Similar to sets with no outputs, one of the factors that would lead to a conclusion that a set that has outputs is a business is an organized workforce that consists of employees that have the necessary skills, knowledge, or experience to perform an acquired process (or group of processes) that when applied to an acquired input or inputs is critical to the ability to continue producing outputs. However, when a set has outputs, an organized workforce provided by an acquired contract may perform a substantive process. Determining whether an organized workforce provided by an acquired contract (i.e., an outsourced workforce) performs a substantive process will require judgment. Entities should consider the substance of the arrangement, including the nature of the activities performed by the outsourced workforce (i.e., whether it is performing a critical process), the duration, and the renewal terms of the contract. While duration may be an indicator that an outsourced workforce performs a substantive process, the task force believes that it is not determinative. For example, in the real estate industry, an acquired 10-year contract for cleaning services may not be critical to producing outputs (rental income). On the other hand, an acquired contract for leasing and property management services that has six months remaining at the acquisition date with provisions for annual renewal may be critical to producing rental income.

2.53 Criteria (c) and (d) in FASB ASC 805-10-55-5E address the scenarios when a set may have a substantive process but no workforce (i.e., the process (c) cannot be replaced without significant cost, effort, or delay or (d) is considered unique or scarce). For example, paragraph BC51 of ASU No. 2017-01 states that "an organized workforce might not be required if the set includes automated processes (for example, through acquired technology, infrastructure, or specialized equipment) or other significant processes that contribute to the ability to continue producing outputs." Examples of processes other than an organized workforce that may be substantive include:

- A manufacturing process included in an assembly line in the automotive sector that is highly automated
- A process embedded in infrastructure in the extractive sector that requires minimal involvement from employees (e.g., automated well equipment in the oil and gas industry)
- Technology that performs a series of automated functions to fulfill contracts with customers in the retail sector
- Applications that perform a series of automated transaction services and data mining functions in the banking sector

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2.54 The determination of whether a process is substantive will depend on the particular facts and circumstances and significant judgment may be required. Refer to the preceding "When a Set is Not Generating Outputs" section for examples of substantive processes that an organized workforce may perform.

2.55 FASB ASC 805-10-55-5F clarifies that "[i]f a set has outputs, continuation of revenues does not on its own indicate that both an input and a substantive process have been acquired. Accordingly, assumed contractual arrangements that provide for the continuation of revenues (for example, customer contracts, customer lists, and leases [when the acquiree is the lessor]) should be excluded from the analysis in paragraph 805-10-55-5E of whether a process has been acquired."

2.56 When the acquired set has only inconsequential outputs, the task force believes it may be appropriate to evaluate it as a set without outputs.

Presence of Goodwill

2.57 FASB ASC 805-10-55-9, the existence of more than an insignificant amount of goodwill may indicate that a process included in the set is substantive. That is, if an entity is willing to pay an amount above fair value of the net identifiable assets included in the set, that may indicate that the set includes a substantive process. For example, the presence of more than an insignificant amount of goodwill in a set that includes scientists and a drug compound may help an entity conclude that the process performed by those scientists is critical to the ability to create outputs.

Bypassing the Initial Screen

2.58 In the "Basis for Conclusions" section of ASU No. 2017-01, the FASB recognized that an entity could choose to bypass the initial screen if it concludes under the framework that the set is not a business. Paragraph BC19 of ASU No. 2017-01 states, "an entity could choose to document its conclusion in the most cost-effective manner depending on its situation."

2.59 It is possible to conclude that a set is *not* a business by solely applying the framework. However, when this approach is taken, an entity will also need to apply the initial screen (either qualitatively or quantitatively) prior to concluding that a set *is* a business. Therefore, the task force believes that this approach is usually not applied, but it could be beneficial when an entity believes that applying the framework is (1) likely to result in a conclusion that the set is not a business and (2) more cost effective or straightforward than applying the initial screen.

Summary of Illustrations of the Definition of a Business Included in FASB ASC 805-10-55

	Is Initial Screen Met?	Are there Outputs?	Are there Employees?	Is it a Business?
Case A: Acquisition of Real Estate - Scenario 1	Yes	N/A	N/A	No
Case A: Acquisition of Real Estate - Scenario 2	No	Yes	No	No

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	Is Initial Screen Met?	Are there Outputs?	Are there Employees?	Is it a Business?
Case A: Acquisition of Real Estate - Scenario 3	No	Yes	Yes	Yes
Case B: Acquisition of a Drug Candidate - Scenario 1	Yes	N/A	N/A	No
Case B: Acquisition of a Drug Candidate - Scenario 2	No	No	No	No
Case C: Acquisition of Biotech	No	No	Yes	Yes
Case D: Acquisition of a Television Station	No	No	No	No
Case E: Acquisition of a Manufacturing Facility	No	No	Yes	No
Case F: License of Distribution Rights	No	Yes	No	No
Case G: Acquisition of Brands	No	Yes	No	Yes
Case H: Acquisition of Loan Portfolio - Scenario 1	Yes	N/A	N/A	No
Case H: Acquisition of Loan Portfolio - Scenario 2	No	Yes	No	No
Case H: Acquisition of Loan Portfolio - Scenario 3	No	Yes	Yes	Yes

Business Combination in Which No Consideration is Transferred

2.60 Typically, a business combination will include the transfer of consideration (e.g., cash or other assets, equity interests, assumption of liabilities). However, an acquirer sometimes obtains control of an acquiree without transferring consideration. According to FASB ASC 805-10-25-11 and FASB ASC 810-10-30-2, such circumstances include any of the following:

- The acquiree repurchases a sufficient number of its own shares for an existing investor (the acquirer) to obtain control
- Minority veto rights lapse that previously kept the acquirer from controlling an acquiree in which the acquirer held the majority voting interest
- The acquirer and acquiree agree to combine their businesses by contract alone
- The initial consolidation of a VIE that is a business

2.61 Regardless of whether any consideration is transferred, the acquisition method of accounting applies to all transactions that are business combinations. When no consideration is transferred, the acquirer must substitute the acquisition-date fair value of its interest in the acquiree for the acquisition-date fair value of the consideration transferred in order to measure goodwill or a gain on a bargain purchase.

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Businesses Transferred Over Time

2.62 For various reasons, an acquirer may purchase a business (or businesses) through a series of two or more stages. For example, due to regulatory requirements, the seller may not be able to transfer all the assets or processes upfront and may have to wait until approval is obtained before transfer can take place. Another example may be when the business is transferred in stages to correspond with the development of a new product, such that design and know-how are transferred in phase one; machinery and equipment in phase two; and employees in phase three. As a result of these or similar circumstances, the following scenarios may occur:

- An initial acquisition of assets that does not constitute a business followed by a subsequent acquisition of additional assets or processes that make the entire acquired set a business;
- An initial acquisition of assets that constitutes a business followed by a subsequent acquisition of assets that does not constitute a business;
- An initial acquisition of assets that constitutes a business followed by a subsequent acquisition of additional assets that also constitutes a business.

2.63 Questions arise as to the accounting for these transactions. The task force believes the following factors listed in FASB ASC 810-10-40-6 related to deconsolidation or derecognition may be applied by analogy when determining whether the multiple transfers should be accounted for as a single transaction:

- They are entered into at the same time or in contemplation of one another.
- They form a single transaction designed to achieve an overall commercial effect.
- The occurrence of one arrangement is dependent on the occurrence of at least one other arrangement.
- One arrangement considered on its own is not economically justified, but they are economically justified when considered together. An example is when one disposal is priced below market, compensated for by a subsequent disposal priced above market.

2.64 An acquirer would also need to consider the timing between transfers and whether transfers subsequent to the initial one are considered perfunctory (which might indicate that they are part of a single transaction) or whether certain conditions must be met prior to each transfer (which may indicate that each transfer should be accounted for separately).

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2.65 If a conclusion is reached that multiple transfers are to be treated as a single transaction, the acquirer would need to consider the accounting implications for each stage of the transfer. For example, even though the total consideration for the transaction would represent fair value, the consideration at each transfer stage may not be at arm's length. In these situations, the acquirer may need to record a prepaid or payable when there are one or more pending stages of the transaction.

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Chapter 3

Identifying the Acquirer

Introduction

3.01 FASB ASC 805-10-25-4 provides that "For each business combination, one of the combining entities shall be identified as the acquirer." The acquirer is the entity which obtains control of the acquiree. Regardless of the number of entities involved in a business combination, only one acquirer can be identified.

3.02 The determination of whether control has been obtained begins with the assessment of whether control should be evaluated based on the variable interest versus voting interest model in the consolidation literature. Accordingly, first, it is necessary to determine whether the legal acquiree is a variable interest entity (VIE) pursuant to the guidance on variable interest entities in FASB ASC 810-10. If so, the primary beneficiary is always considered the acquirer, and the VIE is the acquiree.

3.03 If the acquired entity is not a VIE, the entity is considered a voting interest entity and is evaluated based on the voting interest model. FASB ASC 810-10-15-8 states that "[f]or legal entities other than limited partnerships, the usual condition for a controlling financial interest is ownership of a majority voting interest, and, therefore, as a general rule ownership by one reporting entity, directly or indirectly, of more than 50 percent of the outstanding voting shares of another entity is a condition pointing toward consolidation. The power to control may also exist with a lesser percentage of ownership, for example, by contract, lease, agreement with other stockholders, or by court decree."[1]

3.04 A business combination may be consummated by forming a new entity (often referred to as *newco*) that has no significant precombination activities other than to issue shares to the shareholders of the combining entities. Determining whether a newly-formed entity is involved in significant precombination activities may require significant judgment. FASB ASC 805-10-55-15 provides the following guidance on whether a newly formed entity may be identified as an accounting acquirer:

> A new entity formed to effect a business combination is not necessarily the acquirer. If a new entity is formed to issue equity interests to effect a business combination, one of the combining entities that existed before the business combination shall be identified as the acquirer by applying the guidance in

[1] For limited partnerships, FASB ASC 810-10-15-8A provides the following guidance

> Given the purpose and design of limited partnerships, kick-out rights through voting interests are analogous to voting rights held by shareholders of a corporation. For limited partnerships, the usual condition for a controlling financial interest, as a general rule, is ownership by one limited partner, directly or indirectly, of more than 50 percent of the limited partnership's kick-out rights through voting interests. The power to control also may exist with a lesser percentage of ownership, for example, by contract, lease, agreement with partners, or by court decree.

paragraphs 805-10-55-10 through 55-14. In contrast, a new entity that transfers cash or other assets or incurs liabilities as consideration may be the acquirer.

Identifying the Acquirer if the Acquiree is a Voting Interest Entity

3.05 If the legal acquiree is a voting interest entity, the determination of the acquirer starts with an evaluation of the consideration transferred in the exchange. According to FASB ASC 805-10-55-11, in a business combination that involves consideration other than equity interests, the company that pays cash, distributes assets or incurs debt is likely the acquirer.

3.06 FASB ASC 805-10-55-12 states that "[i]n a business combination effected primarily by exchanging equity interests, the acquirer usually is the entity that issues its equity interests." However, in a business combination involving primarily the exchange of equity interests, identification of the accounting acquirer may not always be obvious. In such situations, companies should consider other pertinent facts and circumstances, including the following factors listed in paragraphs 12–13 of FASB ASC 805-10-55, to determine the accounting acquirer:

- Relative voting rights
- Existence of a large minority voting interest
- Composition of the governing body
- Composition of the senior management
- The terms of the exchange of equity interests
- Relative size of parties to the transaction

3.07 Situations in which the factors are mixed (that is, some of the factors may point to one of the combining entities as the accounting acquirer whereas other factors may point to the other combining entity as the accounting acquirer) may be particularly challenging as none of the factors are individually determinative. When the accounting acquirer is not clear, the Business Combinations Task Force (task force) observes that companies have considered other factors in the overall evaluation of the accounting acquirer (see the "Other Practical Considerations" section of this chapter).

3.08 The task force recommends companies avoid approaching the factors as a checklist. For example, the combining entity with the most factors may not necessarily be the accounting acquirer.

3.09 Each of these factors is discussed in greater detail in the following sections.

Relative Voting Rights

3.10 One of the additional factors to consider when identifying the acquirer in a business combination effected primarily by exchanging equity interests is the relative voting rights in the combined entity after the business combination. FASB ASC 805-10-55-12(a) states

> The acquirer usually is the combining entity whose owners as a group retain or receive the largest portion of the voting rights in the combined entity. In

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> determining which group of owners retains or receives the largest portion of the voting rights, an entity shall consider the existence of any unusual or special voting arrangements and options, warrants, or convertible securities.

3.11 The relative voting rights in the combined entity are considered as of the acquisition date on the basis of all securities with voting rights (e.g., voting preferred shares) and not just voting common stock. The task force believes that the weight of this factor generally increases as the portion of the voting rights held by the majority becomes more significant.

3.12 FASB ASC 805-10-55-12(a) also requires the consideration of any unusual or special voting arrangements (which may serve to alter the outstanding voting rights of the holders of voting securities) as well as options, warrants or convertible securities (e.g., convertible debt with attributes similar to common stock). The task force believes that careful consideration should be given when evaluating whether to include options, warrants and convertible securities in the relative voting rights analysis. Factors to consider include (i) the vesting status of the security, (ii) whether the security is in or out-of-the money and (iii) whether the security is exercisable or convertible into voting shares as of the acquisition date.

Existence of a Large Minority Voting Interest

3.13 One of the additional factors to consider when identifying the acquirer in a business combination effected primarily by exchanging equity interests is the existence of a large minority voting interest in the combined entity if no other owner or organized group of owners has a significant voting interest. FASB ASC 805-10-55-12(b) states

> The acquirer usually is the combining entity whose single owner or organized group of owners holds the largest minority voting interest in the combined entity.

3.14 For example, assume Company X and Company Y merge, resulting in the former shareholders of each company owning approximately 50% of the outstanding shares of the combined entity. If a former shareholder (or a group of individuals[2] or entities under common control) of Company X received 30% of the outstanding shares of the combined company (with no other shareholders owning a significant interest), then this factor would usually support Company X as the accounting acquirer.

[2] Based on the guidance in EITF Issue No. 02-5, Definition of "Common Control" in Relation to FASB Statement No. 141 (EITF 02-5), the Business Combinations Task Force (task force) believes that a group of individuals would be considered together if the individuals have written evidence of an agreement to vote their shares in concert or the individuals are immediate family members (with no evidence that those family members will vote their shares in any way other than in concert). Immediate family members include a married couple and their children, but not the married couple's grandchildren. EITF 02-5 was not codified in FASB ASC; however, the task force believes it provides helpful guidance and, therefore, decided to incorporate it in this guide.

Composition of the Governing Body

3.15 One of the additional factors to consider when identifying the acquirer in a business combination effected primarily by exchanging equity interests is the composition of the governing body of the combined entity. FASB ASC 805-10-55-12(c) states

> The acquirer usually is the combining entity whose owners have the ability to elect or appoint or to remove a majority of the members of the governing body of the combined entity.

3.16 It is important to consider the initial composition of the governing body (for example, the board of directors) and whether it is subject to change within a short period of time after the acquisition date. If control of the governing body by a shareholder group is temporary, then control may not be substantive.

3.17 While there is no minimum duration required for a shareholder group to be in control of the governing body for it to be substantive, the task force believes that control generally should extend for a sufficient duration to allow the governing body to consider and act on substantive matters arising from the acquisition, such as those related to:

- corporate governance
- the appointment and compensation of senior management
- the issuance of debt or equity securities
- substantive business integration, exit, and disposal activities

3.18 The task force also believes that when evaluating this criterion, it is important for companies to consider the election schedule of the governing body's members, the process for replacing current members of the governing body and whether the ability to elect or appoint a voting majority of the governing body could change in the near-term. For example, companies would need to consider the effect of scheduled member retirements or elections over the year or two following the business combination when assessing the governing body of the combined entity.

Composition of the Senior Management

3.19 One of the additional factors to consider when identifying the acquirer in a business combination effected primarily by exchanging equity interests is the composition of the senior management of the combined entity. FASB ASC 805-10-55-12(d) states

> The acquirer usually is the combining entity whose former management dominates the management of the combined entity.

3.20 A plan or intention as of the acquisition date to alter the initial composition of senior management, such as a planned retirement with a determined successor, would need to be evaluated to determine whether such a plan or intention is relevant in determining the acquirer. Mandatory retirement dates that could change the relative composition and degree of influence of the senior management team in the near-term also would need to be considered.

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3.21 In addition, the roles, responsibilities, and seniority of executive positions taken by the combining entities' former management teams would need to be considered. The task force believes that the roles, responsibilities, and seniority of the various management positions should be given greater weight over the actual number of senior management positions in the determination of the composition of senior management.

3.22 For purposes of this factor, senior management generally includes, but is not necessarily limited to, the executive chairman of the board, the chief executive officer, the chief operating officer, the chief financial officer, divisional heads, and members of the executive committee, if one exists. This description of senior management is meant to identify functions, not necessarily managers with a specific title. These functions need to comprise the highest level of operating decision makers within the combined entity.

3.23 For example, assume Company X and Company Y agree to merge their technology businesses. A joint press release on the date of the Merger Agreement describes the combined entity as being in a prime position to take advantage of digital and mobile innovations in the market. The expected composition of the combined entity's management team will be split evenly between former Company X and former Company Y executives. The roles of CFO, SVP of Human Resources and SVP, General Counsel will be filled by former Company X executives; the roles of CEO, SVP of Digital Sales and SVP of Mobile Strategy will be filled by former Company Y executives. This factor would usually support Company Y as the accounting acquirer. Although the executive management positions of the combined entity will be split evenly among the former executives of both combining entities, former Company Y executives will assume the role of CEO and those executive positions that are most closely aligned with the purpose and design of the merger (that is, innovation through digital sales and mobile strategy).

Terms of the Exchange of Equity Interests

3.24 One of the additional factors to consider when identifying the acquirer in a business combination effected primarily by exchanging equity interests is the terms of the exchange of equity interests. FASB ASC 805-10-55-12(e) states

> The acquirer usually is the combining entity that pays a premium over the precombination fair value of the equity interests of the other combining entity or entities.

3.25 This factor is considered in any circumstance in which equity instruments are exchanged. In situations when either or both securities are not publicly traded, the reliability of the fair value measurement should be considered prior to assessing whether a premium has been paid for the equity securities exchanged in a business combination. In these cases when the fair value of the equity securities is less objectively determinable, this factor may be considered less significant.

Relative Size of Parties to the Transaction

3.26 One of the additional factors to consider when identifying the acquirer is relative size of parties to the transaction. FASB ASC 805-10-55-13 states

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The acquirer usually is the combining entity whose relative size (measured in, for example, assets, revenues, or earnings) is significantly larger than that of the other combining entity or entities.

3.27 Judgment is required when comparing the combining entities based on their relative size. When each combining entity is involved in similar activities and lines of business, a comparison of relative size may be straightforward. For example, reported revenue and total assets might be an appropriate comparison in these circumstances. However, in circumstances in which the combining entities are involved in disparate activities and businesses, a comparison of relative size based on reported amounts might not be appropriate, and information other than the reported amounts of assets, earnings, and revenue may require consideration. For example, comparing revenue generated by an entity with high volume, high turnover, and low gross margins (e.g., a grocery store chain) with revenue generated by an entity with low volume, high value-added, and high gross margins (e.g., a custom designer and manufacturer of specialized equipment) might not be meaningful.

3.28 Likewise, comparing the reported amount of total assets or net assets of an entity whose principal revenue-generating assets are internally developed intangible assets (and thus not reflected in the entity's reported amounts) to the reported amount of total assets or net assets of an entity whose principal revenue-generating assets are similar intangible assets that were acquired in a series of business combinations (and thus are reflected in the entity's reported amounts), may not be particularly meaningful.

3.29 Other metrics also may provide evidence about the relative size of the combining entities. For example, operating cash flows, market capitalization, the number of employees, stores or geographic locations could indicate which of the combining entities is larger. Additionally, depending on the industry of the combining entities, other non-GAAP measures (e.g., *EBITDA*) may provide relevant information about which entity is larger.

3.30 Depending on the metric being used to evaluate the relative size of the combining entities, it may be appropriate to adjust for unusual, nonrecurring items. For example, if such evaluation is being performed based on the net income of the two combining entities, it may be appropriate to make an adjustment for a current-year impairment charge recognized by either of the combining entities.

Other Practical Considerations

3.31 When the accounting acquirer is not clear after evaluating the factors listed in paragraphs 12–13 of FASB ASC 805-10-55, the task force observes that companies have considered other factors in the overall evaluation of the accounting acquirer, including the following:

- Qualitative factors about the process leading up to the transaction (e.g., the reason for the combination, which entity initiated the transaction)
- The combined entity's name after the transaction

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- The location of the combined entity's corporate headquarters
- If the combined entity is publicly traded, the ticker symbol of the combined entity
- The year-end of the combined entity

Reverse Acquisitions

3.32 In a business combination, the legal acquirer is usually the entity that transfers the consideration. However, in some business combinations (referred to as *reverse acquisitions*), the entity that issues securities (the legal acquirer) is identified as the acquiree for accounting purposes based on the guidance in paragraphs 11–15 of FASB ASC 805-10-55 discussed earlier. The entity whose equity interests are acquired (the legal acquiree) must be the acquirer for accounting purposes for the transaction to be considered a reverse acquisition. FASB ASC 805-40 provides guidance on reverse acquisitions. According to FASB ASC 805-40-25-1, for a business combination transaction to be accounted for as a reverse acquisition, the legal acquirer (accounting acquiree) must meet the definition of a business (see the "Definition of a Business" section in chapter 2, "Identifying Business Combination Transactions," for further discussion). If the legal acquirer (accounting acquiree) does not meet the definition of a business, the transaction would be accounted for as a reverse acquisition of an asset or group of assets.

3.33 If the transaction qualifies as a reverse acquisition, all of the recognition and measurement principles in FASB ASC 805-10, 805-20, and 805-30 apply. In addition, FASB ASC 805-40 provides guidance on the recognition and measurement of noncontrolling interest. FASB ASC 805-40-55 provides an example of the accounting for a reverse acquisition.

3.34 Mergers between public companies and relatively larger or more valuable private companies often are executed as reverse acquisitions so that the merged companies can retain public entity status. If the public company involved meets the definition of a business, the reverse acquisition transaction constitutes a business combination. If the public company is a non-operating public shell, the transaction would be accounted for as a reverse recapitalization. This latter transaction is addressed in Section 12100 of the SEC Financial Reporting Manual which states

> The acquisition of a private operating company by a non-operating public shell corporation typically results in the owners and management of the private company having actual or effective voting and operating control of the combined company. The staff considers a public shell reverse acquisition to be a capital transaction in substance, rather than a business combination. That is, the transaction is a reverse recapitalization, equivalent to the issuance of stock by the private company for the net monetary assets of the shell corporation accompanied by a recapitalization. The accounting is similar to that resulting from a reverse acquisition, except that no

goodwill or other intangible assets should be recorded.

3.35 The legal acquirer (accounting acquiree) is the surviving legal entity in a reverse acquisition and continues to issue financial statements. The financial statements are generally in the name of the legal acquiree (accounting acquirer), because the legal acquirer (accounting acquiree) often adopts the name of the legal acquiree (accounting acquirer). In the absence of a change in name, the financial statements remain labeled as those of the surviving legal entity (accounting acquiree). Although the surviving legal entity may continue, the financial reporting will reflect the accounting from the perspective of the legal acquiree (accounting acquirer), except for the legal capital, which is retroactively adjusted to reflect the capital of the legal acquirer (accounting acquiree).

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Chapter 4

Determining the Acquisition Date

4.01 FASB ASC 805-10-25-6 states that "[t]he acquirer shall identify the acquisition date, which is the date on which it obtains control of the acquiree."

4.02 According to FASB ASC 805-10-25-7

> The date on which the acquirer obtains control of the acquiree generally is the date on which the acquirer legally transfers the consideration, acquires the assets, and assumes the liabilities of the acquiree – the closing date. However, the acquirer might obtain control on a date that is either earlier or later than the closing date. For example, the acquisition date precedes the closing date if a written agreement provides that the acquirer obtains control of the acquiree on a date before the closing date. An acquirer shall consider all pertinent facts and circumstances in identifying the acquisition date.

4.03 The business combination may require regulatory or shareholder approval by either the acquirer or the acquiree. If regulatory or shareholder approval is required, the Business Combinations Task Force (task force) believes that control generally does not transfer before that approval is obtained. However, if shareholder approval is considered perfunctory (for example, if management and the board of directors control sufficient votes to approve the transaction), the task force believes that a transfer of control might occur prior to the date of shareholder approval. In all cases, for the acquisition date to precede the closing date, a written agreement would need to be in place that provides the acquirer with control of the acquiree.

4.04 FASB Statement No. 141(R), *Business Combinations* (which was codified as FASB ASC 805) eliminated the previous provision in FASB Statement No. 141 that allowed the acquirer in a business combination, under certain circumstances, to designate an effective date other than the acquisition date (that is, the end of an accounting period between the dates a business combination was initiated and consummated). As indicated in paragraph B110 in the "Basis for Conclusions" section of FASB Statement No. 141(R),[1] the FASB concluded that the financial statement effects of eliminating that provision are rarely likely to be material; and unless events between the convenience date and the actual acquisition date result in material differences in the amounts recognized, designation of a convenience date would comply with the requirements of FASB Statement 141(R).

[1] This and other paragraphs from the "Basis for Conclusions" section of FASB Statement No. 141(R), *Business Combinations*, were not codified in FASB ASC; however, the Business Combinations Task Force (task force) believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

Chapter 5

Measuring the Consideration Transferred

Introduction

5.01 According to FASB ASC 805-30-30-7, the consideration transferred to the former owner(s) of the acquiree from the acquirer in a business combination should be measured at fair value, which should be calculated as the sum of the acquisition-date fair values of the assets transferred by the acquirer, the liabilities incurred by the acquirer to former owners of the acquiree, and the equity interests issued by the acquirer. However, any portion of the acquirer's share-based payment awards issued in exchange for awards held by the acquiree's grantees that is included in consideration transferred should be measured according to the fair-value-based measurement principles of FASB ASC 718, *Compensation-Stock Compensation*, rather than at fair value. FASB ASC 805-30-30-7 provides the following examples of potential forms of consideration transferred:

a. Cash
b. Other assets
c. A business or a subsidiary of the acquirer
d. Contingent consideration
e. Common or preferred equity instruments
f. Options
g. Warrants
h. Member interests of mutual entities.

5.02 The acquirer and the acquiree may have entered into other arrangements before negotiations for the business combination began, or they may enter into an arrangement during the negotiations that would not form part of consideration transferred. See the "Determining What is Part of the Business Combination Transaction" section of chapter 8, "Other Accounting Topics," which provides guidance for determining whether a transaction is separate from the business combination.

Assets Transferred and Liabilities Incurred (Excluding Contingent Consideration)

5.03 As indicated in FASB ASC 805-30-30-8, the consideration transferred may include assets (for example, nonmonetary assets or a business of the acquirer) or liabilities of the acquirer that have carrying amounts that differ from their fair values at the acquisition date. In such instances, the acquirer should remeasure the transferred assets or liabilities to their fair values as of the acquisition date and recognize the resulting gains or losses [that is, differences between the fair values and the carrying amounts of these assets or liabilities], if any, in earnings.

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5.04 However, sometimes the transferred assets or liabilities remain within the combined entity after the business combination (for example, because the assets or liabilities were transferred to the acquiree rather than to its former owners), and the acquirer therefore retains control of them. In that situation, the acquirer should measure those assets and liabilities at their carrying amounts immediately before the acquisition date and should not recognize a gain or loss on assets or liabilities it controls both before and after the business combination.

Equity Interests Issued

5.05 When consideration transferred is in the form of equity interests, the acquirer would measure the fair value of the issued equity instruments on the acquisition date. According to FASB ASC 805-30-30-2, in a business combination in which the acquirer and the acquiree (or its former owners) exchange only equity interests, there may be circumstances in which the acquisition-date fair value of the acquiree's equity interests is more reliably measurable than the acquisition-date fair value of the acquirer's equity interests (for example, when a private company acquires a public company). In these circumstances, the acquirer should determine the amount of goodwill by using the acquisition-date fair value of the acquiree's equity interests instead of the acquisition-date fair value of the equity interests transferred.

Share-Based Payment Replacement Awards

5.06 The acquirer in a business combination may exchange its share-based payment awards for awards held by grantees of the acquiree in order to either assume the obligation of the acquiree's existing share-based payment awards or provide compensation arrangements as an incentive to employees of the acquiree. If such arrangement exists, the acquirer needs to determine whether the replacement award represents consideration for precombination vesting or compensation for postcombination vesting.

5.07 The first step in making this determination is to ascertain whether the acquirer is obligated to replace all or a portion of the acquiree's awards. FASB ASC 805-30-30-9 states that

> The acquirer is obligated to replace the acquiree awards if the acquiree or its grantees have the ability to enforce replacement. For example, for purposes of applying this requirement, the acquirer is obligated to replace the acquiree's awards if replacement is required by any of the following:
>
> a. The terms of the acquisition agreement
> b. The terms of the acquiree's awards
> c. Applicable laws or regulations.

5.08 According to FASB ASC 805-30-30-9, if the acquirer is required to replace the acquiree's award and issues new awards, either all or a portion of the fair-value-based measure of such award should be included in the measurement of consideration transferred. Any excess of the fair-value-based measure of the acquirer replacement

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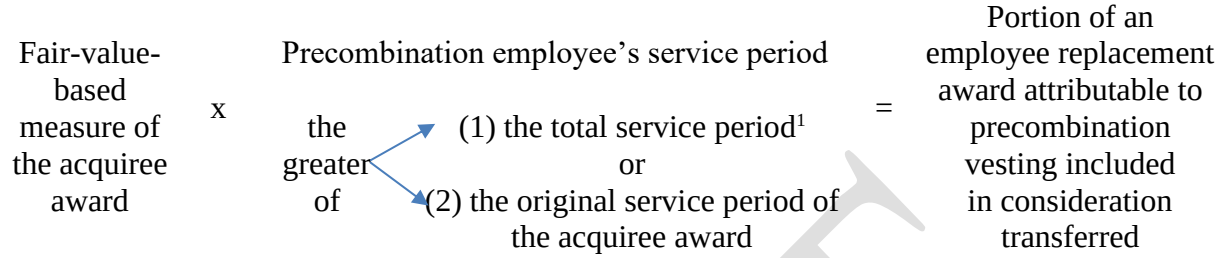
award over the fair-value-based measure of the acquiree award as of the acquisition date should be accounted for as compensation cost in the postcombination period. In contrast, as indicated in FASB ASC 805-30-30-10, if the acquirer replaces the award although not obligated to do so and the awards would otherwise expire as a result of the business combination, the entire fair-value-based measure of the replacement award should be recognized as compensation expense in the postcombination period and would be accounted for as a new award in accordance with FASB ASC 718.

5.09 If the acquirer is not obligated to issue replacement awards to the acquiree but does so voluntarily and the awards would not have otherwise expired as a result of the business combination, there is diversity in practice in the accounting for such transactions. Some entities account for the awards as if the acquirer was obligated to issue replacement awards, while others account for them separate from the business combination as new grants and recognize the fair-value-based measure of the replacement awards as compensation cost in the postcombination period. Acquiree awards that remain outstanding and do not otherwise expire as a result of the business combination would follow the same principle such that the portion of the acquisition-date fair-value-based measure of the share-based payments that is attributable to precombination vesting is recognized as noncontrolling interest and the portion relating to any remaining postcombination vesting is recognized as compensation cost in the postcombination period.

5.10 In circumstances in which the acquirer is obligated to replace the acquiree's award, an analysis should be performed to determine the portion of a replacement award which is part of the consideration transferred. In doing so, as provided in FASB ASC 805-30-30-11, the acquirer should determine the fair-value-based measure of both the replacement award and the acquiree award as of the acquisition date in accordance with FASB ASC 718.

5.11 In order to determine the fair-value-based measure of the awards issued to an acquiree's employees, the acquirer would need to determine 1) the requisite service period for the acquiree award, 2) the portion of the employee's requisite service period that was completed prior to the acquisition date and 3) the postcombination employee's requisite service period, if any, for the replacement award. The portion of the replacement award attributable to precombination vesting (which, according to FASB ASC 805-30-30-11, is included in the consideration transferred) is calculated as follows:

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5.12 The portion of the replacement award attributable to postcombination vesting is the difference between the fair-value-based measure of the replacement award and the amount attributed to precombination vesting.

5.13 For example, assume an acquiree's employee awards all vest after a requisite service period of four years from the grant date (referred to as *cliff vesting*). As of the acquisition date, two years of the four years of service had been completed. Further, the acquirer was obligated to issue replacement awards under the terms of the acquisition agreement and the fair-value-based measure of the acquirer replacement award equals the fair-value-based measure of the acquiree award as of the acquisition date. The replacement awards issued by the acquirer require a new four-year service period from the acquisition date. In this instance, the acquirer will use the ratio of the two years of service completed to the total service period of six years (which is calculated as the sum of the two years completed plus the four years of additional service period required by the replacement award and which, in this case, is greater than the original service period of the acquiree award of four years), resulting in 33% percent of the fair-value-based measure of the acquiree award being attributed to precombination services and accounted for as consideration transferred for the acquiree. The remaining fair-value-based measure of the replacement award would be accounted for as postcombination compensation cost over the postcombination service period of four years. If there had been any excess of the fair-value-based measure of the acquirer replacement award over the fair-value-based measure of the acquiree award, it would have been accounted for in the postcombination period.

5.14 In contrast, if the postcombination service period was reduced to one year (that is, the replacement award requires less service after the acquisition than would have been required under the original award), the acquirer would use the ratio of the two years of service completed to the original service period of the acquiree award of four years (which, in this case, would be greater than the total service period of three years [calculated as the sum of the two years completed plus one year of additional service period required by the replacement award]) and 50% of the acquiree award would be

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[1] As indicated in FASB ASC 805-30-55-8

The total service period is the sum of the following amounts:

a. The part of the employee's requisite service period for the acquiree award that was completed before the acquisition date
b. The postcombination employee's requisite service period, if any, for the replacement award.

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attributed to precombination services and accounted for as consideration transferred for the acquiree. The remaining 50% would be accounted for as postcombination compensation cost over the postcombination service period of one year.

5.15 The acquirer should follow the guidance in FASB ASC 805-30-55-9A to allocate the fair-value-based measure of replacement awards issued to an acquiree's nonemployees between consideration transferred and postcombination compensation cost. Also see paragraphs 6–13 and 17–24 of FASB ASC 805-30-55 which provide implementation guidance and examples on replacement awards. For examples of replacement of nonemployee awards, refer to paragraphs 25–35 of FASB ASC 805-30-55.

Change in Control Provisions in Share-Based Payment Awards

5.16 In some instances, acquiree awards include an automatic change in control provision and the replacement award does not require postcombination vesting (that is, the awards automatically vest upon closing of an acquisition). Consistent with the guidance in paragraphs 18–19 and 23–24 of FASB ASC 805-30-55, the fair-value-based measure of acquiree awards that include such a provision should be included in the consideration transferred for the acquiree. However, if the acquiree awards for which vesting is accelerated contain a discretionary change in control provision, further analysis is necessary in determining if the acceleration of the vesting of the awards by the acquiree was arranged primarily for the economic benefit of the acquirer (or combined entity), or if it was for the benefit of the acquiree (see the "Determining What is Part of the Business Combination Transaction" section of chapter 8, which provides guidance for determining whether a transaction is separate from the business combination). The portion of the fair-value-based measure of the acquiree's award related to the acceleration of vesting under a discretionary change in control provision would be recognized immediately in the postcombination financial statements of the combined company if it is for the benefit of the acquirer.

5.17 In some situations, acquiree awards may be modified to add a change in control provision in contemplation of a business combination. A careful analysis of all facts and circumstances is necessary to determine if the modification should be accounted for as part of the business combination or as a separate transaction (i.e., post combination compensation cost). As indicated in the preceding paragraph, entities should consider the guidance in the "Determining What is Part of the Business Combination Transaction" section of chapter 8 to determine whether the modification was arranged primarily for the economic benefit of the acquirer (or combined entity), or if it was for the benefit of the acquiree.

Contingent Consideration

Overview

5.18 Consideration transferred in a business combination can be in the form of contingent consideration. The FASB ASC Master Glossary defines *contingent consideration* as follows:

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Usually an obligation of the acquirer to transfer additional assets or equity interests to the former owners of an acquiree as part of the exchange for control of the acquiree if specified future events occur or conditions are met. However, contingent consideration also may give the acquirer the right to the return of previously transferred consideration if specified conditions are met.

5.19 Contingent consideration is often used when the buyer and seller cannot agree on the consideration for the acquired business.

5.20 Prior to accounting for a potential contingent payment to be made by the acquirer to former owners of the target in a business combination, an acquirer needs to determine whether the contingent consideration arrangement represents consideration transferred for the acquiree or is compensation to the target's employees or selling shareholders for future services. According to FASB ASC 805-10-55-25(a), a contingent consideration arrangement in which the payments are automatically forfeited if employment terminates is compensation for postcombination services.

5.21 Contingent consideration can take various forms where a fixed or variable payment will be made upon achievement of certain financial thresholds (for example, revenue; gross profit; assets under management; earnings before interest, taxes, depreciation, and amortization (EBITDA); and so on) or technical milestones (for example, regulatory approval). These arrangements often entail multiple contingencies over multiple time periods. Generally, a contingent consideration arrangement is classified as a liability unless the arrangement satisfies the conditions to be classified as equity as of the acquisition date. Though less common, when certain specified conditions are met, a contingent consideration arrangement should be classified as an asset if it entitles the acquirer to a return of some consideration paid. A contingent consideration arrangement that requires the acquirer to transfer cash or other assets to the acquiree should be classified as a liability. If the acquirer's contingent obligation is required to be (or at the acquirer's option can be) settled in shares of the acquirer, the arrangement needs to be analyzed to determine whether it should be classified as a liability or as equity. All contingent consideration arrangements are measured at fair value on the acquisition date and included in the amount of consideration transferred in the business combination.

5.22 The initial classification of the contingent consideration as an asset, liability or equity will impact the accounting in the postcombination period, as discussed in paragraphs 5.51–.52.

5.23 In some situations, an acquirer may be obligated to deliver additional consideration to the seller after the acquisition date that is not contingent on a future event occurring or on conditions being met. In such situations, the obligation is not accounted for as a contingent consideration obligation. The initial measurement of this obligation is at fair value on the acquisition date and the deferred payment is included as part of the consideration transferred. However, the subsequent accounting for this non-contingent obligation may be different than the accounting for a contingent consideration arrangement and the classification and subsequent measurement may be based on other

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applicable sections of FASB ASC depending on the nature of the obligation (e.g., FASB ASC 835, *Interest*).

5.24 In certain cases, the acquiree may have consummated a prior business combination in which it issued contingent consideration. See the "Existing Contingent Consideration of the Acquiree Acquired in Business Combination" section in chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree," for discussion of contingent consideration of the acquiree.

Classification of Contingent Consideration

5.25 Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 805, *Business Combinations*, does not provide guidance on the classification of contingent consideration arrangements but rather states in FASB ASC 805-30-25-6 that the acquirer should classify an obligation to pay contingent consideration as a liability or as equity in accordance with FASB ASC 480-10, *Distinguishing Liabilities from Equity – Overall*, FASB ASC 815-40, *Derivatives and Hedging - Contracts in Entity's Own Equity*,[2] or other applicable GAAP. The task force observes that, in practice, contingent consideration arrangements that meet the necessary conditions required for classification as equity are infrequent.

5.26 The following FASB ASC sections provide relevant guidance for determining the appropriate classification of contingent consideration:

- FASB ASC 480-10 - provides guidance on distinguishing whether certain types of instruments represent liabilities or equity
- FASB ASC 815-10-15 - provides guidance on determining whether an arrangement meets the definition of a derivative instrument
- FASB ASC 815-40-15 - provides guidance on evaluating whether an instrument is considered indexed to an entity's own stock

[2] ASU No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity,* amended the guidance in FASB ASC 815-40, *Derivatives and Hedging - Contracts in Entity's Own Equity*. Specifically, it amended the guidance on the derivatives scope exception for contracts in an entity's own equity, including related implementation and disclosure guidance.

This section reflects amendments of ASU No. 2020-06. The "Pending Content" in FASB ASC referred to in this section represents guidance that was amended by ASU No. 2020-06.

ASU No. 2020-06 is effective for public business entities that meet the definition of an SEC filer, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. An entity should adopt the guidance as of the beginning of its annual fiscal year.

Reporting entities that have not yet adopted ASU No. 2020-06 should follow the pre-amendment guidance.

- FASB ASC 815-40-25 - provides guidance on determining whether the arrangement meets the conditions for liability or equity classification if the arrangement is indexed to the acquirer's own shares

Contingent Consideration that Must be Settled in Cash

5.27 A contingent consideration arrangement that must be settled in cash is classified as a liability. An entity should also assess whether the arrangement meets the definition of a derivative per the guidance in FASB ASC 815, which applies to both freestanding instruments and embedded features. Such an instrument would, therefore, be accounted for as a derivative instrument, unless it meets one of the scope exceptions.

5.28 FASB ASC 815-10-15-83 defines a derivative instrument as a financial instrument or other contract with all of the following characteristics:

a. Underlying, notional amount, payment provision. The contract has both of the following terms, which determine the amount of the settlement or settlements, and, in some cases, whether or not a settlement is required:
    1. One or more underlyings
    2. One or more notional amounts or payment provisions or both.

b. Initial net investment. The contract requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors.

c. Net settlement. The contract can be settled net by any of the following means:
    1. Its terms implicitly or explicitly require or permit net settlement.
    2. It can readily be settled net by a means outside the contract.
    3. It provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement.

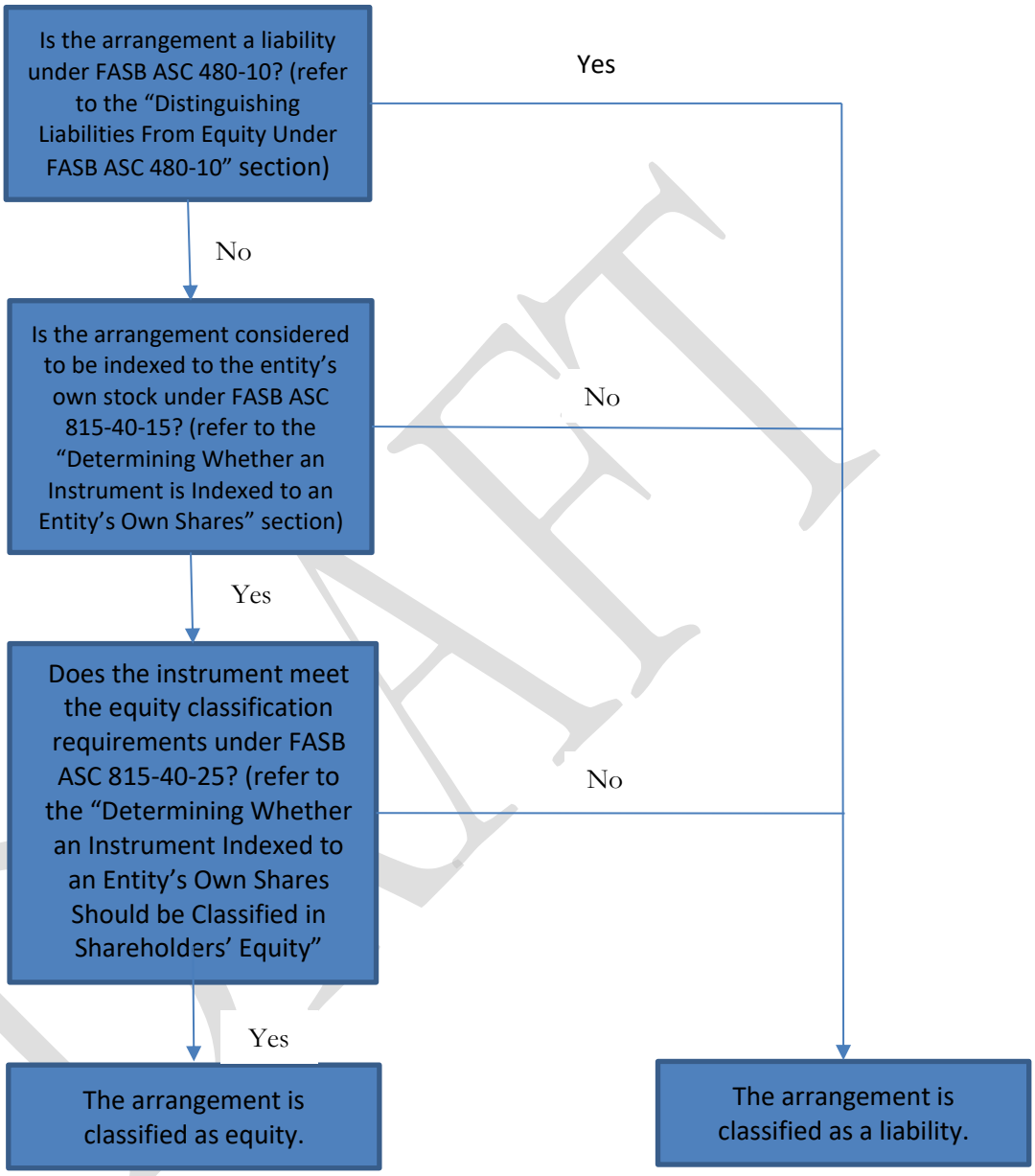
5.29 Many contingent consideration arrangements meet the preceding definition of a derivative instrument in FASB ASC 815. However, FASB ASC 815 provides several scope exceptions from derivative accounting – for example, it includes a scope exception for nonexchange traded contracts and instruments whose underlying is a specified volume of sales or service revenues by one of the parties to the contract.

Contingent Consideration that May Be Settled in the Acquirer's Own Equity Instruments – General Framework for Determining Liability versus Equity Classification

5.30 Determining the liability or equity classification of contingent consideration arrangements that are settled in the acquirer's own equity instruments can be complex and requires analysis of the facts and circumstances of each transaction. The following

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flowchart provides a general framework for evaluating how to classify a contingent consideration arrangement:



5.31 The following sections provide guidance on whether contingent consideration arrangements that are settled in shares of the acquirer's stock should be classified as a liability or as equity.

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Distinguishing Liabilities From Equity Under FASB ASC 480-10 (see the first box in the Flowchart)

5.32 FASB ASC 480-10 provides guidance on whether certain freestanding financial instruments with characteristics of both liabilities and equity should be classified as liabilities. Paragraphs 4–14 of FASB ASC 480-10-25 provide the following guidance:

> **Mandatorily Redeemable Financial Instruments**
>
> **25-4** A mandatorily redeemable financial instrument shall be classified as a liability unless the redemption is required to occur only upon the liquidation or termination of the reporting entity.
>
> **25-5** A financial instrument that embodies a conditional obligation to redeem the instrument by transferring assets upon an event not certain to occur becomes mandatorily redeemable if that event occurs, the condition is resolved, or the event becomes certain to occur.
>
> **25-6** In determining if an instrument is mandatorily redeemable, all terms within a redeemable instrument shall be considered. The following items do not affect the classification of a mandatorily redeemable financial instrument as a liability:
>
> a. A term extension option
> b. A provision that defers redemption until a specified liquidity level is reached
> c. A similar provision that may delay or accelerate the timing of a mandatory redemption.
>
> **25-7** If a financial instrument will be redeemed only upon the occurrence of a conditional event, redemption of that instrument is conditional and, therefore, the instrument does not meet the definition of mandatorily redeemable financial instrument in this Subtopic. However, that financial instrument would be assessed at each reporting period to determine whether circumstances have changed such that the instrument now meets the definition of a mandatorily redeemable instrument (that is, the event is no longer conditional). If the event has occurred, the condition is resolved, or the event has become certain to occur, the financial instrument is reclassified as a liability.
>
> **Obligations to Repurchase Issuer's Equity Shares by Transferring Assets**
>
> **25-8** An entity shall classify as a liability (or an asset in some circumstances) any financial instrument, other than an outstanding share, that, at inception, has both of the following characteristics:
>
> a. It embodies an obligation to repurchase the issuer's equity shares, or is indexed to such an obligation.

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b. It requires or may require the issuer to settle the obligation by transferring assets.

25-9 In this Subtopic, *indexed to* is used interchangeably with *based on variations in the fair value of*. The phrase *requires or may require* encompasses instruments that either conditionally or unconditionally obligate the issuer to transfer assets. If the obligation is conditional, the number of conditions leading up to the transfer of assets is irrelevant.

25-10 Examples of financial instruments that meet the criteria in paragraph 480-10-25-8 include forward purchase contracts or written put options on the issuer's equity shares that are to be physically settled or net cash settled.

25-11 All obligations that permit the holder to require the issuer to transfer assets result in liabilities, regardless of whether the settlement alternatives have the potential to differ.

25-12 Certain financial instruments that embody obligations that are liabilities within the scope of this Subtopic also may contain characteristics of assets but be reported as single items. Some examples include the following:

a. Net-cash-settled or net-share-settled forward purchase contracts
b. Certain combined options to repurchase the issuer's shares.

Those instruments are classified as assets or liabilities initially or subsequently depending on the instrument's fair value on the reporting date.

25-13 An instrument that requires the issuer to settle its obligation by issuing another instrument (for example, a note payable in cash) ultimately requires settlement by a transfer of assets, accordingly:

a. When applying paragraphs 480-10-25-8 through 25-12, this also would apply for an instrument settled with another instrument that ultimately may require settlement by a transfer of assets (warrants for puttable shares).
b. It is clear that a warrant for mandatorily redeemable shares would be a liability under this Subtopic

Certain Obligations to Issue a Variable Number of Shares

25-14 A financial instrument that embodies an unconditional obligation, or a financial instrument other than an outstanding share that embodies a conditional obligation, that the issuer must or may settle by issuing a variable number of its equity shares shall be classified as a liability (or an asset in some circumstances) if, at inception, the monetary value of the obligation is based solely or predominantly on any one of the following:

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a. A fixed monetary amount known at inception (for example, a payable settleable with a variable number of the issuer's equity shares)
b. Variations in something other than the fair value of the issuer's equity shares (for example, a financial instrument indexed to the Standard and Poor's S&P 500 Index and settleable with a variable number of the issuer's equity shares)
c. Variations inversely related to changes in the fair value of the issuer's equity shares (for example, a written put option that could be net share settled)

See paragraph 480-10-55-21 for related implementation guidance.

Questions and Answers—Classification of a Contingent Consideration Arrangement

5.33 *Question 1: Obligation to issue a variable number of shares equal to a fixed price.* Company A, a publicly traded company, acquires Company T in a business combination by issuing 500,000 common shares of Company A stock to Company T's shareholders. Company A's share price is $50 per share at the acquisition date. Company A also agrees that if the common shares of Company A are trading below $50 per share one year after the acquisition date, Company A will issue additional common shares sufficient to make the current value of the consideration equal to $25 million. Is the arrangement a liability under FASB ASC 480-10?

Answer: Yes. The arrangement is within the scope of FASB ASC 480-10 because Company A is required to settle the obligation with a variable number of its equity shares and the monetary value of the obligation varies inversely to changes in Company A's share price. Therefore, the arrangement is classified as a liability.

5.34 *Question 2: Single revenue-based performance target.* Company A, a publicly traded company, acquires Company T in a business combination. Company A also agreed to issue 100,000 of its common shares to Company T's former shareholders if Company T's revenue, as a wholly owned subsidiary of Company A, equals or exceeds $100 million during the one-year period following the acquisition. Is the arrangement a liability under FASB ASC 480-10?

Answer: No. The arrangement is not within the scope of FASB ASC 480-10 because at inception, the arrangement does not obligate Company A to transfer cash or other assets to settle the arrangement. In addition, there is no obligation to repurchase the issuer's equity shares and the task force generally believes that Company A is not obligated to deliver a variable number of shares. Further analysis under FASB ASC 815 would be required before concluding whether equity classification is appropriate.

5.35 *Question 3: Multiple revenue-based performance targets.* Assume the same facts as in question 2, except that Company A will issue 10,000 additional common shares for each $10 million increase in revenue in excess of $100 million, not to exceed 200,000 additional shares. How should Company A consider this arrangement?

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Answer: The arrangement may be within the scope of FASB ASC 480-10 because (1) it is an obligation to issue a variable number of shares and (2) the monetary value of the obligation appears to vary based on Company T's revenue, rather than the fair value of Company A's equity shares. A determination would need to be made as to whether its monetary value at inception is based solely or predominantly on variations in Company T's revenue (versus Company A's share price), and would, therefore, require liability classification. In general, the more substantive (difficult to achieve) the multiple revenue-based performance targets, the more likely the arrangement is based solely or predominantly on revenue (which is assumed to be the case in this example).

On the other hand, if the revenue target was not substantive, the monetary value of the arrangement would not be predominantly based on Company T's revenue. In this situation, further analysis under FASB ASC 815 would be required before concluding whether equity classification is appropriate.

Determining Whether an Instrument is Indexed to an Entity's Own Shares (see the second box in the Flowchart)

5.36 In determining whether an equity-linked financial instrument (or embedded feature) is indexed to an entity's own shares, FASB ASC 815-40-15-7 requires an entity to apply the following two-step approach:

a. Evaluate the instrument's contingent exercise provisions, if any.
b. Evaluate the instrument's settlement provisions.

5.37 The FASB ASC Master Glossary defines *exercise contingency* as "[a] provision that entitles the entity (or the counterparty) to exercise an equity-linked financial instrument (or embedded feature) based on changes in an underlying, including the occurrence (or nonoccurrence) of a specified event." For example, the holders may have a contingent exercise right or may have their right to exercise accelerated or extended upon satisfaction of a contingency. If the exercise contingency is based on the occurrence of an event, such as an IPO, the contingency does not preclude a conclusion that the instrument is indexed to the company's own stock. Consistent with the guidance in FASB ASC 815-40-15-7A, an exercise contingency will preclude an instrument (or embedded feature) from being considered indexed to an entity's own stock if it is based on either of the following:

a. an observable market, other than the market for the entity's own shares
b. an observable index, other than an index calculated or measured solely by reference to the entity's own operations (for example, revenue, EBITDA, net income, total equity of the issuer).

5.38 The task force believes that an index measured solely by reference to an entity's own operations can be based on the operations of an acquired entity's postcombination performance.

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5.39 If the assessment of the contingent exercise provisions does not preclude an instrument from being considered indexed to the entity's own stock, the second step to assess the settlement provisions should be performed. Under the second step, the "Pending Content" in FASB ASC 815-40-15-7C[3] provides that an instrument (or embedded feature) should be considered indexed to an entity's own stock if the settlement amount equals the difference between the fair value of a fixed number of the entity's equity shares and a fixed monetary amount (which is referred to as *the fixed-for-fixed rule*). According to the "Pending Content" in FASB ASC 815-40-15-7D,[4] the strike price or the number of shares used to calculate the settlement amount are not considered fixed if the terms of the instrument or embedded component allow for any potential adjustment, regardless of the probability of such adjustment or whether the issuer can control the adjustment. However, certain exceptions exist, as discussed in the following paragraphs.

5.40 The exception to the fixed-for-fixed rule relates to certain adjustments made to the strike price or number of shares used to calculate the settlement amount. According to the "Pending Content" in FASB ASC 815-40-15-7D,[5] those terms may be adjusted provided the only variables that could affect the settlement amount are standard inputs to the fair value of a fixed-for-fixed forward or option on equity shares. FASB ASC 815-40-15-7E indicates that these variables include items such as the term of the instrument, expected dividends, stock borrow costs, interest rates, stock price volatility, and the ability to maintain a standard hedge position. The task force believes that settlement adjustments designed to protect a holder's position from being diluted (for example, stock split) will generally not prevent an instrument (or embedded features) from being considered indexed to the entity's own stock provided the adjustments are limited to the effect that the dilutive event has on the shares underlying the instrument.

Questions and Answers—Determining Whether a Contingent Consideration Arrangement is Indexed to an Entity's Own Stock

5.41 *Question 4: Revenue indexed to the average of competitors' revenues.* Company A, a publicly traded company, acquires Company T in a business combination by issuing 2 million common shares to Company T's former shareholders. In addition, Company A agrees to issue 200,000 additional common shares to the former shareholders of Company T if Company T's revenue exceed the average of the revenues of Company T's three competitors by $2 million during the first-year period following the acquisition. Is the arrangement considered to be indexed to Company A's own stock under FASB ASC 815-40-15?

Answer: No. The arrangement is not considered indexed to Company A's own shares as the exercise contingency is based on a comparison to competitors' revenues (and not

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[3] The "Pending Content" in paragraphs 7C–7D of FASB ASC 815-40-15 reflects the amendments made to these paragraphs by ASU No. 2020-06. See footnote 2 in paragraph 5.25 for information regarding the effective date of ASU No. 2020-06.

[4] Ibid.

[5] Ibid.

solely the company's own operations). As such, equity classification would be precluded.

5.42 *Question 5: Issuance of a fixed number of the acquirer's shares based on a revenue target.* Company A, a publicly traded company, acquires Company T in a business combination. Company A agreed to issue 100,000 of its common shares to Company T's former shareholders if Company T's revenue, as a wholly owned subsidiary of Company A, equals or exceeds $100 million during the one-year period following the acquisition. Is the arrangement considered to be indexed to the entity's own stock under FASB ASC 815-40-15?

Answer: Yes. The exercise contingency (that is, Company A's subsidiary's revenue exceeding $100 million) is based on an observable index that can only be measured by reference to Company A's operations. The arrangement would not be precluded from being considered indexed to Company A's own shares under the first step. The settlement amount is considered fixed-for-fixed (that is, the settlement amount equals the difference between the fair value of Company A's 100,000 shares and a fixed exercise price of zero). Therefore, the contingent consideration arrangement is considered indexed to Company A's common shares. However, the arrangement would still require further analysis under FASB ASC 815-40-25 before concluding whether equity classification would be appropriate.

5.43 *Question 6: Issuance of a variable number of acquirer's shares based on multiple revenue-based performance targets.* Assume the same facts as in question 5, except that Company A will issue 1,000 additional common shares for each $10,000 increase in revenue in excess of $100 million, not to exceed 100,000 additional shares. Assume for purposes of this example that this instrument is not in the scope of FASB ASC 480-10. Is the arrangement considered to be indexed to the entity's own stock under FASB ASC 815-40-15?

Answer: No. For the first step, the analysis and conclusion are the same as that in question 5. However, the settlement of the arrangement is not considered fixed-for-fixed because the number of shares that can be issued is not fixed (that is, the settlement amount varies based on Company T's revenue, which is not a direct input for valuing a fixed-for-fixed option or forward on Company A's equity shares). As such, equity classification would be precluded because the contingent consideration arrangement is not considered indexed to Company A's common shares.

Determining Whether an Instrument Indexed to an Entity's Own Shares Should be Classified in Shareholders' Equity (see the third box in the Flowchart)

5.44 If the contingent consideration arrangement is considered indexed to the acquirer's own stock under FASB ASC 815-40-15, the guidance in FASB ASC 815-40-25 is applied to determine whether equity classification is appropriate. The basic premise underlying FASB ASC 815-40-25 is that share settlement must be within the entity's control for equity classification to be appropriate. In contrast, liability classification is appropriate when the instrument either:

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— requires net-cash settlement; or
— provides the counterparty (instead of the entity) with a choice of net-cash settlement.

5.45 Further, the "Pending Content" in FASB ASC 815-40-25-10[6] provides that all of the following additional conditions must be met for a contract to be classified as equity:

b. *Entity has sufficient authorized and unissued shares*. The entity has sufficient authorized and unissued shares available to settle the contract after considering all other commitments that may require the issuance of stock during the maximum period the derivative instrument could remain outstanding.

c. *Contract contains an explicit share limit*. The contract contains an explicit limit on the number of shares to be delivered in a share settlement.

d. *No required cash payment (with the exception of penalty payments) if entity fails to timely file*. There is no requirement to net cash settle the contract in the event the entity fails to make timely filings with the Securities and Exchanges Commission (SEC).

e. *No cash-settled top-off or make-whole provisions*. There are no cash settled top-off or make-whole provisions.

5.46 The "Pending Content" in FASB ASC 815-40-25-10A[7] provides that the following conditions are not required to be considered in an entity's evaluation of net cash settlement (that is, if any one of these provisions is in a contract [or the contract is silent on these points], they should not preclude equity classification, except as described below):

a. Whether settlement is required in registered shares, unless the contract explicitly states that an entity must settle in cash if registered shares are unavailable. Requirements to deliver registered shares do not, by themselves, imply that an entity does not have the ability to deliver shares and, thus, do not require a contract that otherwise qualifies as equity to be classified as a liability.

b. Whether counterparty rights rank higher than shareholder rights. If the provisions of the contract indicate that the counterparty has rights that rank

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[6] The "Pending Content" in FASB ASC 815-40-25-10 reflects the amendments made to this paragraph by ASU No. 2020-06. Note that subparagraphs a, f, and g have been superseded by ASU No. 2020-06.
See footnote 2 in paragraph 5.25 for information regarding the effective date of ASU No. 2020-06.

[7] The "Pending Content" in FASB ASC 815-40-25-10A was added to FASB ASC by ASU No. 2020-06. See footnote 2 in paragraph 5.25 for information regarding the effective date of ASU No. 2020-06.

higher than the rights of a shareholder of the stock underlying the contract, this provision does not preclude equity classification.

c. Whether collateral is required. A provision requiring the entity to post collateral at any time for any reason does not preclude equity classification.

5.47 A contingent consideration arrangement that is not within the scope of FASB ASC 480 and is indexed to the entity's own stock and that meets the requirements for equity classification would be classified as equity at the acquisition date.

Unit of Account

5.48 Significant judgment may be required to determine the appropriate unit of account for a contingent consideration arrangement. When an arrangement contains multiple performance targets, it is important to consider all relevant facts and circumstances to determine whether the unit of account is the overall arrangement or the separate performance targets within the overall arrangement. The task force believes that each performance target would need to have discrete risk exposures to be assessed as a separate unit of account. For example, if the contingent consideration arrangement:

- covers multiple reporting periods
- contains an obligation that will be settled in a fixed number of shares in each reporting period if the performance target for that reporting period is met and
- the shares delivered in each reporting period would not be affected by the performance outcome of the other reporting periods,

then it may be appropriate to conclude that the contingent consideration arrangement includes separate units of account for each reporting period that result in the delivery of a fixed number of shares. If the shares to be delivered are based on the performance targets for multiple reporting periods that are interrelated and not independent of each other, then it may be appropriate to conclude that the contingent consideration arrangement is one unit of account that results in the delivery of a variable number of shares. Once units of account are determined, each would need to be evaluated separately to determine its appropriate classification.

Questions and Answers—Determining the Unit of Account in a Contingent Consideration Arrangement

5.49 *Question 7: Unit of account – consecutive periods with independent targets.* Company A, a publicly traded company, acquires Company T in a business combination. Company A agreed to issue 100,000 of its common shares to Company T's former shareholders if Company T's revenue, as a wholly owned subsidiary of Company A, equals or exceeds $100 million during the one-year period following the acquisition. In addition, Company A agrees to issue 50,000 additional common shares to the former shareholders of Company T if Company T's revenue, as a wholly-owned subsidiary of Company A, equals or exceeds $150 million during the second one-year period following the acquisition. The achievement of these targets is independent of each other. How many units of account are encompassed in this arrangement?

Answer: Two units of account. Since the year one and year two outcomes are independent and are not interrelated (that is, revenue in the one-year period after the acquisition has no bearing on the second one–year period following the acquisition), the arrangement would be treated as two separate units of account that each result in the delivery of a fixed number of shares. Company A would then look to other GAAP to determine the classification of the contingent consideration.

5.50 *Question 8: Unit of account – multiple periods with payment dependent on the individual outcomes.* Company A, a publicly traded company, acquires Company T in a business combination. Company A agreed to issue 100,000 of its common shares to Company T's former shareholders if Company T's revenue, as a wholly owned subsidiary of Company A, equals or exceeds $100 million during the one-year period following the acquisition. If Company T's cumulative revenue (year one and year two) equals or exceeds $220 million for the two-year period following the acquisition, Company A agrees to issue 250,000 of its common shares to the former shareholders of Company T subject to the outcome of the one-year period contingency (i.e., if the year one revenue target is achieved, the payout at the end of year two if the cumulative revenue target is achieved will be 150,000 additional shares). How many units of account are encompassed in this arrangement?

Answer: One unit of account. Since the year one and year two outcomes are not independent of one another and they share similar risks (that is, the number of shares to be delivered is based on cumulative revenue over a two-year period, which means that the revenue earned in year one will affect the number of shares to be delivered in year two), the arrangement would be treated as a single unit of account that results in the delivery of a variable number of shares. Company A would then look to other GAAP to determine the classification of the contingent consideration.

Subsequent Accounting and Reassessment of Classification

5.51 As indicated in FASB ASC 805-30-35-1, contingent consideration classified as an asset or a liability should be remeasured to fair value at each reporting date until the contingency is resolved. The task force believes changes in fair value should be reflected in operating income or expense (if the acquirer presents such a subtotal) unless the contingent consideration qualifies as a designated cash flow hedging instrument, in which case FASB ASC 815-20-35 requires the change in fair value to be recognized in other comprehensive income.

5.52 According to FASB ASC 805-30-35-1, contingent consideration classified as equity should not be remeasured in the postcombination period and its subsequent settlement should be accounted for within equity. The initial amount recognized for contingent consideration classified as equity is not adjusted even if the fair value of the arrangement on the settlement date is different.

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5.53 Consistent with the "Pending Content" in FASB ASC 815-40-35-8,[8] the classification of a contingent consideration arrangement as equity or liability should be reassessed at each balance sheet date. Consistent with the "Pending Content" in paragraphs 9–10 of FASB ASC 815-40-35,[9] if the contingent consideration arrangement is reclassified from equity to an asset or a liability, the change in fair value of the contract during the period the contract was classified as equity should be accounted for as an adjustment to stockholders' equity. Subsequently, the contract should be marked to fair value through earnings. If the contingent consideration arrangement is reclassified from an asset or a liability to equity, gains or losses recorded to account for the contract at fair value during the period that the contract was classified as an asset or a liability should not be reversed.

Arrangements Tied to Continuing Employment

5.54 According to FASB ASC 805-10-55-24, understanding why the contingent payments are included in the arrangement, which party (the acquiree or the acquirer) initiated the arrangement and when the parties entered into the arrangement may help to determine whether the contingent payments to employees or selling shareholders are contingent consideration or a separate transaction.

5.55 FASB ASC 805-10-55-25 states that

> If it is not clear whether an arrangement for payments to employees or selling shareholders is part of the exchange for the acquiree or is a transaction separate from the business combination, the acquirer should consider the following indicators:
>
> a. *Continuing employment*. The terms of continuing employment by the selling shareholders who become key employees may be an indicator of the substance of a contingent consideration arrangement. The relevant terms of continuing employment may be included in an employment agreement, acquisition agreement, or some other document. A contingent consideration arrangement in which the payments are automatically forfeited if employment terminates is compensation for postcombination services. Arrangements in which the contingent payments are not affected by employment termination may indicate that the contingent payments are additional consideration rather than compensation.
>
> b. *Duration of continuing employment*. If the period of required employment coincides with or is longer than the contingent payment period, that fact

[8] The "Pending Content" in paragraphs 8–10 of FASB ASC 815-40-35 reflects the amendments made to these paragraphs by ASU No. 2020-06. See footnote 2 in paragraph 5.25 for information regarding the effective date of ASU No. 2020-06.

[9] Ibid.

may indicate that the contingent payments are, in substance, compensation.

c. *Level of compensation*. Situations in which employee compensation other than the contingent payments is at a reasonable level in comparison to that of other key employees in the combined entity may indicate that the contingent payments are additional consideration rather than compensation.

d. *Incremental payments to employees*. If selling shareholders who do not become employees receive lower contingent payments on a per-share basis than the selling shareholders who become employees of the combined entity, that fact may indicate that the incremental amount of contingent payments to the selling shareholders who become employees is compensation.

e. *Number of shares owned*. The relative number of shares owned by the selling shareholders who remain as key employees may be an indicator of the substance of the contingent consideration arrangement. For example, if the selling shareholders who owned substantially all of the shares in the acquiree continue as key employees, that fact may indicate that the arrangement is, in substance, a profit-sharing arrangement intended to provide compensation for postcombination services. Alternatively, if selling shareholders who continue as key employees owned only a small number of shares of the acquiree and all selling shareholders receive the same amount of contingent consideration on a per-share basis, that fact may indicate that the contingent payments are additional consideration. The preacquisition ownership interests held by parties related to selling shareholders who continue as key employees, such as family members, also should be considered.

f. *Linkage to the valuation*. If the initial consideration transferred at the acquisition date is based on the low end of a range established in the valuation of the acquiree and the contingent formula relates to that valuation approach, that fact may suggest that the contingent payments are additional consideration. Alternatively, if the contingent payment formula is consistent with prior profit-sharing arrangements, that fact may suggest that the substance of the arrangement is to provide compensation.

g. *Formula for determining consideration*. The formula used to determine the contingent payment may be helpful in assessing the substance of the arrangement. For example, if a contingent payment is determined on the

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basis of a multiple of earnings, that might suggest that the obligation is contingent consideration in the business combination and that the formula is intended to establish or verify the fair value of the acquiree. In contrast, a contingent payment that is a specified percentage of earnings might suggest that the obligation to employees is a profit-sharing arrangement to compensate employees for services rendered.

h. *Other agreements and issues*. The terms of other arrangements with selling shareholders (such as noncompete agreements, executory contracts, consulting contracts, and property lease agreements) and the income tax treatment of contingent payments may indicate that contingent payments are attributable to something other than consideration for the acquiree. For example, in connection with the acquisition, the acquirer might enter into a property lease arrangement with a significant selling shareholder. If the lease payments specified in the lease contract are significantly below market, some or all of the contingent payments to the lessor (the selling shareholder) required by a separate arrangement for contingent payments might be, in substance, payments for the use of the leased property that the acquirer should recognize separately in its postcombination financial statements. In contrast, if the lease contract specifies lease payments that are consistent with market terms for the leased property, the arrangement for contingent payments to the selling shareholder may be contingent consideration in the business combination.

5.56 These indicators are applied to all arrangements for payments to employees or selling shareholders, including both cash compensation and share-based awards. Additionally, arrangements between the selling shareholders and the acquiree's employees are evaluated to determine whether such arrangements were entered into for the benefit of the acquirer and thus represent compensation.

Questions and Answers—Application of the Indicators in FASB ASC 805-10-55-25 to Contingent Consideration Arrangements to Determine the Nature of the Arrangement

5.57 *Question 9: Contingent consideration arrangement – forfeiture of consideration linked to employment.* Company T is owned by a sole shareholder who is also the CEO of Company T. Company T is acquired by Company A. The CEO of Company T will, per the terms of the purchase agreement, receive additional consideration for the acquisition based on specific EBITDA levels of Company T over the two-year period following the acquisition. The arrangement also stipulates that the CEO of Company T will forfeit any rights to the additional consideration if the CEO is not an employee of Company A or Company T at the end of the two-year period. Are these payments to the CEO of Company T for achievement of the specific EBITDA levels contingent consideration or a separate transaction?

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Answer: Separate transaction. As indicated in FASB ASC 805-10-55-25(a), a contingent consideration arrangement in which the payments are automatically forfeited if employment terminates is compensation for postcombination services. Accordingly, any payments made to the CEO of Company T for achievement of the specific EBITDA levels would be accounted for as postcombination compensation cost.

5.58 *Question 10: Arrangement between a nonemployee selling shareholder and an employee of the acquiree.* Company T is owned by a sole shareholder ("Seller") who is not an employee of Company T. Company T is acquired by Company A for $200 million and a contingent payment of $25 million, payable to Seller upon reaching a certain EBITDA target in the next year. Seller retains no ownership interest in Company T. Seller entered into a separate agreement with the CEO of Company T, who will be retained by Company A, and agreed to pay $1.5 million of the contingent consideration to the CEO if he remains employed by Company A post acquisition and Seller receives the $25 million contingent consideration payment. (Note this payment of $25 million by Company A to the Seller is not contingent upon employment of any individual, including the CEO. However, the payment of $1.5 million from the Seller to the CEO is contingent on employment). The side agreement is entered into at the time of the acquisition and Company A is aware of it, but did not participate in its negotiations. The compensation paid to the CEO by Company A is set at a level commensurate with his title and responsibilities. In the year following the acquisition the EBITDA target was reached. The $25 million was paid to Seller, and the CEO received $1.5 million from Seller. How would Company A account for the contingent consideration and the compensation element at the acquisition date?

Answer: Even though this example does not involve share-based payments, the task force believes FASB ASC 718-10-15-4 provides relevant guidance and, therefore, it is appropriate to consider it by analogy. Specifically, it states that:

> Share-based payments awarded to a grantee by a related party or other holder of an economic interest in the entity as compensation for goods or services provided to the reporting entity are share-based payment transactions to be accounted for under this Topic unless the transfer is clearly for a purpose other than compensation for goods or services to the reporting entity.

The payment to the CEO based on his continued employment with Company A will be reflected as compensation cost in Company A's financial statements. To account for this arrangement, Company A would separate the transaction into two components, one being consideration transferred for the business and the second being a compensatory arrangement with the CEO. Company A would record the fair value of the $23.5 million contingent payment as a contingent consideration liability at the acquisition date, and the $1.5 million consideration received by the CEO as compensation cost as the services are rendered by the CEO, beginning once achievement of the milestone becomes probable. When the milestone is reached, the compensation cost liability and the contingent consideration liability will be relieved when the $25 million is transferred to Seller.

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In-substance Service Period

5.59 The task force observes that there may be situations in which the eligibility for contingent payment is not dependent on future employment but the terms of the arrangement are such that they compel the employee to provide service to the acquirer or combined entity for a period of time. For example, there may be cases where (1) the acquired business operates in a highly specialized industry and the employee is integral to the future success of the business (with limited other individuals who possess commensurate expertise), (2) the employee enters into an employment agreement that is longer than the contingent payment period and the agreement includes a substantive penalty provision if the employee were to leave early and (3) the value of the contingent payment is disproportionately high relative to the upfront payment received. The task force believes that the terms of the arrangement may function as an in-substance vesting condition and create an in-substance service period resulting in the arrangement being accounted for as compensation for post combination services. This evaluation will require the exercise of professional judgment based on the particular facts and circumstances.

Bonus Arrangements

5.60 Preexisting employment or other agreements with key employees (who may also be shareholders) may provide for a bonus payable in cash, shares or both upon a change of control. When triggered by a business combination, these arrangements would need to be analyzed to determine if they represent compensation for postcombination services. If the arrangement was included in the employment agreement prior to contemplation of the business combination, and there is no postcombination service required, the consideration would not be associated with postcombination services. Accordingly, the bonus payable would be part of the liabilities assumed by the acquirer in the business combination.

5.61 Other times, as part of the negotiations of the acquisition agreement, the acquiree or acquirer may provide key employees of the acquiree with a bonus if they continue employment until, or for a certain amount of time after, the acquisition date. These arrangements would also need to be analyzed to determine whether they are part of the liabilities assumed by the acquirer in the business combination or constitute compensation for postcombination service.

5.62 For example, there are situations in which the acquiree will establish at closing a bonus arrangement if certain of the acquiree's key employees remain employed by the acquirer for a certain amount of time. As this arrangement is for the benefit of the acquirer, the bonus is treated as compensation cost and recorded in a systematic and rational manner during the post-combination period.

Questions and Answers—Preexisting Bonus Arrangement

5.63 The following question is based on the examples included in paragraphs 34–36 of FASB ASC 805-10-55.

5.64 *Question 11: Arrangement for contingent payment to an employee.* In 2X10, Company T hired a new CEO under a 10-year contract. The contract required Company T to pay the

CEO $5 million if Company T is acquired before the contract expires, and the CEO remains employed through the acquisition date. In 2X14, Company A acquired Company T. The CEO was still employed by Company T at the acquisition date and is, therefore, eligible to receive the payment under the existing contract. The CEO is not obligated to remain employed after the acquisition date. How should Company A account for the $5 million payment?

Answer: Company T entered into the employment agreement before the negotiations of the business combination began, and the purpose of the agreement was to obtain the services of the CEO. Thus, there is no evidence that the agreement was arranged primarily to provide benefits to Company A or the combined entity. As there is no continued service period required, the $5 million payment is associated with precombination service. The bonus payable would be part of the liabilities assumed by Company A.

Dual Trigger Arrangements

5.65 Commonly referred to as *dual trigger arrangements*, preexisting employment agreements often include clauses that provide for payments upon a change of control and an action by the acquirer within a defined period of time from the acquisition date (for example, termination of employment or change in responsibility which could be considered a substantive termination). Employment agreements of the acquiree would need to be evaluated to determine whether the payment is primarily for the economic benefit of the acquirer by considering the reasons for the transaction, who initiated the transaction, and the timing of the transaction pursuant to FASB ASC 805-10-55-18.

5.66 If it is determined that the payment is primarily for the economic benefit of the acquirer, the payment is accounted for separately from the business combination and recognized as compensation cost to the acquirer.

5.67 In most cases, the dual trigger clause effectively places the decision to terminate the acquiree's employees in the control of the acquirer and, thus, the decision would be made primarily for the acquirer's economic benefit (for example, reduced cost).

Questions and Answers—Accounting for Dual Trigger Arrangements

5.68 *Question 12: Payment conditioned upon a dual trigger consisting of change in control and termination.* Company A acquires Company T in a business combination. Company T has an existing employment agreement in place with a key employee that states that the key employee's severance payment will fully vest upon a change in control and termination of employment within 18 months following the acquisition date. The employment agreement was in place before Company A and Company T began negotiations for the acquisition of Company T. The severance payment vests only if the employee is subsequently terminated without cause or leaves for good reason as defined in the employment contract.

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Prior to the acquisition date, Company A had determined it would not offer employment to the key employee of Company T, effectively terminating employment on the acquisition date. How should Company A account for this arrangement?

Answer: Company A would immediately recognize compensation cost in its postcombination period. The payment is conditioned upon both a change in control of the acquiree and the termination of employment of the key employee. At the acquisition date, both conditions were triggered. The decision not to employ the key employee was in the control of Company A and effectively made for its primary economic benefit (for example, reduce cost) and, therefore, would be recorded separately from the business combination.

Last Man Standing Arrangements

5.69 In connection with a business combination, the acquirer may grant to a group of employees consideration that is reallocated equally among the remaining employees if any of the employees terminate employment prior to the end of a defined vesting period (which are commonly referred to as *last man standing arrangements*). Although the terms and conditions of last man standing arrangements can vary, they are typically considered compensation for postcombination services as they require some degree of continued service for an employee to receive a payment.

Questions and Answers—Last Man Standing Arrangements

5.70 *Question 13: Last man standing arrangement.* Company A acquires Company T and, as part of the acquisition agreement, grants each of ten key employees of the acquiree a cash bonus award of $1.5 million (total of $15 million) that vests and becomes payable at the end of the third year of service in the event that Company T achieves certain pre-determined sales targets for the three years following the acquisition. If employment is terminated before the end of three years (that is, the vesting date), the employee's cash bonus award is forfeited and redistributed among the remaining employees within the group. Although unlikely, if none of the employees remain employed at the end of the three-year service period but the relevant sales targets are still achieved, all of the previous shareholders of Company T will receive the additional payment in proportion to their previous ownership. How should Company A account for this arrangement?

Answer: As long as the relevant sales targets are achieved, the contingent payment will be made by the acquirer. The entire $15 million payment should be accounted for as compensation cost by Company A as the payment is tied to the employment of one or more key employees and is intended to incentivize those employees to stay with the company. As employees leave the company, the remaining ones are further motivated to stay because the per-person cash bonus award increases. The existence of the provision to pay previous shareholders if no key employees remain employed is not considered to be substantive and does not overcome the fact that the arrangement is designed to incentivize and compensate key employees for staying with the company.

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Amounts Held in Escrow for General Representations and Warranties

5.71 In certain business combinations, a portion of the consideration may be held in escrow pending resolution of general representation and warranty provisions contained in the acquisition agreement. Such arrangement provides assurance for an acquirer that the general representations and warranties provided in the acquisition agreement are accurate. In the absence of evidence to the contrary, general representations and warranties provided in the business combination agreement would be expected to be valid as of the acquisition date. In contrast, FASB ASC Master Glossary defines contingent consideration as consideration to be transferred "if specified future events occur or conditions are met." Therefore, payments for facts and circumstances that existed at the balance sheet date (such as representations and warranties) would not meet the definition of contingent consideration.

5.72 Because general representations and warranties would be expected to be valid as of the acquisition date, release of the consideration from escrow is likely to occur. Therefore, the task force believes it is generally considered appropriate to include the amounts in escrow for general representations and warranties in the total consideration transferred as of the acquisition. In addition, an acquirer would need to evaluate the legal terms of the escrow arrangement to conclude whether it can present the amounts held in escrow as an asset on its balance sheet.

Working Capital Adjustment

5.73 In certain business combinations, a *working capital* adjustment provision is included in a purchase and sale agreement when some uncertainty exists about the working capital that existed on the acquisition date. Similar to general representation and warranty provisions, working capital is determined at the acquisition date and subsequent adjustments are based on facts and circumstances existing as of that date. Therefore, working capital adjustments made after the acquisition date but before the end of the measurement period are not considered contingent consideration; rather, they are generally considered measurement-period adjustments and would be included in the consideration transferred by the acquirer (see the "Measurement Period" section in chapter 8). Working capital adjustments made after the end of the measurement period are recognized as a charge or credit to income.

Effect of Contingent Equity Issued in a Business Combination on Earnings per Share

5.74 When contingent consideration arrangements require the issuance of additional common shares in the future, the shares are considered contingently issuable and may affect the acquirer's computation of basic and diluted earnings per share (EPS). Paragraphs 12A–13 and 48-57 of FASB ASC 260-10-45 provide EPS guidance for contingently issuable shares, while paragraphs 53–56 of FASB ASC 260-10-55 provide a related illustration.

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Chapter 6

Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree

Recognition and Measurement Principles and Related Exceptions

6.01 FASB ASC 805-20-25-1 specifies the recognition principle applicable to business combinations, which is as follows: "As of the acquisition date, the acquirer shall recognize, separately from goodwill, the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree." It also indicates that recognition of identifiable assets acquired and liabilities assumed as part of a business combination is subject to the conditions specified in paragraphs 2–3 of FASB ASC 805-20-25, which require that in order to be recognized the item acquired or assumed should:

a. Meet the definition of an asset or liability at the acquisition date, and

b. Be part of the business combination rather than the result of a separate transaction.

6.02 If the acquirer is a private company, FASB ASC 805-20-25-1 provides that it may elect to apply the accounting alternative for the recognition of certain identifiable intangible assets (which is discussed in the "Intangible Asset Accounting Alternative for Private Companies" section of chapter 8, "Other Accounting Topics").

6.03 FASB ASC 805-20-30-1 describes the measurement principle applicable to business combinations which requires the acquirer to measure the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at their acquisition-date fair values.

6.04 However, as noted in the "Pending Content" in FASB ASC 805-20-25-16, FASB ASC 805 provides limited exceptions to the recognition and measurement principles applicable to business combinations. The "Pending Content" in FASB ASC 805-20-25-17 specifies the following exceptions to the recognition principle (which are further discussed in paragraphs 18A–28C of FASB ASC 805-20-25) and the "Pending Content" in FASB ASC 805-20-30-12 specifies the following exceptions to the measurement principle (which are further discussed in paragraphs 13–30 of FASB ASC 805-20-30):

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	Exception to the:		Section in this guide where each exception is discussed
	recognition principle	measurement principle	
Assets and liabilities arising from contingencies	x	x (limited to certain assets and liabilities arising from contingencies)	"Preacquisition Contingencies" section of this chapter
Income taxes	x	x	"Income Taxes" section of this chapter
Employee benefits	x	x	"Pensions and Other Employee Benefits" section of this chapter
Indemnification assets	x	x	"Indemnification Assets" section of this chapter
Leases[1]	x	x	"Leases" section of this chapter
Contract assets and contract liabilities[2]	x	x	"Assets and Liabilities Associated with Acquired Contracts with Customers" section of this chapter
Reacquired rights		x	"Reacquired Rights" section in chapter 8
Share-based payment awards		x	"Share-Based Payment Replacement Awards" section in chapter 5
Assets held for sale		x	"Property, Plant and Equipment" and "Acquired Intangible Assets to be Sold" sections of this chapter
Purchased financial assets with credit deterioration[3]		x	"Trade and Other Receivables" section of this chapter

[1] This guide reflects provisions of ASU No. 2016-02, *Leases (Topic 842)*, which, among other things, amended FASB ASC 805-20 to add leases to the list of exceptions to the recognition and measurement principles applicable to business combinations. However, there are no recognition or measurement exceptions for leases accounted for under FASB ASC 840, *Leases*.

See footnote 17 in the "Leases" section of this chapter for ASU No. 2016-02 effective date.

[2] This guide reflects provisions of ASU No. 2021-08, *Business Combinations (Topic 805)–Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, which, among other things, amended FASB ASC 805-20 to add contract assets and contract liabilities to the list of exceptions to the recognition and measurement principles applicable to business combinations.

See footnote 25 in paragraph 6.183 for ASU No. 2021-08 effective date.

[3] This guide reflects provisions of ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*, which, among other things, amended FASB ASC 805-20 to add *purchased financial assets with credit deterioration* to the list of exceptions to the measurement principle applicable to business combinations.

See footnote 4 in the "Trade and Other Receivables" section of this chapter for ASU No. 2016-13 effective date.

Assets

Trade and Other Receivables[4] [5]

6.05 Under the "Pending Content" in FASB ASC 805-20, there are two models for initial measurement of financial assets in the scope of FASB ASC 326 that are acquired in a business combination, including trade and other receivables, depending on whether they represent purchased financial assets with credit deterioration (PCD assets). While non-PCD assets are recognized at the acquisition-date fair value, PCD assets represent an exception to the fair value measurement principle in FASB ASC 805.

6.06 The "Pending Content" in FASB ASC Master Glossary defines *purchased financial assets with credit deterioration* as

> Acquired individual (or acquired groups of financial assets with similar risk characteristics) that as of the date of acquisition have experienced a more-than-insignificant deterioration in credit quality since origination, as determined by an acquirer's assessment. See paragraph 326-20-55-5 for more information on the meaning of similar risk characteristics for assets measured on an amortized cost basis.

6.07 The "Pending Content" in paragraphs 4A–4B and 26 of FASB ASC 805-20-30 provides the following guidance on initial measurement of non-PCD and PCD assets:

> **30-4A** For acquired financial assets that are not purchased financial assets with credit deterioration, the acquirer shall record the purchased financial assets at the acquisition-date fair value. Additionally, for these financial assets within the scope of Topic 326, an allowance shall be recorded with a corresponding charge to credit loss expense as of the reporting date.
>
> **30-4B** For assets accounted for as purchased financial assets with credit deterioration (which includes beneficial interests that meet the criteria in paragraph

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[4] This section reflects provisions of ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments.* The "Pending Content" in FASB ASC referred to in this section represents guidance that was added or amended by ASU No. 2016-13.

ASU No. 2016-13 is effective for public business entities that are SEC filers, excluding entities eligible to be smaller reporting companies as defined by the SEC, for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. For all other entities, ASU No. 2016-13 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early application is permitted for all entities for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years.

Reporting entities that have not yet adopted ASU No. 2016-13 should follow the guidance in FASB ASC 805-20 prior to ASU No. 2016-13 amendments.

[5] On July 14, 2021, FASB added a project to its agenda to address the accounting for acquired financial assets within the scope of ASU No. 2016-13. The objective of this project is to consider (1) expanding the scope of the purchased credit deteriorated (PCD) accounting model to all loans acquired in a business combination and (2) modifying the presentation of expected credit losses for acquired financial assets that meet the definition of PCD. This project may result in amendments to ASU No. 2016-13 and, as a result, have an impact on this section. Please refer to the FASB website for the latest information on this project.

325-40-30-1A), an acquirer shall recognize an allowance in accordance with Topic 326 with a corresponding increase to the amortized cost basis of the financial asset(s) as of the acquisition date.

30-26 An acquirer shall recognize purchased financial assets with credit deterioration (including beneficial interests meeting the conditions in paragraph 325-40-30-1A) in accordance with Section 326-20-30 for financial instruments measured at amortized cost or Section 326-30-30 for available-for-sale debt securities. Paragraphs 326-20-55-57 through 55-78 illustrate how the guidance is applied for purchased financial assets with credit deterioration measured at amortized cost. Paragraphs 326-30-55-5 through 55-7 illustrate how the guidance is applied to available-for-sale debt securities. An acquirer shall not accrete into interest income the credit losses embedded in the purchase price for purchased financial assets with credit deterioration.

6.08 A company initially measures the amortized cost of a PCD asset by determining the acquisition date estimate of expected credit losses under the applicable impairment model (e.g., FASB ASC 326-20) and adding that amount to the asset's fair value. A valuation allowance for expected credit losses is recognized separate and apart from the PCD asset to establish its amortized cost on the acquisition date and no credit loss expense is recognized upon acquisition.

6.09 A separate valuation allowance is not recognized for non-PCD assets as part of the business combination. Instead, the expected credit loss measured under the credit impairment model that applies to that type of financial asset is recognized in net income in the period that includes the business combination.

Inventory

6.10 The FASB ASC Master Glossary defines *inventory* as

> The aggregate of those items of tangible personal property that have any of the following characteristics:
>
> a. Held for sale in the ordinary course of business
>
> b. In process of production for such sale
>
> c. To be currently consumed in the production of goods or services to be available for sale.
>
> The term inventory embraces goods awaiting sale (the merchandise of a trading concern and the finished goods of a manufacturer), goods in the course of production (work in process), and goods to be consumed directly or indirectly in production (raw materials and supplies). This definition of inventories excludes long-term assets subject to depreciation accounting, or goods which, when put into use, will be so classified. The fact that a depreciable asset is retired from regular use and held for sale does not indicate that the item should be classified as part of

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the inventory. Raw materials and supplies purchased for production may be used or consumed for the construction of long-term assets or other purposes not related to production, but the fact that inventory items representing a small portion of the total may not be absorbed ultimately in the production process does not require separate classification. By trade practice, operating materials and supplies of certain types of entities such as oil producers are usually treated as inventory.

6.11 In a business combination, inventory is recognized and measured at fair value. The method of accounting for inventories (for example, FIFO, LIFO, weighted average cost, specific identification) does not impact the determination of the fair value of the acquired inventory. See the "Inventory" section in chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed," for further guidance on valuation of inventory.

Subsequent Accounting for LIFO Inventories

6.12 If the acquirer follows the LIFO inventory method, guidance for subsequent accounting for acquired LIFO inventory is provided in paragraphs 9–15 of the AICPA's November 30, 1984, Issues Paper, *Identification and Discussion of Certain Financial Accounting and Reporting Issues Concerning LIFO Inventories* (LIFO Issues Paper). The LIFO Issues Paper provides that if the acquired inventory is combined into an existing LIFO pool of the acquirer, the fair value of the acquired inventory should be considered part of the current period's purchases for purposes of the acquirer's calculations of inventory increments or decrements in the period. If the inventory of the acquired entity is treated as a separate LIFO pool, the fair value of the acquired inventory should be considered the LIFO base inventory.

Property, Plant and Equipment

6.13 According to FASB ASC 360-10-05-3, property, plant, and equipment typically consist of long-lived tangible assets used to create and distribute an entity's products and services and include land and land improvements, buildings, machinery and equipment, and furniture and fixtures. Property, plant, and equipment may also include leasehold improvements, construction-in-progress, and other related tangible assets.

6.14 The measurement of property, plant, and equipment depends on whether the acquirer intends to use or sell the acquired assets. Acquired property, plant, and equipment to be used by the acquirer should be measured at its acquisition-date fair value. FASB ASC 805-20-30-22 provides that acquired property, plant, and equipment that is classified as held for sale at the acquisition date should be measured at fair value less costs to sell in accordance with the guidance in paragraphs 38–43 of FASB ASC 360-10-35. According to FASB ASC 360-10-45-12, an acquirer should classify newly acquired long-lived assets, including property, plant, and equipment, as held for sale at the acquisition date if the newly acquired asset is expected to be sold within one year and the other held for sale criteria in FASB ASC 360-10-45-9 that are not met at the acquisition date are probable of being met within a short period following the acquisition (usually within three months).

6.15 Acquired property, plant, and equipment may have an existing asset retirement obligation. FASB ASC 410-20 provides guidance on asset retirement obligations, which applies to legal obligations associated with the retirement of tangible long-lived assets that result from the acquisition, construction, or development or the normal operation of a long-lived asset, except for certain obligations of lessees (as indicated in paragraphs 1–3 of FASB ASC 410-20-15). The acquirer should recognize separately the acquisition-date fair value of the obligation in accordance with FASB ASC 410-20. Specifically, FASB ASC 410-20-25-5 provides that an entity should capitalize an asset retirement cost by increasing the carrying amount of the related long-lived asset by the same amount as the liability. For example, as part of a business combination, Company A acquires a plant with an associated asset retirement obligation. Company A determines the fair value of the plant to be $500 million (net of the asset retirement obligation of $100 million). Company A would record the plant at $600 million and a liability for the asset retirement obligation at $100 million.

6.16 See the "Property, Plant and Equipment" section in chapter 13 for further guidance on valuation of acquired property, plant and equipment.

Identifiable Intangible Assets

6.17 The FASB ASC Master Glossary defines *intangible assets* as "[a]ssets (not including financial assets) that lack physical substance. (The term intangible assets is used to refer to intangible assets other than goodwill.)" In a business combination, only those intangible assets that are *identifiable* are recognized separately from goodwill. An intangible asset is identifiable if it meets either the separability criterion or the contractual-legal criterion, as described in the following sections. Some common intangible assets that are either separable or arise from contractual-legal rights and, therefore, are recognized separately in a business combination include customer lists, customer contracts and related customer relationships, brands, patents, trademarks and trade names, franchise agreements, broadcast rights, and in-process research and development (see AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*). Intangible assets that are neither separable nor arise from contractual or other legal rights (for example, an assembled workforce) are not separately recognized in a business combination and are subsumed into goodwill.

6.18 Intangible assets acquired in a business combination are measured at their acquisition-date fair values in accordance with the guidance in FASB ASC 820, *Fair Value Measurement*, unless the intangible asset qualifies for an exception to FASB ASC 805's fair value measurement principle, such as reacquired rights. If the acquirer is a private company, it may elect to apply the accounting alternative for the recognition of customer-related intangible assets and noncompetition agreements acquired in a business combination, which is discussed in the "Private Company Considerations" section in chapter 8.

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Initial Recognition of Intangible Assets

6.19 Consistent with the FASB ASC Master Glossary definition of *identifiable*, an intangible asset is identifiable and, therefore, is recognized separately from goodwill if it meets either of the following criteria:

- The intangible asset arises from **contractual or other legal rights** (i.e., the contractual-legal criterion), regardless of whether those rights are transferable or separable from the acquiree or from other rights and obligations.

- The intangible asset is **separable** (i.e., the separability criterion); that is, the asset is capable of being separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged (regardless of whether the acquirer intends to do so). An intangible asset that cannot be sold, transferred, licensed, rented or exchanged individually is considered separable if it can be sold, transferred, licensed, rented, or exchanged in combination with a related contract, asset or liability (e.g., core deposit intangibles and the related deposit base of a financial institution).

Contractual-Legal Criterion

6.20 Many intangible assets arise from rights conveyed legally by contract, statute, or similar means. For example, franchises are granted to fast food restaurants and sports teams; trademarks and service marks may be registered with the government; contracts are often negotiated with customers or suppliers; and patents often protect technological and scientific innovations. Therefore, arising from contractual or other legal rights distinguishes identifiable intangible assets from goodwill. If an intangible asset arises from contractual or other legal rights, it should be recognized separately from goodwill even if the acquirer is legally or contractually restricted from selling, transferring, or otherwise exchanging the asset. The "Pending Content" in FASB ASC 805-20-55-2[6] provides the following examples of intangible assets arising from contractual or other legal rights:

a. An acquiree leases a manufacturing facility to a lessee under an operating lease that has terms that are favorable relative to market terms. The lease terms explicitly prohibit transfer of the lease (through either sale or sublease). The amount by which the lease terms are favorable compared with the pricing of current market transactions for the same or similar items is an intangible asset that meets the contractual-legal criterion for recognition separately from goodwill, even though the acquirer cannot sell or otherwise transfer the lease contract. See also paragraph 805-20-25-12.

b. An acquiree owns and operates a nuclear power plant. The license to operate

[6] The "Pending Content" in FASB ASC 805-20-55-2 reflects the amendments made to this paragraph by ASU No. 2016-02. See footnote 17 in the "Leases" section of this chapter for ASU No. 2016-02 effective date.

that power plant is an intangible asset that meets the contractual-legal criterion for recognition separately from goodwill, even if the acquirer cannot sell or transfer it separately from the acquired power plant. An acquirer may recognize the fair value of the operating license and the fair value of the power plant as a single asset for financial reporting purposes if the useful lives of those assets are similar.

c. An acquiree owns a technology patent. It has licensed that patent to others for their exclusive use outside the domestic market, receiving a specified percentage of future foreign revenue in exchange. Both the technology patent and the related license agreement meet the contractual-legal criterion for recognition separately from goodwill even if selling or exchanging the patent and the related license agreement separately from one another would not be practical.

6.21 Some intangible assets that meet the contractual-legal criterion may also meet the separability criterion, but this is not a requirement for the intangible asset to be considered identifiable. An intangible asset that meets the contractual-legal criterion is identifiable even if it is not transferable or separable from the combined entity or from other rights and obligations. Similarly, an intangible asset that meets the separability criterion does not need to arise from a contractual or legal right.

Separability Criterion

6.22 Some intangible assets do not arise from contractual or other legal rights, but are capable of being separated from the acquiree and sold or exchanged. Therefore, separability is another characteristic distinguishing identifiable intangible assets from goodwill. An acquired intangible asset meets the separability criterion if there is evidence of exchange transactions for the asset or similar assets, even if such exchanges occur infrequently and even if the acquirer has not participated and does not intend to participate in such exchanges. Restrictions on the sale, transfer or exchange of an asset may preclude it from meeting the separability criterion. If agreements, laws, or statutes prohibit the sale, transfer, license, rent or exchange of an intangible asset, then that asset would not meet the separability criterion. It is the acquirer's ability to separate the asset from the combined entity that makes an intangible asset separable. FASB ASC 805-20-55-4 provides the following example illustrating customer-related intangible assets that meet the separability criterion:

> For example, customer and subscriber lists are frequently licensed and thus meet the separability criterion. Even if an acquiree believes its customer lists have characteristics different from other customer lists, the fact that customer lists are frequently licensed generally means that the acquired customer list meets the separability criterion. However, a customer list acquired in a business combination would not meet the separability criterion if the terms of confidentiality or other agreements prohibit an entity from selling, leasing, or otherwise exchanging information about its customers.

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6.23 An intangible asset may be related to a contract, identifiable asset, or liability and cannot be separated individually from that contract, identifiable asset or liability. The intangible asset will still meet the separability criterion if it can be transferred together with that related contract, identifiable asset, or liability. FASB ASC 805-20-55-5 provides examples of intangible assets that, while not individually separable, are separable when segregated with other assets or liabilities:

> An intangible asset that is not individually separable from the acquiree or combined entity meets the separability criterion if it is separable in combination with a related contract, identifiable asset, or liability. For example:
>
> a. Market participants exchange deposit liabilities and related depositor relationship intangible assets in observable exchange transactions. Therefore, the acquirer should recognize the depositor relationship intangible asset separately from goodwill.
>
> b. An acquiree owns a registered trademark and documented but unpatented technical expertise used to manufacture the trademarked product. To transfer ownership of a trademark, the owner is also required to transfer everything else necessary for the new owner to produce a product or service indistinguishable from that produced by the former owner. Because the unpatented technical expertise must be separated from the acquiree or combined entity and sold if the related trademark is sold, it meets the separability criterion.

Intangible Assets That Are Not Identifiable at the Acquisition Date

6.24 An acquirer might identify certain intangible assets acquired in a business combination which may have value but do not meet either the separability or contractual-legal criteria. Thus, such assets are subsumed into goodwill. The task force believes the following are examples of intangible assets that generally are not identifiable:

- Potential contracts the acquiree is negotiating with prospective new customers at the acquisition date (as discussed in FASB ASC 805-20-55-7)
- Customer base or unidentifiable customers
- Customer service capacity
- Presence in geographic markets or locations
- Nonunion status or strong labor relations
- Ongoing training or recruiting programs
- Access to capital markets
- Favorable government relations
- Assembled workforce (as discussed in FASB ASC 805-20-55-6).

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6.25 Although the assembled workforce is not recognized separately from goodwill, the application of some valuation methodologies may still require measuring its fair value for purposes of calculating *contributory asset charges*, which are necessary inputs in the determination of the fair value of other recognized identifiable intangible assets. For further discussion, see the "Assembled Workforce" section of chapter 13.

Combining Intangible Assets into a Single Unit of Account

6.26 FASB ASC 805-20 allows accounting for acquired complementary assets as a single unit of account if the assets have similar useful lives. Furthermore, the Business Combinations Task Force (task force) believes that such assets should have similar methods of amortization. FASB ASC 805-20 offers three examples of acquired assets that may be recognized and measured as a group for financial reporting purposes:

- A brand name consisting of a trademark and its related trade name, formulas, recipes, and technological expertise [as discussed in FASB ASC 805-20-55-18].
- A license to operate a nuclear power plant and the related plant [as discussed in the "Pending Content" in FASB ASC 805-20-55-2(b)[7]].
- An artistic-related copyright and the related assignments or license agreements [as discussed in FASB ASC 805-20-55-30].

6.27 Additionally, in practice, separately identifiable assets that share similar characteristics are sometimes aggregated into a single unit of account because they are considered to be substantially the same. The determination of the unit of account will depend on the relevant facts and circumstances of each acquisition. When making that determination, the task force believes that it may be helpful to consider the following factors. None of these factors is individually determinative and the list is not meant to be all inclusive:

- The nature of the activities and costs necessary to maintain the assets
- The amount and timing of benefits expected to be derived in the future from the assets
- The expected *economic life* of the assets
- Whether there is an intent to manage costs for the assets separately or on a combined basis in areas such as strategy, manufacturing, advertising, selling, and so on
- Whether the asset would be transferred by itself or with other separately identifiable assets.

6.28 The task force notes that determining whether it is appropriate to combine intangible assets into a single unit of account may require considerable judgment. Also see the "Unit of

[7] The "Pending Content" in FASB ASC 805-20-55-2 reflects the amendments made to this paragraph by ASU No. 2016-02. See footnote 17 in the "Leases" section of this chapter for ASU No. 2016-02 effective date.

Account for Customer-Related Intangible Assets" section of this chapter for discussion of unit of account considerations related to customer-related intangible assets.

Examples of Intangible Assets that Are Identifiable

6.29 FASB ASC 805-20-55 provides a list of intangible assets that are frequently recognized in business combinations, although that list was not intended to be all inclusive. As indicated in FASB ASC 805-20-55-12

> Intangible assets designated with the symbol # are those that arise from contractual or other legal rights. Those designated with the symbol * do not arise from contractual or other legal rights but are separable. Intangible assets designated with the symbol # might also be separable, but separability is not a necessary condition for an asset to meet the contractual-legal criterion.

6.30 FASB ASC 805-20-55 provides the following examples of identifiable intangible assets acquired in a business combination, some of which are discussed in greater detail in the following sections:

Marketing-Related Intangible Assets (FASB ASC 805-20-55-14)

a. Trademarks, trade names, service marks, collective marks, certification marks #
b. Trade dress (unique color, shape, package design) #
c. Newspaper mastheads #
d. Internet domain names #
e. Noncompetition agreements #

Customer-Related Intangible Assets (FASB ASC 805-20-55-20)

a. Customer lists *
b. Order or production backlog #
c. Customer contracts and related customer relationships #
d. Noncontractual customer relationships *

Artistic-Related Intangible Assets (FASB ASC 805-20-55-29)

a. Plays, operas, ballets #
b. Books, magazines, newspapers, other literary works #
c. Musical works such as compositions, song lyrics, advertising jingles #
d. Pictures, photographs #
e. Video and audiovisual material, including motion pictures or films, music videos, television programs #

Contract-Based Intangible Assets (The "Pending Content" in FASB ASC 805-

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20-55-31[8])

a. Licensing, royalty, standstill agreements #
b. Advertising, construction, management, service or supply contracts #
c. Operating lease agreements of a lessor #
d. Construction permits #
e. Franchise agreements #
f. Operating and broadcast rights #
g. Servicing contracts such as mortgage servicing contracts #
h. Employment contracts #
i. Use rights such as drilling, water, air, timber cutting, and route authorities#

Technology-Based Intangible Assets (FASB ASC 805-20-55-38)

a. Patented technology #
b. Computer software and mask works #
c. Unpatented technology *
d. Databases, including title plants *
e. Trade secrets, such as secret formulas, processes, recipes. #

Marketing-Related Intangible Assets

6.31 As indicated in FASB ASC 805-20-55-14, "[m]arketing-related intangible assets are primarily used in the marketing or promotion of products or services." They are typically registered or protected through legal rights and, therefore, generally meet the contractual-legal criterion for recognition separately as an intangible asset.

Trademarks, Trade Names, Service Marks, Collective Marks, and Certification Marks

6.32 According to paragraphs 16–18 of FASB ASC 805-20-55

55-16 Trademarks are words, names, symbols, or other devices used in trade to indicate the source of a product and to distinguish it from the products of others. A service mark identifies and distinguishes the source of a service rather than a product. Collective marks identify the goods or services of members of a group. Certification marks certify the geographical origin or other characteristics of a good or service.

55-17 Trademarks, trade names, service marks, collective marks, and certification marks may be protected legally through registration with governmental agencies, continuous use in commerce, or by other means. If it is protected legally through registration or other means, a trademark or other mark acquired in a business combination is an intangible asset that meets the contractual-legal criterion. Otherwise, a trademark or other mark acquired in a business combination can be

[8] The "Pending Content" in FASB ASC 805-20-55-31 reflects the amendments made to this paragraph by ASU No. 2016-02. See footnote 17 in the "Leases" section of this chapter for information regarding the effective date of ASU No. 2016-02.

recognized separately from goodwill if the separability criterion is met, which normally it would be.

55-18 The terms *brand* and *brand name*, often used as synonyms for trademarks and other marks, are general marketing terms that typically refer to a group of complementary assets such as a trademark (or service mark) and its related trade name, formulas, recipes, and technological expertise. This Subtopic does not preclude an entity from recognizing, as a single asset separately from goodwill, a group of complementary intangible assets commonly referred to as a brand if the assets that make up that group have similar useful lives.

6.33 See the "Trademarks, Trade Names and Brand Assets" section of chapter 13 for a discussion of valuation considerations related to these assets.

Trade Dress, Newspaper Mastheads, and Internet Domain Names

6.34 As indicated in FASB ASC 805-20-55-14, trade dress refers to the "unique color, shape, package design." If protected legally, then the trade dress meets the contractual-legal criterion. If the trade dress is not legally protected, but there is evidence of similar sales, or if the trade dress is sold in conjunction with a related asset, such as a trademark, then it would meet the separability criterion.

6.35 Newspaper mastheads are generally protected through legal rights and, therefore, meet the contractual-legal criterion. If not protected legally, a company would look at whether exchanges or sales of mastheads occur to determine if the separability criterion is met.

6.36 According to FASB ASC 805-20-55-19

> An Internet domain name is a unique alphanumeric name that is used to identify a particular numeric Internet address. Registration of a domain name creates an association between that name and a designated computer on the Internet for the period of the registration. Those registrations are renewable. A registered domain name acquired in a business combination meets the contractual-legal criterion.

Noncompetition Agreements

6.37 Noncompetition or "noncompete" agreements are legal agreements that prohibit or restrict a person's or business' ability to compete with a company in a certain market for a specified period of time. As it relates to noncompete agreements of the acquiree that were in place before the business combination, they meet the contractual-legal criterion because they arise from legal or contractual rights. The terms, conditions, and enforceability of noncompete agreements affect their fair value, but not their recognition. Noncompete agreements will generally have finite lives and are amortized over the period the entity will receive the benefits from the noncompete agreement. Determining the period of amortization is a matter of judgment and all terms of the agreement, including restrictions on enforceability of the agreement, should be considered. For further discussion, see the "Determining the Useful Life of Intangible Assets" section later in this chapter.

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6.38 Companies also frequently enter into noncompete agreements at the time of the business combination. There are differing views regarding whether such noncompete agreements are part of a business combination or represent transactions separate from a business combination. These differing views are discussed in paragraph BC19 in the "Background Information and Basis for Conclusions" section of Accounting Standards Update (ASU) No. 2014-18, *Business Combinations (Topic 805): Accounting for Identifiable Intangible Assets in a Business Combination (a consensus of the Private Company Council)*,[9] which states:

> while many reporting entities and public accountants consider noncompetition agreements to be part of most business combinations, to other reporting entities and public accountants, most noncompetition agreements represent transactions separate from a business combination. Noncompetition agreements are not specifically discussed in the guidance on determining what is part of a business combination transaction. To date, however, the diversity in practice has not resulted in significantly different financial reporting outcomes. As a result, the PCC and the Board decided not to provide additional guidance to clarify whether noncompetition agreements are part of a business combination.

6.39 Private companies have the option to include noncompetition agreements in goodwill. See the "Private Company Considerations" section in chapter 8 for further discussion.

6.40 See the "Noncompetition Agreements" section of chapter 13 for a discussion of valuation considerations related to these assets.

Customer-Related Intangible Assets

6.41 Customer-related intangible assets include, but are not limited to, customer contracts and related customer relationships, noncontractual customer relationships, customer lists, order or production backlog, and customer loyalty programs. In many cases, the relationships that an acquiree has with its customers may encompass more than one type of intangible asset (e.g., customer contract and related relationship, customer list and backlog), which can pose challenges in recognizing and measuring customer-related intangible assets so as not to double count cash flows associated with the assets. Also, as indicated in FASB ASC 805-20-55-24, because the useful lives and the pattern in which the economic benefits of the assets are consumed may differ, it may be necessary to recognize separately the intangible assets that relate to a single customer relationship (e.g., a customer contract and the related customer relationship).

6.42 If a customer-related intangible asset arises from contractual rights, the fact that the contract is cancelable or includes transfer restrictions would not impact whether the asset should be recognized separately from goodwill, although it may impact its fair value measurement. However, if the customer-related intangible asset is not contractual, transfer restrictions may

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[9] This and other paragraphs from the "Background Information and Basis for Conclusions" section of Accounting Standards Update (ASU) No. 2014-18, *Business Combinations (Topic 805): Accounting for Identifiable Intangible Assets in a Business Combination (a consensus of the Private Company Council)*, were not codified in FASB ASC; however, the Business Combinations Task Force (task force) believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

impact whether the asset should be recognized separately from goodwill (i.e., the asset is not separable). If the customer-related intangible asset is not currently transferrable but will be in the future, recognition separate from goodwill may be appropriate. If the asset will never be transferrable, recognition separate from goodwill may not be appropriate.

6.43 Private companies have the option to include certain customer-related intangible assets in goodwill. See the "Private Company Considerations" section in chapter 8 for further discussion.

Customer Lists

6.44 As indicated in FASB ASC 805-20-55-21

> A customer list consists of information about customers, such as their names and contact information. A customer list also may be in the form of a database that includes other information about the customers, such as their order histories and demographic information. A customer list generally does not arise from contractual or other legal rights. However, customer lists are frequently leased or exchanged. Therefore, a customer list acquired in a business combination normally meets the separability criterion.

6.45 A customer list meets the separability criterion even if the acquiring company has never sold or leased a customer list and has no intentions of doing so in the future provided that the list is capable of being sold, leased, or otherwise exchanged. However, if a confidentiality agreement or restrictions on the sale or transfer prohibit a company from selling, leasing, or otherwise exchanging a non-contractual customer list, the separability criterion would not be met and an intangible asset would not be recognized separately from goodwill.

Order or Production Backlog

6.46 According to FASB ASC 805-20-55-22

> An order or production backlog arises from contracts such as purchase or sales orders. An order or production backlog acquired in a business combination meets the contractual-legal criterion even if the purchase or sales orders are cancelable.

6.47 See the "Intangible Assets Associated with Contracts with Customers" section of chapter for 13, which, among other things, discusses backlog.

Customer Contracts and Customer Relationships

6.48 Paragraphs 23, 25 and 27 of FASB ASC 805-20-55 provide the following guidance in connection with customer contracts and customer relationships

> **55-23** If an entity establishes relationships with its customers through contracts, those customer relationships arise from contractual rights. Therefore, customer contracts and the related customer relationships acquired in a business combination meet the

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contractual-legal criterion, even if confidentiality or other contractual terms prohibit the sale or transfer of a contract separately from the acquiree.

55-25 A customer relationship exists between an entity and its customer if the entity has information about the customer and has regular contact with the customer, and the customer has the ability to make direct contact with the entity. Customer relationships meet the contractual-legal criterion if an entity has a practice of establishing contracts with its customers, regardless of whether a contract exists at the acquisition date. Customer relationships also may arise through means other than contracts, such as through regular contact by sales or service representatives. As noted in paragraph 805-20-55-22, an order or a production backlog arises from contracts such as purchase or sales orders and therefore is considered a contractual right. Consequently, if an entity has relationships with its customers through these types of contracts, the customer relationships also arise from contractual rights and therefore meet the contractual-legal criterion.

55-27 A customer relationship acquired in a business combination that does not arise from a contract may nevertheless be identifiable because the relationship is separable. Exchange transactions for the same asset or a similar asset that indicate that other entities have sold or otherwise transferred a particular type of noncontractual customer relationship would provide evidence that the noncontractual customer relationship is separable. For example, relationships with depositors are frequently exchanged with the related deposits and therefore meet the criteria for recognition as an intangible asset separately from goodwill.

6.49 Many non-contractual customer relationships are not separable by themselves, but may be separable along with another asset, liability, or contract, such as with a sales representative's contract, with a brand or trademark, or with a product line, even if management has no intention of doing so. If so, the customer relationship would meet the separability criterion.

6.50 Customer relationships (both contractual and non-contractual) are recognized separately from goodwill only to the extent that they exist at the acquisition date (although a contract need not be in place at the acquisition date for a contractual customer relationship to exist). Customer relationships that arise after the acquisition date would not be recognized separately as an acquired intangible asset.

Customer Loyalty Programs

6.51 Customer loyalty programs generally allow customers to earn current or future discounts, free products or services, or other benefits on the basis of cumulative purchases from the operator of the program. Many airlines, casinos, hotels, and retailers offer such programs. A program's enrollment process is often designed to be easy to complete, with the participant generally agreeing to the terms and conditions of the program at the time of enrollment. Participants in such programs generally have no obligation to complete future purchases of products or services, and operators of such programs generally reserve the right to modify or cancel the program at any time.

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6.52 Despite the absence of enforceable rights between the parties as to future purchases or fulfillment of accrued benefits, such arrangements are deemed to meet the contractual-legal criterion because the parties have agreed to certain terms and conditions, have had a previous contractual relationship, or both. In addition to evaluating the recognition and measurement of an acquired customer-related intangible asset, an acquirer would also need to separately evaluate the recognition and measurement of assumed liabilities related to a customer loyalty program of the acquiree as of the acquisition date.

Unit of Account for Customer-Related Intangible Assets

6.53 Customer-related intangible assets may give rise to unit of account issues. For example, the relationships that an acquiree has with a single customer may encompass more than one type of a customer-related intangible asset (e.g., customer contract, customer relationship, customer list or backlog). This may lead to questions about whether different customer-related intangible assets that pertain to the same customer may be measured and recognized separately or as a single unit of account.

6.54 An example is when numerous customer-related intangible assets with different customers are acquired. The task force observes that for convenience, customer-related intangible assets with different customers are often aggregated into pools for purposes of measurement and recognition. The pools may be based on the products or services customers purchase or characteristics such as profit margins, attrition patterns, geographic locations, sizes, and so on. The task force observes that in practice, the individual customer-related intangible assets within a pool may not have the same useful lives. Therefore, companies will often amortize a pool of customer-related intangible assets using a shorter *useful life* or an accelerated method to take into account that some of the assets within the pool may have shorter useful lives than others.

6.55 Unit of account issues can be challenging and require the use of judgment.

Examples of Customer-Related Intangible Assets

6.56 Paragraphs 53–57 of FASB ASC 805-20-55 provide the following examples illustrating the guidance for recognizing customer-related intangible assets acquired in a business combination:

a. Five-year supply agreement (Case A)
b. One customer contract in one of two lines of business (Case B)
c. Purchase and sales orders (Case C)
d. Cancelable contracts (Case D).

6.57 See the "Customer-Related Intangible Assets" section of chapter for 13 for a discussion of valuation considerations related to these assets.

Overlapping Customers

6.58 An acquirer and an acquiree may have relationships with the same customers. This is sometimes referred to as *overlapping customers*. If the acquired customer relationship meets

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the contractual-legal or separable criteria, the acquirer should recognize an intangible asset for that acquired customer relationship. The fair value of the acquired customer relationship would be estimated using assumptions market participants would make about their ability to generate incremental cash flows from the acquired customer relationships. The task force believes it would be difficult to support a conclusion that no value should be attributed to the acquired intangible customer relationship asset as a result of the acquirer's pre-established relationship with the target's customer. An acquired customer relationship that overlaps an existing customer relationship has value because the acquirer has the ability to generate incremental cash flows from the acquired relationship, such as the ability to sell new products to the customer or to increase its "shelf space" with the customer. That value may appropriately be reflected in the recognition of other intangible assets, such as trade names, that drive customer loyalty.

Customer Base

6.59 The term *customer base* refers to a group of customers that are not known or identifiable to the company. For example, customers of fast-food franchises or movie theatres may be loyal and repeat customers; however, rarely would specific demographic data on customers be maintained such that it would meet the separability criterion. Because of the inability to separate a customer base, and the fact that the customer base relationship is not contractual, a customer base does not meet the criteria for recognition separately from goodwill. However, a customer base may give rise to a customer list if information is obtained about the customers. For example, a customer list may exist, even if only basic contact information about a customer, such as name and address or telephone number, is available. The "Customer Lists" section of this chapter provides additional guidance to determine whether a customer list meets the separate recognition criteria.

Artistic-Related Intangible Assets

6.60 Artistic-related intangible assets are creative assets that are typically protected by copyrights or other contractual and legal means. FASB ASC 805-20-55-30 states that

> Artistic-related assets acquired in a business combination are identifiable if they arise from contractual or legal rights such as those provided by copyright. The holder can transfer a copyright, either in whole through an assignment or in part through a licensing agreement. An acquirer is not precluded from recognizing a copyright intangible asset and any related assignments or license agreements as a single asset, provided they have similar useful lives.

Contract-Based Intangible Assets

6.61 The "Pending Content" in FASB ASC 805-20-55-31[10] states that

[10] The "Pending Content" in FASB ASC 805-20-55-31 reflects the amendments made to this paragraph by ASU No. 2016-02. See footnote 17 in the "Leases" section of this chapter for information regarding the effective date of ASU No. 2016-02.

> Contract-based intangible assets represent the value of rights that arise from contractual arrangements. Customer contracts are one type of contract-based intangible asset. If the terms of a contract give rise to a liability (for example, if the terms of a customer contract are unfavorable relative to market terms), the acquirer recognizes it as a liability assumed in the business combination.

6.62 The fact that a contract is cancellable does not affect the recognition of an intangible asset or liability but may affect its fair value measurement. For example, if an acquired unfavorable contract is cancelable by the counterparty to that contract, then the acquirer would need to recognize a liability for the unfavorable terms. However, if an acquired unfavorable contract is cancellable by the acquirer immediately and without penalty, the fair value of the liability for the unfavorable terms would generally be de minimis because the acquirer could cancel the contract and, therefore, avoid its unfavorable terms.

Purchase and Supply Contracts

6.63 Purchase and supply contracts for inventory, supplies or items used in the manufacturing and production process, and contracts for the sale of products, are executory contracts. To the extent the terms of a purchase or supply contract of an acquiree are favorable or unfavorable compared with the market terms for the same or similar items at the acquisition date, the acquirer would recognize an intangible asset or a liability. For further discussion, see the "Off-Market Non-Lease Contracts" section of chapter 13.

Leases

6.64 See the "Leases" section in the "Items That Might be Assets or Liabilities" part of this chapter.

Franchise Agreements

6.65 Franchise agreements are contractual arrangements through which a party (the franchisor) grants rights to another party (the franchisee) to operate a franchised business for a specified period. The purpose of the agreement is the distribution of a product or service, or an entire business concept, within a particular market area. To the extent the terms of an acquired franchise agreement are favorable or unfavorable compared with the market terms for the same or similar agreements at the acquisition date, the acquirer would recognize an intangible asset or a liability. In addition to the franchise agreement itself, there may be additional intangible assets that the acquirer may recognize (e.g., customer list or customer contracts and related customer relationships intangible assets).

Servicing Contracts Such as Mortgage Servicing Contracts

6.66 The FASB ASC Master Glossary defines a *servicing asset* as

> A contract to service financial assets under which the benefits of servicing are expected to more than adequately compensate the servicer for performing the servicing. A servicing contract is either:

a. Undertaken in conjunction with selling or securitizing the financial assets being serviced
b. Purchased or assumed separately.

6.67 Contracts to service financial assets may include collecting principal, interest, and escrow payments from borrowers; paying taxes and insurance from escrowed funds; monitoring delinquencies; executing foreclosure, if necessary; temporarily investing funds pending distribution; remitting fees to guarantors, trustees and others providing services; and accounting for and remitting principal and interest payments to the holders of beneficial interests in the financial assets. As indicated in FASB ASC 805-20-55-33, although servicing is inherent in all financial assets, it is not recognized as a separate intangible asset unless (i) the underlying financial assets (e.g., receivables) are sold or securitized and the servicing contract is retained by the seller; or (ii) the servicing contract is separately purchased or assumed (refer to paragraphs 1–4 in FASB ASC 860-50-25 for the guidance on servicing contracts).

6.68 According to FASB ASC 805-20-55-35

> If mortgage loans, credit card receivables, or other financial assets are acquired in a business combination with the servicing obligation, the inherent servicing rights are not a separate intangible asset because the fair value of those servicing rights is included in the measurement of the fair value of the acquired financial asset.

Employment Contracts

6.69 FASB ASC 805-20-55-36 states that

> Employment contracts that are beneficial contracts from the perspective of the employer because the pricing of those contracts is favorable relative to market terms are one type of contract-based intangible asset.

6.70 However, recognition of employment contract intangible assets or liabilities is unusual. Employees can choose to leave employment with relatively short notice periods, and employment contracts are often not enforced. In addition, the difficulty of substantiating market compensation for specific employees may present challenges in measuring the fair value of such an asset or liability.

Use Rights

6.71 According to FASB ASC 805-20-55-37, use rights such as drilling, water, air, timber cutting, and route authorities are contract-based intangible assets to be accounted for separately from goodwill. Particular use rights may have characteristics of tangible, rather than intangible, assets. An acquirer should account for use rights based on their nature. For example, mineral rights (which are defined in the FASB ASC Master Glossary as "the legal right to explore, extract, and retain at least a portion of the benefits from mineral deposits") are tangible assets.

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Technology-Based Intangible Assets

6.72 Technology-based intangible assets generally represent innovations on products or services, but can also include collections of information held electronically. Many innovations and technological advances are protected by contractual or other legal rights, such as patents and copyrights, and therefore meet the contractual-legal criterion.

Patented and Unpatented Technology

6.73 Patented technology is protected legally and, therefore, meets the contractual-legal criterion for separate recognition as an intangible asset. Unpatented technology is typically not protected by legal or contractual means and, therefore, does not meet the contractual-legal criterion. Unpatented technology, however, is often sold in conjunction with other intangible assets, such as trade names or secret formulas. As it is often sold with a related asset, the unpatented technology generally would meet the separability criterion. For a discussion of valuation considerations, see the "Patented and Unpatented Technology" section of chapter 13.

Computer Software and Mask Works

6.74 FASB ASC 805-20-55-40 provides that "[c]omputer software and program formats acquired in a business combination that are protected legally, such as by patent or copyright, meet the contractual-legal criterion for identification as intangible assets." Even if not protected by patent or copyright, if the software and program formats can be separated or divided from the acquired business (individually or combined with a related asset, liability or contract) and sold, transferred, licensed, rented or exchanged, then the software and program formats meet the separability criterion.

6.75 FASB ASC 350-40 provides that the costs related to the development of the new software that will be used internally are not research and development costs (unless it is a pilot project or the software will be used in a research and development project). Therefore, the internal-use software project acquired in a business combination should be initially recognized and measured at fair value (provided the asset meets the criteria of being *identifiable*). For further discussion, see the "Internal-Use Software" section of chapter 13.

6.76 According to ASC 805-20-55-41

> Mask works are software permanently stored on a read-only memory chip as a series of stencils or integrated circuitry. Mask works may have legal protection. Mask works with legal protection that are acquired in a business combination meet the contractual-legal criterion for identification as intangible assets.

Databases, Including Title Plants

6.77 FASB ASC 805-20-55-42 provides that

> Databases are collections of information, often stored in electronic form, such as on computer disks or files. A database that includes original works of authorship may be

entitled to copyright protection. A database acquired in a business combination that is protected by copyright meets the contractual-legal criterion. However, a database typically includes information created as a consequence of an entity's normal operations, such as customer lists, or specialized information, such as scientific data or credit information. Databases that are not protected by copyright can be, and often are, exchanged, licensed, or leased to others in their entirety or in part. Therefore, even if the future economic benefits from a database do not arise from legal rights, a database acquired in a business combination meets the separability criterion.

6.78 The FASB ASC Master Glossary defines *title plant* as

> A historical record of all matters affecting title to parcels of land in a particular geographic area. The number of years covered by a title plant varies, depending on regulatory requirements and the minimum information period considered necessary to issue title insurance policies efficiently.

6.79 According to FASB ASC 805-20-55-43, "[t]itle plant assets are bought and sold, either in whole or in part, in exchange transactions or are licensed. Therefore, title plant assets acquired in a business combination meet the separability criterion."

Trade Secrets Such as Secret Formulas, Processes, and Recipes

6.80 According to FASB ASC 805-20-55-44

> A trade secret is "information, including a formula, pattern, recipe, compilation, program, device, method, technique, or process that (1) derives independent economic value, actual or potential, from not being generally known and (2) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy," according to *The New Role of Intellectual Property in Commercial Transactions* (Simensky and Breyer 1998).

6.81 If the future economic benefits from a trade secret acquired in a business combination are legally protected, that asset meets the contractual-legal criterion. Anti-piracy laws or regulations frequently exist to protect trade secrets and other intellectual property. Even if laws or regulations do not protect a trade secret, a trade secret generally would be recognized as an intangible asset separately from goodwill if the separability criterion is met, which likely would be the case. However, the value of such a trade secret might be adversely affected by the lack of legal or regulatory protection.

In-Process Research and Development Assets

6.82 Before a business combination, an acquired entity may incur research and development (R&D) expenditures that could result in the development of certain intangible assets by the acquired entity that would be expensed as incurred in accordance with FASB ASC 730-10, unless they had an alternative future use. In other words, an acquired entity would probably not record any intangible assets related to R&D before the consummation of a business combination.

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6.83 Under FASB ASC 805, the acquirer recognizes acquired in-process research and development (IPR&D) assets at fair value as of the acquisition date. FASB ASC 350-30-35-17A provides that intangible assets acquired in a business combination that are used in R&D activities (regardless of whether they have an alternative future use) should be capitalized and classified as indefinite-lived until the completion or abandonment of the associated R&D efforts.

6.84 For a high-level overview of valuation considerations, see the "In-Process Research and Development Assets" section of chapter 13. For in-depth guidance on IPR&D assets, refer to the AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*, which provides guidance and illustrations regarding the initial and subsequent accounting for, valuation of, and disclosures related to acquired IPR&D assets.

Digital Assets[11]

6.85 The AICPA Practice Aid, "Accounting for and Auditing of Digital Assets," provides nonauthoritative guidance on how to account for and audit digital assets. The practice aid broadly defines *digital assets* as digital records that are made using cryptography for verification and security purposes, on a distributed ledger (referred to as a blockchain). The distributed ledger keeps a record of all transactions on a blockchain network. Digital assets, as defined herein, may be characterized by their ability to be used for a variety of purposes, including as a medium of exchange, as a representation to provide or access goods or services, or as a financing vehicle, such as a security, among other uses. According to the practice aid, the term *crypto asset* is specific to the type of digital assets that

a. function as a medium of exchange and

b. have all the following characteristics:

i. They are not issued by a jurisdictional authority (for example, a sovereign government).

ii. They do not give rise to a contract between the holder and another party.

iii. They are not considered a security under the Securities Act of 1933 or the Securities Exchange Act of 1934.

SEC Staff Accounting Bulletin (SAB) No. 121 expresses SEC staff views regarding the accounting for obligations of public companies to safeguard crypto-assets an entity holds for platform users. SAB No. 121 defines the term *crypto asset* more broadly to refer to "a

[11] On May 11. 2022, FASB added a project to its agenda to improve the accounting for and disclosure of certain digital assets. The Board will consider potential scope alternatives for digital assets at its future meeting. For further information, please refer to the FASB website.

digital asset that is issued and/or transferred using distributed ledger or blockchain technology using cryptographic techniques."

6.86 According to the practice aid, entities that do not apply specialized industry guidance (for example, not applying FASB ASC 946, *Financial Services — Investment Companies*) generally classify digital assets as indefinite-lived intangible assets. However, the practice aid notes that the rights and obligations associated with digital assets vary significantly, as do the terms used to describe them, and the accounting treatment for a digital asset will ultimately be driven by the specific terms, form, underlying rights, and obligations of the digital asset. Certain digital assets, such as stablecoins, may meet the definition of a financial asset. Detailed discussion of acquired digital assets is beyond the scope of this guide. For in-depth guidance on digital assets, refer to the practice aid (which is available on the AICPA website) and SAB No. 121 (which is available on the SEC website).

6.87 In a business combination, acquired digital assets classified as identifiable intangible assets, as well as digital assets that meet the definition of a financial asset, are recognized and measured at fair value as of the acquisition date.[12]

Defensive Intangible Assets

6.88 The FASB ASC Master Glossary defines a *defensive intangible asset* as "[a]n acquired intangible asset in a situation in which an entity does not intend to actively use the asset but intends to hold (lock up) the asset to prevent others from obtaining access to the asset." For example, an entity acquires a competitor in a business combination and decides not to use the acquiree's trade name because it directly competes with its own trade name. A defensive intangible asset can be an asset the entity will never actively use or an asset that the entity will only use for a short period until it discontinues use of the asset. FASB ASC 350-30- 55-1B states that

> The determination of whether an intangible asset is a defensive intangible asset is based on the intentions of the reporting entity and that determination may change as the reporting entity's intentions change. For example, an intangible asset that was accounted for as a defensive intangible asset on the date of acquisition will cease to be a defensive asset if the entity subsequently decides to actively use the asset. Examples 9C and 9D (see paragraphs 350-30-55-28G through 55-28L) illustrate the determination of whether an acquired intangible asset is a defensive intangible asset.

6.89 While such assets are not being actively used, they are likely contributing to an increase in the value of other assets owned by the acquirer. Therefore, consistent with FASB ASC 805-20-30-6, an acquirer should measure the fair value of a defensive intangible asset in accordance with FASB ASC 820-10 assuming its *highest and best use* by market participants, both initially and for purposes of subsequent impairment testing.

6.90 FASB ASC 350-30-25-5 provides that a defensive intangible asset should be accounted for as a separate unit of account. It should not be included as part of the cost of the acquirer's

[12] The guidance in paragraph 6.87 does not address the accounting for acquired assets and liabilities within the scope of SEC Staff Accounting Bulletin (SAB) No. 121.

existing intangible assets because the defensive intangible asset is separately identifiable. See the "Defensive Intangible Assets" section in the "Subsequent Accounting for Acquired Intangible Assets" part of this chapter (paragraphs 6.110–.111) for guidance on the subsequent accounting for defensive intangible assets acquired in a business combination.

Reacquired Rights

6.91 As part of a business combination, an acquirer may reacquire a right that it previously had granted to the acquiree to use one or more of the acquirer's recognized or unrecognized assets. The accounting for reacquired rights is discussed further in the "Reacquired Rights" section in chapter 8.

Acquired Intangible Assets to be Sold

6.92 Consistent with the guidance in FASB ASC 360-10-45-12, an acquirer should classify newly acquired long-lived assets, including intangible assets, as held for sale at the acquisition date if the newly acquired asset is expected to be sold within one year and the other held for sale criteria in FASB ASC 360-10-45-9 that are not met at the acquisition date are probable of being met within a short period following the acquisition (usually within three months). FASB ASC 360-10-35-43 provides that an acquired intangible asset that meets the criteria in FASB ASC 360 to be classified as held for sale initially should be recognized at fair value less cost to sell, which is an exception to the fair value measurement principle in FASB ASC 805. As explained in paragraph B305 in the "Basis for Conclusions" section of FASB Statement 141(R), *Business Combinations*,[13] the FASB believed this exception was necessary because without the exception, an acquirer would have been required to remeasure the acquired assets that met the criteria on the acquisition date to be classified as held for sale at fair value less costs to sell immediately following an acquisition in accordance with FASB ASC 360-10, which would have resulted in an immediate loss in the amount of the costs to sell.

Subsequent Accounting for Acquired Intangible Assets

6.93 FASB ASC 350-30, *Intangibles—Goodwill and Other – General Intangibles Other than Goodwill*, provides guidance for accounting for intangible assets after initial recognition. Intangible assets are determined to be either indefinite-lived (i.e., not subject to amortization) or finite-lived (i.e., subject to amortization) based on their useful lives *to the entity,* as discussed in the following section.

Determining the Useful Life of Intangible Assets

6.94 There are two distinct but related concepts for the life of an asset: economic life and useful life. Economic life is a valuation concept while useful life is an accounting concept. According to FASB ASC Master Glossary, *economic life* may be defined as "the period over

[13] This and other paragraphs from the "Basis for Conclusions" section of FASB Statement No. 141(R), *Business Combinations*, were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

which an asset is expected to be economically usable by one or more users."[14] FASB ASC Master Glossary defines *useful life* as "[t]he period over which an asset is expected to contribute directly or indirectly to future cash flows." Furthermore, FASB ASC 350-30-35-2 states that

> The useful life of an intangible asset to an entity is the period over which the asset is expected to contribute directly or indirectly to the future cash flows of that entity. The useful life is not the period of time that it would take that entity to internally develop an intangible asset that would provide similar benefits.

6.95 The task force observes that useful life may be less than, but will not exceed, economic life. For further discussion of economic life, see the "Economic Life" section of chapter 12, "Valuation Approaches and Techniques."

6.96 FASB ASC 350-30-35-3 provides the following factors to consider in determining an intangible asset's useful life and specifies that no one factor is more presumptive than another:

a. The expected use of the asset by the entity.

b. The expected useful life of another asset or a group of assets to which the useful life of the intangible asset may relate.

c. Any legal, regulatory, or contractual provisions that may limit the useful life.

d. The entity's own historical experience in renewing or extending similar arrangements, consistent with the intended use of the asset by the entity, regardless of whether those arrangements have explicit renewal or extension provisions.

e. The effects of obsolescence, demand, competition, and other economic factors.

f. The level of maintenance expenditures required to obtain the expected future cash flows from the asset.

6.97 The economic life of the intangible asset used in the valuation technique to measure its fair value is often consistent with its useful life for financial reporting. However, as indicated in FASB ASC 350-30-55-1C, in some instances, there will be a difference between the useful life of the asset used for amortization and the period of *expected cash flows* used to measure the fair value of the asset. These instances will likely be limited to situations in which the entity's own assumptions about the period over which the asset is expected to contribute directly and indirectly to the future cash flows of the entity are different from the assumptions market participants would use in pricing the asset. It is appropriate for the entity to use its own assumptions to determine the useful life of the asset, because

[14] This definition represents the "Pending Content" in FASB ASC which was added by ASU No. 2016-02. See footnote 17 in the "Leases" section of this chapter for information regarding the effective date of ASU No. 2016-02.

amortization of a recognized intangible asset should reflect the period over which the asset will contribute both directly and indirectly to the expected future cash flows of the entity.

6.98 The following paragraphs discuss in greater detail factors from FASB ASC 350-30-35-3 which an entity should consider when determining an intangible asset's useful life.

Expected use of the asset by the entity (FASB ASC 350-30-35-3(a))

6.99 The determination of the useful life is based on the expected use of the asset *by the entity* rather than by a market participant. Unless an entity expects to continue to use the asset indefinitely, assigning an indefinite life is not appropriate. Even though prevalent practice within an industry might be to classify a particular type of intangible asset as indefinite-lived, that does not mean that the same type intangible asset would have an indefinite life to the acquiring entity if that entity intends to only use the asset for a finite period.

Expected useful life of another asset or a group of assets to which the useful life of the intangible asset may relate (FASB ASC 350-30-35-3(b))

6.100 The relationship of an intangible asset to another asset or group of assets with a shorter useful life may limit the useful life of that intangible asset. For example, as part of a business combination, Company A identified a nontransferable right held by the acquired entity to manufacture a specific product in a given geographic area. The remaining term is 10 years. However, manufacturing the product, whose sales have steadily declined in recent years, requires significant investment in specialized equipment. The acquired entity is using specialized equipment with an estimated remaining useful life of eight years. Because of the product's declining sales and the investment necessary for replacement equipment, Company A does not intend to replace the specialized equipment at the end of its estimated useful life. Although the manufacturing right has a remaining contractual term of 10 years, the 8-year term of the specialized equipment, along with management's intention regarding replacement equipment, would effectively limit the useful life of the right to a period shorter than its remaining contractual term.

Any legal, regulatory, or contractual provisions that may limit the useful life (FASB ASC 350-30-35-3(c))

6.101 Existing contractual provisions may indicate that an intangible asset has an indefinite useful life but actual or anticipated regulatory or legal changes related to the ownership or use of an asset may limit the useful life for the asset and result in the asset having a finite life. Accordingly, such changes would need to be assessed to determine their impact on the useful life of the intangible asset. Examples 4 and 5 in paragraphs 12–16 of FASB ASC 350-30-55 illustrate situations in which regulatory provisions may or may not limit the useful life of a broadcast license.

The entity's own historical experience in renewing or extending similar arrangements (FASB ASC 350-30-35-3(d))

6.102 If renewal is not restricted or prohibited, entities customarily evaluate the likelihood of renewal or extension to determine the useful life of an intangible asset. As indicated in

FASB ASC 350-30-35-3(d), an entity should consider its own historical experience in renewing or extending similar arrangements when developing its assumptions about renewals or extensions used to determine the useful life of an intangible asset. In the absence of that experience, an entity should consider the assumptions that market participants would use about renewals or extensions (consistent with the highest and best use of the asset by market participants), adjusted for the entity specific factors in FASB ASC 350-30-35-3. In addition, FASB ASC 350-30-35-3 states that "if an *income approach* is used to measure the fair value of an intangible asset, in determining the useful life of the intangible asset for amortization purposes, an entity shall consider the period of expected cash flows used to measure the fair value of the intangible asset adjusted as appropriate for the entity-specific factors in this paragraph." Examples 9A and 9B in paragraphs 28A–28F in FASB ASC 350-30-55 illustrate determining the useful life when an entity lacks historical experience.

The effects of obsolescence, demand, competition, and other economic factors (FASB ASC 350-30-35-3(e))

6.103 Although the terms of the entity's use of the asset may be indefinite, the continued ability of the asset to generate cash flows may not be indefinite because of the effects of obsolescence, demand, competition, and other factors. For an intangible asset to be considered to have an indefinite useful life, there can be no foreseeable limit on the period over which the asset is expected to contribute to the cash flows of the reporting entity. The effects of obsolescence, demand, competition, and other economic factors can potentially impose such limits and, thus, would need to be carefully analyzed. Example 3 in paragraphs 9–10 of FASB ASC 350-30-55 illustrates an acquired copyright with a useful life that is shorter than its legal life.

The level of maintenance expenditures required to obtain the expected future cash flows from the asset (FASB ASC 350-30-35-3(f))

6.104 As provided in FASB ASC 350-30-35-3(d), an entity estimates the useful life of an intangible asset by analyzing the level of maintenance expenditures required to obtain the expected future cash flows from the asset (for example, a material level of required maintenance in relation to the carrying amount of the asset may suggest a very limited useful life). As in determining the useful life of depreciable tangible assets, regular maintenance may be assumed but enhancements may not.

6.105 *Finite-Lived Intangible Assets.* If any legal, regulatory, contractual, competitive, economic or other factors limit the useful life of an intangible asset to the acquiring entity, the intangible asset should be considered finite-lived. Finite-lived intangible assets are amortized over their useful lives to the entity. If an intangible asset has a finite life but the precise length of that life is not known, it should be amortized over the entity’s best estimate of its useful life. Example 1 in ASC 350-30-55-3 and 55-4 illustrates determining management’s best estimate of useful life.

6.106 *Indefinite-Lived Intangible Assets.* According to FASB ASC 350-30-35-4, if no legal, regulatory, contractual, competitive, economic or other factors limit the useful life of an intangible asset to the acquiring entity, the useful life of that intangible asset should be considered to be indefinite. Indefinite does not mean infinite. The useful life of an intangible

asset is indefinite if there is no foreseeable limit on the time over which it is expected to contribute to the cash flows of the reporting entity. If a precise useful life is difficult to determine, that does not mean that the useful life is indefinite. Paragraphs 18–25 of FASB ASC 350-30-55 provide examples of intangible assets with indefinite useful lives (such as airport route authorities and certain trademarks).

Method of Amortization

6.107 FASB ASC 350-30-35-6 states that "[t]he method of amortization shall reflect the pattern in which the economic benefits of the intangible asset are consumed or otherwise used up. If that pattern cannot be reliably determined, a straight-line amortization method shall be used."

6.108 An acquirer may believe that an intangible asset will generate cash flows for a period longer than the company expects to own the asset (e.g., the company expects to sell the asset before it is fully consumed). In that case, the amount of an intangible asset to be amortized is the amount initially assigned to that asset less any residual value. According to FASB ASC 350-30-35-8, the residual value of an intangible is assumed to be zero unless 1) at the end of its useful life to the entity the asset is expected to continue to have a useful life to another entity and 2) either:

a. The reporting entity has a commitment from a third party to purchase the asset at the end of its useful life; or
b. The residual value can be determined by reference to an exchange transaction in an existing market for that asset and that market is expected to exist at the end of the asset's useful life.

6.109 Example 2 in paragraphs 6–7 of FASB ASC 350-30-55 illustrates amortizing an intangible asset following the pattern in which the expected benefits will be consumed or otherwise used up.

Defensive Intangible Assets

6.110 As described in paragraph 6.89, acquired defensive intangible assets should be recognized at fair value on the acquisition date. Similar to other intangible assets, defensive intangible assets should be assigned a useful life in accordance with paragraphs 1–4 of FASB ASC 350-30-35. In addition, paragraphs 5A–5B of FASB ASC 350-30-35 provide the following guidance:

> **35-5A** … A defensive intangible asset shall be assigned a useful life that reflects the entity's consumption of the expected benefits related to that asset. The benefit a reporting entity receives from holding a defensive intangible asset is the direct and indirect cash flows resulting from the entity preventing others from realizing any value from the intangible asset (defensively or otherwise). An entity shall determine a defensive intangible asset's useful life, that is, the period over which an entity consumes the expected benefits of the asset, by estimating the period over which the defensive intangible asset will diminish in fair value. The period over which a

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defensive intangible asset diminishes in fair value is a proxy for the period over which the reporting entity expects a defensive intangible asset to contribute directly or indirectly to the future cash flows of the entity.

35-5B It would be rare for a defensive intangible asset to have an indefinite life because the fair value of the defensive intangible asset will generally diminish over time as a result of a lack of market exposure or as a result of competitive or other factors. Additionally, if an acquired intangible asset meets the definition of a defensive intangible asset, it shall not be considered immediately abandoned.

6.111 See the "Defensive Intangible Assets" section in the "Initial Recognition of Intangible Assets" part of this chapter (paragraphs 6.88–.90) for guidance on the initial accounting for defensive intangible assets acquired in a business combination.

Indemnification Assets

6.112 Indemnification assets are an exception to the recognition and fair value measurement principles. (For the list of other exceptions, see the "Recognition and Measurement Principles and Related Exceptions" section of this chapter.) Acquisition agreements sometimes provide that the seller indemnifies the acquirer against a particular contingent liability outstanding at the acquisition date. A contingent liability could relate, for example, to a legal case of the acquiree for environmental pollution or a tax uncertainty. An indemnification asset arises from the seller's agreement to reimburse (indemnify) the acquirer for all or a portion of the ultimate liability resulting from the resolution of the contingent liability. An indemnified item could also be an asset such as the value of a financial instrument.

6.113 When the seller is contractually obligated to indemnify the acquirer for the outcome of a contingency or uncertainty related to a specific liability or an asset, FASB ASC 805-20-25-27 states that the acquirer should recognize an indemnification asset at the same time that it recognizes the indemnified item, measured on the same basis as the indemnified item, subject to the need for a valuation allowance for uncollectible amounts.

6.114 An indemnification asset would be recognized as of the acquisition date only if the item to which the indemnification relates is recognized at that date. For example, an indemnification may relate to an environmental contingency that does not meet the recognition threshold under FASB ASC 805 (see the "Preacquisition Contingencies" section of this chapter). Because the environmental liability was not recognized at the acquisition date or during the measurement period, it would be accounted for under other applicable GAAP, including FASB ASC 410-30, as appropriate. Likewise, the indemnification asset is not recognized at the acquisition date. In these situations, consistent with the guidance in paragraphs 27–28 of FASB ASC 805-20-25, the indemnification asset should be recognized and measured at the same time and on the same basis as the indemnified item, subject to management's assessment of the collectibility of the indemnification asset and any contractual limitations on the indemnified amount.

6.115 According to FASB ASC 805-20-35-4, an indemnification asset initially recognized at the acquisition date is subsequently measured on the same basis as the indemnified liability or asset, subject to any contractual limitations on its amount and, for an indemnification asset that is not subsequently measured at its fair value, management's assessment of the collectibility of the indemnification asset. FASB ASC 805-20-40-3 provides that an indemnification asset is derecognized only when the acquirer collects it, sells it, or otherwise loses the right to it.

Questions and Answers—Indemnification Assets

6.116 The following question addresses the subsequent settlement of an indemnified tax uncertainty at less than the amounts recognized at the acquisition date.

6.117 *Question 1:* Company A acquired Company T on July 31, 20X4. Company A recognized a $5 million liability in its acquisition accounting related to an uncertain tax position of Company T, measured in accordance with FASB ASC 740-10. Company A was to be fully indemnified for any liability upon the final resolution of the tax uncertainty. Company A did not believe there was an issue with collectibility of the indemnification. Therefore, Company A recognized an indemnification asset of $5 million at the acquisition date. On March 31, 20X6, the uncertain tax position was effectively settled with no payment required to be made by Company A. Assuming there were no changes to the amounts recognized by Company A prior to the settlement and ignoring accrual of penalties and interest, how should Company A account for the settlement of the uncertain tax position?

Answer: Company A would derecognize the $5 million liability it had recognized at the acquisition date and record an offsetting credit to income tax expense in accordance with FASB ASC 740-10. Company A also would derecognize the indemnification asset of $5 million with an offsetting charge to expense. The offsetting charge would not be to income tax expense because this asset was a result of an agreement between the seller and the acquirer, and not with a taxing authority.

Equity Investments of an Acquiree

6.118 All equity investments of an acquiree, including equity method investments, are recorded at fair value on the acquisition date pursuant to the guidance in FASB ASC 820. While certain equity securities may not have a *readily determinable fair value* (i.e., not traded on a US or foreign exchange or investment in a mutual fund or similar structure with a published fair value), fair value can be determined at the acquisition date using other valuation techniques.

6.119 For equity method investments, after acquisition, any embedded basis differences between the FASB ASC 805 acquisition-date value of the acquired investment and the carrying amounts of the underlying net assets as of the acquisition date would be reflected in the determination of the acquirer's equity in the earnings of the investee. That is, an acquirer is required to complete a one-line business combination accounting

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pursuant to the guidance in FASB ASC 323, on the acquisition date, effectively recognizing a pro-rata share of the fair value of the equity method investee's net assets.

Liabilities

Trade Accounts Payable and Notes Payable

6.120 An acquiree's trade accounts payable and notes payable are recognized at fair value by the acquirer in a business combination. Generally, settlement amount of trade accounts payable approximates their fair value due to their short-term nature. However, if trade accounts payable are long term, it may be necessary to consider discounting.

Guarantees

6.121 Guarantees made by the acquiree that are assumed by the acquirer are measured at fair value as of the acquisition date. These assumed guarantees are subsequently accounted for in accordance with the guidance in FASB ASC 460, *Guarantees*. According to FASB ASC 460-10-35-1, FASB ASC 460-10 does not describe in detail how the guarantor's liability for its obligations under the guarantee would be measured after its initial recognition. The liability that the guarantor initially recognized would typically be reduced (by a credit to earnings) as the guarantor is released from risk under the guarantee. FASB ASC 460-10-35-2 states, in part, that

> Depending on the nature of the guarantee, the guarantor's release from risk has typically been recognized over the term of the guarantee using one of the following three methods:
>
> a. Only upon either expiration or settlement of the guarantee
> b. By a systematic and rational amortization method
> c. As the fair value of the guarantee changes
>
> …this Subsection does not provide comprehensive guidance regarding the circumstances in which each of those methods would be appropriate. A guarantor is not free to choose any of the three methods in deciding how the liability for its obligations under the guarantee is measured subsequent to the initial recognition of that liability.

6.122 If, subsequent to the business combination, a payment under the guarantee becomes probable, an additional liability may need to be recognized. The "Pending Content" in FASB ASC 460-10-35-4[15] provides the following guidance

> The discussion in paragraph 460-10-35-2 about how a guarantor typically reduces the liability that it initially recognized does not encompass the recognition and

[15] The "Pending Content" in FASB ASC 460-10-35-4 reflects the amendments made to this paragraph by ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. See footnote 4 in the "Trade and Other Receivables" section of this chapter for ASU No. 2016-13 effective date.

subsequent adjustment of the contingent liability related to the contingent loss for the guarantee. The contingent aspect of the guarantee shall be accounted for in accordance with Subtopic 450-20 unless the guarantee is accounted for as a derivative instrument under Topic 815 or the guarantee is within the scope of Subtopic 326-20 on financial instruments measured at amortized cost. For guarantees within the scope of Subtopic 326-20, the expected credit losses (the contingent aspect) of the guarantee shall be accounted for in accordance with that Subtopic in addition to and separately from the fair value of the guarantee liability (the noncontingent aspect) accounted for in accordance with paragraph 460-10-30-5.

Pensions and Other Employee Benefits

6.123 Employee benefits is one of the exceptions to both the recognition and measurement principles of valuing assets acquired and liabilities assumed in an acquisition. (For the list of other exceptions, see the "Recognition and Measurement Principles and Related Exceptions" section of this chapter.)

6.124 FASB ASC 805-20-25-22 states that "[t]he acquirer shall recognize a liability (or asset, if any) related to the acquiree's employee benefit arrangements in accordance with other GAAP." Paragraphs 23–26 of FASB ASC 805-20-25 specifically note the following standards that provide recognition guidance on the accounting for employee benefits:

- Defined benefit pension plans – FASB ASC 715-30
- Settlements and curtailments of defined benefit pension plans and certain termination benefits – the "Settlements, Curtailments, and Certain Termination Benefits" subsections of FASB ASC 715-30-25 and 715-30-35
- Defined benefit other postretirement plans – FASB ASC 715-60
- One-time termination benefits in connection with exit or disposal activities – FASB ASC 420-10-25
- Compensated absences – FASB ASC 710-10-25
- Deferred compensation contracts – FASB ASC 710-10-25
- Nonretirement postemployment benefits – FASB ASC 712-10-25

Defined Benefit Pension Plans

Single-Employer Pension Plans

6.125 According to FASB ASC 805-20-25-23, if an acquiree sponsors a single-employer defined benefit pension plan, the acquirer should recognize as part of the business combination an asset or liability representing the funded status of the plan. FASB ASC 805-20-30-15 provides that "[i]n determining that funded status, the acquirer shall exclude the effects of expected plan amendments, terminations, or curtailments that at the acquisition date it has no obligation to make. The projected benefit obligation assumed shall reflect any other necessary changes in assumptions based on the acquirer's assessment of relevant future events." These relevant future events include the actuarial

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assumptions necessary to measure the projected benefit obligation (for example, the discount rate, mortality assumptions, turnover and compensation increases.) Consistent with the guidance in FASB ASC 715-30-25-1, if at the acquisition date, the fair value of the plan assets exceeds the projected benefit obligation, an asset is recognized; however, if the projected benefit obligation exceeds the fair value of the plan assets, a liability is recognized.

Questions and Answers—Single-Employer Pension Plans

6.126 *Question 2:* Company A acquired Company T in a business combination on May 1, 2X14. Company T sponsored a single-employer defined benefit pension plan. Company A expects to make certain amendments to Company T's plan after the acquisition; however, there is no obligation for Company A to make these amendments. Should the measurement of the projected benefit obligation at the acquisition date consider Company A's expectation to amend Company T's plan?

Answer: No, the measurement of the projected benefit obligation at the acquisition date is not affected by the expected amendments because Company A has no obligation to make the amendments. Instead, the amendments, when made, are accounted for as plan amendments in accordance with FASB ASC 715-30.

Multiemployer Pension Plans

6.127 FASB ASC 715-80-05-1 defines a multiemployer plan as a "pension plan or other postretirement benefit plan to which two or more unrelated employers contribute, usually pursuant to one or more collective-bargaining agreements." Liabilities for multiemployer pension plans generally are recognized for the due and unpaid contributions as of the acquisition date.

6.128 According to FASB ASC 805-20-25-23, if an acquiree in a business combination participates in a multiemployer pension plan, and it is probable as of the acquisition date that the acquirer will withdraw from that plan, the acquirer should recognize as part of the business combination a withdrawal liability in accordance with FASB ASC 450-20 if it is reasonably estimable.

Defined Benefit Postretirement Benefits Other Than Pensions

6.129 FASB ASC 715-60 provides guidance on other postretirement benefits. The acquirer's accounting for an acquiree's other postretirement benefit plans under FASB ASC 715-60 is similar to the accounting for single-employer defined benefit plan under FASB ASC 715-30.

Existing Contingent Consideration of the Acquiree Acquired in Business Combination

6.130 In certain cases, the acquiree may have issued contingent consideration as part of the consideration transferred in a previous business combination. A subsequent acquisition of the acquiree does not change the nature of this existing contingent consideration; therefore, if an acquirer assumes an existing contingent consideration arrangement in a

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business combination, the acquirer should measure and recognize that obligation in the same manner as if it had entered into that arrangement with respect to the current business combination.

6.131 Pursuant to the guidance in FASB ASC 805-20, existing contingent consideration arrangements of an acquiree assumed by the acquirer in a business combination should be recognized initially at fair value and subsequently measured in accordance with the guidance for contingent consideration under the provisions of FASB ASC 805-30. Unlike a contingent consideration arrangement between the acquirer and acquiree, which is part of the consideration transferred, the task force believes that an existing contingent consideration arrangement of the acquiree is a liability assumed in the acquisition rather than consideration transferred.

6.132 See the "Contingent Consideration" section in chapter 5, "Measuring the Consideration Transferred," for discussion of contingent consideration.

6.133 In other cases, the acquiree may have previously sold a business in which it was entitled to receive contingent consideration ("seller's contingent consideration"). Regardless of the acquiree's policy to account for seller's contingent consideration, the acquirer likely would need to determine the fair value of the contingent consideration arrangement for the current business combination. The task force believes that the fair value of a contingent consideration arrangement of an acquiree would generally be determinable because (1) the existing contingent consideration arrangement is inherently part of the economic consideration in the negotiations between the buyer and the seller and (2) the fair value of contingent consideration obligations can be determined using common valuation techniques.

Items That Might be Assets or Liabilities

Preacquisition Contingencies

6.134 The FASB ASC Master Glossary defines a *contingency* as "[a]n existing condition, situation, or set of circumstances involving uncertainty as to possible gain (gain contingency) or loss (loss contingency) to an entity that will ultimately be resolved when one or more future events occur or fail to occur." A preacquisition contingency may be a contingent asset or contingent liability. Although a preacquisition contingency must exist or result from events that occurred prior to the acquisition date, it may not be known at the acquisition date. Therefore, a preacquisition contingency could be discovered during the measurement period.

Initial Recognition and Measurement

6.135 If the acquisition-date fair value of a preacquisition contingency can be determined as of the acquisition date or during the measurement period, FASB ASC 805-20-25-19 requires it to be recognized at fair value. If the acquisition-date fair value cannot be determined during the measurement period, paragraphs 20–20A of FASB ASC 805-20-25 require that it be recognized at the acquisition date only if the acquired loss or gain contingency

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is both (1) probable of occurring and (2) can be reasonably estimated, using the same guidance as FASB ASC 450, *Contingencies*.

6.136 When the fair value of a preacquisition contingency cannot be determined, questions may arise in practice about the initial measurement of the contingency when the intentions of the acquirer differ from that of the target (e.g., the target intended to contest a lawsuit whereas the acquirer intends to settle the lawsuit). This is illustrated in the following question.

Questions and Answers—Initial Recognition and Measurement

6.137 *Question 3*: On January 1, 20X6, Company A acquired all of the outstanding shares of Company T in a business combination. Prior to the acquisition, Company T was the defendant in a lawsuit that it intended to litigate. Company T determined that a loss was not probable pursuant to FASB ASC 450 and, therefore, did not recognize a liability. Company A determines that the acquisition-date fair value of the lawsuit cannot be determined. However, unlike Company T, Company A intends to settle rather than contest the lawsuit. Company A believes it can settle the lawsuit for $2 million. What amount, if any, should Company A recognize in the business combination relating to the lawsuit?

Answer: Because the acquisition-date fair value of the liability cannot be determined, pursuant to FASB ASC 805-20-25-20, Company A should recognize a liability if it is probable that a liability had been incurred and the amount of the liability can be reasonably estimated. Because Company A intends to settle the lawsuit both of these conditions have been satisfied. Therefore, Company A should record a liability for $2 million (its best estimate of the settlement amount) in accounting for the business combination.

In paragraphs B7–B8 in the "Basis for Conclusions" section of FASB Staff Position No. 141(R)-1, *Accounting for Assets Acquired and Liabilities Assumed in a Business Combination That Arise from Contingencies*,[16] the FASB acknowledged that preparers and attorneys expressed concerns about an acquirer's ability to reliably determine the acquisition-date fair value of assets and liabilities arising from legal contingencies. Specifically, paragraph B8 states that

> Because of the number of variables and assumptions involved in assessing the possible outcomes of a legal dispute, particularly in the early stages, individual attorneys are much more likely to develop significantly different assessments of the fair value of a legal contingency than individual valuation professionals determining the fair value of other assets and liabilities that involve *unobservable inputs* (for example, an identifiable intangible asset).

[16] These and other paragraphs from the "Basis for Conclusions" section of FASB Staff Position No. 141(R)-1, *Accounting for Assets Acquired and Liabilities Assumed in a Business Combination That Arise from Contingencies*, were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

The task force observes that it may often be difficult to reliably determine the fair value of acquired contingencies associated with legal disputes.

In addition, FASB ASC 805-20-25-19 indicates that "the acquisition-date fair value of a warranty obligation often can be determined." Therefore, it is expected that warranty obligations will be measured at fair value by the acquirer in most circumstances. However, fair value of warranty obligations may differ from the acquiree's reported warranty liability (because that is the acquiree's estimated cost to fulfill and not necessarily fair value [which would have a profit margin], if work is done internally).

Subsequent Measurement

6.138 FASB ASC 805 does not provide guidance for the subsequent accounting for acquired contingencies except to state in FASB ASC 805-20-35-3 that "[a]n acquirer shall develop a systematic and rational basis for subsequently measuring and accounting for assets and liabilities arising from contingencies depending on their nature." For contingencies that have been recognized at fair value on the date of acquisition, the task force believes that the approach used for subsequent accounting should be consistent with the nature of the asset or liability. For example, the subsequent accounting for a warranty obligation may be similar to those methods used for guarantees under FASB ASC 460. The task force believes that contingent liabilities and assets initially recognized and measured in accordance with the guidance in FASB ASC 450 would subsequently be accounted for in accordance with that guidance.

6.139 See Question 9 in the "Measurement Period" section in chapter 8 for an example of a situation when information becomes available during and after the measurement period.

Leases[17]

6.140 The recognition and measurement of leases is an exception to both the recognition and fair value measurement principles in FASB ASC 805. (For the list of other exceptions, see the "Recognition and Measurement Principles and Related Exceptions" section of this

[17] This section reflects provisions of ASU No. 2016-02, *Leases (Topic 842)*, as amended. The "Pending Content" in FASB ASC referred to in this section represents guidance that was added or amended by ASU No. 2016-02.

As of the writing of this guide, ASU No. 2016-02, as amended, was effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years, for public business entities; not-for-profit (NFP) entities that have issued or are conduit bond obligors for securities that are traded, listed, or quoted on an exchange or an over-the-counter market (referred to as *public NFP entities*); and employee benefit plans that file or furnish financial statements with or to the SEC. For public NFP entities that have not yet issued (or made available for issuance) financial statements as of as of June 3, 2020, ASU No. 2020-05, *Revenue from Contracts with Customers (Topic 606) and Leases (Topic 842): Effective Dates for Certain Entities,* deferred the effective date to fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. For all other entities (private companies and private NFP entities), ASU No. 2020-05 deferred the effective date to fiscal years beginning after December 15, 2021, and to interim periods within fiscal years beginning after December 15, 2022. Earlier application is permitted for all entities. For further information, please refer to ASU No. 2020-05, which can be accessed at the FASB website.

Reporting entities that have not yet adopted ASU No. 2016-02, as amended, should follow the guidance in FASB ASC 840, *Leases*.

chapter.) According to the "Pending Content" in FASB ASC 842-10-55-11, the acquirer should retain the acquiree's lease classification unless there is a lease modification and that modification is not accounted for as a separate contract.

6.141 According to the "Pending Content" in paragraphs 24–25 of FASB ASC 805-20-30, the lease assets and lease liabilities are measured as if the lease were a new lease of the acquirer at the acquisition date. See the "Leases" section of chapter 13 for discussion of valuation considerations related to leases.

6.142 The following assets and liabilities are recognized at the acquisition date.

	Asset	Liability
Acquiree is a *lessee* in an operating or finance lease	*Right-of-use asset* equal to the lease liability as adjusted to reflect favorable or unfavorable terms of the lease when compared with market terms *Leasehold improvements* recorded at fair value *Intangible assets associated with the lease,* such as in-place lease value, if any	*Lease liability* equal to the *present value* of the remaining lease payments (that is, the lease liability is based on contractual terms)
Acquiree is a *lessor* in an operating lease	*Favorable lease terms* relative to market *Property, plant, and equipment* equal to the fair value of the underlying asset *Intangible assets associated with the lease,* such as in-place lease value or customer relationships, if any	*Unfavorable lease terms* relative to market
Acquiree is a *lessor* in a sales-type or a direct financing lease	*Net investment in lease* equal to the sum of: *Lease receivable,* which is the present value of the remaining lease payments and guaranteed residual value, and *Unguaranteed residual asset,* which is the difference between the fair value of the underlying asset and lease receivable *Intangible assets associated with the lease,* such as in-place lease value or customer relationships, if any	N/A

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Lessee Accounting

6.143 At the acquisition date, for leases in which the acquiree is a lessee, the acquirer may be required to recognize the following, regardless of whether the lease is an operating or finance lease:

- *A lease liability equal to the present value of the remaining lease payments.* According to the "Pending Content" in FASB ASC 805-20-30-24, the lease liability is measured as if the lease were a new lease of the acquirer at the acquisition date. As indicated in paragraph BC415 in the "Background Information and Basis for Conclusions" section of ASU 2016-02, *Leases (Topic 842)*,[18] measuring the acquired lease as if it were a new lease involves reassessing, among other things, the lease term. The task force believes that the lease term would be assessed from the acquirer's perspective taking into account any renewal or purchase options expected to be exercised by the acquirer. The "Pending Content" in FASB ASC 805-20-30-24 states that "the acquirer shall measure the lease liability at the present value of the remaining lease payments," which would be discounted at the rate implicit in the lease if readily determinable, or otherwise using the acquirer's incremental borrowing rate.

- *A Right-of-use asset equal to the liability, adjusted for any favorable / unfavorable terms.* According to the "Pending Content" in FASB ASC 805-20-25-12, "the acquirer shall determine whether the terms of each of an acquiree's operating leases are favorable or unfavorable compared with the market terms of leases of the same or similar items at the acquisition date… If the acquiree is a lessee, the acquirer shall adjust the measurement of the acquired right-of-use asset for any favorable or unfavorable terms in accordance with paragraph 805-20-30-24."

- *Intangible assets associated with the lease.* Even if a lease is at market terms, there may be other identifiable intangible assets associated with the lease such as in-place lease value. Such identifiable intangible assets are recognized at fair value in the acquisition accounting. For further discussion, see the "Intangible Assets Associated with the Lease" section.

- *Leasehold Improvements recorded at fair value.*

6.144 However, the "Pending Content" in FASB ASC 805-20-25-28B provides a practical expedient for certain lessees. It states that

[18] This and other paragraphs from the "Background Information and Basis for Conclusions" section of ASU No. 2016-02 were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

For leases for which the acquiree is a lessee, the acquirer may elect, as an accounting policy election by class of underlying asset and applicable to all of the entity's acquisitions, not to recognize assets or liabilities at the acquisition date for leases that, at the acquisition date, have a remaining lease term of 12 months or less. This includes not recognizing an intangible asset if the terms of an operating lease are favorable relative to market terms or a liability if the terms are unfavorable relative to market terms.

6.145 The task force believes that under this practical expedient, the acquirer also would not recognize in-place lease assets.

Lessor Accounting

6.146 If the acquiree is a lessor, the assets and liabilities recognized by the acquirer will depend on the classification of the lease (i.e., operating versus sales–type and direct financing leases**)**.

Operating Leases

6.147 If the acquired lease is an operating lease, the acquirer will recognize the following:

- *Property, plant, and equipment recognized at fair value.*
- *An asset or liability for the favorable / unfavorable terms.* According to the "Pending Content" in FASB ASC 805-20-25-12, "the acquirer shall determine whether the terms of each of an acquiree's operating leases are favorable or unfavorable compared with the market terms of leases of the same or similar items at the acquisition date. If the acquiree is a lessor, the acquirer shall recognize an intangible asset if the terms of an operating lease are favorable relative to market terms and a liability if the terms are unfavorable relative to market terms."
- *Intangible assets associated with the lease.* Even if a lease is at market terms, there may be other identifiable intangible assets associated with the lease such as in-place lease value or customer relationships. Such identifiable intangible assets are recognized at fair value in the acquisition accounting. For further discussion, see the "Intangible Assets Associated with the Lease" section.

Sales-Type or Direct Financing Leases

6.148 If the acquired lease is a sales-type or direct financing lease, the acquirer will recognize the following:

- *A lease receivable for the present value of the remaining lease payments and guaranteed residual value.* According to the "Pending Content" in FASB ASC 805-20-30-25, the lease receivable should be measured at the present value of the

remaining lease payments and guaranteed residual value, discounted at the rate implicit in the lease.

- *Unguaranteed residual asset for the difference between fair value of underlying asset and lease receivable.* The "Pending Content" in FASB ASC 805-20-30-25 provides that "[t]he acquirer shall take into account the terms and conditions of the lease in calculating the acquisition-date fair value of an underlying asset that is subject to a sales-type lease or a direct financing lease by the acquiree-lessor."

- *Intangible assets associated with the lease.* Even if a lease is at market terms, there may be other identifiable intangible assets associated with the lease such as in-place lease value or customer relationships. Such identifiable intangible assets are recognized at fair value in the acquisition accounting. For further discussion, see the "Intangible Assets Associated with the Lease" section.

6.149 For sales-type and direct financing leases, lessors recognize all of the economic benefits inherent to the underlying asset as a net investment in the lease. The "Pending Content" in FASB ASC Master Glossary defines the *net investment in the lease* as

> For a sales-type lease, the sum of the lease receivable and the unguaranteed residual asset.
>
> For a direct financing lease, the sum of the lease receivable and the unguaranteed residual asset, net of any deferred selling profit.

6.150 Consistent with the "Pending Content" in FASB ASC 805-20-30-25, for leases in which the acquiree is a lessor of a sales-type lease or a direct financing lease, the acquisition-date net investment in the lease measured under FASB ASC 805 will equal the acquisition-date fair value of the underlying asset in the lease (which is calculated taking into account the terms and conditions of the lease).

Deferred Rent

6.151 According to paragraph BC415 of ASU 2016-02, deferred rent (of lessees or lessors) should not be recognized under the acquisition method of accounting because such amounts do not meet the definition of an asset or a liability in Concepts Statement 6, *Elements of Financial Statements*. Instead, the remaining lease payments required under the terms of the lease are considered in evaluating whether the terms of the lease are favorable or unfavorable at the acquisition date. This means that if the lease payments change significantly over the term of the lease, this may result in a conclusion that the terms and conditions of the remaining lease at the acquisition date are off-market.

Intangible Assets Associated with the Lease

6.152 According to the "Pending Content" in FASB ASC 805-20-25-10A, an identifiable intangible asset may be associated with leases in place at the acquisition date, which may

be evidenced by market participants' willingness to pay a price for the lease even if it is at market terms. For example, a lease of gates at an airport or of retail space in a prime shopping area might provide entry into a market, or other future economic benefits that qualify as an identifiable intangible asset, such as an in-place lease asset or, for lessors only, a customer relationship.

6.153 From the lessor's perspective, economic benefits related to in-place leases are intended to reflect the incremental or contributory value associated with the asset that is leased and generating rental income compared to one that is unutilized, idle, or vacant. It includes lost rental income at market lease rates during the expected time to secure replacement tenants under existing market conditions (commonly referred to as expected *lease-up* or *absorption period*).

6.154 In addition, the value related to in-place leases may reflect the value associated with avoiding the costs of originating the acquired in-place leases, as well as the value associated with the avoidance of holding costs that would be incurred if an asset intended to be leased was acquired without a lessee. Origination costs comprise the costs to execute similar leases, including marketing costs, leasing commissions, legal, and other related costs. Holding costs may include property taxes, insurance and other normal operating expenses.

6.155 The "Pending Content" in FASB ASC 805-20-25-10A indicates that in those situations the acquirer should recognize the identifiable intangible asset(s) associated with in-place lease in accordance with FASB ASC 805-20-25-10. The task force believes that an acquirer should separately measure an intangible asset for in-place leases on a lease-by-lease basis.

6.156 The task force believes that an intangible asset recognized in accordance with FASB ASC 805 for in-place leases would generally be recognized and reported separately in the financial statements. It would generally not be combined with the acquired lease assets (i.e. lessee right-of-use assets, or lessor lease receivables and unguaranteed residual assets).

Post-acquisition Accounting

6.157 Subsequent to the acquisition date, the acquirer should apply the subsequent measurement guidance in FASB ASC 842, *Leases*, to leases acquired in a business combination and account for any intangible assets associated with the lease in accordance with FASB ASC 350-30.

6.158 With respect to leasehold improvements, the "Pending Content" in FASB ASC 805-20-35-6 provides the following guidance

> Leasehold improvements acquired in a business combination shall be amortized over the shorter of the useful life of the assets and the remaining lease term at the date of acquisition. However, if the lease transfers ownership of the underlying asset to the lessee, or the lessee is reasonably certain to exercise an option to

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purchase the underlying asset, the lessee shall amortize the leasehold improvements to the end of their useful life.

Questions and Answers—Accounting for Acquired Leases under FASB ASC 842[19]

6.159 *Question 4: Accounting for an acquired operating lease in which the acquiree is the lessee and the lease is at market terms at the acquisition date.* Company A acquires Company LE, a shipping entity, which leases its shipping harbor from Company LR under an operating lease at market terms. The shipping harbor consists of a shipping dock, main building and some surrounding land. How should Company A account for the acquired Company LE's lease?

Answer: Company A would recognize a lease liability (based on the present value of the remaining lease payments) and a right-of-use asset (equal to the lease liability because the terms of the lease are at market at the acquisition date.) It should be noted that the accounting would still be the same even if it were a finance lease.

6.160 *Question 5: Accounting for an acquired operating lease in which the acquiree is the lessor and the lease is at market terms at the acquisition date.* Assume the same facts as in Question 4 except for that Company A is acquiring Company LR instead of Company LE. How should Company A account for the acquired Company LR's lease?

Answer: Because Company LR is the lessor in the operating lease, Company A recognizes the dock, building and the land at fair value, but no other assets.

6.161 *Question 6: Accounting for an acquired operating lease in which the acquiree is the lessee and the lease is at below market terms at the acquisition date.* Assume the same facts as in Question 4, except that, at the acquisition date, the terms of the lease to Company LE are considered favorable when compared to market terms. How should Company A account for the acquired Company LE's lease?

Answer: Company A recognizes a lease liability (based on the present value of the remaining lease payments due) and a right-of-use asset (equal to the lease liability adjusted for the favorable lease terms).

6.162 *Question 7: Accounting for an acquired operating lease in which the acquiree is the lessor and the lease is at below market terms at the acquisition date.* Assume the same facts as in Question 4, except that Company A is acquiring Company LR (rather than Company LE) and, from Company LR's perspective, at the acquisition date the terms of the lease are considered unfavorable when compared to market terms. How should Company A account for the acquired Company LR's lease?

Answer: Because the acquiree is the lessor in the operating lease, Company A recognizes the dock, building and the land at fair value, and an unfavorable lease liability equal to

[19] Please note that for the questions and answers in this section, it is assumed that, in the fact patterns given, no intangible assets are being recognized for any in-place value or customer relationships.

the difference between the present value of the remaining lease payments and the present value of the remaining market-based rental payments.

6.163 *Question 8: Accounting for an acquired sales-type lease in which the acquiree is the lessor.* Company A acquires Company LR which leases medical device equipment to hospitals and cancer research centers. Company LR has a sales-type lease to Company LE with lease terms that are at market. Ownership of the medical device equipment transfers to Company LE at the end of the lease for no additional consideration. How should Company A account for this acquired Company LR's lease?

Answer: Company A recognizes a lease receivable which equals the remaining lease payments discounted at the rate implicit in the lease at the acquisition date. There is no unguaranteed residual asset to recognize because Company LE obtains ownership of the medical device equipment at the end of the lease term.

Income Taxes

6.164 As indicated in FASB ASC 805-740-25-2 and 805-740-30-1, an acquirer should recognize and measure deferred tax assets and liabilities arising from the assets acquired and liabilities assumed in a business combination in accordance with FASB ASC 740-10 together with the incremental guidance in FASB ASC 805-740. The recognition and measurement of deferred tax assets and liabilities is an exception to both the recognition and fair value measurement principles in FASB ASC 805. Therefore, deferred tax assets and liabilities are not measured at fair value. (For the list of other exceptions, see the "Recognition and Measurement Principles and Related Exceptions" section of this chapter.)

6.165 FASB ASC 805-740-25-2 provides that the acquirer should account for the potential tax effects of temporary differences, carryforwards, and income tax uncertainties of an acquiree that exist at the acquisition date, or that arise as a result of the acquisition. Acquired temporary differences can include (1) book and tax basis differences on the acquiree's identifiable assets and liabilities (commonly referred to as *inside basis differences*) and (2) book and tax differences on the acquirer's investment in the acquired entity and the acquiree's investments in other entities (commonly referred to as *outside basis differences*).

6.166 The following paragraphs highlight key guidance and considerations related to the accounting for income taxes in a business combination.

6.167 *Tax structure of the transaction.* The acquisition of a business via direct purchase of assets and assumption of liabilities (that is, an asset deal)[20] generally is treated as a taxable transaction, and the tax bases of the assets acquired and liabilities assumed are adjusted, often to fair value based on the rules of the taxing jurisdiction. A stock deal generally is treated as a non-taxable transaction, and the historical tax bases of the assets

[20] The term *asset deal* in this context refers to the legal form of the business combination (that is, a business is acquired, but not through acquisition of the stock (or equity interests) of an entity).

and liabilities of the acquiree carry over to the acquirer.[21] However, in a stock deal, the acquired stock's tax basis often is adjusted to the amount paid based on the rules of the taxing jurisdiction, which results in the acquirer's book basis in the stock of the acquiree equaling the acquirer's tax basis in that stock at the business combination date (that is, no outside basis difference). It is important to carefully consider the tax laws and regulations of the relevant jurisdictions when determining the tax bases of the assets acquired and liabilities assumed.

6.168 *Tax status of entities acquired.* Business combinations can involve the acquisition of taxable entities (for example, corporations), non-taxable entities (for example, partnerships), or a collection of assets and liabilities that, on a combined basis, meets the definition of a business. When the acquiree is a taxable entity, the acquirer generally recognizes deferred tax assets and liabilities on each of the acquiree's inside basis differences. If a non-taxable entity is acquired, the acquirer generally recognizes a deferred tax asset or liability only for the outside basis difference. In both the acquisition of a taxable entity and non-taxable entity, the book basis of the acquirer's ownership interest (for example, stock interest, partnership interest) and the tax basis of that interest often are equal resulting in no outside basis difference at the acquisition date.

6.169 *Recognition and measurement of deferred tax assets and liabilities.* With limited exceptions (for example, goodwill), deferred tax assets and liabilities should be recognized for the tax-effected difference between the book and tax bases of the assets acquired and the liabilities assumed in a business combination. The book bases of the assets and liabilities are determined based on application of FASB ASC 805, which generally will result in the book bases equaling fair value. The tax bases of the assets acquired and liabilities assumed are determined based on the tax laws and regulations of the relevant jurisdictions. In addition, when measuring deferred taxes, the identification of the applicable tax rate for each jurisdiction (and sometimes for each individual type of temporary difference) is important. Deferred tax assets and liabilities are measured using the enacted tax rates applicable to the acquirer expected to apply to taxable income in the periods in which the related temporary difference is expected to be realized (for deferred tax assets) or settled (for deferred tax liabilities). Deferred taxes are measured using enacted tax rates, regardless of whether the parties included apparent or expected tax rates in their negotiations. In addition, FASB ASC 740-10-25-47 requires that rate changes be recognized at the date of enactment. As a result, a change in enacted rates subsequent to the acquisition date may result in an immediate positive or negative impact on the tax provision in the postcombination period.

Questions and Answers—Recognition and Measurement of Deferred Tax Assets and Liabilities

6.170 The following question illustrates recording deferred taxes on acquired temporary differences.

[21] In certain circumstances in the US, an acquirer and an acquiree may jointly elect under Internal Revenue Code Section 338(h)(10) to treat a stock deal as a deemed asset acquisition for federal and certain state tax purposes.

6.171 *Question 9:* Company A acquired Company T in a stock deal (nontaxable transaction) for total consideration of $10 million. The fair value of the acquired identifiable net assets was $8 million. The carryover historical tax bases of the acquired net identifiable assets was $4 million. The tax rate is 25% in this jurisdiction. How should Company A record deferred taxes on acquired temporary differences?

Answer: Company A would record the following journal entry in acquisition accounting:

Net assets	$8.0 million	
Goodwill	$3.0 million[22]	
Cash		$10.0 million
Net deferred tax liability		$1.0 million[23]

6.172 *Recognition and measurement of other acquired tax benefits.* Consistent with the guidance in FASB ASC 805-740-25-3, acquired net operating loss (NOL) carryforwards, credit carryforwards, and other relevant tax attributes should be recorded as deferred tax assets as part of the business combination. NOL carryforwards generally are measured using the enacted tax rates expected to apply to taxable income in the period in which the NOLs are expected to be realized.

6.173 It is important to note that many jurisdictions limit the use of NOL and other carryforwards upon an acquisition. For example, US tax law limits, in some cases, the utilization of NOL carryforwards, credit carryforwards, and certain other tax benefits upon an ownership change.

6.174 *Goodwill.* FASB ASC 805-740-25-3 prohibits recognition of a deferred tax asset or liability relating to the portion of goodwill for which amortization is not deductible for tax purposes. According to FASB ASC 805-740-25-8, in tax jurisdictions in which amortization of goodwill is deductible, the amount of goodwill recognized for the book and the tax basis of goodwill are each separated into two components as of the acquisition date for purposes of computing deferred taxes. The first component of goodwill equals the lesser of book goodwill or tax-deductible goodwill. The second component equals the remainder, if any, of (a) the excess of book goodwill over tax-deductible goodwill or (b) the excess of tax-deductible goodwill over book goodwill.

6.175 FASB ASC 805-740-25-9 provides that for the first component of goodwill, deferred taxes are recognized for any differences between book and tax that arise in the future. For the second component, if book goodwill exceeds tax-deductible goodwill at the acquisition date, the acquirer should not record a deferred tax liability for the difference at the acquisition date or in future years. However, if tax-deductible goodwill exceeds book goodwill at the acquisition date, the acquirer should record a deferred tax asset at

[22] Goodwill is calculated as the residual after recording the identifiable net assets acquired and associated deferred tax assets and liabilities ($10 million – ($8 million – $1 million)).

[23] The net deferred tax liability is calculated as the difference between the book bases (in this case, the fair value) of the identifiable net assets acquired and the carryover tax bases at the applicable tax rate (($8 million – $4 million) x 25%).

the acquisition date and adjust that asset based on book and tax differences in future years.

6.176 Because the book basis of goodwill is affected by the measurement of the deferred tax asset for goodwill, measuring goodwill and the related deferred tax asset is an iterative process.

6.177 *Valuation allowances.* FASB ASC 805-740-25-3 provides that an acquirer should evaluate the need for a valuation allowance as of the acquisition date for an acquired entity's deferred tax assets in accordance with FASB ASC 740-10. The effect of recording a valuation allowance at the acquisition date is to increase the amount of goodwill recorded (or reduce the amount of bargain purchase gain recognized).

6.178 As noted in FASB ASC 805-740-45-2, changes in a valuation allowance for an acquired entity's deferred tax assets within the measurement period that result from new information about facts and circumstances that existed at the acquisition date should be recognized through a corresponding adjustment to goodwill. However, once goodwill is reduced to zero, the acquirer should recognize any additional decrease in the valuation allowance as a bargain purchase gain. Changes in a valuation allowance for an acquired entity's deferred tax assets that occur outside of the measurement period or those that occur within the measurement period that do not relate to new information about facts and circumstances that existed at the acquisition date should be recorded within income tax expense, or as an adjustment to contributed capital in certain circumstances. (For a further discussion of measurement period, please see the "Measurement Period" section in chapter 8.)

6.179 Under FASB ASC 805-740-30-3, a change in an acquirer's valuation allowance for its deferred tax asset that results from a change in the acquirer's circumstances caused by a business combination should be accounted for separate from the business combination.

6.180 *Income tax uncertainties.* As provided in FASB ASC 805-740-25-5, the tax bases used in the calculation of deferred tax assets and liabilities, as well as amounts due to or receivable from taxing authorities related to tax positions taken prior to the date of the business combination, should be calculated based on the guidance on tax positions in FASB ASC 740-10.

6.181 As noted in FASB ASC 805-740-45-4, the effect of a change to an acquired tax position, or those that arise as a result of the acquisition, should be recognized through a corresponding adjustment to goodwill if the change is within the measurement period and resulted from new information about facts and circumstances that existed as of the acquisition date. However, once goodwill is reduced to zero, the remaining portion of that adjustment should be recognized as a bargain purchase gain. Changes in acquired income tax positions that occur outside of the measurement period or those that occur within the measurement period that do not relate to new information about facts and circumstances that existed at the acquisition date should be accounted for in accordance with the guidance on tax positions in FASB ASC 740-10 (that is, recorded in income tax

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expense). (For a further discussion of measurement period, please see the "Measurement Period" section in chapter8, "Other Accounting Topics.")

Assets and Liabilities Associated with Acquired Contracts with Customers[24]

6.182 An acquired contract with a customer that is in progress as of the acquisition date may result in the recognition of certain assets and liabilities, including the following:

- A receivable or contract asset under FASB ASC 606 for the acquiree's right to consideration for goods or services transferred to a customer before the business combination.
- A contract liability under FASB ASC 606 for an acquiree's obligation to transfer goods or services to a customer for which the acquiree has received consideration (or an amount of consideration is due) from the customer before the business combination.
- A customer contract intangible asset for the inherent or in-place value of the contract (i.e., the price a market participant is willing to pay for an at-market contract, including *order* or *production backlog*).
- An intangible asset or liability to the extent that the terms of the contract are not "at market" at the acquisition date (generally referred to as the *off-market component*).
- A customer relationship intangible asset.

6.183 ASU No. 2021-08, *Business Combinations (Topic 805)–Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*,[25] amended FASB ASC 805 to require that an acquirer recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with FASB ASC 606, *Revenue from Contracts with Customers*. Paragraph BC52 in the "Background Information and Basis for Conclusions" section of ASU No. 2021-08[26] states that "the amendments in this

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[24] This section reflects provisions of ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended.

[25] ASU No. 2021-08, *Business Combinations (Topic 805)–Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, is effective for public business entities for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2022. For all other entities, ASU No. 2021-08 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2023. ASU No. 2021-08 should be applied prospectively to business combinations that occur after the effective date. Early application is permitted for public business entities for periods for which financial statements have not yet been issued and for all other entities for periods for which financial statements have not yet been made available for issuance.

The "Pending Content" referred to in this section represents guidance that was added or amended by ASU No. 2021-08.

[26] This and other paragraphs from the "Background Information and Basis for Conclusions" section of ASU No. 2021-08 were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

Update apply only to contract assets and contract liabilities as defined in Topic 606 from contracts with customers and other contracts to which the provisions of Topic 606 apply. The Board indicated that other assets and liabilities that may be recognized under Topic 606, such as refund liabilities and upfront payments to customers, or under related Topics, such as deferred costs under Subtopic 340-40, *Other Assets and Deferred Costs—Contracts with Customers*, are not within the scope of the amendments."

6.184 The last three components are acquired intangible assets and liabilities and generally would meet the contractual-legal or separability criterion to be recognized separately from goodwill at the acquisition date and measured at fair value. See the "Identifiable Intangible Assets" section of this chapter for further guidance on the identification of intangible assets.

6.185 The interrelationship of the last three components may pose challenges in determining the appropriate unit of account. See the "Unit of Account for Customer-Related Intangible Assets" section of this chapter for discussion of unit of account considerations related to customer-related intangible assets. Regardless of the unit of account conclusions reached, an important aspect of valuing an acquired contract with a customer is to verify that all components of value have been considered (that is, none of the components of value have been omitted or double counted) and appropriately reflected in the fair value measurement.

6.186 Paragraph BC37 in the "Background Information and Basis for Conclusions" section of ASU No. 2021-08 provides that the amendments in this ASU relate only to contract assets and contract liabilities as defined in FASB ASC 606. Therefore, these amendments do not affect the accounting for associated customer-related intangible assets (FASB ASC 805-20-55-20) or contract-based intangible assets (FASB ASC 805-20-55-31) that also may arise from contracts with customers in a business combination. See the "Intangible Assets Associated with Contracts with Customers" section of chapter 13 for discussion of valuation considerations related to intangible assets associated with these contracts.

Recognition of Contract Assets and Contract Liabilities

6.187 The "Pending Content" in FASB ASC 805-20-25-28C and FASB ASC 805-20-30-27 provides that the acquirer should recognize and measure a contract asset or contract liability in accordance with FASB ASC 606 on revenue from contracts with customers. This guidance represents an exception to recognition and measurement principles under FASB ASC 805-20.

6.188 The "Pending Content" in FASB ASC 805-20-30-28 states that

> An acquirer shall measure the contract assets and contract liabilities of the acquired contract as if the acquirer had originated the acquired contract. Topic 606 specifies when certain assessments and estimates should be made, for example, as of contract inception or on a recurring basis. At the acquisition date, the acquirer shall make those assessments as of the dates required by Topic 606.

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6.189 According to the "Pending Content" in paragraphs 29–30 FASB ASC 805-20-30, an acquirer may use certain practical expedients when identifying and measuring contract assets or contract liabilities from acquired contracts with customers in accordance with FASB ASC 606. For further guidance on contract assets and contract liabilities, refer to paragraphs 1–5 of FASB ASC 606-10-45.

6.190 Paragraph BC33 in the "Background Information and Basis for Conclusions" section of ASU No. 2021-08 indicates that "differences between contract assets and contract liabilities recorded by an acquirer and those recorded by the acquiree before the acquisition generally would result from (a) differences in the acquirer's and acquiree's revenue recognition accounting policies and the resulting change to the acquiree's policies, (b) differences in estimates between the acquirer and acquiree, or (c) errors in the Topic 606 accounting of the acquiree. Therefore, the Board acknowledged that the amendments in this Update may not always be as simple as carrying over the acquiree's recorded contract assets or contract liabilities for some arrangements." For example, differences may exist in the way an acquirer and acquiree estimate variable consideration or measure progress towards completion of a performance obligation.

6.191 If some contracts result in the recognition of a contract asset, and others result in the recognition of a contract liability, the task force believes the amounts from separate contracts would generally not be offset.[27]

6.192 *Contract Asset*. If, prior to the business combination, an acquiree performed its obligation by transferring goods or services to its customer before the customer paid consideration, the acquirer would need to consider whether it should recognize either a contract asset or a receivable, depending on the nature of the right to consideration.

- *A contract asset*, as defined by the FASB ASC Master Glossary, is an entity's right to consideration in exchange for goods or services that the entity has transferred to a customer when that right is conditioned on something other than the passage of time (for example, the entity's future performance).

- *A receivable* is an entity's right to consideration that is unconditional. A right to consideration is unconditional if only the passage of time is required before payment of that consideration is due. See the "Trade and Other Receivables" section of this chapter for guidance on how to recognize and measure acquired receivables.

6.193 FASB ASC 606 requires the transaction price for a revenue contract with variable consideration to be constrained (that is, limited to an amount such that it is probable a

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[27] This view is consistent with the conclusions reached by the Transition Resource Group for Revenue Recognition (TRG) in Agenda ref 11, *October 2014 Meeting – Summary of Issues Discussed and Next Steps- Topic 2: Presentation of a contract as a contract asset or a contract liability.* Specifically, this TRG paper indicates that the unit of account for presentation of contract assets and contract liabilities would generally be determined at the contract level. For more information, refer to this TRG paper, which is available on FASB website.

Entities should also refer to general offsetting guidance in FASB ASC 210-20, *Balance Sheet—Offsetting*.

significant reversal in the amount of cumulative revenue recognized will not occur). This constraint introduces a downward bias into the estimate of variable consideration, requiring an entity to exercise conservatism before it recognizes revenue and a corresponding contract asset. When a customer contract of this nature is acquired in a business combination, the contract asset recognized by the acquirer by applying the FASB ASC 606 approach may be less than the asset's fair value. The task force believes that the value of the future cash flows associated with the constrained variable consideration in these contracts would be included in measuring the corresponding customer-related intangible asset, embracing the notion that none of the components of value have been omitted, as noted previously. See the "Intangible Assets Associated with Contracts with Customers" section of chapter 13 for discussion of valuation considerations related to intangible assets associated with these contracts.

6.194 *Contract Liability.* If, prior to the business combination, the acquiree had recorded a contract liability because a customer paid consideration, or the acquiree had a right to an amount of consideration that is unconditional (that is, a receivable), before the promised goods or services are transferred to the customer, the acquirer would recognize a contract liability as part of the acquisition accounting. The FASB ASC Master Glossary defines *contract liability* as

> An entity's obligation to transfer goods or services to a customer for which the entity has received consideration (or the amount is due) from the customer.

6.195 The acquirer recognizes a contract liability only to the extent that it represents a performance obligation of the acquirer as of the acquisition date. The FASB ASC Master Glossary defines *performance obligation* as

> A promise in a contract with a customer to transfer to the customer either:
>
> a. A good or service (or a bundle of goods or services) that is distinct
> b. A series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer.

6.196 Paragraphs 14–22 of FASB ASC 606-10-25 provide guidance on identifying performance obligations. If the acquirer determines that there is an unsatisfied performance obligation, the contract liability is recognized and measured in accordance with FASB ASC 606. Some common examples of contract liabilities of the acquiree that may be recognized include advanced payments for subscriptions; membership fees to gyms, clubs, or other organizations; customer support for licensed software; the license of a brand; or software as a service (SaaS). Customer loyalty and similar programs may also give rise to material rights and result in the recognition of contract liabilities.

6.197 Prior to the adoption of ASU No. 2021-08, a contract liability was generally recognized in an acquirer's financial statements if it represented a legal obligation, and FASB ASC 805 required those obligations to be recorded at fair value. In many situations, the contract liability recognized by applying the FASB ASC 606 approach will be higher than the liability's fair value, primarily because it will not be subject to the same

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downward adjustment that usually resulted from fair value measurement (for example, selling and marketing efforts already expended). Paragraph BC41 in the "Background Information and Basis for Conclusions" section of ASU No. 2021-08 indicates that "The Board believes that the corresponding increase to the acquired contract liabilities balance for those adjustments will generally be recognized in goodwill."

6.198 See the "Interplay of Contract Liabilities and the Valuation of Certain Intangible Assets" section in chapter 13 for a discussion of how to consider the contract liabilities when valuing other intangible assets related to acquired contracts.

Noncontrolling Interests

6.199 The FASB ASC Master Glossary defines *noncontrolling interest* as "[t]he portion of equity (net assets) in a subsidiary not attributable, directly or indirectly, to a parent." In addition to common shares not held by the parent, this might include un-replaced share-based payment awards classified as equity, warrants or preferred stock. For example, assume Company A acquires 80% of the outstanding shares of Company T in a business combination with the remaining 20% held by other owners. Because the remaining 20% ownership interest is not held directly or indirectly by Company A, the 20% ownership interest represents a noncontrolling interest. However, if the remaining 20% ownership interest was previously held by a wholly-owned subsidiary of Company A, there would be no noncontrolling interest because all of the outstanding shares of Company T would be held either directly (80%) or indirectly (20%) by Company A.

6.200 FASB ASC 805-20-30-1 requires the acquirer in a business combination to measure any noncontrolling interest in the acquiree at its acquisition-date fair value.

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Chapter 7

Recognizing and Measuring Goodwill or a Gain from a Bargain Purchase

Goodwill

7.01 Goodwill is recognized at the acquisition date, and is measured as a residual. Goodwill previously recorded by an acquiree is not recorded as a separate asset by the acquirer.

7.02 FASB ASC 805-30-30-1 states that

> The acquirer shall recognize goodwill as of the acquisition date, measured as the excess of (a) over (b):
>
> a. The aggregate of the following:
> 1 The consideration transferred measured in accordance with this Section, which generally requires acquisition-date fair value (see paragraph 805-30-30-7)
> 2 The fair value of any noncontrolling interest in the acquiree
> 3 In a business combination achieved in stages, the acquisition-date fair value of the acquirer's previously held equity interest in the acquiree.
>
> b. The net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed measured in accordance with this Topic.

7.03 The FASB ASC Master Glossary defines *goodwill* as "[a]n asset representing the future economic benefits arising from other assets acquired in a business combination or an acquisition by a not-for-profit entity that are not individually identified and separately recognized." There are components of goodwill that are identifiable but may not be separately recognized, such as an assembled workforce.

7.04 This definition is consistent with the objective of not subsuming into goodwill amounts that should be separately recognized in a business combination.[1] Goodwill is also affected by assets and liabilities that are not recognized at their fair values (e.g., deferred income taxes). Goodwill is the difference between the fair value of the acquiree and the recognized bases of the identifiable net assets acquired.

7.05 While excess consideration transferred over the identifiable assets acquired and liabilities assumed could represent an overpayment for the acquirer's interest in the acquiree, the acquirer does not recognize a loss on a business combination at the acquisition date. During its deliberations of FASB Statement No. 141(R), *Business Combinations*, FASB

[1] Private companies have the option to not recognize separately from goodwill certain customer-related intangible assets and noncompetition agreements. For further discussion, see the "Private Company Considerations" section in chapter 8, "Other Accounting Topics."

concluded that "in practice it is not possible to identify and reliably measure an overpayment at the acquisition date. Accounting for overpayments is best addressed through subsequent impairment testing when evidence of a potential overpayment first arises."[2] Overpayments are thus subsumed into goodwill and addressed through subsequent impairment testing of goodwill.

Bargain Purchase

7.06 As indicated in FASB ASC 805-30-25-2, bargain purchases occur if the acquisition-date amounts of the identifiable net assets acquired exceed the sum of (i) the consideration transferred, which is generally measured at its acquisition-date fair value, (ii) the fair value of any noncontrolling interest in the acquiree, and (iii) the acquisition-date fair value of any previously held equity interest in the acquiree. Such a transaction results in a gain to the acquirer and is referred to as a *bargain purchase*. FASB ASC 805 requires the bargain purchase gain to be recognized in earnings. The bargain purchase gain is not attributed to any noncontrolling interest.

7.07 Paragraphs B371–B378 in the "Basis for Conclusions" section of FASB Statement No. 141(R) explain the rationale for the accounting for bargain purchase gains. Paragraph B374 states

> The Boards acknowledged concerns raised by constituents that a requirement to recognize gains on a bargain purchase might provide an opportunity for inappropriate gain recognition from intentional errors resulting from the acquirer's:
>
> a. Understating or failing to identify the value of items of consideration that it transferred
> b. Overstating values attributed to particular assets acquired
> c. Understating or failing to identify and recognize particular liabilities assumed.

7.08 As a result, if a bargain purchase is initially identified, FASB ASC 805-30-25-4 requires that

> Before recognizing a gain on a bargain purchase, the acquirer shall reassess whether it has correctly identified all of the assets acquired and all of the liabilities assumed and shall recognize any additional assets or liabilities that are identified in that review.

FASB ASC 805-30-30-5 provides that, as part of that required reassessment, the acquirer should review the procedures used to measure the following items:

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[2] The quoted language is an excerpt from paragraph B382 of FASB Statement No. 141(R), *Business Combinations*, which was part of the "Basis for Conclusions" section, none of which was codified in FASB ASC. However, the Business Combinations Task Force (task force) believes that paragraph B382 and other paragraphs from the "Basis for Conclusions" section of FASB Statement No. 141(R) provide helpful guidance and, therefore, decided to incorporate them in this guide.

a. The identifiable assets acquired and liabilities assumed
b. The noncontrolling interest in the acquiree, if any
c. For a business combination achieved in stages, the acquirer's previously held equity interest in the acquiree
d. The consideration transferred

7.09 Paragraph B375 of FASB Statement No. 141(R) indicates that the objective of the required reassessment

> … is to ensure that appropriate consideration has been given to all available information in identifying the items to be measured and recognized and in determining their fair values. The Boards believe that the required review will mitigate, if not eliminate, undetected errors that might have existed in the initial measurements.

7.10 Because an owner generally will not knowingly or willingly transfer control of a businesses at a price below its fair value, this situation is expected to occur infrequently, other than when there may be a forced liquidation or a distressed sale. The Business Combinations Task Force (task force) observes that there are other examples where a bargain purchase gain may result, such as a sale not subject to a bidding process, or where the purchase price is fixed but the value of the business increases. A company bought out of bankruptcy does not automatically result in a bargain purchase gain.

7.11 FASB ASC 805-30-50-1(f) requires disclosure of the amount of any recognized gain from a bargain purchase, the line item in the income statement in which the gain is recognized, and a description of the reasons why the transaction resulted in a gain.

7.12 Example 1 in paragraphs 15–16 of FASB ASC 805-30-55 provides additional guidance on bargain purchases and illustrates its application.

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Chapter 8

Other Accounting Topics

Determining What is Part of the Business Combination Transaction

8.01 To qualify for recognition as part of applying the acquisition method, the identifiable assets acquired and liabilities assumed must be part of what the acquirer and the acquiree (or its former owners) exchanged in the business combination transaction rather than the result of separate transactions. FASB ASC 805-10-25-20 states

> The acquirer and the acquiree may have a preexisting relationship or other arrangement before negotiations for the business combination began, or they may enter into an arrangement during the negotiations that is separate from the business combination. In either situation, the acquirer shall identify any amounts that are not part of what the acquirer and the acquiree (or its former owners) exchanged in the business combination, that is, amounts that are not part of the exchange for the acquiree. The acquirer shall recognize as part of applying the acquisition method only the consideration transferred for the acquiree and the assets acquired and liabilities assumed in the exchange for the acquiree. Separate transactions shall be accounted for in accordance with the relevant generally accepted accounting principles (GAAP).

8.02 The FASB ASC 805 principle is based on the concept of who receives the primary benefits from the transaction. FASB ASC 805-10-25-21 indicates that "[a] transaction entered into by or on behalf of the acquirer or primarily for the benefit of the acquirer or the combined entity, rather than primarily for the benefit of the acquiree (or its former owners) before the combination, is likely to be a separate transaction." Separate transactions should be accounted for apart from the business combination in accordance with the relevant generally accepted accounting principles (GAAP).

Factors to Consider

8.03 FASB ASC 805-10-55-18 provides certain factors (discussed in the following paragraphs), which are neither mutually exclusive nor individually conclusive, that should be considered in assessing whether a transaction is part of a business combination or should be accounted for separately.

Reason for the Transaction

8.04 Item *a* in FASB ASC 805-10-55-18 states

> Understanding the reasons why the parties to the combination (the acquirer, the acquiree, and their owners, directors, managers, and their agents) entered into a particular transaction or arrangement may provide insight into whether it is part of the consideration transferred and the assets acquired or liabilities assumed. For example, if a transaction is arranged primarily for the benefit of the acquirer or the

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combined entity rather than primarily for the benefit of the acquiree or its former owners before the combination, that portion of the transaction price paid (and any related assets or liabilities) is less likely to be part of the exchange for the acquiree. Accordingly, the acquirer would account for that portion separately from the business combination.

8.05 In certain circumstances, both parties (that is, the acquirer and the former owners of the acquiree) may benefit from a transaction entered at or near the same time as a business combination. In those cases, the acquirer would need to evaluate who receives the primary benefit from the transaction in evaluating whether it was part of the exchange for the acquiree.

Who Initiated the Transaction

8.06 Item *b* in FASB ASC 805-10-55-18 states

> Understanding who initiated the transaction may also provide insight into whether it is part of the exchange for the acquiree. For example, a transaction or other event that is initiated by the acquirer may be entered into for the purpose of providing future economic benefits to the acquirer or combined entity with little or no benefit received by the acquiree or its former owners before the combination. On the other hand, a transaction or arrangement initiated by the acquiree or its former owners is less likely to be for the benefit of the acquirer or the combined entity and more likely to be part of the business combination transaction.

Timing of the Transaction

8.07 Item *c* in FASB ASC 805-10-55-18 states

> The timing of the transaction may also provide insight into whether it is part of the exchange for the acquiree. For example, a transaction between the acquirer and the acquiree that takes place during the negotiations of the terms of a business combination may have been entered into in contemplation of the business combination to provide future economic benefits to the acquirer or the combined entity. If so, the acquiree or its former owners before the business combination are likely to receive little or no benefit from the transaction except for benefits they receive as part of the combined entity.

Question and Answer—Determining Whether a Transaction is Part of the Business Combination

8.08 *Question 1*: Assume Company A, in its evaluation of a potential business combination with Company T, has identified numerous facilities that would be redundant in the combined entity after the transaction. During the negotiations, Company A requests that Company T undertake certain restructuring activities in order to eliminate the redundancy; Company A will reimburse Company T for the related expenses. Company T agrees to restructure certain activities before the acquisition date, but only after receiving shareholder approval for the business combination. Would the restructuring activities be accounted for as part of the business combination?

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Answer: No. In this scenario, Company A initiated the transaction and is the recipient of the future economic benefits of the restructuring activities. The fact that the restructuring occurred prior to the acquisition date is not substantive because Company A, in contemplation of the business combination, directed Company T to undertake the restructuring activities during the negotiation process to provide future economic benefit to the combined entity. Additionally, Company T was not committed to the restructuring independent of the transaction and the restructuring did not commence until after the shareholder approval. As such, in this case, the restructuring activities would be accounted for separately from the business combination and would result in an expense by Company A pursuant to the guidance in FASB ASC 420. All three factors have been highlighted in this example for illustrative purposes. The factors should be considered in the aggregate and no individual factor is determinative.

Specific Transactions Addressed in FASB ASC 805

8.09 FASB ASC 805-10-25-21 lists the following examples of separate transactions that are not considered to be part of a business combination:

a. A transaction that in effect settles preexisting relationships between the acquirer and acquiree
b. A transaction that compensates employees or former owners of the acquiree for future services
c. A transaction that reimburses the acquiree or its former owners for paying the acquirer's acquisition-related costs

Preexisting Relationships and Reacquired Rights

8.10 According to FASB ASC 805-10-55-20, a preexisting relationship is a relationship between the acquirer and acquiree that existed before they contemplated the business combination. According to FASB ASC 805-20-25-14, as part of a business combination, an acquirer may reacquire a right that it previously had granted to the acquiree to use one or more of the acquirer's recognized or unrecognized assets. A preexisting relationship must exist for a reacquired right to exist, but not all preexisting relationships include a reacquired right. Once a preexisting relationship is identified it should be first evaluated for settlement and then evaluated for the existence of a reacquired right.

Settlement of Preexisting Relationships

8.11 A business combination between two parties that have a preexisting relationship is a multiple-element transaction with one element being the business combination and the other element being the settlement of the preexisting relationship.

8.12 According to FASB ASC 805-10-55-20, "[a] preexisting relationship between the acquirer and acquiree may be contractual (for example, vendor and customer or licensor and licensee) or noncontractual (for example, plaintiff and defendant)." Preexisting relationships should be identified and assessed to determine whether they have been effectively settled as a result of the business combination transaction and should,

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therefore, be accounted for separately from the business combination in accordance with other relevant GAAP. Because the acquirer consolidates the acquiree following a business combination, preexisting relationships are generally effectively settled as a result of the business combination (i.e., following the business combination, such transactions are eliminated in the postcombination consolidated financial statements).

8.13 A settlement gain or loss should be recognized for the settlement of a preexisting relationship. The process for determining the settlement gain or loss differs depending on whether the relationship is contractual or noncontractual.

8.14 Regardless of the type of relationship (that is, contractual or noncontractual), the acquirer's recognition of an asset or liability related to the preexisting relationship before the business combination will affect the calculation of the settlement gain or loss.

Calculating Gain or Loss on the Settlement of the Preexisting Relationship

8.15 The process for measuring a settlement gain or loss when a preexisting relationship exists is different for contractual and noncontractual relationships. If the preexisting relationship was documented in a contract, it would be considered a contractual relationship. Otherwise, the relationship would be considered noncontractual.

8.16 FASB ASC 805-10-55-21 states

> If the business combination in effect settles a preexisting relationship, the acquirer recognizes a gain or loss, measured as follows:
>
> a. For a preexisting noncontractual relationship, such as a lawsuit, fair value
>
> b. For a preexisting contractual relationship, the lesser of the following:
>
> 1. The amount by which the contract is favorable or unfavorable from the perspective of the acquirer when compared with pricing for current market transactions for the same or similar items. An unfavorable contract is a contract that is unfavorable in terms of current market terms. It is not necessarily a loss contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it.
>
> 2. The amount of any stated settlement provisions in the contract available to the counterparty to whom the contract is unfavorable. If this amount is less than the amount in (b)(1), the difference is included as part of the business combination accounting.

Settlement of a Preexisting Noncontractual Relationship

8.17 As indicated previously, a settlement gain or loss is recognized as a result of the effective settlement of a noncontractual relationship in connection with a business combination. The

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settlement gain or loss is calculated as the difference between the fair value of the effective settlement of the noncontractual relationship and any amounts previously recognized by the acquirer (in accordance with applicable GAAP). This is illustrated in the following questions.

Questions and Answers—Settlement of a Preexisting Noncontractual Relationship

8.18 *Question 2*: Company T is suing Company A for patent infringement. In accordance with the provisions of FASB ASC 450, Company A has not recognized a liability related to the lawsuit. Company A pays $100 million to acquire Company T. The fair value of the liability related to the lawsuit is $5 million. How should Company A account for the settlement of the noncontractual preexisting relationship?

Answer: Company A would recognize a settlement loss of $5 million in connection with the effective settlement of the lawsuit with Company T. The remaining $95 million ($100 million of acquisition consideration less the fair value of the liability related to the lawsuit of $5 million) would be included as consideration transferred in the business combination.

8.19 *Question 3*: Assume the same facts in Question 2, except that Company A is suing Company T for patent infringement. Further assume that Company T has not recognized a liability related to the lawsuit in accordance with the provisions of FASB ASC 450. How should Company A account for the settlement of the noncontractual preexisting relationship?

Answer: Company A would recognize a settlement gain of $5 million in connection with the effective settlement of the lawsuit with Company T. In this case, Company A would adjust the consideration transferred by $5 million to arrive at a total consideration transferred of $105 million in the business combination.

In the preceding questions, Company A did not have a previously recognized amount in its financial statements related to the lawsuit. As indicated previously, any amount already recognized by the acquirer will affect the amount recognized as a settlement gain or loss. For example, if in Question 2 Company A previously recognized a liability of $1 million pursuant to FASB ASC 450, the amount of the settlement loss would be $4 million (the fair value of the lawsuit of $5 million less the previously recognized liability of $1 million) instead of $5 million (note that the consideration transferred for the business combination would still be $95 million).

Settlements of Contractual Relationships

8.20 As discussed in FASB ASC 805-10-55-21, a settlement gain or loss should be recognized by the acquirer as a result of the effective settlement of a contractual relationship in connection with a business combination.

8.21 If a preexisting contract that is settled in connection with a business combination is otherwise cancelable without penalty, the stated settlement provision amount of that contract is zero and no settlement gain or loss would be recognized in connection with the business combination. However, if there are no stated settlement terms and the contract is not cancelable, a settlement gain or loss would be recognized based on the amount by which the

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contract is favorable or unfavorable to the acquirer (determined based on the settled contract's fair value on the date of acquisition).

8.22 As indicated in FASB ASC 805-10-55-21, a settlement gain or loss is recognized based on the amount of the stated settlement provision available to the counterparty to whom the contract is unfavorable when that stated amount is less than the off-market component of the contract. Therefore, the amount by which the off-market element of the settled contract exceeds the stated settlement provision effectively is ignored. Conceptually, the party to whom the contract is unfavorable could have made a unilateral decision to cancel the contract by invoking the settlement provision and then proceed with the business combination transaction based on an exchange determined without reference to the off-market contract that, by then, would not exist. Example 2 in paragraphs 30–32 of FASB ASC 805-10-55 illustrates the accounting for the settlement of a preexisting contractual relationship.

> **Example 2: Effective Settlement of a Supply Contract as a result of a Business Combination**
>
> **55-30** …Acquirer purchases electronic components from Target under a five-year supply contract at fixed rates. Currently, the fixed rates are higher than rates at which Acquirer could purchase similar electronic components from another supplier. The supply contract allows Acquirer to terminate the contract before the end of the initial 5-year term only by paying a $6 million penalty. With 3 years remaining under the supply contract, Acquirer pays $50 million to acquire Target, which is the fair value of Target based on what other market participants would be willing to pay.
>
> **55-31** Included in the total fair value of Target is $8 million related to the fair value of the supply contract with Acquirer. The $8 million represents a $3 million component that is at-market because the pricing is comparable to pricing for current market transactions for the same or similar items (selling effort, customer relationships, and so forth) and a $5 million component for pricing that is unfavorable to Acquirer because it exceeds the price of current market transactions for similar items. Target has no other identifiable assets or liabilities related to the supply contract, and Acquirer has not recognized any assets or liabilities related to the supply contract before the business combination.
>
> **55-32** In this Example, Acquirer recognizes a loss of $5 million (the lesser of the $6 million stated settlement amount and the amount by which the contract is unfavorable to the acquirer) separately from the business combination. The $3 million at-market component of the contract is part of goodwill.

8.23 In this example, the consideration transferred for the business combination would be $45 million (the consideration transferred of $50 million, less the fair value of the off-market component of $5 million). In addition, the task force believes that because the supply contract is effectively settled as part of the business combination, it would not be appropriate for Acquirer to recognize a separate customer relationship intangible asset for

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the supply contact with Target (that is, Acquirer cannot have a customer relationship intangible asset with itself).

8.24 Further, a question may arise on how to account for the settlement of a preexisting contractual relationship when the acquirer obtains control of less than 100% of the acquiree in a business combination (that is, a noncontrolling interest is present). For example, should the acquirer recognize 100% of the settlement gain or loss or only the portion of the settlement gain or loss relating to the percentage ownership acquired? The task force observes that FASB ASC 805 does not explicitly address this issue, and that judgment should be applied based on the individual facts and circumstances.

Settlements of Preexisting Contractual Relationship Where Acquirer Previously Recognized a Liability

8.25 The amount recognized as a settlement gain or loss might differ from the amount calculated pursuant to FASB ASC 805-10-55-21 when the acquirer had previously recognized an amount in its financial statements related to the preexisting relationship. This is illustrated in Example 3 in FASB ASC 805-10-55-33.

> **Example 3: Effective Settlement of a Contract Between the Acquirer and Acquiree in Which the Acquirer Had Recognized a Liability Before the Business Combination**
>
> **55-33** …In Example 2 (see paragraph 805-10-55-30), generally accepted accounting principles (GAAP) might have required Acquirer to recognize a $6 million liability for the supply contract before the business combination. In that situation, Acquirer recognizes a $1 million settlement gain on the contract in earnings at the acquisition date (the $5 million measured loss on the contract less the $6 million loss previously recognized). In other words, Acquirer has in effect settled a recognized liability of $6 million for $5 million, resulting in a gain of $1 million.

8.26 In this example, the consideration transferred for the business combination would be $45 million (the consideration transferred of $50 million, less the fair value of the off-market component of $5 million).

Settlement of Debt

8.27 A business combination may result in the effective extinguishment of debt issued by the acquirer to the acquiree. If the debt is settled (extinguished) as a result of the business combination, the acquirer would apply the guidance in FASB ASC 470-50, *Debt - Modifications and Extinguishments*, to account for the debt extinguishment. An extinguishment gain or loss would be recognized if the reacquisition price (fair value or stated settlement amount) differs from the net carrying amount of the debt. Any settlement gain or loss would be recognized separate from the business combination.

8.28 If the debt is issued by the acquiree to the acquirer, the acquirer would be effectively settling a receivable and would apply the guidance in FASB ASC 805-10-55-21 related to the

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settlement of preexisting relationships in a business combination. See paragraph 8.16 for that guidance.

Questions and Answers—Settlement of Debt

8.29 The following question illustrates the accounting for the settlement of debt issued by the acquirer to the acquiree.

8.30 *Question 4*: On June 1, 20X2, Company A issued debt securities of $10 million to Company T. On June 1, 20X4, Company A acquires all of the outstanding stock of Company T for $100 million and there is no other separate agreement to settle the debt. Assume that on the acquisition date, the carrying amount of the debt recorded on Company A's books was $10 million and the fair value of the debt was $12 million. How would Company A account for the settlement of the preexisting relationship?

Answer: As a result of the acquisition of Company T, Company A would recognize a $2 million loss associated with the extinguishment of the debt securities held by Company T. The $2 million loss represents the amount by which the fair value of the debt exceeds the net carrying amount. The consideration transferred in this example would be $88 million, calculated as the consideration transferred of $100 million less the fair value of the debt of $12 million.

Reacquired Rights

8.31 As previously noted, when a preexisting relationship exists, it should also be evaluated for the existence of a reacquired right. According to FASB ASC 805-20-25-14, as part of a business combination, an acquirer may reacquire a right that it previously had granted to the acquiree to use one or more of the acquirer's recognized or unrecognized assets. Examples of such rights include a right to use the acquirer's trade name under a franchise agreement or a right to use the acquirer's technology under a technology licensing agreement. Relationship based intangible assets are not subject to licensing transactions and, therefore, do not give rise to reacquired rights. (See chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," for a detailed discussion of *IP-based* and *relationship-based intangible assets*.)

8.32 The guidance in paragraphs 14–15 of FASB ASC 805-20-25 requires (1) a reacquired right to be recognized as an identifiable intangible asset separate from goodwill and (2) a settlement gain or loss to be recognized to the extent the terms of the contract are favorable or unfavorable, respectively, compared to current market terms. To the extent there is a difference between contractual and market terms, the effect of the off-market terms should be removed from the measurement of a reacquired right, regardless of how the settlement amount is determined.

8.33 Reacquired rights are an exception to FASB ASC 805's fair value measurement principle. According to FASB ASC 805-20-30-20, an acquirer should measure the value of a reacquired right on the basis of the remaining contractual term of the related contract regardless of whether market participants would consider potential contractual renewals in determining its fair value. As indicated in paragraphs B308–B309 in FASB Statement

No. 141(R), *Business Combinations*,[1] while market participants generally would reflect expected renewals of the term of a contractual right in their estimate of the fair value of a right traded in the market, the FASB observed that an acquirer who controls a reacquired right could assume indefinite renewals of its contractual term, effectively making the reacquired right an indefinite-lived intangible asset. The FASB therefore concluded that a right reacquired from an acquiree is no longer a contract with a third party and in substance has a finite life. Accordingly, reacquired rights are measured based only on the remaining contractual term.

Questions and Answers—Reacquired Rights

8.34 The following questions illustrate the measurement and recognition concepts for the acquisition of a reacquired right in a business combination:

8.35 *Question 5*: Company A pays $30 million to acquire Company T. Company A previously granted Company T a franchise right to use Company A's trade name in a specified territory for an annual royalty rate of 3% of sales, which based on current market conditions at the acquisition date is 5%. Assume that the value of the reacquired franchise right (as measured over the remaining term of the agreement) is $19 million which consists of a $15 million component that is at-market because the pricing is comparable to the pricing for current market transactions and a $4 million component for pricing that is unfavorable to Company A (i.e., the royalty rate that Company A is entitled to is less than the market royalty rate of 5%). The contract does not include any cancellation or settlement provisions. How would Company A account for the settlement of the preexisting relationship and the acquisition of the reacquired right in the business combination?

Answer: Company A would recognize a reacquired franchise right in the amount of $15 million as part of the business combination and would recognize a settlement loss of $4 million separately from the business combination. The consideration transferred for the acquisition of the business would be $26 million (consideration transferred of $30 million less the settlement amount equal to the fair value of the off-market component of $4 million).

8.36 *Question 6*: Assume the same facts as in Question 5, except that the contract is cancellable upon payment of $2 million by Company A. How would Company A account for the settlement of the preexisting relationship and for the acquisition of the reacquired right in the business combination?

Answer: Company A would recognize a reacquired franchise right in the amount of $15 million as part of the business combination and would recognize a settlement loss of $2 million (the lesser of the $2 million contractual settlement provision and the $4 million off market component) separately from the business combination. The consideration

[1] These and other paragraphs from the "Basis for Conclusions" section of FASB Statement No. 141(R), *Business Combinations*, were not codified in FASB ASC; however, the Business Combinations Task Force (task force) believes that these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

transferred for the acquisition of the business would be $28 million (consideration transferred of $30 million less the contractual settlement amount of $2 million).

Subsequent Accounting

8.37 Consistent with how it is initially measured, FASB ASC 805-20-35-2 provides that a reacquired right should be amortized over the remaining contractual period of the contract in which the right was granted.

A Transaction That Compensates Employees or Former Owners of the Acquiree for Future Services

8.38 Replacement awards or other compensation arrangements for past services or future services, including contingent consideration arrangements, may be given to employees of the acquiree. The acquirer must determine what portion of the arrangement, if any, should be considered part of the business combination. Amounts that are not part of the consideration transferred are recognized separately from a business combination and accounted for in accordance with the relevant GAAP. For further discussion, see chapter 5, "Measuring the Consideration Transferred."

Acquisition Costs

8.39 FASB ASC 805-10-25-23 states

> Acquisition-related costs are costs the acquirer incurs to effect a business combination. Those costs include finder's fees; advisory, legal, accounting, valuation, and other professional or consulting fees; general administrative costs, including the costs of maintaining an internal acquisitions department; and costs of registering and issuing debt and equity securities. The acquirer shall account for acquisition-related costs as expenses in the periods in which the costs are incurred and the services are received, with one exception. The costs to issue debt or equity securities shall be recognized in accordance with other applicable GAAP.

8.40 While not specifically included in the FASB discussion of acquisition-related costs, the task force believes that costs to integrate the acquiree into the operations of the acquirer are similar in substance to acquisition-related costs and therefore should be accounted for outside of the business combination.

8.41 Acquisition-related costs that are embedded in the consideration transferred should be accounted for separately from the business combination. For example, consideration transferred by the acquirer that includes amounts to reimburse the acquiree or its former owners for payments made on behalf of the acquirer for the acquirer's acquisition-related costs should be recognized separately from the business combination.

8.42 Costs incurred by the acquiree or seller to sell a business are not acquisition-related costs and are expensed by the acquiree in the period incurred. Any consideration transferred by the acquirer that includes amounts to reimburse the acquiree for the acquiree's costs

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incurred to sell the business generally would be accounted for by the acquirer as part of the consideration transferred.

Questions and Answers—Acquisition Costs

8.43 *Question 7*: Company A purchases Company T in a business combination. Company A engages an advisory firm to assist with its purchase of Company T. Company A is obligated to pay the advisory firm $2 million for services provided. Further assume that as part of the purchase agreement, Company A requests that Company T pay the fees to the advisory firm, and that Company A would reimburse Company T for the fees on the acquisition date. How would Company A account for the reimbursement to Company T for the fees paid to the advisory firm?

Answer: Because Company A is the primary obligor for the advisory fees, the fees represent acquisition-related costs of Company A that would be expensed by Company A, and would not be part of the consideration transferred for Company T.

8.44 *Question 8*: Assume the same facts as in Question 7 except that Company T engaged the advisory firm to assist with the sale. Company T is obligated to pay the advisory firm $2 million for services provided. As part of the purchase agreement Company A agrees to assume Company T's obligation for the advisory fees on the acquisition date. How would Company A account for the fees paid to the advisory firm?

Answer: Because Company T engaged the advisory firm and is the primary obligor for the advisory fees, the fees would not represent acquisition-related costs of Company A. The obligation to the advisory firm would represent an assumed liability in the business combination.

Business Combination Achieved in Stages

8.45 As indicated in FASB ASC 805-10-25-9, an acquirer sometimes obtains control of an acquiree in which it held an equity interest (whether accounted for by the cost method, equity method or at fair value) immediately before the acquisition date. For example, on December 31, 20X1, Entity A holds a 35% noncontrolling equity interest in Entity B. On that date, Entity A purchases an additional 40% interest in Entity B, which gives it control of Entity B. Such a transaction is referred to as a *business combination achieved in stages*.

8.46 In a business combination achieved in stages where control is gained, the acquirer changes its status from an owner of an investment in the acquiree to a controlling financial interest holder in the acquiree. This change in control of the previously held equity interest in the acquiree triggers the remeasurement of the investment to fair value. Therefore, consistent with the guidance in FASB ASC 805-10-25-10, the acquirer remeasures any previously held equity interest in the acquiree to its acquisition-date fair value. If the fair value of the previously held interest at the acquisition date is not equal to its carrying amount, the acquirer recognizes a gain or loss in earnings. In prior reporting periods, the acquirer may have recognized changes in the value of its equity

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interest in the acquiree in other comprehensive income (e.g., because the investment was in a foreign entity for which the acquirer has recognized a cumulative translation adjustment amount). If so, the amount that was recognized in other comprehensive income should be reclassified and included in the calculation of the gain or loss as of the acquisition date.

8.47 According to FASB ASC 805-30-30-1 (a)[3], in a business combination achieved in stages, the acquisition-date fair value of the previously held interest is one of the components used in determining goodwill.

Mandatory Tender Offers

8.48 An acquirer may need to consider situations in which there is a regulatory requirement that obligates the acquirer to offer to purchase the ownership interest of the non-controlling interest shortly after gaining control of a business. For example, assume Company A acquires 60% of Company T and gains control. Local jurisdiction law requires Company A to make a mandatory tender offer (MTO) to the remaining 40% shareholders at the same price it paid per share for the 60% interest. The remaining shareholders have the option to either accept or reject Company A's offer.

8.49 Although the MTO may not be contractual, it is similar to a written put option (an equity contract) on the 40% non-controlling interest (NCI) that should be evaluated for accounting considerations. The accounting in this area can be complex because of the variety of authoritative guidance that should be considered and the terms of the transaction. For example, (1) the equity contract (e.g., the option on NCI) may be entered into contemporaneously with the creation of the NCI or subsequent to its creation, (2) the equity contract on the NCI may be considered embedded or freestanding and (3) the strike price of the equity contract may be set at either a fixed or variable (formulaic) price, or at fair value. Each of those variations can affect the accounting.

8.50 In this example, the acquirer should first determine whether the option is an embedded feature in the 40% NCI or a freestanding financial instrument to be accounted for separately from the 40% NCI. This determination is based on the definition of a 'freestanding financial instrument" within FASB ASC 480.

MTO (as an Option) is Considered Embedded in NCI

8.51 If the acquirer determines the option granted to the non-controlling shareholders is considered a feature embedded in the 40% NCI, the acquirer would need to further consider whether the NCI, with the option, represents a liability under FASB ASC 480. In this example, since the remaining shareholders have the *option* to either accept or reject the MTO, the 40% NCI, with the option, does not represent a mandatorily redeemable share. There are no other provisions that would result in the MTO being within the scope of FASB ASC 480. Therefore, the remaining 40% shareholder interest (with the option) would not be classified as a liability. The acquirer would then need to consider whether the remaining shareholders' option to accept the MTO requires bifurcation from the NCI under FASB ASC 815. That evaluation includes: (1) the

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determination of the nature of the host contract in the NCI (with the option) to be more akin to debt or equity; and (2) whether the remaining shareholders' option meets the definition of a derivative pursuant to FASB ASC 815.

- If the option does not require bifurcation, the remaining 40% NCI, including the option, would be classified in equity and accounted for as NCI pursuant to FASB ASC 810. Changes in the fair value of the option are not recognized in earnings.
- If the option requires bifurcation, it would be separated from the NCI and recorded at fair value, which would reduce the amount allocated to the NCI. The NCI would be classified in equity and accounted for pursuant to FASB ASC 810. The option would be subsequently measured at fair value, with changes in the fair value recorded in profit or loss.

8.52 Regardless of whether the option is bifurcated or not, because it permits the remaining shareholders to sell its interest to Company A for cash, the NCI is considered redeemable NCI and would be classified outside of permanent equity pursuant to FASB ASC 480-10-S99 during the open MTO period. Once the MTO period concludes, the remaining non-controlling interests that were not redeemed would be reclassified to permanent equity.

8.53 Classification of redeemable instruments outside of permanent equity under FASB ASC 480-10-S99 is required for SEC registrants. A non-SEC registrant may (but is not required to) present redeemable noncontrolling interests as temporary equity (i.e., in the mezzanine between liabilities and equity). The measurement guidance within FASB ASC 480-10-S99 is applicable for redeemable noncontrolling interests.

MTO (as an Option) is Considered Freestanding From NCI

8.54 If, in this example, the option granted to NCI shareholders is determined to be a freestanding financial instrument per FASB ASC 480, the NCI and the freestanding option would be accounted for separately. The NCI would be classified in equity and subsequently accounted for in accordance with FASB ASC 810. The option would be classified as a liability pursuant to FASB ASC 480 and measured at fair value, which changes in the fair value recorded in profit or loss.

MTO as a Forward

8.55 In certain situations, the remaining shareholders may be *required* to accept Company A's MTO, as such, instead of being considered an option, the MTO would be considered a forward which obligates the acquirer to purchase and the NCI shareholders to sell the 40% NCI. In this case, Company A would likely account for the transaction as a 100% business combination and consolidate 100% of Company T, without recognizing the NCI at the consolidated entity level. Rather, a liability for the obligation to repurchase the remaining 40% interest would be recorded (rather than in equity as NCI) in acquisition accounting. (See the "Noncontrolling Interests" section of chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree," and the "Noncontrolling Interest and

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Previously Held Equity Interest for IRR Purposes" section in chapter 10, "Internal Rate of Return Analysis," for further discussion regarding NCI.)

Measurement Period

8.56 According to FASB ASC 805-10-25-15, the measurement period is the period after the acquisition date during which the acquirer may adjust the provisional amounts recognized for a business combination. FASB ASC 805 does not provide specific guidance on how to determine provisional amounts but those provisional amounts should be determined based on facts and circumstances that existed as of the acquisition date that are known at the date the financial statements are issued. While the information may be preliminary or may not be readily available at the acquisition date, the task force believes it would not be appropriate to simply assign a nominal value or no value to particular assets or liabilities simply because the acquirer anticipates receiving (during the measurement period) additional information that will affect the ultimate recognition and measurement of those items.

8.57 The measurement period provides the acquirer with a reasonable time to obtain the information necessary to identify and measure all aspects of the business combination in accordance with the guidance in FASB ASC 805. This includes the identifiable assets acquired, liabilities assumed, and any noncontrolling interest in the acquiree; the consideration transferred for the acquiree; the equity interest in the acquiree previously held by the acquirer; and any goodwill recognized or a bargain purchase gain.

8.58 Paragraphs 13–14 of FASB ASC 805-10-25 state that

> **25-13**….During the measurement period, in accordance with paragraph 805-10-25-17, the acquirer shall adjust the provisional amounts recognized at the acquisition date to reflect new information obtained about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date.
>
> **25-14** During the measurement period, the acquirer also shall recognize additional assets or liabilities if new information is obtained about facts and circumstances that existed as of the acquisition date that, if known, would have resulted in the recognition of those assets and liabilities as of that date.

8.59 The measurement period is not a fixed period for all business combinations, or even for all aspects of a particular business combination. FASB ASC 805-10-25-14 provides that "[t]he measurement period ends as soon as the acquirer receives the information it was seeking about facts and circumstances that existed as of the acquisition date or learns that more information is not obtainable. However, the measurement period shall not exceed one year from the acquisition date."

8.60 The one-year limit is in place to prevent the measurement period from extending indefinitely. As indicated in paragraph B392 of FASB Statement No. 141(R), FASB concluded that "providing a measurement period longer than one year would not be

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especially helpful; obtaining reliable information about circumstances and conditions that existed more than a year ago is likely to become more difficult as time passes."

Adjustments Made to Provisional Amounts During the Measurement Period

8.61 The acquirer should adjust provisional amounts only for new information about facts and circumstances that existed as of the acquisition date. Therefore, as indicated in paragraphs 2–3 of FASB ASC 805-10-30:

> **30-2** The acquirer shall consider all pertinent factors in determining whether information obtained after the acquisition date should result in an adjustment to the provisional amounts recognized or whether that information results from events that occurred after the acquisition date. Pertinent factors include the time at which additional information is obtained and whether the acquirer can identify a reason for a change to provisional amounts.
>
> **30-3** Information that is obtained shortly after the acquisition date is more likely to reflect circumstances that existed at the acquisition date than is information obtained several months later.

8.62 If the acquirer becomes aware of new information about facts and circumstances that existed as of the acquisition date, the provisional amounts recognized at the acquisition date should be adjusted only if the new information:

- Affects the measurement of items that were initially recognized at the acquisition date,
- Establishes that an additional asset was acquired or a liability was assumed that was not recognized in the initial accounting for the acquisition, or
- Establishes that an asset or a liability that was previously recognized at the acquisition date does not meet the recognition requirements of FASB ASC 805.

8.63 If a measurement-period adjustment is identified, an acquirer increases or decreases the provisional amounts of identifiable assets or liabilities with an offsetting adjustment to goodwill. However, new information obtained during the measurement period sometimes may result in an adjustment to the provisional amounts of more than one asset or liability. In these situations, consistent with the guidance in FASB ASC 805-10-25-16, an adjustment to goodwill resulting from a change to a provisional amount may be offset, in whole or part, by another adjustment to goodwill from a corresponding adjustment to a provisional amount of the other asset or liability.

Prospective Application of Measurement-Period Adjustments

8.64 Based on the guidance in FASB ASC 805-10-25-17, an acquirer should recognize measurement-period adjustments during the period in which they determine the amounts, including the effect on earnings (e.g., depreciation, amortization) of any amounts they

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would have recorded in previous periods if the accounting had been completed at the acquisition date.

Adjustments After the Measurement Period

8.65 Adjustments to amounts recognized in a business combination that occur after the end of the measurement period are recognized in current period operations. The acquirer would not adjust the accounting for the business combination in such circumstances for anything other than the correction of an error that would be accounted for in accordance with the guidance in FASB ASC 250, *Accounting Changes and Error Corrections*. The materiality of any such errors would need to be considered. SAB 108 provides guidance for SEC registrants regarding the assessment of materiality of errors and the task force recommends that it also be considered by non-public companies.

Questions and Answers—Measurement-Period Adjustments

8.66 The following question illustrates the accounting for measurement-period adjustments when information becomes available before and after the measurement period.

8.67 *Question 9:* Company A acquires Company T on July 31, 20X4. Provisional amounts are recognized for certain of the assets acquired and liabilities assumed, including a liability related to a contractual dispute between Company T and one of its customers. Shortly before the acquisition, Company T's customer claimed that certain amounts were due from Company T under penalty clauses for completion delays included in the contract. Company A evaluated the contingency based on the information available at the acquisition date, and concluded that Company T was responsible for at least some of the delays in completing the contract. Company A concluded that the fair value of the contract dispute could not be determined and accounted for the contingency under FASB ASC 450. Pursuant to FASB ASC 450, Company A recognized a provisional amount of $1 million for this contingent liability in its acquisition accounting, which was its best estimate of the contingent liability based on the information available at the acquisition date.

In September 20X4, based on evaluation of additional information presented by the customer in support of its claim, Company A concluded that the best estimate of the contingent liability at the acquisition date was $2 million.

Company A concluded that the measurement period ended on March 31, 20X5, at which time the contingent liability had a balance of $2 million. In May 20X5, based on new information, Company A concluded that the contingent liability for the claim at the acquisition date was $2.1 million.

How should Company A account for changes to the contingent liability provisionally recognized for this dispute?

Answer: The increase in the contingent liability from $1 million at the acquisition date to $2 million in September 20X4 would be accounted for as a measurement-period adjustment (by increasing goodwill by $1 million) because this adjustment results from new information

about facts and circumstances that existed at the acquisition date and falls within the measurement period.

The increase in the contingent liability from $2 million at the end of the measurement period in March 20X5 to $2.1 million in May 20X5 occurred after the measurement period ended and, therefore, would not qualify as a measurement-period adjustment. Company A would recognize an increase in the contingent liability with an offsetting charge to earnings.

Disclosure Considerations

8.68 As indicated in FASB ASC 805-10-50-5 and FASB ASC 805-20-50-4A, until the accounting for a business combination is complete, the acquirer is required to include additional disclosures in its financial statements. Those disclosures include the assets, liabilities, equity interests, or items of consideration for which the initial accounting is incomplete and the reasons why the initial accounting is incomplete for those items. The acquirer also should disclose the nature and amount of any measurement-period adjustments recognized during the reporting period, including separately the amount of adjustment to current-period income statement line items relating to the income effects that would have been recognized in previous periods if the adjustment to provisional amounts were recognized as of the acquisition date. Alternatively, an acquirer may present those amounts separately on the face of the income statement.

Settlement of Litigation Arising From Business Combination

8.69 After a business combination, disputes may arise between the acquirer and the former shareholders of the acquiree (for example, disputes over the value of consideration transferred or representations of fact underlying the acquisition). If the parties transfer amounts to settle the dispute, questions may arise about whether the acquirer should reflect any amounts paid or received as an adjustment to the consideration transferred or whether the amounts paid or received should be recognized in the postcombination income statement.

8.70 The task force believes that the acquirer's cost to settle litigation with the acquiree's former shareholders generally are not preacquisition contingencies and, therefore, would be recorded as an expense when incurred unless there is a clear and direct link to the consideration transferred. If the acquirer is able to establish a clear and direct link to the consideration transferred (for example, litigation seeking enforcement of an escrow or escrow-like arrangement, such as specifying a minimum amount of working capital in the acquired business), the task force believes that an adjustment to the consideration would be appropriate only if the measurement period is open. If the measurement period is closed, the task force believes that any settlement amount that differs from the amount recognized during the measurement period, if any, would need to be recognized in current earnings. On the other hand, claims asserting that one party misled the other or that a provision of the purchase agreement is unclear are not unique to business combination agreements and generally do not establish a clear and direct link to the consideration transferred. In these cases, the settlement of such claims generally would be recognized in current earnings.

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Pushdown Accounting

8.71 For transactions accounted for under FASB ASC 805, a new basis of accounting is established in the acquirer's consolidated financial statements for the assets acquired and liabilities assumed. FASB ASC 805 gives all acquirees (both public and private companies) that are businesses or nonprofit activities the option to apply pushdown accounting (which the FASB ASC Master Glossary defines as "[u]se of the acquirer's basis in the preparation of the acquiree's separate financial statements") when an acquirer obtains control of the acquiree. The SEC staff eliminated its previous guidance which had required or precluded pushdown accounting for registrants generally based on the percentage of ownership.

Recognition

8.72 Pursuant to paragraphs 4–9 of FASB ASC 805-50-25, an acquiree has the option to apply pushdown accounting in its separate financial statements when an acquirer (an entity or individual) obtains control of the acquiree, regardless of the manner in which control is obtained (e.g., acquisition of a majority of voting rights or a change in the primary beneficiary of a variable interest entity). The FASB concluded that a threshold of a party gaining control is the most appropriate trigger for applying pushdown accounting because it is consistent with the thresholds of obtaining control in FASB ASC 805 and FASB ASC 810.[2]

8.73 Any subsidiary of an acquiree also is eligible to make an election to apply pushdown accounting to its separate financial statements independent of the acquiree's election to apply pushdown accounting.

8.74 The decision by an acquiree to apply pushdown accounting is not an accounting policy election that would be required to be applied to future transactions. For example, an acquiree may elect to apply pushdown accounting upon an event in which an acquirer obtains control of it, but elect not to apply pushdown accounting upon the next event.

8.75 If the acquiree elects not to apply pushdown accounting as of the acquisition date, the acquiree later can elect to apply pushdown accounting retrospectively to the most recent acquisition date. Such an election would be treated as a change in accounting principle in accordance with FASB ASC 250, *Accounting Changes and Error Corrections*. Once an entity elects to apply pushdown accounting to a specific change-in-control event, that election is irrevocable.

8.76 In accordance with FASB ASC 805-50-30-10, an acquiree may elect the option to apply pushdown accounting even if the acquirer is not required to apply FASB ASC 805 (for example, the acquirer is an individual or an investment company).

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[2] This guidance is consistent with paragraph BC12 of ASU No. 2014-17, *Pushdown Accounting*, which was part of the "Basis for Conclusions" section, none of which was codified in FASB ASC. However, the task force believes paragraph BC12 and other paragraphs from the "Basis for Conclusions" section of ASU No. 2014-17 provide helpful guidance and, therefore, decided to incorporate them in this guide.

Measurement

8.77 According to FASB ASC 805-50-30-10, an acquiree that elects to apply pushdown accounting will reflect the new basis of accounting established by the acquirer through its application of FASB ASC 805 to the individual assets and liabilities of the acquiree. If an acquiree is acquired by an acquirer that does not apply FASB ASC 805 (e.g., an individual or an investment company that accounts for the acquiree at fair value), and it elects to apply pushdown accounting, the acquiree will reflect in its financial statements the new basis that would have been established if the acquirer had applied FASB ASC 805.

8.78 According to FASB ASC 805-50-30-11, an acquiree should recognize goodwill that arises because of the application of pushdown accounting in its separate financial statements. However, if applying FASB ASC 805 results in a bargain purchase gain, this gain should not be recognized in the acquiree's income statement. Instead, the acquiree should recognize any such gain as an adjustment to additional paid-in capital (or net assets of a not-for-profit acquiree).

8.79 Additionally, FASB ASC 805-50-30-12 indicates that any acquisition-related liability incurred by the acquirer is recognized in the acquiree's separate financial statements only if it represents an obligation of the acquiree in accordance with other applicable GAAP. For example, if an acquirer incurred debt to finance the acquisition of an acquiree, that debt would not be recognized in the financial statements of the acquiree unless the acquiree were to assume the debt such that it became an obligation of the acquiree. In another example, an obligation arising from joint and several liability arrangements under FASB ASC 405-40 would represent an obligation of the acquiree that would be recognized in the financial statements of the acquiree.

8.80 The consideration transferred in a business combination may include a contingent consideration arrangement. FASB ASC 805-30-25-5 states that an acquirer should recognize the acquisition-date fair value of the contingent consideration as part of the consideration transferred in exchange for the acquiree. That arrangement may represent an asset or liability. Consistent with the guidance in FASB ASC 805-50-30-12, the task force believes that unless the acquiree has an obligation to pay or has the right to receive the contingent consideration, the contingent consideration liability or asset would not be pushed down to the acquiree.

8.81 Acquisition-related costs are not part of the fair value exchange between the buyer and seller for the acquired business. Rather, acquisition-related costs are separate transactions of the acquirer and do not form part of the basis of accounting recorded by the acquirer. As such, consistent with the guidance in FASB ASC 805, these costs are expensed by the acquirer when incurred and would not be pushed down to the acquiree.

8.82 For subsequent measurement, FASB ASC 805-50-35-2 requires an acquiree to follow the subsequent measurement guidance in other Subtopics of FASB ASC 805 and other applicable GAAP.

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Disclosures

8.83 If an acquiree elects the option to apply pushdown accounting, it should follow the guidance in paragraphs 5–6 of FASB ASC 805-50-50 and disclose information in the current reporting period that enables users of financial statements to evaluate the effect of pushdown accounting.

Private Company Considerations

8.84 In 2012, the Financial Accounting Foundation (FAF) of the FASB established a group to improve the process of setting accounting standards for private companies. That group, the Private Company Council (PCC), has two principal responsibilities. Based on criteria mutually developed and agreed to with the FASB, the PCC will determine whether exceptions or modifications to existing nongovernmental U.S. Generally Accepted Accounting Principles (U.S. GAAP) are necessary to address the needs of users of private company financial statements. The PCC will identify, deliberate, and vote on any proposed changes, which will be subject to endorsement by the FASB and submitted for public comment before being incorporated into GAAP. The PCC serves as the primary advisory body to the FASB on the appropriate treatment for private companies for items under active consideration on the FASB's technical agenda.

8.85 The first step in determining whether an entity can apply the private company standards is to evaluate whether the entity meets the definition of a public business entity. If so, then the entity cannot apply the private company standards. The FASB ASC Master Glossary defines a *public business entity* as:

> A public business entity is a business entity meeting any one of the criteria below. Neither a not-for-profit entity nor an employee benefit plan is a business entity.
>
> a. It is required by the U.S. Securities and Exchange Commission (SEC) to file or furnish financial statements, or does file or furnish financial statements (including voluntary filers), with the SEC (including other entities whose financial statements or financial information are required to be or are included in a filing).
> b. It is required by the Securities Exchange Act of 1934 (the Act), as amended, or rules or regulations promulgated under the Act, to file or furnish financial statements with a regulatory agency other than the SEC.
> c. It is required to file or furnish financial statements with a foreign or domestic regulatory agency in preparation for the sale of or for purposes of issuing securities that are not subject to contractual restrictions on transfer.
> d. It has issued, or is a conduit bond obligor for, securities that are traded, listed, or quoted on an exchange or an over-the-counter market.
> e. It has one or more securities that are not subject to contractual restrictions on transfer, and it is required by law, contract, or regulation to prepare U.S. GAAP financial statements (including footnotes) and make them publicly

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available on a periodic basis (for example, interim or annual periods). An entity must meet both of these conditions to meet this criterion.

8.86 It may also be helpful to consider the guidance in AICPA Technical Question & Answer (TQA) Sections 7100.01-16, which was developed to assist with the determination of whether an entity meets the definition of a public business entity.

8.87 An entity may meet the definition of a public business entity solely because its financial statements or financial information is included in another entity's filing with the SEC. In that case, the entity is only a public business entity for purposes of financial statements that are filed or furnished with the SEC.

Intangible Asset Accounting Alternative for Private Companies

8.88 In response to feedback from some private company stakeholders that the benefits of recognizing certain identifiable intangible assets may not justify the related costs, FASB ASC 805-20-25-30 gives private companies the option to not recognize separately from goodwill the following intangible assets:

a. Customer-related intangible assets unless they are capable of being sold or licensed independently from other assets of a business

b. Noncompetition agreements.

Customer-Related Intangible Assets

8.89 Many stakeholders indicated that the fair value of customer-related intangible assets does not provide decision-useful information unless the contract could be sold separately from the other assets of a business. As a result, the PCC and FASB believed that the benefits of recognizing them separately may not justify the related costs. Therefore, FASB ASC 805-20-25-30 gives private companies the option to not recognize separately from goodwill customer-related intangible assets unless they are capable of being sold or licensed independently from other assets of a business. While many customer-related intangible assets would meet that criterion, FASB ASC 805-20-25-31 provides examples of customer-related intangible assets that generally could be sold separately including, but are not limited to, mortgage servicing rights, commodity supply contracts, core deposits, and customer information (for example, names and contact information).

8.90 Under this accounting alternative, favorable customer contracts would be included in goodwill, but unfavorable customer contracts would not because they are liabilities and not in the scope of the accounting alternative. However, in paragraph BC20 in the "Background Information and Basis for Conclusions" section of Accounting Standards Update (ASU) No. 2014-18, *Business Combinations (Topic 805): Accounting for Identifiable Intangible Assets*

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in a Business Combination (a consensus of the Private Company Council),[3] the Board noted that "the concept of "at market" is a broad range and customer contracts generally are considered to fall within the range that is considered "at market." Therefore, most customer contracts do not fall under the favorable-unfavorable contract guidance." Paragraph BC20 also states that

> …subsuming a significant favorable contract into goodwill will not necessarily create subsequent impairment issues. FASB Accounting Standards Update No. 2014-02, Intangibles—Goodwill and Other (Topic 350): Accounting for Goodwill, allows reporting entities to choose a life for goodwill that is less than 10 years. The PCC and the Board concluded that significant favorable contracts with a life shorter than 10 years may justify a shorter useful life for goodwill. As a result, the PCC and the Board concluded that favorable customer contracts will be included within the scope of this Update.

Noncompetition Agreements

8.91 Noncompetition agreements represent another category of intangible assets that may be included in goodwill under this accounting alternative. According to paragraph BC14 of ASU No. 2014-18, many stakeholders indicated that noncompetition agreements are among the most subjective and difficult intangible assets to measure and their value is disregarded by many users. As a result, the PCC and FASB believed that the benefits of recognizing them separately may not justify the related costs. Furthermore, as indicated in paragraph BC19 of ASU No. 2014-18, "[t]he PCC and the Board chose not to require an assessment of whether a noncompetition agreement is capable of being sold or licensed separately from the other assets of a business because, in their view, noncompetition agreements will seldom, if ever, meet the criteria for recognition."

Contract Assets

8.92 FASB ASC 805-20-25-32 states that contract assets, as used in FASB ASC 606 on revenue from contracts with customers, are not considered to be customer-related intangible assets for purposes of applying the accounting alternative for private companies. Therefore, contract assets must be recognized separate from goodwill. Paragraph BC21 of ASU No. 2014-18 elaborates on FASB decision regarding contract assets as follows:

> The PCC and the Board decided that contract assets as defined in the Master Glossary and used in Topic 606, *Revenue from Contracts with Customers*, are not considered intangible assets eligible to be subsumed into goodwill and therefore are not within the scope of this Update. In certain situations, an entity satisfies a performance obligation but does not have an unconditional right to consideration, for example,

[3] This and other paragraphs from the "Background Information and Basis for Conclusions" section of Accounting Standards Update (ASU) No. 2014-18, *Business Combinations (Topic 805): Accounting for Identifiable Intangible Assets in a Business Combination (a consensus of the Private Company Council)*, were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

because it first needs to satisfy another performance obligation in the contract. That leads to recognition of a contract asset. Once an entity has an unconditional right to consideration, it should present that right as a receivable separately from the contract asset and account for it in accordance with other guidance (for example, Topic 310, Receivables). As a result, the PCC and the Board concluded that it is inappropriate to classify a contract asset as a customer-related intangible asset at the acquisition date when the contract asset will eventually be reclassified as a receivable.

Leases

8.93 FASB ASC 805-20-25-33 clarifies that leases are also not considered to be customer-related intangible assets for purposes of applying the accounting alternative for private companies. Therefore, favorable and unfavorable leases must be recognized separate from goodwill.

Transition

8.94 To achieve comparability, the intangible assets accounting alternative should be applied to all intangible assets within its scope. That is, adoption of the accounting alternative for intangible assets requires an entity to not separately recognize both certain customer-related intangible assets and noncompetition agreements. Furthermore, a private entity that elects the accounting alternative for intangible assets must adopt the private company accounting alternative to amortize goodwill as described in ASU No. 2014-02, *Intangibles—Goodwill and Other (Topic 350): Accounting for Goodwill*.[4] However, an entity that elects the accounting alternative to amortize goodwill in ASU No. 2014-02 is not required to adopt the accounting alternative for intangible assets.

8.95 If elected, the accounting alternative would be applied prospectively to all intangible assets arising from business combinations occurring after adoption (i.e., the option would not affect intangible assets recognized from previous business combinations).

8.96 The accounting alternatives for private companies can be adopted at any time without a preferability assessment. Any subsequent change to this accounting policy election requires justification that the change is preferable under FASB ASC 250, *Accounting Changes and Error Corrections*.

8.97 Before electing this and other private company accounting alternatives, the task force recommends that private companies consider whether they might become public business entities at any point in the future. Since neither the FASB nor the Securities and Exchange Commission has provided relief or transition for private companies that have elected the

[4] ASU No. 2014-02—*Intangibles—Goodwill and Other (Topic 350): Accounting for Goodwill*, was issued in January 2014. To alleviate the cost and complexities associated with the goodwill impairment test under ASC 350, ASU No. 2014-02 offers private companies a simplified accounting alternative for goodwill. It allows private companies the option (1) to amortize goodwill on a straight-line basis over a useful life of 10 years or less than 10 years if the entity is able to demonstrate that a shorter useful life is more appropriate, (2) to test goodwill for impairment only when a triggering event occurs instead of having to perform the test at least annually, and (3) to test goodwill for impairment at either the entity level or the reporting-unit level.

private company accounting alternatives, companies that become public business entities would have to retrospectively apply public business entity accounting and reporting requirements to all prior periods presented. This could be challenging especially as more time passes from the date of adopting the private company accounting alternatives.

8.98 Furthermore, in some situations the adoption of the accounting alternative for intangible assets may not significantly reduce the cost and complexity associated with the measurement of certain identifiable intangible assets within the scope of the accounting alternative. The application of some valuation methodologies may still require measuring the fair value of these identifiable, but unrecognized, intangible assets for purposes of calculating contributory asset charges, which are necessary inputs in the determination of the fair value of other recognized identifiable intangible assets that are not subject to the accounting alternative. (See the "Multiperiod Excess Earnings Method" section of chapter 12, "Valuation Approaches and Techniques," for a discussion of contributory asset charges.)

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Chapter 9

Valuation Considerations in a Business Combination

9.01 FASB *Accounting Standards Codification* (ASC) 805, *Business Combinations*, requires that identifiable assets acquired and liabilities assumed in a business combination be measured and recognized at their fair values, with limited exceptions. Those exceptions are discussed in detail in chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree."

9.02 FASB ASC 820, *Fair Value Measurement*, defines *fair value* and establishes a framework for measuring fair value for financial reporting purposes. This chapter provides an overview of the concepts and framework of FASB ASC 820 and a basis for valuation discussions included in chapters 10−13.

Considerations Related to FASB ASC 820

9.03 FASB ASC 820 provides the framework for measuring fair value. Although this guide does not provide an in-depth discussion of FASB ASC 820, the following sections focus on those aspects of FASB ASC 820 that affect the assumptions and methods or techniques used in the valuation of assets acquired and liabilities assumed as part of a business combination.

9.04 FASB ASC 820 codifies a number of fair value concepts, including the following:

- *Fair value definition*. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Under this definition, fair value is an exit price from a market participant perspective. Refer to the "Market Participants" section in this chapter for a discussion regarding market participants.

- *Highest and best use for nonfinancial assets*. Defined as the use of a nonfinancial asset by market participants that would maximize the value of the asset or the group of assets and liabilities (for example, a business) within which the asset would be used. FASB ASC 820-10-35-10E indicates that the highest and best use of a nonfinancial asset establishes the valuation premise used to measure the fair value of the asset, as follows: (a) in combination with other assets or with other assets and liabilities, or (b) on a standalone basis. Refer to the "Highest and Best Use for Nonfinancial Assets" section in this chapter for a more detailed discussion.

- *Market participants.* FASB ASC 820-10-35-9 provides that a reporting entity should measure the fair value of an asset or a liability using the assumptions that market participants would use in pricing the asset or liability, assuming that market participants act in their economic best interest. Refer to the "Market Participants" section in this chapter for a more detailed discussion.

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- *Valuation approaches.* FASB ASC 820-10-35-24A provides that three widely used valuation approaches are the *market approach*, *cost approach*, and income approach. The main aspects of valuation techniques consistent with those approaches are summarized in paragraphs 3A−3G of FASB ASC 820-10-55. An entity should use valuation techniques consistent with one or more of those approaches to measure fair value. Refer to the "Valuation Approaches and Techniques" section in this chapter and chapters 11−12 for a more detailed discussion.

9.05 Key considerations from FASB ASC 820 that affect fair value measurement of assets acquired and liabilities assumed include market participants and the highest and best use (in combination with other assets or with other assets and liabilities or on a standalone basis). The following are brief discussions of these concepts.

Market Participants

9.06 Because fair value is measured from the perspective of market participants it is necessary to identify the characteristics of the appropriate market participants.

9.07 According to the FASB ASC glossary, *market participants* are

> Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:
>
> a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a fair value measurement if the reporting entity has evidence that the transaction was entered into at market terms
> b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary
> c. They are able to enter into a transaction for the asset or liability
> d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

9.08 FASB ASC 820-10-05-1C requires that valuation techniques maximize the use of relevant *observable inputs*. To the extent that relevant observable inputs are not available, FASB ASC 820 allows for the use of unobservable inputs to measure fair value. However, as indicated in FASB ASC 820-10-35-53, the fair value measurement objective remains the same, that is, an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability. According to FASB ASC 820-10-35-54A, a reporting entity should develop unobservable inputs using the best information available in the circumstances, which might include the reporting entity's own data. However, as indicated in FASB ASC 820-10-35-53, unobservable inputs should reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk.

9.09 Valuations of assets and liabilities are typically highly sensitive to certain inputs. As a result, it is important to ascertain that these inputs reflect the perspectives of market participants.

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This requires judgement as many of these inputs are unobservable. FASB ASC 820-10-35-54A states that

> A reporting entity shall develop unobservable inputs using the best information available in the circumstances, which might include the reporting entity's own data. In developing unobservable inputs, a reporting entity may begin with its own data, but it shall adjust those data if reasonably available information indicates that other market participants would use different data or there is something particular to the reporting entity that is not available to other market participants (for example, an entity-specific *synergy*). A reporting entity need not undertake exhaustive efforts to obtain information about market participant assumptions. However, a reporting entity shall take into account all information about market participant assumptions that is reasonably available. Unobservable inputs developed in the manner described above are considered market participant assumptions and meet the objective of a fair value measurement.

9.10 FASB ASC 820-10-35-9 states that "a reporting entity need not identify specific market participants. Rather, the reporting entity shall identify characteristics that distinguish market participants generally." The identification of market participant characteristics is an important aspect of the valuation process, particularly when considering how an asset or liability would be used. However, the identification of market participant characteristics is subjective and dependent on specific facts and circumstances.

9.11 When identifying market participant characteristics, the Business Combinations Task Force (task force) believes it may be helpful to consider the following:

- Press releases, prior bids, board of director presentations, due diligence documents, transaction models, a list of all known bidders in the transaction and those who did not participate in the bidding process (if the transaction was subject to competitive bids), a list of comparable companies

- Materials related to the acquiree, including management's discussion and analysis (MD&A) and its competitors; industry, market, and government studies; merger and acquisition activity surrounding private equity, venture capital, and hedge funds

- Current industry trends (for example, consolidation), as well as motivations of key competitors and potential bidders for entities and assets and whether market transactions align with those trends and motivations. For example, a shortage of raw materials or decline in demand for certain industries could be an indication for future industry consolidation. As another example, consolidation would generally be anticipated in the pharmaceutical industry if pharmaceutical companies face dwindling drug pipelines, coupled with increasing R&D costs.

- The acquiree's growth and profitability prospects on a standalone basis and in conjunction with the operations and perspectives of the potential market participants (that is, the actual and potential bidders). This analysis would take into account the acquiree's expected performance within the context of key competitors' performance, industry performance, and the overall economy.

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- Geographic location of the acquirer's operations or markets served, or both, which could affect highest and best use of assets being valued, existence and extent of *synergies*, and so forth.

- The general economy and capital market condition, which could affect the ability of companies to successfully bid for similar businesses, the volume of acquisitions entered into by strategic buyers versus financial buyers, and so forth. For instance, during periods of economic turmoil, acquisitions by private equity firms decline significantly because such buyers are generally unable to access debt capital levels or terms that are available to them during times of economic strength and growth.

9.12 When identifying market participant characteristics, it is also important to differentiate between entity-specific and market participant assumptions. When differentiating between these assumptions, the task force believes it may be helpful to consider factors such as the following:

- The reporting entity's strategies and objectives and how these strategies and objectives shaped the assumptions used

- Nature of any preexisting relationship between acquirer and acquiree, if any. Assumptions regarding whether the acquirer could be a key supplier, a key customer, or a key competitor of the acquiree (present or potential) and whether the relationship is contractual or non-contractual should be evaluated.

- The extent to which the reporting entity's expectations are consistent with the forecasts of industry analysts and market experts

- The level of revenue and cost synergies anticipated by the reporting entity and whether those synergies would be available to a market participant

- Whether the reporting entity assumes use of the assets being valued that differs from their highest and best use

9.13 When identifying market participants, a reporting entity should consider both strategic and financial buyers. *Strategic buyers* engage in the same or related businesses and may be competitors, customers or suppliers of the acquiree or the acquirer. Other buyers, commonly referred to as *financial buyers*, may include individual investors, private equity and venture capital investors, and institutional investors. Private equity buyers, who have traditionally been considered financial buyers, have recently often been viewed as strategic buyers as well, based on their deep technical expertise in certain industries or through potential synergies that may be obtained in combination with other portfolio companies. Strategic buyers may also invest in businesses or operations unrelated to their business for diversification purposes.

9.14 FASB ASC 820 requires that fair value be measured using the assumptions that market participants would use when pricing an asset or a liability. Therefore, the distinction between financial and strategic buyers becomes significant when considering the cash flows and returns these assets and liabilities would be expected to generate in the post-acquisition period. For example, consideration of operating synergies would be quite different between the two sets of potential buyers. Although strategic buyers will often expect to realize cost-saving synergies

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resulting from eliminating redundant administrative and other personnel functions or revenue synergies resulting from introduction to new markets or customers or the cross-selling of complementary products, or both, financial buyers will be unlikely to expect such synergies. Accordingly, the identification of the appropriate market participants and related synergies may have an effect on the fair value determination.

Highest and Best Use for Nonfinancial Assets

9.15 In addition to the requirement to identify the characteristics of market participants for a given asset or liability, for nonfinancial assets (which includes both tangible and intangible assets), FASB ASC 820 also requires consideration of the asset's highest and best use. The FASB ASC glossary defines *highest and best use* as "[t]he use of a nonfinancial asset by market participants that would maximize the value of the asset or the group of assets and liabilities (for example, a business) within which the asset would be used." According to FASB ASC 820-10-35-10B, "[t]he highest and best use of a nonfinancial asset takes into account the use of the asset that is physically possible, legally permissible, and financially feasible." FASB ASC 820-10-35-10E provides that the highest and best use of a nonfinancial asset establishes the valuation premise used to measure the fair value of the asset. The valuation premise assumes that the asset would be used either (a) in combination with other assets as a group (as installed or otherwise configured for use) or in combination with other assets and liabilities (for example, a business) or (b) on a standalone basis.

9.16 FASB ASC 820-10-35-10E(a)(3) indicates that if the highest and best use is in combination with other assets or with other assets and liabilities, then "[a]ssumptions about the highest and best use of a nonfinancial asset shall be consistent for all of the assets (for which highest and best use is relevant) of the group of assets or the group of assets and liabilities within which the asset would be used." This concept is illustrated in Case A: Asset Group" in paragraphs 26–29 of FASB ASC 820-10-55, which demonstrates that if the highest and best use of the acquired assets is in a group by a certain market participant (current use), then this premise should be applied to all assets in the group, even if the fair value of some individual assets could be maximized on a standalone basis by a different market participant. Therefore, it is helpful to first consider the group of operating assets and liabilities which are used in combination, and then identify the highest and best use for that group of assets. FASB ASC 820-10-35-10C further provides that "a reporting entity's current use of a nonfinancial asset is presumed to be its highest and best use unless market or other factors suggest that a different use by market participants would maximize the value of the asset."

9.17 The guidance in FASB ASC 820-10-35-10E(a)(1), indicates that "if the highest and best use of the asset is to use the asset in combination with other assets or with other assets and liabilities, the fair value of the asset is the price that would be received in a current transaction to sell the asset assuming that the asset would be used with other assets or with other assets and liabilities and that those assets and liabilities (that is, its complementary assets and the associated liabilities) would be available to market participants." As such, if the highest and best use is in combination with a group of other assets, then it is assumed that the market participant will have or will acquire the complementary assets. For example, FASB ASC 820-10-55-3(c) states that "an asset's use in combination with other assets or with other assets and liabilities might be incorporated into the fair value measurement through the market participant assumptions used to measure the fair value of the asset."

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Valuation Approaches and Techniques[1]

9.18 Valuation approaches used to measure the *fair value* may be classified broadly as cost, market, or income. FASB ASC 820-10-35-24 states that a "reporting entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs." Therefore, techniques within all three approaches should be considered, and the technique or techniques that are appropriate under the circumstances should be selected. The determination as to which techniques are employed is highly dependent on the quality of available inputs.

9.19 Each of the three approaches can be used to measure fair value. As provided in FASB ASC 820-10-35-24B

> [i]n some cases, a single valuation technique will be appropriate...In other cases, multiple valuation techniques will be appropriate...If multiple valuation techniques are used to measure fair value, the results (that is, respective indications of fair value) shall be evaluated considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.

9.20 *Cost Approach.* As discussed in paragraphs 3D–3E of FASB ASC 820-10-55, the cost approach reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as *current replacement cost*). From the perspective of a *market participant* seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. See chapter 12, "Valuation Approaches and Techniques," for further discussion of the cost approach.

9.21 *Market Approach.* As stated in FASB ASC 820-10-55-3A, the market approach uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities, such as a business. See chapter 12 for further discussion of the market approach.

9.22 *Income Approach.* As stated in FASB ASC 820-10-55-3F, the income approach converts future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts. See chapter 12 for further discussion of the income approach.

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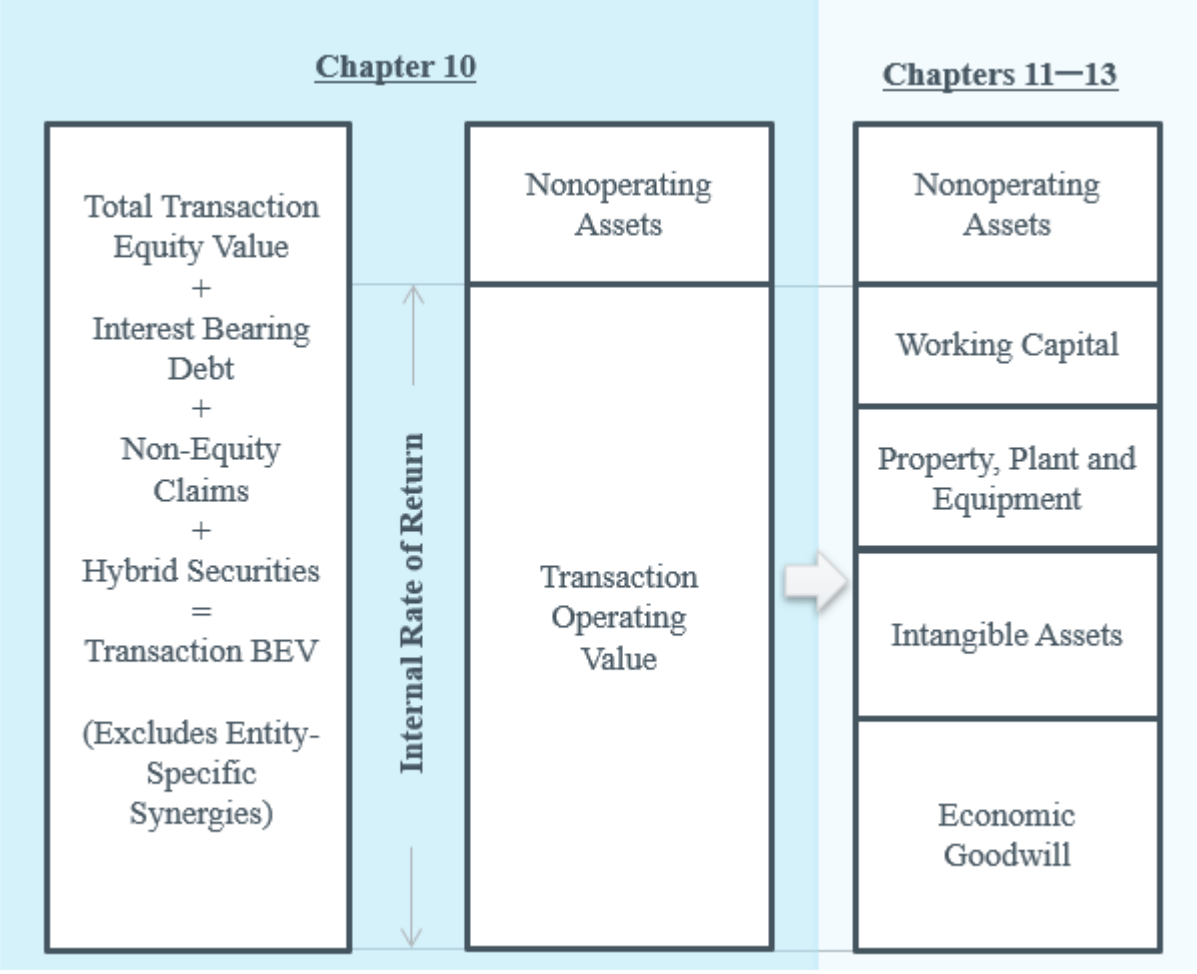
[1] FASB ASC 820, *Fair Value Measurement*, refers to valuation approaches and valuation techniques; however, Statement on Standards for Valuation Services (SSVS) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), refers to valuation approaches and methods (not techniques). SSVS No. 1 defines *valuation method* as "[w]ithin approaches, a specific way to determine value." This definition is consistent with the use of the term *valuation technique* in FASB ASC 820. Also, in practice, many valuation techniques are referred to as *methods* (for example, guideline public company method, guideline company transactions method, and discounted cash flow method). As a result, this guide uses the terms technique and method interchangeably to refer to a specific way of determining value within an approach.

Chapter 10

Internal Rate of Return Analysis

Introduction

10.01 This chapter provides guidance for assessing prospective financial information (PFI), discount rate and Transaction Operating Value of the acquiree. Chapters 11–13 address valuation approaches and methods as well as their application to a variety of assets acquired, primarily intangible assets, and certain liabilities assumed in a business combination. The cost, market and income approaches form the foundation for those chapters, but the income approach is most prominent. PFI and discount rates are critical inputs for all income approaches and should be evaluated in the context of market participant assumptions regarding the operations of the acquired business. The following graphic summarizes the general contents of this chapter and how it relates to chapters 11–13.



10.02 This chapter outlines and illustrates various components of an internal rate of return (IRR) analysis implied by the acquisition. An IRR analysis is a diagnostic tool[1] used to assess the PFI to be used in the valuation analysis. In addition, the IRR is used in the development and assessment of discount rates that are used when estimating fair values of the identifiable assets acquired and the liabilities assumed (subsequently referred to in this chapter as *valuation* or *valuation analysis*). This chapter also discusses relevant considerations related to FASB *Accounting Standards Codification* (ASC) 820, *Fair Value Measurement*, derivation of the business enterprise value (BEV), the use of, and adjustments to, PFI, specific considerations for the various methodologies a reporting entity might use to make these adjustments, and examples that demonstrate the application of concepts discussed. Because fair value is measured from the perspective of market participants, the valuation specialist would need to ensure that, consistent with FASB ASC 820, the assumptions used in the derivation of IRR reflect market participant assumptions (for further discussion, see chapter 9, "Valuation Considerations in a Business Combination").

10.03 While similar in nature, BEV and IRR analyses differ. The BEV analysis estimates the value of operations based on a derived discount rate and PFI, whereas an IRR analysis reverses this process and derives the discount rate necessary to make the present value of PFI equal to the purchase price based on a combination of the Transaction BEV (that is, the BEV derived from the transaction price) and PFI. In order to distinguish between BEV and IRR analyses, this guide uses the terms Transaction BEV, Transaction Operating Value and Total Transaction Equity Value when referring to an IRR analysis. The BEV analysis is a method that uses the income approach, the market approach or both to estimate the value of operations, and adds the fair value of nonoperating assets to arrive at BEV. In other words, BEV = *operating value* + nonoperating assets. (For further details, see the chart in paragraph 10.06.)

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[1] IRR calculations may be used in a variety of contexts for different purposes. According to the *International Glossary of Business Valuation Terms* (IGBVT), IRR is a discount rate at which the present value of the future cash flows of the investment equals the cost of the investment. For the purposes of this guide, the IRR is the discount rate applied to operating cash flows, based on market participant assumptions, such that the present value equates to the Transaction Operating Value. It is used to assess whether the PFI reflects expected cash flows through comparison to WACC estimates.

The AICPA Accounting and Valuation Guide, *"Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and Other Investment Companies"* (the PE/VC Guide), discusses the use of the IRR calculation to calibrate the business valuation model to the PFI to estimate a company-specific risk premium (CSRP) consistent with the transaction price. In particular, the PE/VC guide recommends using the implied transaction IRR to support the CSRP component of the WACC at the inception of the investment and ongoing remeasurement. The PE/VC Guide also refers to the internal rate of return as a measure of fund performance, mentioning that it may be considered in a limited partner's evaluation of a fund manager based on the IRR of the fund manager's prior funds.

10.04 The IRR analysis uses the Transaction BEV, which is derived by summing the components of the total funds invested:

the fair value of consideration transferred to the former owners of the acquiree

+ previously held equity interest (PHEI)

+ noncontrolling interest (NCI)

+ hybrid securities (e.g. convertible debt; preferred stock; employee stock options; and puts and calls related to NCI)

+ interest-bearing debt and non-equity claims (e.g. unfunded pension liabilities; restructuring reserves; and contingent liabilities such as litigation)

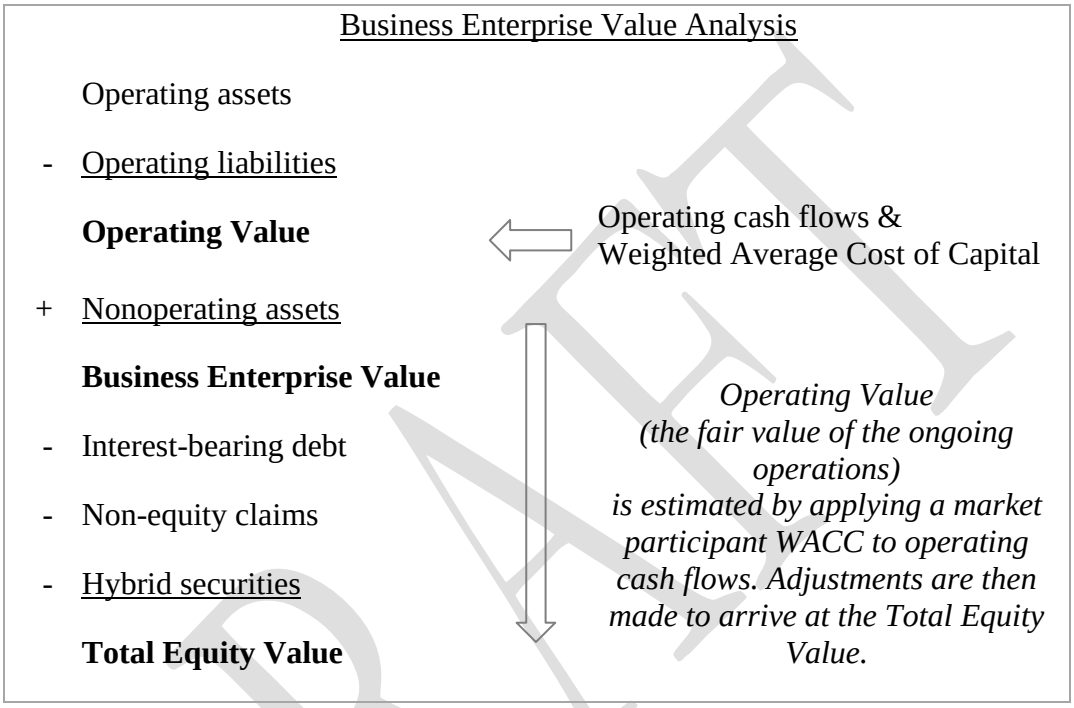
Then the fair value of nonoperating assets is deducted from transaction BEV to arrive at the Transaction Operating Value.

10.05 An IRR analysis is a diagnostic tool used to assess operating cash flows in the context of a purchase price excluding nonoperating assets. PFI includes a measure of the expected cash flows[2] from the investment in the acquiree, and the IRR is the rate of return implied by calculating the discount rate that equates the present value of the operating cash flow to the Transaction Operating Value reflected in the purchase price. The IRR is compared to a market participant discount rate to evaluate the nature and relationship of the operating cash flows and the Transaction Operating Value. The objective of calculating the IRR is to assess whether the PFI is representative of market participant cash flows. This is done by calculating the IRR as the return that is implicit in the purchase price using the PFI. The IRR is then compared to a market participant *Weighted Average Cost of Capital (WACC)*.

[2] The Business Combinations Task Force (task force) believes that the expected cash flows should be utilized (as opposed to the conditional cash flows) because the use of the expected cash flows aligns with application and comparison to the Weighted Average Cost of Capital (WACC). However, if conditional cash flows are used, see the "Expected Present Value Technique versus Discount Rate Adjustment Technique" section of this chapter.

Business Enterprise Value

10.06 The term *business enterprise value* (which also may be referred to as *enterprise value*) is interpreted in a variety of ways in practice. The terms as applied in this guide are defined as follows:



10.07 Operating value is defined in this guide as the fair value of the ongoing operations of a company (or *business unit*[3]) consisting of operating assets less operating liabilities. Determining an appropriate level of operating cash to be included in operating assets is judgmental and requires careful consideration. Operating cash flows (also referred to as *free cash flows to the firm* or *unlevered cash flows*) are those available to all investors (equity and debt holders, as well as any other nonequity investors) to provide a measure of the return available to debt and equity capital. For the purposes of this guide, operating cash flows exclude any cash flows related to nonoperating assets. The operating cash flows are discounted at a market participant WACC to estimate the operating value. Note that if cash flows are prepared on an equity basis (i.e., cash flows available to shareholders after debt payments), an equity discount rate should be used. Equity cash flows are often used for certain financial services entities.

10.08 The fair value of nonoperating assets (e.g. excess cash, marketable securities, prepaid pension assets, investments in unconsolidated subsidiaries and other long-term investments, which are discussed further in the "Nonoperating Assets" section of this chapter) is added to operating

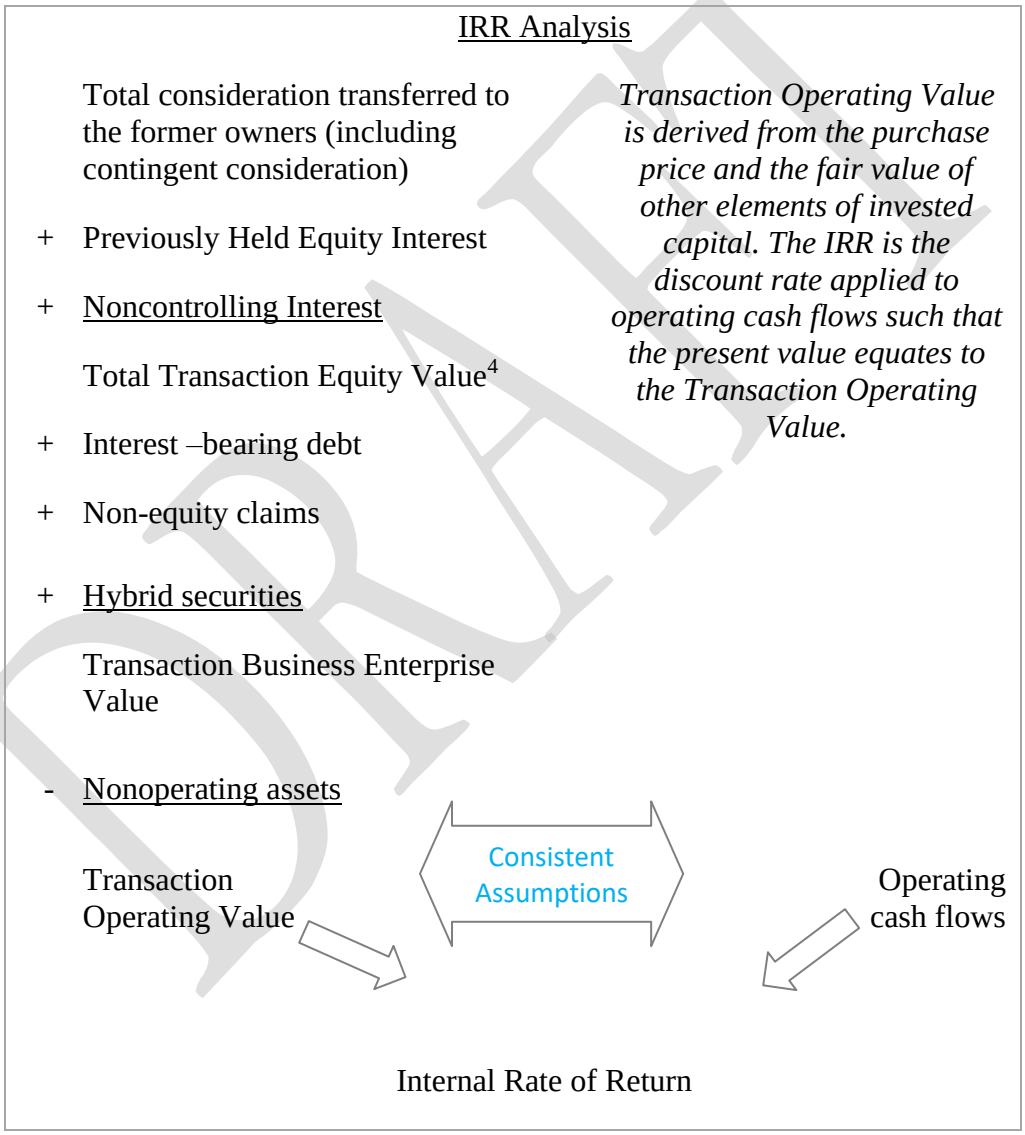
[3] The term *business unit*, as used in this guide, refers to the lowest level or group of operating assets for which PFI is available and is consistent with their respective units of account. Business unit is also referred to in this guide as *collection of assets*. In some cases, business unit may coincide with the acquiree while in other cases, an acquiree may consist of multiple business units.

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value to derive the BEV. BEV is also referred to as *total funds invested*, which may consist of interest-bearing debt, non-equity claims, hybrid securities, and equity.

Internal Rate of Return

10.09 The IRR is the rate of return implied by calculating the discount rate that equates the present value of the operating cash flow to the Transaction Operating Value reflected in the purchase price. These cash flows are also consistent with those used to measure the fair value of the acquired net operating assets. The IRR analysis can be viewed as follows:



[4] For purposes of an IRR calculation, the total equity value is measured on a 100% interest basis. See the "Noncontrolling Interest and Previously Held Equity Interest for IRR Purposes" section of this chapter for further discussion.

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10.10 The operating cash flows used in the IRR analysis should be evaluated in the context of market participant assumptions (see paragraph 10.72) and reconciled to the operating cash flows used to measure the fair value of the assets acquired and liabilities assumed. When no consideration is transferred (e.g., when control is gained through contractual rights and not a purchase), a valuation should be performed to determine the fair value of the acquiree.

Overview of IRR Diagnostic Analysis

10.11 Evaluating the PFI as well as the discount rates requires the consideration of a variety of inputs, adjustments and processes. The Business Combinations Task Force (task force) believes that the following should be considered in an IRR diagnostic analysis (the remainder of this chapter expands on the respective elements of an IRR analysis, some of which may not be applicable to a specific analysis):

- Obtaining an understanding of the acquiree operations, terms of the transaction and the strategic rationale.
- Identifying and estimating the fair value of the total consideration transferred to the former owners of the acquiree. This includes assets transferred, liabilities incurred by the acquirer to the former owners (e.g. debt instruments and contingent consideration) or equity interests issued by the acquirer (e.g. common or preferred stock, options and warrants).
- For purposes of an IRR calculation, the Total Transaction Equity Value is measured on a 100% interest basis (for further discussion, refer to the "Noncontrolling Interest and Previously Held Equity Interest for IRR Purposes" section of this chapter).
- Estimate the Transaction BEV by adding to the Total Transaction Equity Value: fair value of the hybrid securities, non-equity claims and any third-party interest-bearing debt.
- Nonoperating assets should be valued and deducted from the Transaction BEV to estimate the Transaction Operating Value.
- No adjustments should be made to the Transaction BEV for settlement of any off-market elements of pre-existing relationships in that the economic benefit (or liability) would be considered by market participants in arriving at the purchase price and should be reflected in the IRR.
- Deduct entity-specific synergies in excess of market participant synergies to arrive at the market participant Transaction Operating Value.
- Evaluate the operating cash flows to confirm they reflect market participant assumptions:
    a. based on expected cash flows;
    b. consistent with the assumptions inherent in any contingent consideration (note that the cash flows used to estimate the fair value of contingent consideration may include certain entity-specific synergies, but any such entity-specific synergies would not typically be included in the operating cash flows used to compute the IRR, see the "Entity-Specific Synergy Value" section of this chapter for exceptions to this general principle);
    c. excludes entity-specific synergies in excess of market participant synergies;
    d. reflects the actual form of the transaction (e.g. taxable or non-taxable);

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e. nonoperating income (derived from nonoperating assets) is excluded; and
f. consistent with the recognition of any non-equity claims (such as, pension liabilities), which are further discussed in the "Non-Equity Claims" section later in this chapter.

- Assess the assumptions in the *discounted cash flow (DCF) method* such as:
    a. whether the PFI horizon should be extended until a normalized level of operating cash flows is achieved;
    b. evaluate terminal (or residual) value assumptions or methods;
    c. analyze anticipated future reinvestment relative to growth (for example, depreciation, capital expenditures, or working capital); and
    d. evaluate the *return on invested capital (ROIC)* inherent in the operating cash flows and consider whether modifications to the assumptions may be warranted.

- Calculate the IRR that equates the present value of the operating cash flows to the market participant Transaction Operating Value.

- Estimate the WACC, which may be estimated as a range, and assess any difference between the IRR and the WACC and document the rationale. Any difference between the WACC and IRR should be resolved by revisiting the operating cash flows and structural assumptions. The potential for a bargain purchase or the presence of economic obsolescence are additional considerations when reconciling the WACC and IRR.

IRR Analysis and Transaction Information

10.12 PFI used for the IRR analysis may come from a variety of sources, such as the acquirer or acquiree. It is critical to obtain an understanding of the acquiree and assess the transaction to select the PFI that best reflects the assumptions made by the parties in determining the purchase price. This is important because it is used not only for the IRR analysis but as a source of information and assumptions for the valuation of the assets acquired and the liabilities assumed.

10.13 The following is a list of some sources from which PFI can be derived, each of which may require certain modifications and considerations in order to reflect market participant assumptions and be used in the valuation:

- Acquisition models prepared by the acquirer or its advisers to perform due diligence on the acquiree or determine a bidding price
- Internal budgets, business plans and forecasts prepared by the acquiree
- PFI prepared by the acquiree or its advisers in connection with efforts to market the business to potential acquirers (for example, offering memoranda)
- Board of director presentations prepared by the acquirer, acquiree, or both
- Forecasts prepared for lenders

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- Transaction and due diligence documents, press releases, or other disclosures of the transaction
- Implied multiples of the transaction to observed market multiples from similar transactions and/or guideline publicly traded companies
- Prior bid attempts and the competitive nature of the bidding process. In a highly competitive bidding environment, an acquirer may pay for entity-specific synergies, however if no other bidders are present an acquirer may not have to pay for the value of all market participant synergies
- Outlooks prepared by equity or industry analysts, government agencies, market experts, or other third parties who forecast operational trends for the acquiree or its peers and competitors
- Government, regulatory, or industry publications; market surveys; and engineering studies or other third parties, that relate to the transaction
- General economic indicators and industry statistics
- Prior appraisals or valuations performed on the acquiree and/or its assets
- Historical financial statements of the acquiree for an appropriate period (for example, the most recent three to five years), if expected to be indicative of future results
- Comparable company analyses are a helpful means of understanding market participant perspectives and assumptions inherent in the PFI. There are a variety of sources for this information including: past transactions that the acquirer or acquiree has participated in, peer company securities' filings; periodicals, analyst reports, industry magazines and trade organizations, and M&A databases. Information assessed may include attributes such as products or services performed, geography, market position, growth, profitability, capital intensity, ROIC, leverage, etc.
- Summary description and terms of any licensing, distribution, or related party agreements, and copies of any significant/material contracts entered into with customers and/or suppliers.
- Existing or pending economic studies or analyses prepared in connection with the determination or documentation of arm's-length royalty rates, transfer prices, or cross charges between related parties
- Historical and budgeted capital and R&D expenditures of the acquiree
- Technical analyses that relates to the acquiree's products, technologies or patents held by the acquiree
- Description of the acquiree's R&D function and how it is organized; R&D projects tracking system by stage of development; and availability of project financial snapshots.
- Licensing agreements that exist for either the development of technologies or ultimate marketing of product manifestations
- Trends and patterns developed from the acquiree's operating history (for example, life cycles of prior generations of products and rate of changes in average selling prices)
- Sales or marketing materials used by the acquiree

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- Any other relevant information when available, as appropriate

10.14 Although not all of these data sources will be available in a given transaction, the task force believes that, at a minimum, the valuation specialist should collect data that would be considered by potential acquirers in performing their due diligence. For instance, interviews with management and other informed parties can reveal additional information that was known or knowable as of the acquisition date but not contained in any of the documentation listed in the preceding paragraphs. The valuation specialist also would need to consider significant changes in performance expectations that may have occurred between the date when the acquirer and the acquiree came to final terms and the acquisition date.

10.15 The task force believes the valuation specialist should gain an understanding of the PFI that best represents the expectations that were used in negotiating the final purchase price and how this PFI reconciles with market participant assumptions. Typically, PFI considered by the acquirer may be the most readily available data. However, this data may not accurately represent the expectations of market participants or the highest and best use of the assets (as discussed further in paragraphs 10.68 and 10.72). As such, this PFI may not be the most appropriate for use in estimating operating value or valuing the acquired assets and liabilities. The PFI should be challenged and, when appropriate, adjusted to reflect market participant assumptions as of the acquisition date (which may, in some cases, differ from PFI at the time when the purchase price was agreed to).

10.16 These information sources discussed earlier in this section are consistent with typical transactions where businesses rather than individual assets are acquired. While market participant buyers certainly understand the underlying attributes of the business, transactions are rarely priced as an accumulation of individual asset values. The valuation of the identifiable assets and liabilities generally begins with BEV and IRR analyses.

10.17 Operating cash flows, used in BEV and IRR analyses, provide the core of the valuation process and are often apportioned or allocated to the respective operating assets and liabilities (as addressed in chapters 11–13). In summary, the nature and economics of the transaction process is appropriately centered on the historical and future performance of the entity. BEV and IRR analyses provide the foundation for the valuation performed in a business combination by ensuring that the operating cash flows and IRR are consistent with market participant assumptions.

Operating Value Implied by the Transaction

10.18 This section discusses the components of the purchase price and other elements of invested capital as well as any related adjustments to derive the Transaction Operating Value for use in the IRR analysis. See paragraphs 10.04 (Transaction BEV formula) and 10.09 (IRR Analysis) for summary of the Transaction Operating Value.

Consideration Transferred to the Former Owners of the Acquiree

10.19 For purposes of the IRR, the Transaction BEV is the consideration transferred plus PHEI, NCI, hybrid securities, any assumed interest-bearing debt, and non-equity claims. According to FASB ASC 805-30-30-7, "[t]he consideration transferred in a business combination shall be measured at fair value, which shall be calculated as the sum of the acquisition-date fair values of

the assets transferred by the acquirer, the liabilities incurred by the acquirer to former owners of the acquiree and the equity interests issued by the acquirer" (except for certain share-based payment awards). FASB ASC 805-30-30-7 also provides the following examples of potential forms of consideration transferred: cash, other assets, a business or subsidiary of the acquirer, contingent consideration, common or preferred equity instruments, options, warrants, and member interests of mutual entities.

10.20 FASB ASC 805-30-30-2 states that

> In a business combination in which the acquirer and the acquiree (or its former owners) exchange only equity interests, the acquisition-date fair value of the acquiree's equity interests may be more reliably measurable than the acquisition-date fair value of the acquirer's equity interests. If so, the acquirer shall determine the amount of goodwill by using the acquisition-date fair value of the acquiree's equity interests instead of the acquisition-date fair value of the equity interests transferred.

This may occur when a private company acquires a public company with a quoted and reliable market price.

10.21 Consistent with the guidance in FASB ASC 805-30-30-3, in a business combination that does not involve the transfer of consideration, the fair value of the acquirer's interest in the acquiree is determined in place of the acquisition-date fair value of the consideration transferred.

10.22 The consideration transferred may have many components and one would need to consider all the components in arriving at the Transaction BEV. The objective is to avoid double counting of liabilities. For further discussion, see chapter 5, "Measuring the Consideration Transferred."

Contingent Consideration

10.23 FASB ASC Master Glossary indicates that contingent consideration is "[u]sually an obligation of the acquirer to transfer additional assets or equity interests to the former owners of an acquiree as part of the exchange for control of the acquiree if specified future events occur or conditions are met. However, contingent consideration also may give the acquirer the right to the return of previously transferred consideration if specified conditions are met." Contingent consideration is often used to enable the acquirer and the acquiree to agree on the terms of a business combination, even though the final purchase price has not been determined. For further discussion, see the "Contingent Consideration" section in chapter 5.

10.24 The valuation of contingent consideration is beyond the scope of this guide. For further information, see the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #4: *Valuation of Contingent Consideration,* which outlines best practices in the valuation of contingent consideration for financial reporting purposes and is available at the Appraisal Foundation's website at www.appraisalfoundation.org.

Noncontrolling Interest and Previously Held Equity Interest for IRR Purposes

10.25 FASB ASC 805, *Business Combinations*, requires that NCI in the acquiree be measured at fair value when control is obtained. (See the "Noncontrolling Interests" section in chapter 6,

"Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree."). FASB ASC 805-20-30-7 states that "[a]n acquirer sometimes will be able to measure the acquisition-date fair value of a noncontrolling interest on the basis of a quoted price in an *active market* for the equity shares (that is, those not held by the acquirer). In other situations, however, a quoted price in an active market for the equity shares will not be available. In those situations, the acquirer would measure the fair value of the noncontrolling interest using another valuation technique."

10.26 In addition, FASB ASC 805-10-25-10 provides that an "acquirer shall remeasure its previously held equity interest in the acquiree at its acquisition-date fair value and recognize the resulting gain or loss, if any, in earnings." (See the "Business Combination Achieved in Stages" section in chapter 8, "Other Accounting Topics.")[5]

10.27 The fair value of assets and liabilities is estimated assuming the entire business was acquired in a business combination. For the purposes of an IRR analysis, the task force believes it is appropriate to estimate the Transaction BEV on a 100% controlling basis, excluding any discounts that may be applied to NCI and PHEI. This captures any potential difference in the level of influence between the NCI or PHEI and the controlling interests in the enterprise, to the extent that the interests of market participants transacting in the NCI or PHEI and the controlling investors are not aligned. In addition, operating cash flows should be for the entire entity and reflect market participant assumptions.

10.28 A 100% controlling basis Transaction BEV can also be derived directly from the control transaction rather than through adjustments to the fair value of the NCI or PHEI or both. The Transaction BEV may be derived directly by calibrating[6] to the consideration transferred to acquire the controlling interest.

10.29 In a simple capital structure,[7] a direct approach for calibrating to the purchase consideration would be to "gross-up" the consideration paid for the controlling interest by dividing the consideration paid by the percent interest acquired.

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[5] When estimating the fair value of NCI and PHEI, it may be helpful to consider the guidance in the AICPA Accounting and Valuation Guide, *Valuation of Portfolio Company Investments of Venture Capital and Private Equity Funds and Other Investment Companies* (PE/VC guide), specifically chapter 9, "Control and Marketability," and the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #3, *The Measurement and Application of Market Participant Acquisition Premiums.*

[6] The PE/VC guide glossary defines *calibration* as

> The process of reconciling the unobservable inputs used in a valuation technique so that the result of that valuation technique equals a specified value. As further explained in FASB ASC 820-10-35-24C, "[i]f the transaction price is fair value at initial recognition and a valuation technique that uses unobservable inputs will be used to measure fair value in subsequent periods, the valuation technique shall be calibrated so that at initial recognition the result of the valuation technique equals the transaction price. Calibration ensures that the valuation technique reflects current market conditions, and it helps a reporting entity to determine whether an adjustment to the valuation technique is necessary (for example, there might be a characteristic of the asset or liability that is not captured by the valuation technique)."

For further discussion, please refer to the PE/VC guide.

[7] The PE/VC guide glossary defines *simple capital structure* as

10.30 The task force recommends considering the following factors when evaluating whether a grossed-up Transaction BEV is appropriate for use in an IRR analysis. In addition, the guidance in the "Eliminate Entity-Specific Synergies from Transaction BEV" section of this chapter, which elaborates further on the nature of control premiums, should also be considered in this assessment.

- *Magnitude of the previously held equity interest:* If the buyer had a large PHEI (for example, previously held equity interest was 49% and an additional 2% interest was acquired), the benefits of control will be realized not only by the acquired interest but also by the previously held equity interest, and the gross-up of any embedded control premium would be magnified. Therefore, any control premiums should be carefully assessed prior to grossing-up such a transaction. This adjustment is particularly important if the control premium is disproportionate to the interest acquired and to the controlling cash flows or entity-specific synergies.

- *Proportionate market participant synergy cash flows:* Control premiums are often predicated on enhancing cash flows not only for the acquired business itself, but for the acquirer. The noncontrolling interest will not benefit from any synergies that do not benefit the acquired business. To provide a proper indication of the Transaction BEV for the acquired business, any premium paid for synergies that benefit only the acquirer should be subtracted prior to calibrating to the purchase consideration (so that they would not be grossed up, since they do not apply to the NCI). The value of this portion of the premium then would be added back without adjustment to estimate the total Transaction BEV.

  For example, an acquirer expects to enhance cash flows of one of its existing business units (e.g. through sales directly to the acquired business' customers). Consistent with market participant assumptions, the consideration includes payment for 100% of the existing business unit's enhanced cash flows. However, the NCI will not share these enhanced cash flows as they are outside of the acquired business. Therefore, if the consideration is grossed-up by the percent acquired, the control premium related to the enhanced cash flow and the Transaction BEV will be overstated leading to an inappropriate reduction of the IRR.

- *Entity-specific synergies*: The Transaction BEV should reflect only market participant synergies and any consideration paid for entity-specific synergies should be removed prior to calibrating to the transaction. For further discussion, refer to the "Entity-Specific Synergy Value" section of this chapter.

- *Control premiums attributable to reduced risk*: Control premiums that are paid for the expectation of reduced risk in the acquiree are generally shared proportionately among the various equity holders. For example, the acquirer may be able to optimize the capital structure of the acquiree and thereby reduce the indicated WACC. Since the equity holders

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A capital structure that includes only a single primary class of equity (for example, common stock or common units of an LLC), as well as options and warrants or profits interests, plus debt, debt-like preferred instruments, or both.

For further discussion, please refer to the PE/VC guide.

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would all benefit from such a reduction in risk in a simple capital structure, this type of control premium would not preclude the use of a gross-up calculation to derive the Transaction BEV.

10.31 The task force believes that the gross-up approach would generally be more applicable in a simple capital structure, when all synergies will be reflected in the value of the acquired business, and when any previously held equity interest is small relative to the interest acquired. However, even if these factors apply, some of the issues discussed previously may still be present, indicating that the premium paid is not proportional to the interest acquired. In these situations, it is necessary to make adjustments when calibrating to the transaction. If the transaction represents a small interest or it is too difficult to assess the proportion of any control premium paid associated with the PHEI or NCI, it may also be necessary to consider other valuation approaches for estimating the Transaction BEV, such as the market or income approach.

Employee Compensation Arrangements

10.32 Replacement awards or other compensation arrangements for past services or future services may be given to employees of the acquiree. The acquirer must determine what portion of the arrangement, if any, should be considered part of the consideration transferred in the business combination. Amounts that are not part of the consideration transferred are recognized separately from a business combination and accounted for in accordance with the relevant GAAP. For IRR purposes, such arrangements are generally included in the consideration transferred irrespective of whether they are recognized separately from the business combination. When these arrangements are not significant and the PFI includes them as compensation expense, an adjustment to reclassify the compensation expense to consideration may not be warranted. In either case, it is important to ensure that employee compensation arrangements are treated consistently to avoid double-counting. Additional guidance on the accounting for employee compensation arrangements can be found in chapter 5.

Interest-Bearing Debt

10.33 The fair value of the acquiree's third party interest-bearing debt assumed (which excludes any equity consideration paid in the form of interest-bearing debt to the former owners of the acquiree) is the next element of invested capital added to the Total Transaction Equity Value to arrive at the Transaction BEV. Some examples include:

- Short-term debt (commercial paper, notes payable and the current portion of long-term debt)

- Long-term debt (fixed and floating debt, convertible debt with maturities greater than a year)

10.34 The fair value of debt may not be the same as its book value. A fair value of debt lower than book value reflects the benefit to equity holders from having locked in a below-market interest rate. This situation can arise either due to overall market conditions or company-specific credit issues. Alternatively, the fair value of debt may be higher than book value when the interest rate is at an above-market interest rate. Please refer to paragraphs 5.10–.21 of the AICPA

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Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation,* for a discussion regarding the "Fair Value of Debt for the Purpose of Valuing Equity".

Non-Equity Claims

10.35 Common equity and debt are common forms of invested capital that have claims on a company's operating cash flow. There may also be a variety of other non-equity sources of capital that have financial claims that should be incorporated into an IRR analysis. These include non-equity claims (e.g. unfunded postretirement liabilities, asset retirement obligations and contingent liabilities) and hybrid securities (e.g. convertible debt and employee options) that are forms of invested capital in the entity and are added to Total Transaction Equity Value and interest-bearing debt to derive the Transaction BEV. This section provides an overview of non-equity claims and the following section summarizes hybrid securities.

10.36 Irrespective of whether the non-equity claim is operating or nonoperating, it is important to avoid double counting a liability and its associated expense in the operating cash flows, just as with nonoperating assets and related nonoperating income. The following non-equity claim examples provide an overview of the liability and potential operating cash flow adjustments that may be required. All of these items should be evaluated from a market participant point of view:

- *Unfunded Postretirement Liabilities*. Unfunded benefit plans are not treated as operating liabilities (netted against operating assets in the Transaction BEV) but rather as a non-equity claim with the current and future retirees. For the IRR analysis, the value of the liability is estimated based on the present value of the future cash flows necessary to fully fund the pension plan, which is measured on an after-tax basis, for service rendered by plan participants through the acquisition date. Prospective benefit contributions related to future services should continue to be reflected in the PFI as an operating expense.

- *Asset Retirement Obligations*. Certain facilities are decommissioned at the end of their useful life. In these cases, a decommissioning asset and reserve are recognized at the time of the investment in the facility. During the life of the facility, the asset is depreciated and the reserve is accreted. The accretion portion of the total annual decommissioning expense is added back to the operating cash flow as it is treated as a financing expense and the decommissioning asset depreciation remains. The decommissioning reserve is treated as a non-equity claim and is added to the Total Transaction Equity Value in the derivation of the Transaction BEV. The decommissioning asset is considered an operating asset and is reflected in the Transaction Operating Value.

- *Litigation Claims*. Depending on their nature, litigation claims may be routine and correlated to revenue so that they should be treated as an operating expense or they may be unusual events. Nonrecurring litigation costs are considered nonoperating and the fair value of any claims against the company are recognized separately as a non-equity claim and the expected litigation expense is removed from the operating cash flow.

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- *Acquiree's Restructuring Reserves*. Acquiree's existing restructuring reserves should not be double counted (that is, if there is a restructuring liability on the balance sheet, there should not be duplicative restructuring expenses in the PFI).

Valuation Considerations for Leases of a Lessee

10.37 The treatment of an acquiree's lease obligations, which are a form of non-equity claims, needs to be considered in an IRR analysis. The accounting and valuation considerations for leases acquired in a business combination are discussed in the "Leases" sections in chapter 6 and chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed."

10.38 FASB ASC 842, *Leases*, requires a lessee to recognize a liability for the lease payments on the balance sheet and an asset representing the right to use the underlying asset during the lease term. For an operating lease, after lease commencement, a single lease cost is recognized in operating income on a straight-line basis over the lease term. This is consistent with the concept of the lessee paying to use the asset during the lease term, rather than paying to finance the acquisition of the underlying asset in a finance lease. In a finance lease, a lessee separately recognizes interest expense on the finance lease liability and amortization expense on the finance lease right-of-use asset. From a valuation perspective, it is important that the lease liability and its associated lease expense are treated consistently, as discussed later in this section. Accordingly, finance lease liabilities are generally treated as debt-like items as interest expense is excluded from operating cash flows. However, operating lease liabilities are generally not treated as debt-like items as the lease cost included in operating cash flows is not bifurcated between interest expense and amortization expense and the entire lease cost is included in operating cash flows.

10.39 The following methodologies may be considered when the acquiree is the lessee in operating leases. Either of these methodologies may be applied, however, the first one requires fewer adjustments. The most critical attribute of these methodologies is to avoid double counting a liability and its associated expense in the operating cash flows.

Methodology 1

10.40 In this methodology, the operating lease liability, a non-equity claim, is not considered when deriving the Transaction Operating Value. The actual lease expense is reflected in the PFI and the IRR is calculated on this basis. The IRR is compared to the indicated WACC, calculated without incorporating the *cost of capital* associated with the operating lease liability, to perform the diagnostic analysis.

Methodology 2

10.41 This methodology recognizes the operating lease liability as a non-equity claim and includes the liability in Transaction Operating Value. This methodology effectively treats operating leases as if they were finance leases. This perspective requires a number of adjustments to the IRR diagnostic to reflect not only the increase to the Transaction Operating Value but to operating cash flows and the indicated WACC. Key adjustments include the following:

- Convert the operating lease expense to lease financing expenses and replace it with imputed interest and amortization expenses (similar to finance leases).

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- Add back the implicit interest expense to derive operating cash flows.
- Amortization related to leased assets under operating leases (i.e., the remainder of rent expense after removing interest) is treated as a non-cash expense with a corresponding increase to capital expenditures to replace the amortized right-of-use asset. This is equivalent to treating the amortization as a cash expense (not added back as a non-cash charge) and not adjusting capital expenditures.
- Increases in operating lease liabilities (proxy for increases in right-of-use assets) are treated as a cash outflow or capital expenditure.
- Variable lease payments are not included in the operating lease liability. To the extent that variable lease payment terms are present, appropriate adjustments may need to be made to the non-equity claim valuation and the PFI.
- The indicated WACC is reduced by including in the weighting a lower cost of capital related to the operating lease liabilities.

Finance Lease Consideration

10.42 The same approach applied to operating leases in Methodology 1 could also be applied to finance leases. This would involve replacing the interest and amortization expenses with the scheduled lease payments; removing the lease liability from the Transaction Operating Value, removing any associated cash expenditures and adjusting the indicated WACC to exclude the impact of the finance lease liability. In practice, associated cash expenditures are often treated as equivalent to the amortization of the leased asset.

Additional Consideration

10.43 Another consideration when selecting which methodology to use relates to the nature of contributory asset charges (CACs) used when valuing intangible assets with the *multiperiod excess earnings method (MPEEM)*. In simple terms, the purpose of a CAC is to estimate the economic rent to be charged for the use of a contributory asset (see the "Multiperiod Excess Earnings Method" section in chapter 12 for a detailed discussion). Economic rents for the use of the fixed assets, among other assets, are deducted from the cash flows of a collection of assets to derive the excess earnings attributable to the subject intangible asset. When operating leases are viewed from the perspective of CACs, a circular relationship becomes apparent. This relationship begins with the actual remaining lease payments, which serve as the basis for operating lease liabilities and the corresponding right-of-use assets (with adjustments for off-market terms). A CAC for the right-of-use assets would then be derived to estimate the economic rent, which is essentially the same as the lease payments. A more direct approach is to simply retain the lease payments in the PFI and exclude the operating lease liabilities and right-of-use assets from the IRR and business combination valuation analyses.

Hybrid Securities

10.44 The final element of capital that is included to arrive at the Transaction BEV are any hybrid securities that were not classified as NCI or included in the consideration transferred to the former owners. Hybrid securities are an additional source of capital that have equity characteristics but

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are not yet part of owner's equity. Common types of hybrid securities include convertible debt, certain preferred stock, employee stock options, warrants and other options.

10.45 A company may have a capital structure involving multiple classes of stock. Some enterprises are financed by a combination of different equity securities, each of which provides its holders with unique rights, privileges, and preferences. Often, these enterprises issue both preferred and common shares, with the preferred stock comprising several series, resulting from successive rounds of financing, each of which has rights that likely differ from those of other series. Please refer to the AICPA Accounting and Valuation Guides *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* and *Goodwill Impairment* for further discussion regarding valuation treatment of employee stock options and preferred stock.

10.46 There is an element of employee stock options that requires specific attention in an IRR analysis. An IRR analysis should make a distinction between the employee stock options that are currently outstanding and future grants. In the BEV analysis, the outstanding employee stock options not settled as part of the transaction are treated as non-equity claims and the fair value is deducted from the estimated BEV to arrive at Total Equity Value. The IRR analysis reverses this and the fair value of the currently outstanding options are added to the consideration paid. This differs from future option grants that should be treated as compensation expense and reflected in the operating cash flows. Future grants are not included in non-equity claims as that would double count the expense.

Operating Value

10.47 Transaction Operating Value is derived from the purchase price and the fair value of other elements of invested capital. The intent is to measure the total funds invested in the acquiree to allow for the proper IRR analysis in the context of the operating cash flows. However, prior to performing an IRR analysis, nonoperating assets and any element of entity specific synergies that were included in the Transaction BEV are removed to isolate the Transaction Operating Value.

Nonoperating Assets

10.48 In many cases, the nature, risk and return characteristics of the nonoperating assets differs from that of the core operations of the acquiree. Including any cash flow from nonoperating assets in the PFI and calculating the IRR based on the Transaction BEV (inclusive of the nonoperating assets) may provide a false indication of the IRR. Therefore, when the nonoperating assets are significant enough to impact the analysis, the task force believes that they should be evaluated separately and deducted from the Transaction BEV and the PFI should be adjusted to perform the IRR analysis on a basis consistent with how the Transaction Operating Value was determined.

10.49 It is beyond the scope of this guide to discuss every permutation of nonoperating assets and related valuation approaches. However, it is worth noting that the highest and best use of nonoperating assets would generally be on a standalone basis rather than in combination with other assets as a group. The following are some examples of nonoperating assets that valuation specialists should be aware of and consider adjusting for as appropriate:

- *Excess Cash and Marketable Securities*. Excess cash is an additional amount of cash beyond what a company normally needs to have on hand. While in a business combination

any excess cash is generally distributed to the shareholders prior to closing, there may be instances when it remains. When there is cash, an analysis must be performed to determine if there is excess cash which is treated as a nonoperating asset and any related interest income is removed from the PFI.

- *Investments (Equity Investments, Nonconsolidated Subsidiaries or Joint Ventures) Held by the Acquiree.* The nature and underlying economics of the operations will dictate whether the investments should be valued separately and the related income removed from the PFI. For example, captive finance operations generally have fundamentally different attributes from the core operations.

- *Excess Pension Assets*. Expected returns on overfunded pension and postretirement liabilities are related to the performance of the plan assets and do not contribute to the operating profits of the company. Excess pension assets will lead to a lower level of future benefit contributions. They are best treated as nonoperating assets based on their current market value (net of taxes) with the prospective pension funding of future service amounts unadjusted for the benefit of the excess assets themselves or any returns they may provide.

- *Net Operating Losses and Other Tax Benefits*. Where the transaction structure is such that the acquirer will obtain the tax benefit of NOLs or other tax benefits that are temporary in nature (e.g. tax basis in an intangible asset or excess tax basis that may result from the application of economic obsolescence to fixed assets) they should be treated as a nonoperating asset and valued separately from the operations. Anticipated future taxes should be adjusted to exclude these tax benefits and reflect a normalized level of operating taxes. It is important to understand the NOL limitations and reflect those limitations in the analysis.

- *Unused Operating Assets.* Assets, such as excess real estate or corporate assets (jets or fine art), that are not currently used or expected to be used in the future may not be considered operating assets. They should be valued separately and treated as nonoperating assets with any corresponding adjustment to the PFI.

10.50 Certain elements of a transaction may not be accounted for as part of the consideration transferred to the former owners and are recognized separately from a business combination because they do not relate to the acquisition of a business. For example, when these arrangements exist, it may be appropriate for the IRR analysis to adjust the purchase consideration for any settlement gain or loss or to adjust the PFI for market terms reflected in the computation of the settlement gain or loss, or both.

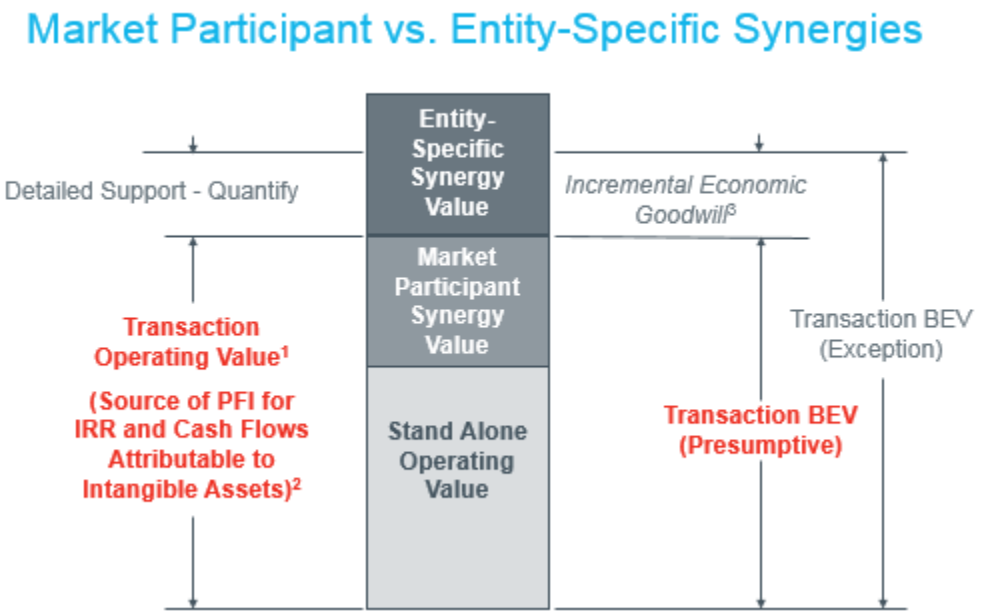
Eliminate Entity-Specific Synergies from Transaction BEV

10.51 It is important to consider whether synergies in the PFI are market-participant or entity-specific in nature. FASB ASC 820-10-30-3A indicates that "[w]hen determining whether fair value at initial recognition equals the transaction price, a reporting entity shall take into account factors specific to the transaction and to the asset or liability." It also provides examples of conditions which, when present, may indicate that the transaction price might not represent fair value of an asset or liability at initial recognition.

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10.52 For clarity, this discussion refers to the PFI benefits of market participant synergies and entity-specific synergies as *market participant synergy cash flows* and *entity-specific synergy cash flows*, respectively. The present value of the PFI benefits are each referred to as *market participant synergy value* and *entity-specific synergy value*.

10.53 The following graphic summarizes how the entity-specific synergy value, if present, is considered in the IRR analysis. The task force believes that while entity-specific synergy cash flows may be expected, acquirers do not have an economic incentive to include a significant portion of the entity-specific synergy value in the consideration transferred. However, the task force recognizes that entity-specific synergy value may at times be paid for; therefore, while an IRR analysis generally begins with the assumption that synergy value is market participant based, this assumption should be evaluated for exceptions. Since the entity-specific synergy value included in the consideration transferred is an element of goodwill (referred to as *incremental economic goodwill* in the following chart), considerable care and a reassessment of the inputs and assumptions are necessary prior to concluding to this outcome.



[1] Assumes that there are no nonoperating assets present.
[2] Also referred to as *operating cash flows* as discussed in this section.
[3] Represents the purchase price paid for entity-specific synergies value in excess of market participant synergy value.

10.54 The task force believes that synergies paid for in a transaction are generally considered market participant synergies. While entities may qualitatively identify synergies as entity-specific or unique to themselves, other market participants might have their own unique synergies of comparable value and, therefore, the amount of these synergies might be broadly considered market participant synergies. For example, market participants might have their own unique perspective as to overlapping geographic footprint. However, the magnitude of the benefit is similar for the acquirer and the market participants. Therefore, while each market participant views

their synergies as unique, the amount of synergies that all potential acquirers would have in common are considered to be market participant in nature.

10.55 Identifying the entity-specific synergy cash flows within the PFI can be more straight-forward than the corresponding value adjustments to the consideration transferred to former owners of the acquiree. The presence of entity-specific synergy cash flows does not by default mean that they were included, all or in part, in the consideration. The dynamics of the negotiations and the strategic rationale for the transaction dictate what portion, if any, of the entity-specific synergy value may have been reflected in the purchase price and the Transaction BEV. Quantifying this adds an additional level of complexity beyond the PFI adjustments.

10.56 Entity-specific assumptions come in a variety of forms (e.g. defensive value) but the most common area where there is a distinction between entity-specific and market participant assumptions occurs is in the context of synergies. The "Prospective Financial Information for Use in the IRR" section of this chapter expands on this area and provides additional commentary and examples of PFI adjustments. The following is a summary of market participant synergy value followed by the discussion of entity-specific synergy value.

Market Participant Synergy Value

10.57 Market participant synergy cash flows are an element of fair value measurement included in the Transaction BEV.

10.58 Market participant synergy cash flows can vary depending on the characteristics of the market participants. Strategic buyers are generally more likely to realize enhanced cash flows because they are more inclined to have overlapping functions with that of the acquired entity. Examples of these include cost savings from reducing staff, consolidating distribution, closing facilities, and eliminating duplicate departments (e.g., human resources, finance and accounting, sales, and engineering).

10.59 Conversely, a financial buyer may be unable to combine the acquiree with another company or business and may be more likely to focus on improving efficiencies of the acquiree as a standalone business. On the other hand, revenue enhancements resulting from the buyer being able to sell the acquiree products to its customers and vice versa may be available to both strategic and financial buyers. Some synergy cash flows may be easily identified and quantified, but there may be others whose characteristics will require significant judgment in determining whether they are market participant or entity-specific.

10.60 Transaction documents may provide a useful starting point when identifying synergies. However, most transaction materials discuss synergies, but do not necessarily attribute them between market participant and entity-specific categories. An analysis should be performed to determine the market participant assumptions for fair value measurements.

10.61 A helpful resource for the evaluation of synergies is the Appraisal Foundation's VFR Valuation Advisory #3: *The Measurement and Application of Market Participant Acquisition Premiums* (Valuation Advisory #3). According to Valuation Advisory #3, the term *market participant acquisition premium* (MPAP) was introduced for two purposes: "(1) to emphasize the importance of the market participants' perspective when measuring fair value, and (2) to

distinguish this premium from the more general (and occasionally controversial) notion of the control premium." While it addresses the issue of synergies, generally there is a fundamental overlap between acquisition premiums and synergies. Valuation Advisory #3 states that to "induce a rational investor to pay more for a controlling interest (a MPAP), the prerogatives of control must give rise to the potential for incremental economic benefits. In other words, the prerogatives of control have little inherent value, but rather have value to the extent that their exercise enhances the economic benefits available to the owner of the subject controlling interest. Control may be valuable if the exercise of control will enhance the enterprise's cash flows and/or reduce the enterprise's risk." Many of these attributes of enhanced cash flows are essentially market participant synergy cash flows.

Entity-Specific Synergy Value

10.62 Entity-specific synergy cash flows and related value are unique to a specific acquirer and are not included when measuring the fair value of assets acquired and liabilities assumed. However, there are occasions when some portion of the entity-specific synergy value is included in the purchase price and to the extent that they were paid for, they would be a component of goodwill and not considered in the IRR analysis. If entity-specific synergies were paid for, then there needs to be a corresponding adjustment to the PFI.

10.63 Contingent consideration is beyond the scope of this guide; however, one aspect related to entity-specific synergy value is worthy of mention. Many contingent consideration arrangements are tied to financial statement metrics (e.g., EBITDA, revenue, earnings). These metrics would be impacted by entity-specific synergies. Therefore, a market participant would take the entity-specific synergies into account when determining the likelihood of achieving the contingent consideration target and the amount of the payout.

10.64 Entity-specific synergy value should be estimated with specific consideration given to the remaining useful life (which may be indefinite) and the risk inherent in the expected cash flows. Once the overall entity-specific synergy value is estimated, an assessment is made to ascertain what portion, if any, was reflected in the consideration transferred. Economically, an acquirer would not include this value in the consideration, so just as with a bargain purchase the task force believes that the valuation specialist should revisit the assumptions and inputs prior to concluding that this occurred.

10.65 If after careful reevaluation of the facts and circumstances (and discussions with management and/or their advisors) it is determined that entity-specific synergy value was reflected in the consideration transferred, the valuation specialist would estimate that amount. This assessment requires a significant amount of judgment.

10.66 A definitive identification of the amount of entity-specific synergy value paid for may not always be achievable, however, when the facts and circumstances support that some portion was included in the purchase price this should be considered in the IRR analysis. One potential process for doing so might be:

1. Identify the entity-specific synergy cash flows and eliminate them from the PFI.

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2. Estimate the total potential entity-specific synergy value based on an appropriate discount rate and economic life. Note that the risk characteristics of achieving the entity-specific synergy cash flows may vary significantly from those of the entity's operating cash flows, one of the reasons for removing them in the IRR analysis.
3. Calculate the IRR using the adjusted PFI (reflecting market participant assumptions) and the operating value (excludes nonoperating assets) before any adjustment to the Transaction Operating Value related to the entity-specific synergy value.
4. If the IRR < WACC this might indicate that some element of the entity-specific synergy value was included in the consideration transferred.
5. Prepare a sensitivity analysis to identify what portion of the total entity-specific synergy value should be removed from Transaction Operating Value to reconcile the WACC and IRR. This should consider that the impact of entity-specific synergy value is limited to the consideration transferred to the former owners and not in the fair value of the PHEI and NCI.
6. Evaluate whether the facts and circumstances support the analysis and document the process in the valuation report.

10.67 Other means of reconciling WACC and the IRR are discussed further in the "Reconciling the IRR and WACC" section in paragraphs 10.75–.98.

10.68 The following are some examples of entity-specific synergies:

- *Entity-specific cost synergies*. Company A acquired Company T in a business combination. Selling costs for Company T are 40% of revenues, and the rate representative of performance of market participants is 30% of revenues. Due to the unique size and efficiency of its distribution channel, selling costs for Company A are 20% (also the rate used by Company A in its PFI that was used to negotiate the final purchase price). Selling costs in Company A's PFI would be adjusted up to 30%, the rate representative of market participants, to eliminate a synergy specific to the acquirer.

- *Entity-specific revenue synergies*. Company A acquired Company T in a business combination. Company T's product complements Company A's product. Upon acquisition, Company A's combined product offering will be unique in the market, and Company A believes that it can derive 10% more in revenues from both products than it or market participants could if they were to sell either product on a separate stand-alone basis. The PFI used to measure fair value of Company T's product should exclude all revenues attributable to Company A's preexisting product and the incremental 10% increase in revenues derived from Company T's product, which resulted from having a combined product offering.

- *Entity-specific income tax synergies*. Company A acquired Company T in a business combination. Company A currently does not pay income taxes because of considerable net operating loss carryforwards and, thus, does not expect to pay income taxes in the foreseeable future (whereas market participants are typically tax-paying entities.) In the PFI that Company A provides to the valuation specialist for

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use in valuing certain assets, management of Company A does not include any anticipated income tax payments resulting from the cash flows attributable to the acquired assets. In other words, in the PFI prepared by Company A's management, the present value of the future cash flows attributed to the acquired assets is the same on a pretax basis as on an after-tax basis because no income tax payments are anticipated. The valuation specialist would adjust the PFI to include an estimate of the anticipated tax payments that market participants would expect to pay on the future cash flows attributable to the acquired assets. The "favorable" tax attributes of Company A is an entity-specific synergy and, therefore, is eliminated from the PFI used to value the acquired assets.

10.69 Other examples of entity-specific synergies include:

- Unique tax jurisdictional presence of the acquirer
- Debt capacity and lower cost of capital
- Cost savings due to unique geographic overlap of facilities (for further discussion, see paragraph 10.54)

Prospective Financial Information for Use in the IRR

Overview

10.70 This section addresses steps to derive, prepare, and analyze the PFI for use in the IRR analysis. It should be noted that PFI provided by management may include both operating and nonoperating cash flows.

Evaluate and Document the Key Assumptions Relating to the PFI

10.71 Management of the reporting entity should take responsibility for the completeness and accuracy of the PFI selected for use in the valuation analysis. However, the valuation specialist should not simply accept PFI from management without investigating its suitability for use in the valuation analysis.

10.72 The following is a brief discussion of certain elements of the PFI that generally would need to be evaluated by the valuation specialist, along with potential sources of objective evidence that may support each material assumption underlying the specific elements of PFI. Such analysis would typically consider historical financial data of the acquiree, assumptions in the PFI and guideline companies and industry data:

- *Revenue.* Assessment of PFI begins with an analysis of the key assumptions related to revenue from current products and services as well as expectations of replacement and new revenue streams. This can include estimated number of units expected to be sold, estimated selling prices throughout the selling period, estimated market penetration, and estimated market share. It may include an evaluation of year-over-year growth, taking into consideration expected competitors' reactions, anticipated technological developments, and historical trends.

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- *Costs of sales.* Understand company-wide costs of sales, taking into consideration product life cycle margins. Compare the historical trend of company-wide costs of sales with those contained in the PFI.

- *Sales, Marketing and Other operating expense*. Analyze historical financial data of the acquiree, guideline companies and industry data to support assumptions in the PFI related to sales, marketing, general and administrative, technical support, and other operating expenses.

- *R&D expense*. Analyze historical financial data of the acquiree and industry data to support R&D expense assumptions in the PFI, considering the maintenance R&D and future product development expenses.

- *Operating taxes.* Operating taxes (cash taxes payable from a market participant perspective) should be based on the tax jurisdiction(s) in which the acquiree operates. Care should be given to ensure that the tax base is consistent with the level of the cash flow.

- *Required levels of working capital and tangible assets*. PFI may include expectations regarding working capital and tangible asset needs for the acquiree. Historical levels of working capital and tangible assets, combined with industry experience available from the public filings of competitors, may provide evidence of required levels of assets.

- *Required levels of intangible assets*. PFI typically does not include expectations regarding the need to acquire additional intangible assets for the business in the aggregate because companies often do not budget purchases of intangible assets. Expenses related to the internal development of new intangible assets or maintenance of existing intangible assets, however, are typically included in PFI.

  Examples of such expenses include marketing or R&D expenses associated with the internal development or enhancement, or both, of brands and technology. Thus, such types of expenses would need to be considered and included within the PFI. Additionally, levels of other intangible assets calculated as a result of the fair value measurement process, combined with industry experience available from the competitors' public filings, may provide evidence of required levels of intangible assets.

PFI and Expected Cash Flows

10.73 In the case of a transaction, the overall purchase price is often based on unconditional or expected cash flows. In certain cases, the PFI is based on *conditional cash flows* or assumes an optimistic or best-case scenario. If alternative scenarios to the conditional cash flows or an adjustment for the probability of success are not included in the analysis the incremental risk should be reflected in the discount rate.

10.74 The nature of the PFI has a direct correlation to the IRR analysis and plays a critical role in the discount rate assessment. The FASB does not mandate the use of any particular cash flow

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methodology discussed in FASB ASC 820, though the task force notes that it is generally a best practice to use expected cash flows in performing a valuation under the income approach. For further discussion on the key considerations in estimating expected cash flows refer to appendix A, "Detailed Example of an Internal Rate of Return Analysis."

Reconciling the IRR and WACC

10.75 An IRR is derived by equating the sum of the operating cash flows on a present-value basis to the Transaction Operating Value as discussed in the "Introduction" section of this chapter. After the acquiree's WACC is estimated the valuation specialists needs to understand the differences between the IRR and WACC. The task force believes that, while a reconciliation of the IRR and WACC is typically performed, it is not required. However, when differences exist, the valuation specialist should understand and document why this occurred. Further, the valuation specialist should be aware that under certain circumstances, such as bargain purchases, IRR and WACC may deviate from each other.

10.76 An indicative WACC is based on an analysis of current market rates of return in the acquiree's industry and represents the return on the investment required by market participants, including both debt and equity investments. The WACC represents the required returns, from a market participant perspective, on interest-bearing debt, non-equity claims, equity capital (common equity as well as hybrid securities) weighted in proportion to their estimated percentages in an observed or selected industry capital structure. The WACC should include risk elements that a market participant would consider when evaluating the acquiree or its assets and liabilities, and not be based on specifics of the acquiree. WACC calculations are not specific point estimates and should be viewed in the context of a reasonable range of potential risk measures. Therefore, when comparisons are made to the IRR, a range of WACC estimates may be factored into the assessment.

10.77 If the IRR and WACC differ, the valuation specialists should understand the differences. When such a scenario exists, the valuation specialist would analyze the assumptions in the WACC calculation and ensure that in the PFI only market participant assumptions are reflected (that is, the PFI excludes entity-specific synergies) to derive operating cash flows for the acquiree.

10.78 The following summarizes the relationship between the IRR and WACC and the implications for the selection of PFI in the instance of a business combination:

IRR = WACC	Indicates that the PFI properly reflects market participant assumptions, and the Transaction Operating Value is likely representative of the fair value.
IRR > WACC	Indicates that the PFI may include the impact of entity-specific synergies, reflect an optimistic bias, and/or reflect a bargain purchase.
IRR < WACC	Indicates that the PFI may exclude the impact of market participant synergies, reflect a conservative bias, and/or reflect an overpayment.

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Expected Present Value Technique versus Discount Rate Adjustment Technique

10.79 The perceived risk of the cash flows being discounted determines the magnitude of the discount rate. Theoretically, investors are compensated, in part, based on the degree of inherent risk and, therefore, would require additional compensation in the form of a higher rate of return for investments bearing additional risk. Typically, a discounted cash flow method uses after-tax cash flows and employs an after-tax discount rate. The use of pretax cash flows generally is inconsistent with how value ordinarily is measured in a discounted cash flow method. In any case, the cash flows and the discount rate used (after-tax or pretax) should be consistent (that is, pretax cash flows should not be used with after-tax discount rates and vice versa).

10.80 FASB ASC 820-10-55 provides guidance on determining the discount rate for cash flows with a specific risk profile which differs from expected cash flows. It describes two basic techniques: the *discount rate adjustment* (formerly referred to as *traditional*) *technique* (DRAT) and the *expected present value* (or *expected cash flow*) *technique* (EPVT).

10.81 Under the DRAT, which is discussed in paragraphs 10–12 of FASB ASC 820-10-55, risk is assigned to, or incorporated into, the discount rate. The DRAT uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events. Those *conditional cash flows* are then discounted to present value using a risk-adjusted rate of return, or discount rate. The greater the perceived risk associated with the cash flows, the higher the discount rate applied to them, and the lower their present value.

10.82 For the EPVT, FASB ASC 820-10-55-13 states that

> The *expected present value technique* uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (that is, the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the *discount rate adjustment technique*).

However, as indicated in FASB ASC 820-10-55-18

> ...to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, a reporting entity might use realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (for example, changes in external factors, including economic or market conditions, industry trends, and competition as well as changes in internal factors affecting the reporting entity more specifically), taking into account the assumptions of market participants.

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10.83 The EPVT has two variations:

- In method 1, the probability-weighted expected cash flows are first adjusted for systematic (market) risk by subtracting a cash *risk premium* (that is, risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty-equivalent cash flow, which is discounted at the risk-free interest rate. A certainty-equivalent cash flow refers to a probability-weighted expected cash flow, adjusted for risk so that a market participant would be indifferent to trading the certain cash flows for the risky probability-weighted expected cash flows. The Black-Scholes model is an example of this method; risk-neutral simulation techniques and lattice models are other examples. In practice, the task force believes it is impractical to directly assess the certainty-equivalent cash flows for an entity or its equity securities, so aside from Black-Scholes and other techniques that use a risk neutral framework, method 1 is rarely used.

- In method 2, the probability-weighted expected cash flows are adjusted for systematic (that is, market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the cash flows are discounted at a risk-adjusted rate of return that corresponds to an expected rate associated with these probability-weighted cash flows (that is, an expected rate of return). Models used for pricing risky assets, such as the capital asset pricing model, can be used to estimate the expected rate of return. As in the DRAT, the greater the perceived risk associated with the expected cash flows, the higher the discount rate associated with it. Because in this method all possible cash flows are probability weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event, unlike the cash flows used in the DRAT. Thus, the overall discount rates used in discounting probability-weighted cash flows are often lower than those used in discounting single best estimate (success) cash flows, all else being equal. Note, however, that probability-weighted cash flows are not the same as certainty-equivalent cash flows, and the discount rate used would still be significantly higher than the risk-free rate.

10.84 In practice, method 2 of the EPVT is more common and easier to implement. In either case, the overriding principle contained in those techniques is that the discount rate used to discount the cash flows should reflect assumptions that are consistent with the risks inherent in the cash flows. Conditional cash flows are discounted using a conditional rate and expected cash flows are discounted using an expected rate. In theory, the two techniques consider the same risks; the DRAT reflects the risk through adjustments to the discount rate whereas the EPVT primarily reflects this risk in the expected cash flows.

10.85 FASB ASC 820 does not limit the use of present value techniques to measure fair value to these three choices. There are many elements of risk that may be handled by adjusting the level of expected cash flows or the discount rate or both.

10.86 When adjusting the discount rate in the DRAT, unsystematic risk may be captured in the company specific risk premium (CSRP or alpha). CSRP is often used to describe an entity-specific risk premium that is commonly used in situations when the specific risk associated with the acquiree's PFI is not sufficiently captured by the market risk premium, beta, and size premium of

the cost of equity. Some of the risks that the alpha adjusts for include considerations such as management depth and expertise, product line diversification, geographic diversification, or PFI risk in excess of market participant assumptions. CSRPs may be necessary to be made as a discount rate adjustment applied to conditional cash flows in the DRAT, thereby approximating the outcome of the EPVT. For example, when the PFI reflects a single optimistic scenario, a CSRP may be applied to approximate the outcome of weighing multiple scenarios with the EPVT.

10.87 As discussed in the preceding sections, when performing an IRR analysis, it is important for the valuation specialist to assess whether the Transaction Operating Value is commensurate with fair value; the estimated WACC range represents a reasonable range of potential risk measures of the acquiree and is consistent with market participant assumptions; and how estimated operating cash flows compare to expected cash flows. This chapter has discussed a variety of adjustments, including non-operating assets and entity-specific synergies, among others, to align the IRR to a market participant perspective. After making these adjustments, the valuation specialist should then assess how the operating cash flows compare to expected cash flows and if the IRR still is inclusive of risks in excess of market participant assumptions. This assessment may lead the valuation specialist to conclude that the operating cash flows are conditional and a DRAT approach may be appropriate. If a DRAT analysis is being used, the task force believes it is a best practice for the valuation specialist to document the rationale for the CRSP from both a qualitative and quantitative perspective. In this situation, the IRR provides evidence to support the CSRP if the IRR is greater than the concluded WACC range.

10.88 The Application of the Mandatory Performance Framework for the Certified in Entity and Intangible Valuations™ Credential describes a process for a valuation specialist to qualitatively assess the PFI for reasonableness for inclusion in a valuation performed in a business combination. A qualitative assessment for the CSRP may include the following procedures (not all inclusive):

a. *Comparison of prior PFI estimates with actual results.* This type of analysis will help assess whether prior PFI forecasts for the acquiree tended to be optimistic, conservative, or generally inaccurate. Note that many external factors make estimating PFI difficult and the mere existence of inaccurate PFI does not necessarily indicate the process to prepare the PFI as deficient or that CSRP is inappropriate.

b. *Comparison of PFI to historical trends.* Historical information and trends, such as recent revenue growth, decline, and variability; various level of profitability; and levels of specific information (such as R&D or sales and marketing expenses), can help to inform on the level of risk in the PFI in the context of comparing projected levels to achieved levels. It is also important to understand any long-term or structural limitations embedded in the PFI. For example, the PFI may assume a trend of continued improvement well beyond historical and industry benchmarks, which should be viewed with skepticism by the valuation specialist requiring further documentation how these levels will be achieved.

c. *Comparison to economic and industry expectations.* An analysis can be performed to understand why an entity's performance may mirror or diverge from economic, industry, or other external data. It is important to assess when economic and/or industry data produce conflicting or disparate expectations. In these circumstances, it may be helpful to compare the entity's PFI to a "scattergram" of economic and industry expectations with an

assessment where the entity is best situated relative to the range of economic and industry data.

d. *Consideration of other qualitative factors.* Some other qualitative factors important to consider include geographic and product line diversification; management experience, depth, and key man exposure; supplier or customer concentration; shift to or unproven strategies.

10.89 While qualitative support may exist for CSRP, the valuation specialist should also provide quantitative support. As discussed, the comparisons of the IRR to WACC can be a helpful starting point in providing quantitative support but should not be relied upon solely without further quantitative analyses. The BEV and IRR analyses can be used to quantify the CSRP through the use of the income approach, specifically the DCF method. This is accomplished by adjusting management's base case PFI to expected cash flows and then discounting the resulting expected cash flows using an "industry" or base WACC (without CSRP). The resulting operating value is then "back solved" for the appropriate CSRP using management's base case PFI. Expected cash flows are often defined as the weighted average of all possible outcomes but are difficult to estimate with a high level of precision in practice and models to estimate expected cash flows can range from simple to complex. Expected cash flows can be estimated through various methods, including a line-by-line analysis and adjustments, estimating discrete PFI scenarios and probabilities, or advanced statistical modeling techniques, such Monte Carlo simulation or binomial models. For further discussion on the key considerations in estimating expected cash flows please refer to appendix A, "Detailed Example of an Internal Rate of Return Analysis."

10.90 If conditional cash flows and the DRAT are used in the valuation analysis of the assets, it is important to assess how the growth and risk factors that drive the overall entity PFI are embodied in the PFI of the individual assets being valued using an income approach. For example, if growth in the business is expected to be driven by obtaining new customers or from future assets, this may drive the risk profile and IRR of the acquiree higher but these risk elements should not be reflected in the discount rate when valuing existing assets. Alternatively, the acquiree's margin expansion may be driven from cost synergies which will benefit existing and future assets equally, suggesting the risk profile of these groups to be similar. When assessing the differences between the risk profile of the overall entity to existing and future assets and appropriate discount rates for each group, the valuation specialist should understand the source of revenue growth, margin expansion, and synergies. Please refer to the "Rates of Return for Assets and Liabilities" section in chapter 12, "Valuation Approaches and Techniques," for considerations related to the discount rate assessment. In addition, the valuation specialist should also evaluate the impact the selected rates of return on the contributory assets when a DRAT is employed using the MPEEM as the results may be skewed for businesses that have a high amount of contributory assets such as working capital and fixed assets.

10.91 For further discussion of the treatment of risk within DRAT and EPVT refer to the AICPA Accounting and Valuation Guides *Goodwill Impairment* and *Assets Acquired to Be Used in Research and Development Activities*.

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Reconciliation Analyses and Potential Adjustments

10.92 The following are examples of additional adjustments or analyses that might be considered to assist in resolving the difference between the IRR and WACC when needed (this list is not exhaustive).

Extend the Explicit PFI Period

10.93 PFI horizons provided by management may not be long enough to reach a level of steady-state performance. This is an important consideration in that the underlying assumptions in the terminal (or residual) value calculation are assumed to continue into perpetuity. If the PFI has not been extended to a point of steady-state expected performance, the *terminal value*, as well as the cash flow during extended years of the PFI, may be misstated and this will impact the IRR. For example, if the final year of the PFI provided by management has margins or a ROIC greater than the long-term steady state performance, then the IRR may be overstated if no normalizing adjustments are being made in the terminal year. In such cases the PFI should be extended based on an understanding of the acquiree, industry and economic conditions, until such a normal level of growth, profitability and return on invested capital have been achieved.

Refine Prospective Depreciation

10.94 Prospective depreciation is often based on simplifying assumptions (such as a percentage of revenue or capital expenditures). The useful lives (tax and economic) of the various classes of assets and asset mix has a direct impact on the prospective (tax) depreciation, the timing of the related tax benefits, as well as the magnitude of future capital expenditures required to sustain the anticipated future level of production. In circumstances where capital expenditures and depreciation are a significant component of the PFI and simplifying assumptions have been used in their calculations, a more refined analysis of the relationship between revenue, depreciation and capital expenditures enhances the IRR analysis.

Evaluate the Prospective ROIC and Underlying Assumptions

10.95 ROIC is a critical performance measure which has a direct correlation to the value creation proposition. In general, value is created when ROIC exceeds the cost of capital; limited to the invested capital amount when ROIC equals the cost of capital value; or destroyed when returns do not exceed the cost of capital. The degree to which this dynamic is considered in the PFI has a direct impact on the IRR. For example, when there is an insufficient level of investment in the PFI to support the growth assumptions the cash flow will be inflated causing the IRR to increase. An analysis of prospective ROIC, even at a high level, can provide a significant amount of insight into the underlying dynamics of anticipated future value creation as well as the IRR.

Consider Alternative Terminal (Residual) Value Methods

10.96 The terminal value in a BEV analysis generally contributes a significant amount of the present value of cash flows. Several terminal methods or models exist with their own strengths and weaknesses. The following is a partial list of the models and methods used by valuation specialists (this list is not exhaustive):

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- Gordon growth model (also referred to as the *constant growth model* or *perpetual growth model*): The Gordon growth model is commonly used and is applicable when the entity is expected to have a stable long-term growth rate in the terminal period.
- Two-stage model: Used when the entity is expected to have an initial phase of higher growth in the terminal period followed by a subsequent phase of stable long-term growth.
- H-model (also referred to as the *fading growth model*): Similar to the two-stage method except the initial phase of higher growth is not constant but declines linearly over time to reach the subsequent phase of stable long-term growth.
- Terminal exit multiples (for example, revenue, EBITDA, or *EBIT* multiples)
- Key value driver formula: A form of the Gordon growth model. It expands upon the free cash flow (FCF) input by including the investment rate in the derivation of the FCF[8] in the terminal value as follows:

$$Investment\ Rate\ (IR) = \frac{Growth\ (g)}{Return\ on\ Invested\ Capital\ (ROIC)}$$

$$Free\ Cash\ Flow\ (FCF) = Net\ Operating\ Profit\ Less\ Adjusted\ Taxes\ (NOPLAT)\ x\ \left(1 - \frac{g}{ROIC}\right)$$

$$Terminal\ Value = \frac{NOPLAT_{t=1}\ x\ \left(1 - \frac{g}{ROIC}\right)}{WACC\ - g}$$

- Other methods (for example, salvage value or disposal costs)

10.97 In certain circumstances, in the IRR analysis the task force believes that it may be helpful to compare the outcomes of more than one method. The outcomes of the selected methods can be compared by evaluating certain implied parameters of one method based on the outcome of an alternative method. For example, the results of the Gordon growth model or use of a terminal exit multiple can be evaluated to calculate the implied ROIC based on the key value driver formula. An implied ROIC that deviates significantly from WACC would lead to further analysis and the consideration of alternative methods in the IRR analysis.

10.98 The IRR analysis is iterative in nature and may require re-performance of certain or all the steps outlined above to arrive at the concluded IRR.

[8] For a derivation of FCF, see McKinsey & Company, *Valuation, Measuring and Managing the Value of Companies*, 6th edition, Chapter 2.

Chapter 11

Selecting Valuation Approaches and Techniques for Acquired Intangible Assets

Introduction

11.01 As indicated in paragraph .04 of the AICPA's Statement on Standards for Valuation Services (*SSVS*) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), in the process of estimating value, the *valuation specialist* applies valuation approaches and valuation methods[1] and uses professional judgment. The use of professional judgment is an essential component of estimating value. Also, it is important for the valuation specialist to consider facts and circumstances specific to the asset being valued.

11.02 Valuation approaches used to measure the *fair value* may be classified broadly as cost, market, or income.[2] Under SSVS No. 1 and the Appraisal Foundation's *Uniform Standards of Professional Appraisal Practice*, a valuation specialist should consider all three approaches (market, income, and cost), and if one or more is not used, then the valuation specialist should explain such nonuse. FASB *Accounting Standards Codification* (ASC) 820-10-35-24 states that a "reporting entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs." Therefore, when estimating fair value, all three approaches should be considered, and the approach or approaches that are appropriate under the circumstances should be selected.

11.03 FASB ASC 820-10-35-24B further indicates that

> In some cases, a single valuation technique will be appropriate...In other cases, multiple valuation techniques will be appropriate...If multiple valuation techniques are used to measure fair value, the results (that is, respective indications of fair value) shall be evaluated considering the reasonableness of the

[1] FASB *Accounting Standards Codification* (ASC) 820, *Fair Value Measurement*, refers to valuation approaches and valuation techniques. However, Statement on Standards for Valuation Services (SSVS) No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100), refers to valuation approaches and methods (not techniques). SSVS No. 1 defines *valuation method* as "within approaches, a specific way to determine value." This definition is consistent with the meaning attributed to valuation techniques in FASB ASC 820. Also, in practice, many valuation techniques are referred to as *methods* (for example, discounted cash flow method, multiperiod excess earnings method, relief from royalty method, Greenfield method, real options method, and so forth.) As a result, this guide uses the terms *technique* and *method* interchangeably to refer to a specific way of determining value within an approach.

[2] Note that although the discussion of the various valuation approaches in this guide is focused only on fair value for financial reporting purposes, as defined in FASB ASC 820, these approaches can, and frequently are, used under other valuation premises or standards (for example, fair market value, liquidation value, investment value, and so forth).

range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.

11.04 Valuation specialists may apply more than one valuation technique when estimating fair value. Due to the nature of the fair value estimation process, value indications from different techniques will not necessarily reconcile. However, the results of one valuation technique can be used to corroborate, or can otherwise be used in conjunction with, the results of one or more other valuation techniques in estimating fair value. If a valuation specialist has applied multiple valuation techniques, and one result is significantly different from the other(s), the valuation specialist would need to assess the reasons for the difference(s). When there are significant differences, it is recommended that the valuation specialist review and revisit the valuation techniques, the assumptions underlying the valuation techniques, and any calculations.

11.05 Irrespective of the valuation method used, the valuation specialist should evaluate the overall reasonableness of the acquired asset's or liability's fair value relative to the other assets acquired and liabilities assumed and the overall purchase price. The Business Combinations Task Force (task force) believes that the valuation specialist should compare the individual asset valuations to the operating value (which is discussed in chapter 10, "Internal Rate of Return Analysis") to ensure that assumptions are consistent or can be reconciled.

11.06 This chapter discusses the valuation method selection process for acquired intangible assets (subsequently referred to as the *valuation method selection process*) and addresses why certain methods, particularly the inputs to those methods, are appropriate given the circumstances. This chapter primarily focuses on the multiperiod excess earnings method (MPEEM) and the *relief from royalty method* as they are most commonly used in practice to value intangible assets. Chapter 12, "Valuation Approaches and Techniques," provides a broader overview of valuation methods and discusses how to apply them.

Valuation Method Selection Process for Acquired Intangible Assets

Overview

11.07 The following section addresses the valuation method selection process for acquired intangible assets and is intended to compliment discussions elsewhere in this guide regarding how to apply valuation methods by addressing why certain methods, particularly the inputs to those methods, are appropriate given the circumstances. Furthermore, this section also touches on certain performance elements such as the depth of analysis.

11.08 The following summarizes some of the main points of this chapter (which are discussed in detail later in this chapter) to assist in the selection of valuation methods used to measure fair value:

- Intangible assets, for purposes of this discussion, can be broadly categorized as IP-based or relationship-based. IP-based assets derive their value directly from attributes that create *excess profits*[3] and the benefit of general legal protection. Relationship-

[3] For purposes of this guide, *excess profits* are defined as returns, or profit, in excess of returns on routine assets utilized (e.g. working capital, fixed assets and other routine assets) and routine functions.

based assets derive their value indirectly through the contributions of intellectual capital and other assets, and they may be formed through relationships between specific individuals. These distinctions impact the underlying rationale for the method selection.

- IP may be accessed in different ways and, although the fair values may differ, a consistent structure should be applied to measure the economic benefit of the IP whether it is owned, licensed or reacquired.

- Pivotal IP-based intangible assets[4] (also referred to in practice as *enabling* or *primary* because they are unique or scarce) have two elements of value: (1) the underlying IP and (2) the commercial value or excess profits that can be created by exploiting, investing in and commercializing the underlying IP. The economic benefits of the commercial value exist regardless of whether the underlying IP is owned or licensed. However, to clearly distinguish the context of the commercial value, this guide refers to the commercial value as *commercial rights* when the underlying IP is owned and to an *intangible rights asset* when the underlying IP is licensed.

  Furthermore, when the underlying IP is owned (in which case there can be no off-market terms), the value of the underlying IP and commercial rights are measured in aggregate as a single asset. However, when the underlying IP is licensed at market rates the licensee controls the commercial value per the terms of the contract and the value is limited to the intangible rights asset. If the license agreement for the underlying IP is favorable or unfavorable, then a separate intangible asset or liability related to off-market terms would generally be recognized (see paragraphs 11.84 and 11.86 for further discussion).

- Specific valuation methods, such as the MPEEM, are not required to be used for *pivotal assets*. Rather, inputs define the profit or cash flow attributable to an intangible asset, capturing its routine or pivotal nature. For example, royalty rates may be simulated to capture excess profits in the same manner as the MPEEM. The substance rather than the form of a valuation method dictates its measurement outcomes.

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[4] The term *pivotal asset*, as used in this guide, has the same meaning as the term *primary asset*, which is used in the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #2: *The Valuation of Customer- Related Assets* (Valuation Advisory #2), and is defined there as "an asset that has significant importance to the business relative to other assets and is a key business driver from an economic perspective (e.g., cash flows)."

However, the term *primary asset* has an alternative meaning in the accounting literature. Specifically, FASB ASC 360-10-35-31 indicates the following (emphasis added):

> Estimates of future cash flows used to test the recoverability of a long-lived asset (asset group) shall be made for the remaining useful life of the asset (asset group) to the entity. The remaining useful life of an asset group shall be based on the remaining useful life of the primary asset of the group. For purposes of this Subtopic, the primary asset is the principal long-lived tangible asset being depreciated or intangible asset being amortized that is the most significant component asset from which the asset group derives its cash-flow-generating capacity. The primary asset of an asset group therefore cannot be land or an intangible asset not being amortized.

To avoid confusion with this use of the term *primary asset* in the context of FASB ASC 360-10, the term *pivotal asset* is used in this guide.

- There is significant variability in the substance of the royalty rates used in the relief from royalty method. They may range from *routine profit*[5] measures to simulated royalties derived to capture the value of commercial rights or intangible rights assets.

- Valuation practice has evolved such that the application of the MPEEM to two assets based on the same prospective revenue or profit in conjunction with a cross charge is not considered a best practice. This valuation method selection process allows for the combination of a variety of valuation methods that, when used in unison with the profit splitting tools discussed in the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section in chapter 12, avoid the use of cross charges.

- The economic substance of a reacquired right is similar to that of an IP-based intangible rights asset licensed from a third party (i.e., based on market participant assumptions), except that any expected contractual renewals a market participant would otherwise consider are excluded from the measurement. Additionally, a settlement gain or loss for any off-market element of the arrangement is recognized in the acquirer's financial statements (see the "Reacquired Rights" section in chapter 8, "Other Accounting Topics," for a discussion of reacquired rights).

- This valuation method selection process is structured so that the underlying economics of the intangible asset can be appropriately measured and align with the asset recognition criteria. In addition, it is sufficiently flexible to accommodate available sources of PFI and current industry practices.

11.09 The attributes of the intangible asset, its contribution to the value chain and consistent application are the primary considerations for the selection of a valuation method and define the general working parameters for the application of the method:

a. *Relationship-based vs. IP-based:* Relationship-based intangible assets derive their value indirectly through the contributions of intellectual capital and other assets, and they may be formed through relationships between specific individuals (e.g. customer relationships). IP-based intangible assets are characterized by the nature of the intellectual property that derives value directly from attributes creating excess profits and may also benefit from legal protection (e.g. patent or FCC license) or trade secrets (e.g. proprietary formula).

b. *Pivotal vs. Routine:* Pivotal assets provide an owner or licensee with the ability to create a significant amount of the excess profit in the business unit or value chain. Their functions are not available from alternative sources because they are unique or scarce assets. *Routine assets*, on the other hand, are not unique or scarce; they provide functionality that can be accessed from a third party in an arm's length transaction (IP-based) or the functions and activities that provide a routine profit (relationship-based).

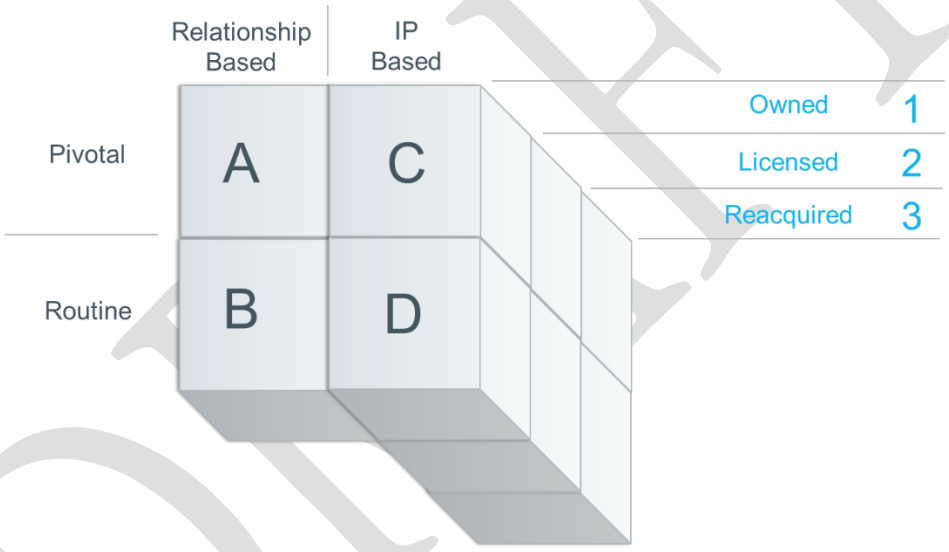
[5] For purposes of this guide, *routine profit* is defined as returns on routine assets utilized (e.g. working capital, fixed assets and other routine assets) and routine functions. Routine profit is commensurate with the routine nature of the assets from which it is derived.

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c. *Consistent application:* Inputs may vary but the valuation method should be consistently applied regardless of how access to the asset is obtained. For example, the only difference between a pivotal IP-based intangible asset valued with the MPEEM that is licensed rather than owned would be the royalty payment to the IP owner, all else being equal.

11.10 The valuation methods applied to the complimentary assets of the business unit, availability of PFI and existing industry conventions should all be considered in the application of the valuation method selection process. It is critical to assess how the valuation methods will interact with each other while considering the available PFI and economics of the respective assets individually and in concert with each other. Valuation methods should not be applied in isolation.

11.11 It may be helpful to consider the valuation method selection process (which is discussed in further detail in this chapter) in the context of the following graphic representation:



General observations regarding the respective asset classifications (these items are discussed in detail in the following sections):

A	Pivotal relationship-based intangible assets[6] (owned): Customer relationships may be treated as a pivotal asset. For example, if workforce is critical to the success of a business (e.g. a consulting firm), customer relationships capture the intellectual capital not reflected in the fair value of the assembled workforce.
B	Routine relationship-based intangible assets[7] (owned): Fair value is generally limited to their replacement cost or present value of any cost savings.

[6] Relationship-based intangible assets cannot be licensed or reacquired and, therefore, there are no "licensed" or "reacquired" categories for relationship-based intangible assets.

[7] Ibid.

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C-1	Pivotal IP-based intangible assets (owned): Create a significant amount of the excess profit of the business unit and are generally measured with the income approach (e.g. MPEEM, simulated royalty, or *greenfield method*). The underlying IP and related commercial rights are combined in the fair value measurement.
D-1	Routine IP-based intangible assets (owned): Limited to the underlying IP (generally measured with a market royalty rate, cost savings or cost approach). There is no commercial value.
C-2	Pivotal IP-based intangible assets (licensed): Intangible rights asset is equivalent to the commercial value if the IP was owned but excludes the underlying IP value by deducting the royalty payments pursuant to the license agreement. The license provides control of the IP.
D-2	Routine IP-based intangible assets (licensed): In-place contract value is generally minor and measured with the cost approach to negotiate and replace it.
C-3	Pivotal IP-based intangible assets (reacquired): Equivalent to the intangible rights asset fair value (C-2) adjusted to exclude renewals. Additionally, a settlement gain or loss for any off-market element of the arrangement is recognized in the acquirer's financial statements.
D-3	Routine IP-based intangible assets (reacquired): The restricted term of the agreement is not a factor in the cost approach and any off-market terms would be measured independently of the replacement cost and recognized as a gain or loss.

11.12 The following summarizes the valuation method selection process that is applied to identifiable intangible assets. Note that it is critical to be aware of how the methods being applied to the respective assets interact and not to determine the fair value of each asset in isolation.

a. Identify whether the intangible asset is relationship-based or IP-based;

b. Evaluate whether it is pivotal or routine;

c. Apply the method and inputs that capture the economics of the intangible asset as if it was owned by the acquiree;

d. If a pivotal IP-based intangible asset is accessed through a contract, estimate the fair value of the intangible rights asset assuming it was owned and then adjust for any license or royalty payments being made.

e. To the extent that the pivotal IP-based intangible asset is a reacquired right, estimate the fair value assuming it was licensed from a third party and then adjust to exclude

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expected contract renewals and any off-market terms which are recognized as a settlement gain or loss.

11.13 The remainder of this chapter is organized as follows:

- *Income Approach Methods – Substance over Form*: Prior to discussing the valuation method selection process itself, an overview of the relationship between substance, form and inputs to certain valuation methods is provided.

- *Relationship-based vs. IP-based assets*: Factors that distinguish relationship from IP-based intangible assets and the correlation with the recognition criteria.

- *Pivotal vs. Routine Assets*: Attributes that distinguish these types of assets.

Each of the four general asset classifications (as if owned) are then discussed:

A: Pivotal Relationship-Based Intangible Assets

B: Routine Relationship-Based Intangible Assets

C: Pivotal IP-Based Intangible Assets

D: Routine IP-Based Intangible Assets

- *Licensed vs. Owned*: The underlying economics of the intangible asset should be consistently measured whether the underlying IP is owned or licensed.

- *Reacquired Rights*: Measurement begins with the fair value of an intangible rights asset measured as if the underlying IP was licensed from a third party and is then adjusted to reflect the reacquired rights measurement parameters (e.g. consideration of potential contract renewals is prohibited).

- *Summary of the valuation method selection process*

- *Questions and Answers—Application of the Valuation Method Selection Process*

Appendix B, "Valuation Method Selection Process Example," includes a detailed example of the application of this valuation method selection process.

Income Approach Methods – Substance over Form

11.14 The nature of the asset (relationship-based vs. IP-based) or its relative importance (pivotal vs. routine) does not necessarily dictate the use of a specific valuation approach or method. These are important factors that should be considered when selecting the form of a valuation method, but the inputs and assumptions ultimately dictate the substance of the intangible asset and its fair value measurement.

11.15 Common examples of valuation methods under the income approach include relief from royalty analyses based on the present value of the after-tax avoided royalty and MPEEM valuations

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founded on deducting contributory asset charges (CACs) from business unit PFI. However, the valuation method selected does not, and should not, dictate the underlying economics of the asset and the outcome of their measurement. Fair value measurements estimated using a method under the income approach are driven by the substance of the inputs to the analysis, not the form of the model.

11.16 The goal when applying any valuation method under the income approach is to estimate the future economic benefit that the intangible asset is expected to contribute to the business unit and discount that benefit to its present value using an appropriate discount rate. In certain circumstances, a specific method under the income approach presents itself as the most appropriate means to measure the fair value of an intangible asset given the attributes of the asset and the inputs available for the analysis. For example:

- *Relief from royalty applied to Routine IP* – The subject intangible asset is routine in nature and limited to the economic contribution of the underlying IP. There is a clearly defined revenue stream related to the IP and comparable market-based royalty rates are available. In this case, since there is no incremental commercial value beyond the underlying IP, the relief from royalty method may be considered the most appropriate.

- *MPEEM applied to a product line (brand)* – The underlying IP of the product line (e.g. the design, patents and brand name) are considered pivotal as they create the excess profit. Product line PFI and the fair value of the contributory assets are available. Therefore, the MPEEM may be considered the most appropriate method in that it captures the income in excess of the CACs.

11.17 In many instances, such a distinct alignment of an asset's economics, methodology and inputs may not present itself where several intangible assets contribute to the business unit PFI. In these cases, a variety of income approach methods are applied in unison to isolate the economic benefit of the respective intangible assets. As stated earlier, a valuation method in and of itself does not define whether an asset is pivotal or routine but they are simply tools used with the goal of deriving an appropriate profit split among the assets. For example, the MPEEM and the relief from royalty methods can be applied to either pivotal or routine assets and are commonly used together to avoid the application of cross charges that would arise if two assets shared the same income stream and were both valued with the MPEEM. Industry conventions as well as the nature and availability of inputs to the analyses also play a role in the selection and substance of income approach methods. The following are some general examples of how the substance of an intangible asset valuation may vary within the form of certain income approach methods.

Relief from Royalty Method

11.18 The relief from royalty method estimates the fair value of the subject intangible based on the present value of royalty payments that would be paid if the subject intangible was not owned but accessed through a license agreement. Avoided royalty payments serve as a proxy for the economic benefits of owning the subject intangible and the underlying source or derivation of the rate define the substance of the fair value measurement. Royalty rate selection should align with the routine or pivotal nature of the intangible asset as well as the underlying intangible asset's stage in the commercialization cycle.

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Comparable Market Royalty Rates

11.19 The attributes of the subject intangible asset are fundamental to the selection of comparable market royalty rates. Routine intangibles by their nature do not create a significant portion of the excess profit of the business unit and the royalty rate selected should be limited to the underlying IP and not capture any measure of commercial value. Pivotal assets, on the other hand, create a significant amount of the excess profit and the selected royalty should reflect that. Therefore, it is critical to ascertain the routine or pivotal nature of the subject intangible asset prior to evaluating the market royalty rates.

11.20 The facts and circumstances underlying each of the market-based royalty agreements should be carefully evaluated to ascertain the extent to which the underlying IP was commercialized when the agreement was entered into. If the agreement provided the licensee with access to the underlying IP early on in the commercialization stage (e.g. the use of a trade name in a new market) it is likely that the royalty rate reflected the value solely attributable to the underlying IP as no investments in the commercialization of the IP in the market had been made. At the other end of the spectrum the IP owner (licensor) may have made the requisite investments and developed the market, increasing the breadth of the license, so that a license agreement negotiated during the commercialization stage would likely capture elements of commercial value in addition to the value attributable to the underlying IP.

11.21 In general, royalty rates are negotiated at terms that would allow the licensee to earn a sufficient margin to develop the market and invest in or create the assets required to commercialize the underlying IP. If the underlying IP had been successfully commercialized when the terms of the agreement were negotiated the royalty rate would be greater, providing the licensor with a fair return on its prior commercialization investments. Therefore, if comparable market royalty rates are to be used in the valuation of pivotal IP, it is critical that the market royalty rates reflect a similar stage of commercial value creation when the terms of the comparable agreement were agreed to. In practice, it may be difficult to identify comparable market royalty rates for pivotal assets that are in the same stage and have the same specified field of use as the asset being valued. In those cases, use of simulated royalty rates can be considered as discussed in the following section. For additional guidance on the selection of market royalty rates, see the "Relief From Royalty Method" section in chapter 12.

Simulated Royalty Rates

11.22 In certain circumstances the relief from royalty method may be applied when comparable market royalty rates are not available. For instance, there may be two pivotal assets within a business unit, so to avoid the cross charges that arise with dual MPEEMs the relief from royalty method is applied to one of the assets incorporating a simulated royalty. In substance, a simulated royalty represents the profit attributable to an intangible asset but is presented in the form of a royalty.

11.23 Simulated royalties are a form of profit split where the method and assumptions used to develop the royalty rate should correlate to the nature of the subject intangible asset. The derivation of such a royalty rate requires the consideration of the relative contribution of the respective assets to the expected income of the business unit and the degree to which the underlying IP has been

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commercialized. Simulated royalty rates can be applied to either routine or pivotal intangible assets. The Asset Class Split method described in the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section in chapter 12 is one method that can be applied to derive a simulated or implicit royalty rate.

11.24 Another method that may be used in practice, but is not considered a best practice by the task force, is an approach that is based on a rule of thumb that splits the income among a business unit's intangible assets. For example, such an analysis might base the simulated royalty of 25% to 33% of the maximum implied royalty for all intangible assets (e.g. based on the MPEEM with CACs for working capital, fixed assets and assembled workforce). A further assessment of the appropriate profit split and the routine or pivotal nature of the intangible asset should be considered.

MPEEM

11.25 The MPEEM defines the economic benefit of an intangible asset as earnings in excess of the CACs. Therefore, the measure of the excess earnings is dependent upon the nature and attributes of the business unit. In circumstances when the underlying IP is the sole pivotal asset of the business unit, the MPEEM captures the underlying IP as well as its commercial value. However, when the business unit contains multiple pivotal assets, the assumptions underlying the pivotal contributory assets (see the preceding discussion of the simulated royalty) define the proportion of commercial value attributable to the subject intangible asset being measured by the MPEEM. The following are examples of how the substance of a MPEEM may vary:

- *Example 1*–The underlying intangible asset, an owned patent, is considered pivotal. Operating cash flows, which are limited to this patented product line, are projected until the expiration of the patent. CACs are applied for working capital, fixed assets, routine product trade name and assembled workforce. In this case the MPEEM measures the aggregate fair value of the patent as well as the related commercial rights.

- *Example 2*–Circumstances are the same as in example 1, however access to the exclusive rights to use the patent was obtained through a license agreement prior to any efforts to commercialize the product. In this case, the royalty payments pursuant to the agreement are deducted and the MPEEM provides a measure of the intangible rights asset (commercial value exclusive of the underlying patent).

- *Example 3*–Consider example 1 (patent is owned) but the product trade name is also a pivotal asset. A simulated royalty was developed based on an asset class split that reflects the underlying trade name as well as its contribution to the commercial value. The MPEEM, as applied to the patent, captures the value of the underlying patent and its portion of the commercial value. Note that the overall commercial value of the business unit has been bifurcated between the trade name and patent as they are both considered pivotal assets.

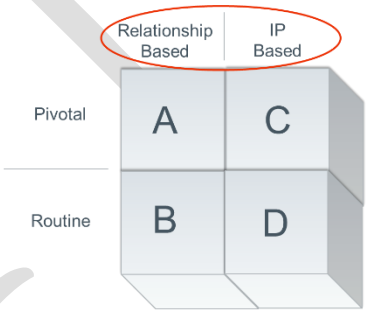
- *Example 4*–An IP-based intangible asset is the business unit's predominant asset while customer relationships are considered routine in nature. Data limitations or common industry practices may preclude the use of the replacement cost or *cost savings method* for

the customer relationships. The IP-based intangible asset drives the commercial value of the business unit and a simulated royalty was developed to apply the relief from royalty method. The MPEEM could be applied to the routine customer relationships in that the excess profits are being directed to the IP-based intangible asset through the simulated royalty that also serves as a CAC.

- *Example 5*–The same case as in example 4 but the customer relationships are also considered pivotal assets. An allocation of the commercial value to the customer relationships might be accomplished by reducing the simulated royalty applied to the IP-based intangible asset.

In each of these cases the same form of the MPEEM was used but the substance was driven by the underlying inputs and assumptions.

Relationship-Based vs. IP-Based Assets



11.26 In a business combination, only those intangible assets that are *identifiable* are recognized separately from goodwill. FASB ASC 805-20-25-10 indicates that "[a]n intangible asset is identifiable if it meets either the separability criterion or the contractual-legal criterion described in the definition of identifiable." The FASB ASC Master Glossary defines *identifiable* as

> An asset is identifiable if it meets either of the following criteria:
>
> a. It is separable, that is, capable of being separated or divided from the entity and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract, identifiable asset, or liability, regardless of whether the entity intends to do so.
>
> b. It arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

The "Initial Recognition of Intangible Assets" section in chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree," provides detailed guidance on recognition of acquired intangible assets.

11.27 FASB ASC 805-20-55-9 states in part:

> The identifiability criteria determine whether an intangible asset is recognized separately from goodwill. However, the criteria neither provide guidance for measuring the fair value of an intangible asset nor restrict the assumptions used in measuring the fair value of an intangible asset.

Therefore, the task force developed this implementation guidance to assist with the selection of valuation methods for acquired intangible assets.

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11.28 The substance of the inputs into income approach valuation methods drive their measurement outcomes. A distinguishing characteristic of pivotal assets is their ability to create a significant amount of the excess profits (commercial rights or intangible rights) of the business unit. This valuation method selection process provides for an initial step that recognizes that the underlying economic rationale for the creation of excess profits is not uniform for all types of intangible assets. Categorizing an intangible asset as either relationship-based or IP-based allows for a more refined selection of the appropriate income approach method and evaluation of the value drivers of the excess profit when present. The following summarizes some of the general attributes of these categories with additional discussion provided in the subsequent subsections.

Relationship-Based Assets

11.29 The Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #2: *The Valuation of Customer-Related Assets* (Valuation Advisory #2),[8] defines *customer-related assets* as including "customer lists, order or production backlog, customer contracts and related relationships, and non-contractual customer relationships." Although the term *relationship-based assets,* as used in this guide, includes customer-related assets, it is intended to be a broader term to also capture other assets with similar attributes (for examples, see table in paragraph 11.37).

11.30 Some of the distinctive characteristics of relationship-based assets are as follows:

- They may be formed through relationships between specific individuals (e.g. customer relationships).
- Relationship-based assets (in particular, customer-related assets) make unique contributions to the value chain deriving their value indirectly through the contributions of intellectual capital and other assets of the business unit.
- They are not licensed and, therefore, there is no distinction between the value attributable to an underlying asset and the related commercial value as there is with pivotal IP-based intangible assets. Unlike pivotal IP-based intangibles, for which an intangible rights asset is recognized when the underlying IP is licensed, no such asset exists in the context of relationship-based intangibles since they are not licensed.

11.31 Relationship-based assets should be carefully evaluated in the context of the products or services sold and any related IP-based intangible assets to determine the relative contribution that the respective assets make to the value chain.

IP-Based Assets

11.32 IP-based intangibles come in a variety of forms ranging from marketing intangibles, such as trademarks and trade names; to those that provide and protect distinct product or service

[8] Valuation Advisory #2 is available at the Appraisal Foundation's website at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

attributes, such as patents, proprietary knowhow and copyrights; as well as those that contribute to manufacturing products in a cost-effective manner.

11.33 Some of the distinctive characteristics of IP-based assets are as follows:

- IP-based intangible assets make direct contributions to the value chain that are distinct and directly correlated to the underlying IP. Their economic benefits are more directly observable than the indirect contributions of relationship-based intangible assets.

- Legal protection (e.g. patent or trademark) or trade secrets (e.g. proprietary formula) beyond that of a contract or relationship between two specific parties contributes to their value proposition.

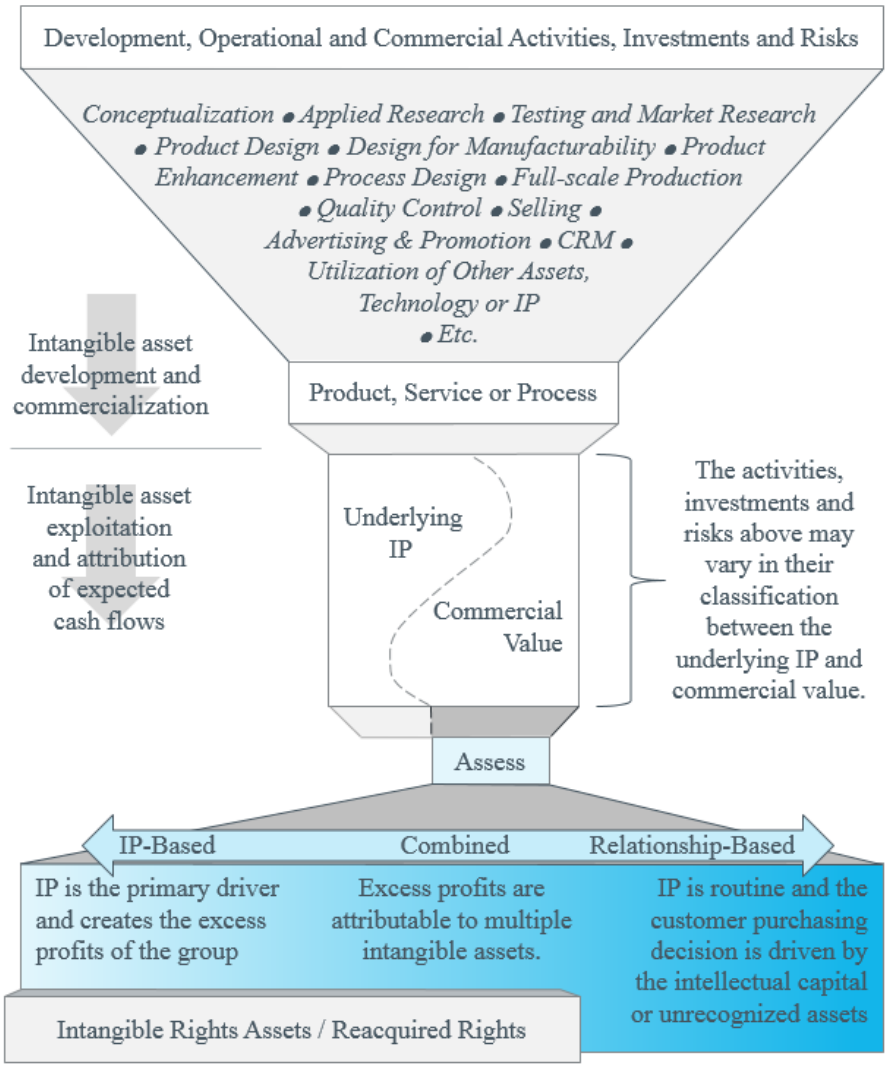
- The underlying intangible asset is capable of being licensed to a third party and the licensee would make investments to commercialize the IP while relying on the legal protection the IP provides.

11.34 In some cases, the distinction between legal protection and the ability to license may be blurred. For example, access to pivotal IP such as a patent may be obtained through a license agreement. This situation includes both a contract between specific parties as well as the broad legal protection afforded by the patent, therefore one must distinguish between the underlying IP and how it is accessed. Determining whether access to the intangible asset is obtained by an agreement is an important difference between owned and licensed IP. The third dimension of this valuation method selection process - how the IP is accessed - is discussed in the subsections that follow.

Additional Considerations for Relationship-Based and IP-Based Assets

11.35 Products, services or processes of a successful business unit evolve from investments in developmental, operational and commercial activities. These activities or functions can range from technology conceptualization to marketing activities, with each of the functions making different contributions to the successful commercialization of the business unit and the corresponding development of intangible assets. The measure of an intangible asset's fair value is based on their successful exploitation within the business unit and the attribution of the overall cash flows to the respective assets. Therefore, evaluating the functions within a business unit, their relationship with the identified assets, as well as their unique risk and return propositions, aids in understanding contributions of the underlying IP and the attribution of the commercial value to the respective pivotal assets. The following graphic summarizes these relationships.

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11.36 The thought process underlying this graphic can be applied along these general steps:

a. Identify the level of PFI, corresponding business unit and its assets;

b. Evaluate the activities and functions of the business unit and how they correlate to the development of the product, service or process and the related assets;

c. Define the underlying IP and related functions. For example, is it limited to an underlying patent or does it also include the designs for manufacturability as well?

d. Derive an appropriate royalty rate for the underlying IP based upon the functions, risks and returns. The rate should be developed under the assumption that the IP would be licensed to a third party and that all investments and efforts to exploit the IP will be performed by the licensee.

e. Isolate the excess profits or commercial value of the business unit over and above the underlying IP and other routine assets such as working capital, fixed assets and routine intangible assets.

f. Assess the degree to which the respective pivotal assets create the excess profits; apply a profit splitting method, such as the asset class split, if appropriate; and assign the commercial value accordingly;

g. When the underlying IP is owned, combine its value with the related commercial value. This may be accomplished by deriving a simulated royalty, inclusive of the underlying IP royalty, to estimate the fair value of the combined fair value of the underlying IP and commercial rights related to the IP.

h. The fair value of the relationship-based pivotal asset might be estimated with a MPEEM that deducts the simulated royalty as a proxy for the profit split between the intangible assets.

i. In summary, the fair value of the underlying pivotal IP should reflect the investments and risks to develop the IP. The successful exploitation of the pivotal IP (in the form of a product, service or process) may be due to the IP itself, commercial rights, or pivotal customer-based intangible assets created during the investments and efforts to commercialize the IP.

11.37 The following table summarizes the examples of identifiable intangible assets from paragraphs 11–45 of FASB ASC 805-20-55 and how the task force believes they align with the categories used in the valuation method selection process. Note that certain assets may fall into either category based on the specific attributes of the intangible asset.

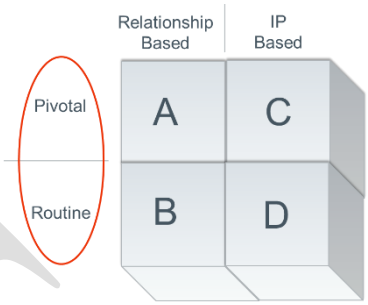
FASB ASC 805 Examples of Intangible Assets That Are Identifiable (# Contractual/Legal; * Separable)	Relationship-Based	IP-Based
Marketing-Related Intangible Assets		
Trademarks, trade names, service marks, collective marks, certification marks #		X
Trade dress (unique color, shape, package design) #		X
Newspaper mastheads #		X
Internet domain names #		X
Noncompetition agreements #	X	
Customer-Related Intangible Assets		
Customer lists *		X
Order or production backlog #	X	

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Customer contracts and related customer relationships #	X	
Noncontractual customer relationships. *	X	
Artistic-Related Intangible Assets		
Plays, operas, ballets #		X
Books, magazines, newspapers, other literary works #		X
Musical works such as compositions, song lyrics, advertising jingles #		X
Pictures, photographs #		X
Video and audiovisual material, including motion pictures or films, music videos, television programs. #		X
Contract-Based Intangible Assets		
Licensing and royalty agreements #		X
Standstill agreements #	X	
Advertising, construction, management, service or supply contracts #	X	
Operating lease agreements of a lessor #	X	
Construction permits #		X
Franchise agreements #		X
Operating and broadcast rights #		X
Servicing contracts such as mortgage servicing contracts #	X	
Employment contracts #	X	
Use rights such as drilling, water, air, timber cutting, and route authorities. #		X
Technology-Based Intangible Assets		
Patented technology #		X
Computer software and mask works #		X
Unpatented technology *		X
Databases, including title plants *		X
Trade secrets, such as secret formulas, processes, recipes. #		X

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Pivotal vs. Routine Assets



11.38 Pivotal assets create a significant amount of the excess profit (greater than a routine amount) generated along a business unit's value chain. Pivotal IP-based assets may also be accessed via a license agreement giving the licensee control of the excess profits related to the commercialization of the IP.

11.39 In broad terms, value is created when the return on invested capital exceeds the cost of invested capital; or value is destroyed when returns do not exceed the cost of capital. This notion of creating value through excess returns is the fundamental driver underlying the valuation of intangible assets and is present in both routine and pivotal intangible assets. Routine intangibles may create value through excess returns; however, their contribution to the business unit's overall excess profit is somewhat limited because their contributions are not unique and similar functionality may be available in the marketplace. Pivotal assets on the other hand are unique and play a significant role in creating the product or service attributes important to the customer purchasing decision. These attributes provide a distinct competitive advantage that drive the excess returns of the business unit.

11.40 In many instances, an intangible asset may clearly distinguish itself as being pivotal to a business unit. Unique and innovative IP in the technology industry or the intellectual capital of a consulting firm are examples of this. However, identifying whether an asset(s) is pivotal may require an assessment of various factors. There are a wide variety of tools and thought processes that may be used in such an assessment of a business unit's value chain and they should not be limited to those mentioned in this discussion.

11.41 There are no bright lines defining pivotal assets and the assets vary by industry; however, there is a high correlation between pivotal assets and strategic planning frameworks such as Michael Porter's "Forces Driving Industry Competition"[9]. A careful evaluation of a business unit's PFI, along with an assessment of its strategic successes, provide insight into the nature of the intangible assets and those that are pivotal to realizing excess profits. Consumer purchasing decision models may also be applied during the exploitation phase (or commercialization stage) to assess how consumer preferences contribute to an intangible asset's ability to create a significant amount of the excess profit generated along a business unit's value chain.

11.42 Evaluating the activities, investments and risks required to successfully develop, operationalize and commercialize products, services or processes also provides insight into the pivotal nature of the intangible assets(s). Such an analysis also aids in understanding the contributions of the underlying IP relative to its commercial value. In addition, for purposes of this discussion, excess profits generated from the exploitation of the underlying IP are equated to commercial rights or intangible rights assets to convert them to a form of intangible asset. Lastly, understanding the respective contributions of the underlying IP and commercial value also provides a foundation for the valuation of intangible rights assets and reacquired rights.

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[9] Porter, Michael E. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. New York: The Free Press, 1980.

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11.43 A variety of tools exist that could be used to assess relative profit contribution and, therefore, assess whether the asset is pivotal or routine. Examples of these tools that may be considered include "the Classic 25% Rule"[10] and transfer pricing principles.

11.44 In 2015 the Organisation for Economic Co-operation and Development (OECD) published its report: *Aligning Transfer Pricing Outcomes with Value Creation, Actions 8-10-2015 Final Reports*[11] (OECD Report) as part of the OECD/G20 Base Erosion and Profit Shifting Project. Transfer pricing focuses on the determination of the conditions that would be agreed upon between independent parties for a comparable transaction; however, this report also provides additional perspectives pertinent to the valuation method selection process, such as:

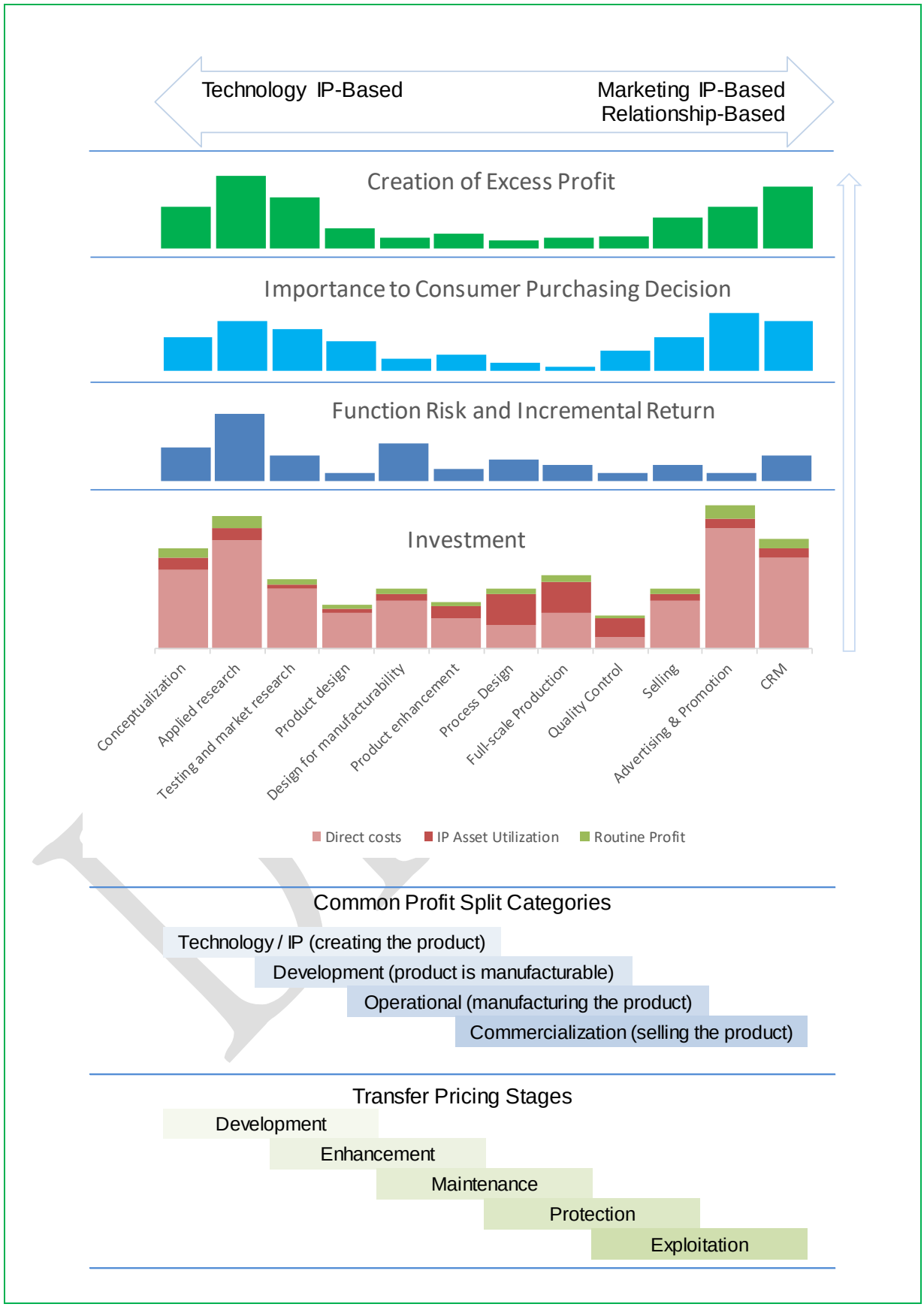
- Transfer pricing outcomes should be aligned with value creation;
- Members of a multinational enterprise are to be compensated based on the value they create through functions performed, assets used and risks assumed in the development, enhancement, maintenance, protection and exploitation of intangibles; and
- The functional analysis should identify all factors that contribute to value creation, which may include risks borne, specific market characteristics, location and business strategies among others.

11.45 Transfer pricing functions overlap to some degree with common profit splitting categories that may be considered in the Classic 25% Rule. The following exhibit demonstrates how functional analyses may be integrated with an assessment of consumer purchasing decisions to assess the degree to which an intangible asset creates the excess profit of a business unit.

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[10] *The Classic 25% Rule* is a flexible method for estimating a baseline royalty based on credible profitability or cost savings to the licensee. Once that baseline royalty is estimated, a variety of factors are evaluated and considered to determine the final reasonable royalty. The baseline royalty—as distinguished from a "reasonable royalty"—is not the end of the analysis in a "hypothetical negotiation" but the starting point. See *The Classic 25% Rule and the Art of Intellectual Property Licensing by Robert Goldscheider, 2011 Duke Law and Technology Review No. 006*. This article clarifies the common misapplication of what at times is referred to as *the 25% to 33% rule of thumb.* Such misapplication may include using insufficient diligence and analysis to arrive at a "reasonable royalty".

[11] OECD (2015), *Aligning Transfer Pricing with Value Creation*, Actions 8-10- 2015 Final Reports, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris.


Technology IP-Based
Marketing IP-Based
Relationship-Based
Creation of Excess Profit
Importance to Consumer Purchasing Decision
Function Risk and Incremental Return
Investment
Conceptualization
Applied research
Testing and market research
Product design
Design for manufacturability
Product enhancement
Process Design
Full-scale Production
Quality Control
Selling
Advertising & Promotion
CRM
Direct costs
IP Asset Utilization
Routine Profit
Common Profit Split Categories
Technology / IP (creating the product)
Development (product is manufacturable)
Operational (manufacturing the product)
Commercialization (selling the product)
Transfer Pricing Stages
Development
Enhancement
Maintenance
Protection
Exploitation

11.46 The substance of the inputs into income approach valuation methods should reflect the degree to which the attributes of the subject intangible asset create excess profit or drives the commercial value of the business unit. The underlying economic rationale for the creation of excess profits for pivotal intangible assets is distinctly different than that of routine intangible assets. Therefore, assessing whether an intangible asset is pivotal or routine allows for a more refined selection of the appropriate income approach method and evaluation of the value drivers of the excess profit when present. In addition, the pivotal or routine nature of the underlying intangible asset has a significant impact on the measurement of an intangible rights asset (the intangible asset is accessed through a license agreement) as well as reacquired rights. The following summarizes some of the general attributes of pivotal and routine intangible assets.

Pivotal Intangible Assets

11.47 A distinguishing characteristic of pivotal assets is their ability to create a significant amount of the excess profits (commercial rights or intangible rights) of the business unit. Pivotal assets have strategic or foundational attributes that drive the performance of the business unit, whether the underlying intangible asset is owned or licensed, and make significant contributions to the value chain. They can also be viewed as a core asset around which investments in other assets are made. For example, ownership or access to industry leading technology or a product with high brand recognition provide the basis to invest in and develop related assets such as manufacturing facilities, distribution network, assembled workforce, and customer relationships.

11.48 Pivotal assets come in a variety of forms and there may be multiple pivotal assets in a business unit. Identifying the relative contribution or commercial value of the respective assets is one of the more challenging aspects of valuing intangible assets. See the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" and "Relief From Royalty Method" sections in chapter 12 for additional guidance.

11.49 Paragraph 6.17 of the OECD Report provides a consistent perspective:

> … "Unique and valuable" intangibles are those intangibles (i) that are not comparable to intangibles used by or available to parties to potentially comparable transactions, and (ii) whose use in business operations (e.g. manufacturing, provision of services, marketing, sales or administration) is expected to yield greater future economic benefits than would be expected in the absence of the intangible.

Routine Intangible Assets

11.50 Routine intangible assets are secondary elements of the operations. They may also be viewed as creating value as an input into the operations, such as contributing value through increased efficiency or a reduction in expenses, rather than an output (e.g. attributes that customers consider in their purchasing decision). Examples include internal use software; intellectual property related to a manufacturing process; and patents or other technology incorporated in an underlying component of a product.

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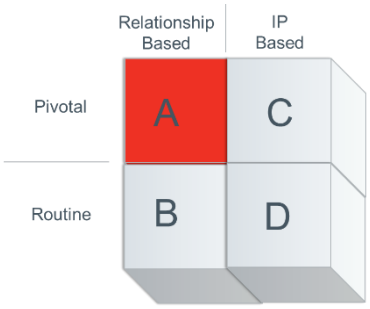
11.51 Routine intangible assets are less critical in nature and, although they do provide an economic benefit, their functionality may be accessible by either recreating them internally or by license agreement. When functional substitutes are available in the marketplace, competitive dynamics would drive down excess returns and the owner would be limited to a routine return on its investment.

11.52 The application of the cost approach may be appropriate for routine intangible assets under certain circumstances, for example the development of intangibles used for internal business unit operations.

11.53 Paragraph 6.10 of the OECD Report also provides a consistent perspective as to the nature of routine intangibles:

> … It should be emphasized that not all intangibles deserve compensation separate from the required payment for goods or services in all circumstances, and not all intangibles give rise to premium returns in all circumstances. For example, consider a situation in which an enterprise performs a service using non-unique know-how, where other comparable service providers have comparable know-how. In that case, even though know-how constitutes an intangible, it may be determined under the facts and circumstances that the know-how does not justify allocating a premium return to the enterprise, over and above normal returns earned by comparable independent providers of similar services that use comparable nonunique know-how ...

A: Pivotal Relationship-Based Intangible Assets



11.54 Relationship-based assets (particularly customer-related assets) make contributions to the value chain that are distinct from those of IP-based intangible assets. These distinctions extend to the concept that their value is derived from contracts or relationships between specified parties rather than through broad legal protection (which is useful to distinguish between the two). The fundamental economic difference between pivotal relationship-based and pivotal IP-based intangible assets is the source of their excess profits. Pivotal IP-based assets derive their value directly from attributes that create excess profits while relationship-based intangible assets do so in a more indirect manner. The following discusses the attributes of pivotal relationship-based intangible assets in the context of identifiable customer relationships but the fundamental principles also apply to other relationship-based assets.

11.55 IP-based assets generally have a clear correlation to the design, features and functions that affect a consumer's purchase decision. IP comes in many forms, providing consumers with desired attributes ranging from the prestige of owning a brand to the health benefits of a pharmaceutical product. Customer relationships, on the other hand, do not have as clear a correlation to the consumer purchase decision. The unique character of customer-related assets is described as follows in paragraph 3.3.5 of Valuation Advisory #2:

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> It is important to observe that customer-related assets have characteristics that are different from most other assets of a business. Customer-related assets can be viewed as the result of the business assets used to create and sell a product or service. Most other assets are typically used to create and sell products or services that are purchased by the customers. In other words, a company assembles fixed assets, working capital, and other intangible assets to produce a product or provide a service. It is important to assess why the customers are paying a company what may appear to be more than a fair return on the assets deployed by the company to create and sell the product or service. This assessment is necessary when considering the relative [magnitudes of] fair value of the various assets of a business.

Stated another way, there must be an underlying economic rationale for attributing value to a customer relationship such as the value derived from the intellectual capital of the assembled workforce not captured in the replacement cost of that assembled workforce. Therefore, the nature of the economic benefits must be identified to allow for an assessment of whether the relationship-based intangible assets are routine or pivotal to the operations of the business unit.

11.56 Michael E. Porter's Value Chain[12] provides a helpful framework to assess where value is created or lost through the activities performed. A business unit derives its competitive advantage and value from a variety of activities along its value chain. IP plays an important role in these activities in addition to human resources (assembled workforce) and other activities. An assembled workforce can differentiate a business unit and provide competitive advantages through a wide range of activities. The activities of the assembled workforce and related intellectual capital can manifest themselves in a variety of intangible assets such as proprietary technologies and processes or in customer contracts and relationships. This interrelationship between an assembled workforce, intellectual capital and intangible assets is also referenced in the accounting literature.

11.57 FASB ASC 805-20-55-6 indicates that intellectual capital of the skilled workforce is not part of an assembled workforce:

> The acquirer subsumes into goodwill the value of an acquired intangible asset that is not identifiable as of the acquisition date. For example, an acquirer may attribute value to the existence of an assembled workforce, which is an existing collection of employees that permits the acquirer to continue to operate an acquired business from the acquisition date. An assembled workforce does not represent the intellectual capital of the skilled workforce–the (often specialized) knowledge and experience that employees of an acquiree bring to their jobs. Because the assembled workforce is not an identifiable asset to be recognized separately from goodwill, any value attributed to it is subsumed into goodwill. (emphasis added)

Note that the value of an assembled workforce subsumed into goodwill is limited to the in-place or assemblage value of the workforce exclusive of any value attributable to the intellectual capital. This is consistent with fair value measures of an assembled workforce that are determined in practice for the purpose of applying a CAC and are generally limited to the replacement cost without consideration of the intellectual capital. Paragraph B180 in the "Basis for Conclusions"

[12] Porter, Michael E. *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: The Free Press, 1985.

section of FASB Statement No. 141(R), *Business Combinations*,[13] emphasizes this point by limiting the value to avoided hiring and training costs.

> The Boards observed that the value of intellectual capital, in effect, is recognized because it is part of the fair value of the entity's other intangible assets, such as proprietary technologies and processes and customer contracts and relationships… In other words, the prohibition of recognizing an assembled workforce as an intangible asset does not apply to intellectual property; it only applies to the value of having a workforce in place on the acquisition date so that the acquirer can continue the acquiree's operations without having to hire and train a workforce.

The first sentence of paragraph B180 is also informative in that it provides the Boards' (FASB and the IASB) observation regarding the effective recognition of intellectual capital. The correlation between intellectual capital and customer contracts / relationships is consistent with the attributes of relationship-based intangible assets outlined in this valuation method selection process and is an important consideration for assessing their pivotal nature. Furthermore, the value of intellectual capital may also manifest itself in IP-based intangibles (see paragraph 11.56).

11.58 Intellectual capital is an important aspect of relationship-based intangible assets making contributions to a business unit's value chain in many ways. It can have a significant impact on the consumer's purchase decision process capturing the attributes of a product or service that customers pay for and not the relationship itself. The following are some examples of where intellectual capital can make significant indirect contributions to a customer relationship and is, therefore, pivotal to the operations of a business unit:

- *Consulting services* – Knowledge, experience and skills of the consulting team provide unique and valuable services to clients.
- *Marketing and sales* – Ongoing relationships are built through the identification and responsiveness to customer needs and by providing quality and timely service.
- *Ongoing product service* – Reliable and effective maintenance services enhance the value of products in support of their critical operating functions.
- *Product quality* – Manufacturing culture of the assembled workforce and their commitment to producing quality products minimizes product defects that would be disruptive to the customer's manufacturing process.
- *Distribution effectiveness* – The distribution process, supplemented by the business unit's geographic proximity and assemblage value, provides the speed and responsiveness for customer just-in-time inventory management.

11.59 Customer relationships exist within most businesses, but not all customer relationships are pivotal. As seen in the preceding examples, the utility derived from customer purchase decisions

[13] This and other paragraphs from the "Basis for Conclusions" section of FASB Statement No. 141(R), *Business Combinations*, were not codified in FASB ASC; however, the Business Combinations Task Force (task force) believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

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reaches beyond the attributes provided by IP-based intangible assets to include relationship-based assets. The pivotal nature of relationship-based intangible assets can be gauged by evaluating the indirect contributions of intellectual capital to the customer decision-making process for a business unit's products or services. There is extensive research in this area including economic, psychological and consumer behavior models to analyze consumer purchasing decisions. Relationship-based assets should be evaluated through discussions with management, industry analyses, and other research to identify the contributions to the value chain and whether they are pivotal to the operations of the business unit.

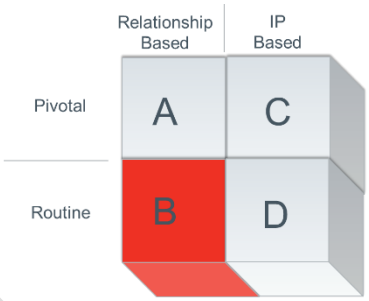
11.60 Pivotal relationship-based intangible assets make significant contributions to the value chain and excess profits of a business unit and since they are not licensed the MPEEM is the preferred form for their fair value measurement. Inputs and assumptions drive the substance of the MPEEM and reflect the degree to which relationship-based assets make contributions to the excess profits. These inputs may consider factors such as:

- The degree to which the relationship-based assets are considered in the customer purchasing decision process;
- The degree to which the intellectual capital is institutionalized and retained within the business unit rather than unique to the individual workforce members;
- The relative contributions of pivotal IP-based intangible assets to the business unit;
- The product or service attributes that provide the greatest utility to customers (supported by company or industry market research or other studies);
- Asset class splitting analyses assessing the relative amount of "investment" and the duration of the investment in the respective asset classes;
- The stage in the product life cycle – IP-based intangible assets may make more prominent contributions to excess profits in the early years of a product life cycle but the customer purchasing decision evolves over time migrating towards relationship-based intangibles;
- The degree to which personal relationships influence the buying decision.

11.61 Relationship-based assets are not licensed. Therefore, although the substance of a relief from royalty analysis incorporating a simulated royalty would, in theory, capture the economics of a pivotal relationship-based asset, it is not commonly applied and not considered to be a best practice. Furthermore, there is no distinction between an underlying asset (e.g. intellectual capital) and commercial value as there is with pivotal IP-based intangible assets.

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B: Routine Relationship-Based Intangible Assets



11.62 Routine relationship-based intangible assets also derive their value indirectly through a business unit's intellectual capital. When IP-based intangible assets or other assets make the greatest contributions to the business unit's value chain, relationship-based intangible assets may not play a predominant role in the customer's purchasing decision process and would be more routine in nature and not the source of excess profits. As with pivotal relationship-based assets, their value is derived from contracts or relationships between specified parties which is useful to identify their relationship-based nature.

11.63 Intellectual capital may not always provide a competitive advantage but the related functions and activities are a routine and necessary element of the business unit's operations. Routine relationship-based asset contributions to the value chain may take on a variety of forms with economic benefits ranging from internal operating efficiencies to elements of the relationship that a customer may take for granted. The following are examples of routine functions and activities that play an important yet supporting role in the operations of a business unit:

- *Responsive marketing and sales* – Recurring customer orders are effectively facilitated by the marketing team that assures on-time delivery and efficient problem resolution.

- *Established relationships* – Although the business unit may be IP driven, existing customers provide an established entry point for the introduction of new products or services.

- *Reliable product service* – Service is not a major component of the operations; however, when it is required, it is provided in a reliable and effective manner.

- *Distribution effectiveness* – The distribution process is consistent with that provided by competing firms.

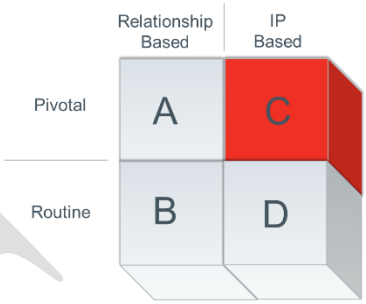
11.64 Routine relationship-based intangible assets can also be gauged by evaluating the indirect contributions of intellectual property to the customer decision-making process for a business unit's products or services. They should be evaluated through discussions with management, industry analyses, and other research to identify the contributions to the value chain.

11.65 Replacement cost or an income approach, such as the cost savings or avoided cost methods, are commonly used to measure routine relationship-based intangible assets. For example, a buyer that acquires a contract manufacturing entity with a highly specialized capability may identify and measure a routine customer relationship that reflects the value attributable to certain marketing expenses related to future orders with an existing customer that are avoided. The MPEEM and the relief from royalty methods (relationships are generally not licensed) are not commonly applied in a case like this. However, use of the MPEEM is not precluded in these situations. It could be applied to measure a routine customer relationship when the excess profits are captured in the

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measurement of a related IP-based intangible asset using a simulated royalty that also serves as a CAC.

C: Pivotal IP-Based Intangible Assets



11.66 Pivotal IP-based intangible assets make distinct contributions to a business unit's value chain by creating a significant amount of the excess profits. Generally speaking, the proprietary design and related features of the IP significantly influence a consumer's purchase decision. In addition, a distinguishing characteristic of IP-based intangible assets, both pivotal and routine, is that they are capable of being licensed. Distinct similarities and differences exist when a pivotal IP-based intangible asset is owned versus when it is accessed through a license agreement. This subsection addresses when they are owned.

11.67 There are two elements of value attributable to pivotal IP-based intangible assets: (1) the underlying IP and (2) the commercial value or excess profits created by exploiting, investing in and commercializing the underlying IP. When the IP is owned, the underlying IP and related commercial rights are measured in aggregate as a single asset. This is generally straightforward when the business unit is limited to one pivotal asset. However, when multiple pivotal assets exist, it is helpful to measure the contribution of the underlying IP in order to isolate the commercial value and facilitate the functional attribution of the overall commercial value among the pivotal intangible assets. This also provides a foundation for the valuation of intangible rights assets (commercial value related to licensed IP) and reacquired rights (intangible rights assets previously granted or licensed to an acquiree that are reacquired by the acquirer as part of the business combination).

11.68 When pivotal IP-based intangible assets coexist with pivotal relationship-based intangible assets, the relief from royalty method is typically used to value the IP and the MPEEM is typically used to value customer relationships. When the royalty rate selection process is limited to a comparable analysis based on observed market data, this could result in the commercial value related to IP within a business unit being attributed solely to customer relationships. Accordingly, the task force believes that further analysis is needed to ensure that the commercial value is properly attributed to both the IP and the customer relationships. This can be done in the form of simulated royalties. The valuation method selection process described in this chapter provides for a functional attribution (or profit split) of the commercial value rather than a presumption that commercial value should be considered an attribute of customer relationships. Note that this valuation method selection process expands upon certain methods described in the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section in chapter 12.

11.69 The following are some examples of where IP-based intangible assets are considered pivotal to a business unit and create and/or control the commercial value. In each case, the operations and functions should be assessed to determine whether there are additional pivotal assets such as customer relationships:

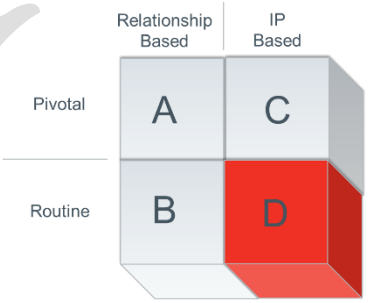
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- *Pharmaceutical Products* – Currently marketed products have progressed through several stages of development incorporating a variety of functions. These functions and resultant intangible asset components include: lead molecule discovery; safety (Phase I) and efficacy (Phase II) testing; manufacturing process development; patents; product phase or clinical trials to generate data for regulatory submissions (Phase III); FDA approval of a product for marketing also includes approval of the manufacturing process (at all phases); ongoing monitoring (Phase IV).

- *Operating Rights* – Intangible assets classified or designated as operating rights typically include, but are not limited to: FCC and other government granted licenses (for example, wireless or broadcast spectrums, casino license, certificate of need); commercial franchises (for example, fast food restaurant); and governmentally granted monopolies or franchises (such as in the cable industry). (AMPF A3.3.1) For further discussion of operating rights, see the "Operating Rights" section later in this chapter.

- *Brand and Brand Name* – Described in FASB ASC 805-20-55-18 as "often used as synonyms for trademarks and other marks, are general marketing terms that typically refer to a group of complementary assets such as a trademark (or service mark) and its related trade name, formulas, recipes, and technological expertise."

D: Routine IP-Based Intangible Assets



11.70 Routine IP-based intangible assets are secondary elements of the operations and in some respects, may also be viewed as creating value as an input into the operations, contributing value through increased efficiency or a reduction in expenses. They do not create significant amounts of excess profit and generally do not possess attributes that customers consider in their purchasing decision and for which they would pay a premium. Examples include internal use software; intellectual property related to a manufacturing process; and patents or other technology incorporated in an underlying component of a product. They can be licensed and are less critical in nature because they provide an economic benefit that may be accessible through other means, for example, by recreating them internally or by licensing a functional equivalent from a third party.

11.71 IP-based intangible assets may not always provide a competitive advantage but the related functions and activities are a routine and necessary element of the business unit's operations. To some extent they provide benefits that a customer may take for granted and will not directly impact their purchasing decision. The following are examples of routine IP-based intangible assets that play an important yet supporting role in the operations of a business unit:

- *Process patents or knowhow* – IP enables increased manufacturing efficiency and cost savings.

- *Wholesale or business-to-business trade name* – The trade name is not critical to wholesale operations but the name recognition does provide some economic benefit.

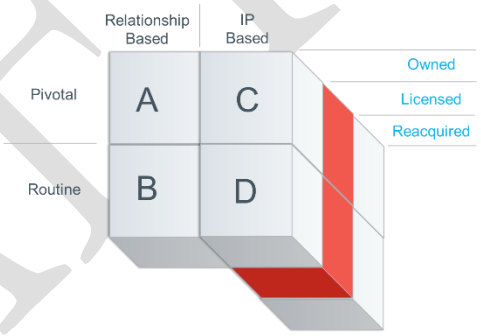
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- *Distribution management system* – The software supports efficient and on-time product delivery.

- *Unpatented IP* –Such assets are not unique and alternative IP with similar functionality is available in the market, for example, component designs, consulting tools and applications.

11.72 Relief from royalty, replacement cost as well as cost savings or avoided cost income methods are commonly used to measure the fair value of routine IP. The relief from royalty, based on comparable market royalty rates rather than simulated royalties, is commonly applied because these assets are capable of being licensed and do not contribute to any of the business unit commercial value. Routine IP is not considered critical to the overall performance of a business unit therefore valuation methods that capture a wider array of income, such as the MPEEM, are generally not applied.

Licensed vs. Owned



11.73 IP-based intangible assets, both pivotal and routine, are distinguishable from relationship-based intangible assets in that they are capable of being licensed. When the underlying intangible asset[14] is accessed through a contract or license agreement, the value created by the licensee by exploiting, investing in and commercializing this asset is referred to as an *intangible rights asset*. The economic benefits of an intangible rights asset are equivalent to the commercial rights of pivotal IP-based intangible assets when the IP is owned, therefore the valuation methods, analyses and assumptions would be the same whether the IP is licensed or owned. This subsection focuses on the valuation implications of licensing IP-based intangible assets and the related intangible rights assets.

11.74 Licensees obtain the right to use and exploit an underlying intangible asset for a specified purpose, in a defined territory and over a certain term, while the licensor retains ownership of the underlying intangible asset. The component of value attributable to this right differs from the component of value attributable to the underlying IP asset itself, although their performance is linked. The licensee will perform the same functions, make the same investments and be exposed to the same risks of exploiting the underlying IP as if the owner had opted to commercialize the underlying IP itself. The analysis prepared to estimate the underlying IP's commercial value is the same as that for intangible rights assets. The economics are essentially the same except that the licensed underlying IP is not included in the fair value measurement (the royalty payments are deducted in the PFI).

11.75 Intangible rights assets can also represent the inherent or in-place value of an at-market contract. Although an at-market contract reflects market terms as of the acquisition date, the contract may have additional value for which market participants would be willing to pay because

[14] Underlying intangible assets comprise unique intellectual property that is commonly licensed out for an ongoing royalty payment and may include an up-front payment. Examples include trade names, patents and know-how.

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the contract provides future economic benefits. The "Pending Content" in FASB ASC 805-20-25-10A[15] states that

> An identifiable intangible asset may be associated with a lease, which may be evidenced by market participants' willingness to pay a price for the lease even if it is at market terms. For example, a lease of gates at an airport or of retail space in a prime shopping area might provide entry into a market or other future economic benefits that qualify as identifiable intangible assets, such as a customer relationship. In that situation, the acquirer shall recognize the associated identifiable intangible asset(s) in accordance with paragraph 805-20-25-10.

11.76 An additional perspective is also provided in paragraph 6.152 of the OECD Report which speaks to how the allocation of income between the IP owner and licensee should consider functions performed and risks assumed:

> Where limited rights in fully developed intangibles are transferred in a license or similar transaction, and reliable comparable uncontrolled transactions cannot be identified, a transactional profit split method can often be utilized to evaluate the respective contributions of the parties to earning combined income. The profit contribution of the rights in intangibles made available by the licensor or other transferor would, in such a circumstance, be one of the factors contributing to the earning of income following the transfer. However, other factors would also need to be considered. In particular, functions performed and risks assumed by the licensee/transferee should specifically be taken into account in such an analysis. Other intangibles used by the licensor/transferor and by the licensee/transferee in their respective businesses should similarly be considered, as well as other relevant factors. Careful attention should be given in such an analysis to the limitations imposed by the terms of the transfer on the use of the intangibles by the licensee/transferee and on the rights of the licensee/transferee to use the intangibles for purposes of ongoing research and development. Further, assessing contributions of the licensee to enhancements in the value of licensed intangibles may be important. The allocation of income in such an analysis would depend on the findings of the functional analysis, including an analysis of the relevant risks assumed. It should not be assumed that all of the residual profit after functional returns would necessarily be allocated to the licensor/transferor in a profit split analysis related to a licensing arrangement.

11.77 This valuation method selection process provides for a functional attribution (or profit split) of the commercial value to assess whether it should be considered an attribute of customer relationships or if the functions and investments have resulted in the creation or enhancement of an intangible rights asset.

11.78 *Example*. Company O has developed a unique product line design and trade name that has made significant investments to successfully market and commercialize the product line in Country A. Company L has a distinct understanding of the market dynamics in Country B and has

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[15] The "Pending Content" in FASB ASC 805-20-25-10A quoted here reflects the amendments made by FASB Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842)*. See footnote 17 in the "Leases" section of chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree," for information regarding the effective date of ASU No. 2016-02.

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entered into a license agreement with Company O to market the product in Country B. The agreement calls for an ongoing royalty payment and there was no upfront payment because the product was new to the market. At the inception of the license agreement the intangible rights assets were of minor value because of the unproven market. Over time Company L makes significant investments to establish the commercial viability of the product and create important relationships with many of the key retail outlets in Country B. Company L's efforts have resulted in developing pivotal customer relationships with the retailers and establishing the product as a leader in its category. Excess profits are attributable to two pivotal intangible assets (1) the intangible rights asset related to the development of the market and brand recognition by the ultimate consumers and (2) the relationships with the retailers. In other words, Company L has successfully commercialized the product enhancing the initial value of the intangible rights asset and created customer relationships, while Company O benefits from the enhancement of the product value through the royalty payments it receives, avoiding the requisite investments and related commercial risks to develop Country B's market. For further discussion, see appendix B that illustrates application of the valuation method selection process.

11.79 An additional aspect of this analysis is to assess the status of the intangible rights asset at the inception of the license agreement. To the extent that the licensor had made some successful efforts to commercialize the IP, an upfront payment would have likely been made (or a corresponding adjustment to the royalty rates) as part of the agreement. Such a payment could serve as an input into a calibration analysis that might be applied in the measurement of the intangible rights asset value. Intangible rights assets, like other intangible assets, are not static in nature and evolve over time with continued investment.

11.80 License agreements may not convey all the marketing rights to the licensee and may be subject to some restrictions relative to owning the IP; in such cases, adjustments to the analysis would be required. Examples of provisions within the licensing agreement that may need to be considered include the following:

- Degree of exclusivity or scarcity of the agreement;
- Term of the agreement;
- Renewal provisions;
- Geographic restrictions.

11.81 The pivotal or routine nature of the underlying IP will also impact the selection of valuation methods as well as their inputs.

Pivotal

11.82 Contracts that provide access to a pivotal underlying intangible asset are in most cases exclusive. When a license is exclusive, there is a greater likelihood that the licensee (or holder of the intangible rights asset) will successfully exploit the pivotal intangible asset and make the requisite investments to do so.

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11.83 The fair value of intangible rights assets that are derived from access to pivotal underlying intangible assets is generally measured with the MPEEM reflecting CACs and royalty payments for the use of the underlying intangible assets.

11.84 Excess earnings would consider market participant expectations of renewing the contract and may also reflect any off-market terms of the license agreement. However, if the license agreement is favorable or unfavorable and the terms are expected to be renegotiated to market rates at the time the contract is renewed, then a separate intangible asset or liability related to off-market terms would need to be recognized.

11.85 Applying the relief from royalty method with a simulated royalty to capture the excess profits of the intangible rights asset over and above the license agreement payments for the underlying IP could be an alternative approach.

Routine

11.86 Routine intangible assets do not create significant amounts of excess profit and generally do not possess attributes that customers consider in their purchasing decision and would pay a premium for. Therefore, the licensee would not derive any excess profits over and above the royalty payments being made for the use of the underlying IP. To the extent there is an off-market component for licensed IP, it would need to be recognized separately.

11.87 The in-place contract value of an intangible rights asset providing access to routine intangibles is generally minor and generally measured based on the cost to negotiate and replace the agreement.

11.88 The negotiated royalty rate would reflect the degree of exclusivity of the agreement and is not a direct factor in the valuation of the intangible rights asset.

***Operating Rights*[16]**

11.89 Operating rights, which in most cases are pivotal assets, are a distinct form of IP-based intangible rights assets that provide licensees with a commercial right to exploit assets that are retained by the asset or IP owner (e.g. government entity). Intangible assets classified or designated as operating rights typically include (but are not limited to):

- FCC and other government granted licenses (for example, wireless or broadcast spectrums, casino license, certificate of need)
- Commercial franchises (for example, fast food restaurant or a retail store)
- Governmentally granted monopolies or franchises (such as in the cable industry)

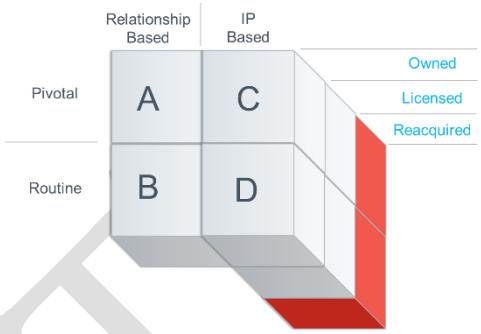
[16] The "Operating Rights" section leverages information from Application of the Mandatory Performance Framework, section A3.3.

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11.90 The income approach is generally most appropriate for valuing operating rights, and the two most common valuation methods are the MPEEM and the Greenfield method.

Reacquired Rights

11.91 Reacquired rights are in substance acquired intangible rights assets, where access to the underlying IP was obtained from the acquirer prior to the business combination through an agreement rather than through a sale. This valuation method selection process is intended to provide a pathway from the underlying economics of the commercial rights related to IP-based intangible assets when they are owned to the intangible rights assets that exist when they are licensed and then in turn if the intangible rights asset were reacquired.



11.92 The value of a reacquired right is determined by first estimating the fair value of the intangible rights asset based on market participant assumptions, and then any expected contract renewals a market participant would otherwise consider are excluded from the analysis. Additionally, a settlement gain or loss for any off-market element of the agreement is recognized in the acquirer's financial statements.

11.93 This valuation method selection process provides for a consistent valuation structure whether the underlying IP-based intangible asset is owned, licensed or reacquired. It also addresses a variety of alternative perspectives found in practice regarding reacquired rights. For example, if the license agreement's royalty rate is at-market, then the licensor is being fully compensated for the use of the underlying asset and by reacquiring the right the licensor is not acquiring any incremental cash flow that it did not already have. Therefore, the value of the reacquired right would be zero and the value created would reside in other assets. This valuation method selection process provides for the recognition of reacquired rights value in the context of commercial rights and intangible rights assets.

11.94 The value associated with the reacquired rights of routine IP-based intangible assets is generally minor and typically measured based on the cost to negotiate and replace the agreement. The remaining term of the agreement is not a factor when using the cost approach. Any off-market terms would be measured independently of the replacement cost and recognized as a settlement gain or loss (for further discussion of accounting considerations, see the "Reacquired Rights" section in chapter 8).

Summary of the Valuation Method Selection Process

11.95 The intent of this implementation guidance is to provide a basis for the selection of a valuation method that aligns with the economic attributes of the subject intangible assets. It is structured to provide flexibility in the method selection while retaining consistency of approaches when IP-based intangible assets are accessed through ownership, licensed or are reacquired. This guidance does not endorse any specific method but it does emphasize the critical importance of

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the inputs in the measurement of fair value. The task force believes that this implementation guidance will provide for greater consistency in the selection of valuation methods.

11.96 It should be emphasized that the nature of the asset (relationship-based vs. IP-based) or its relative importance (pivotal vs. routine) does not necessarily dictate the use of a specific valuation approach or method. These are important factors that should be considered when selecting the form of a valuation method, but the inputs and assumptions ultimately dictate the substance of the intangible asset and its fair value measurement.

11.97 The intent of this implementation guidance is to provide a basis for the selection of valuation methods for intangible assets. It may also be helpful in preparing documentation in accordance with the Mandatory Performance Framework (MPF) and Application of the MPF (collectively referred to as *MPF documents*) as to why specific valuation methods were selected. The MPF documents outline how much work should be performed. They also include documentation requirements related to a variety of topics, some of which may be addressed to some extent through the application of this valuation method selection process, including the following:

- Significant inputs, analyses, and outputs and how they support the final conclusion of value (1.4.1);

- Memos to file or other narratives that document and explain the valuation professional's reasoning behind such matters as the selection of methods, selection of inputs used in applying methods, and judgments made regarding valuation assumptions (2.7.2); commentary on "why" the valuation professional elected certain methods, inputs, and judgments (2.9.2);

- The reasonableness or appropriateness of the approaches and methods used to estimate the fair value of the subject interest (2.11.5)

- A supporting narrative about the applied methods and their applicability and usefulness to the valuation assignment, the reliability of the underlying data used in their preparation, and an explanation of inputs and assumptions (A1.3.4[c][i])

- Analyses and discussions with management that identify key value drivers and related assets associated with those value drivers, including the rationale for the transaction (for example, strategic, financial), and whether the acquisition was made in a competitive bid environment (A3.2.4[a])

- The rationale for the inclusion in the valuation analysis of the selected assets and liabilities (for example, assets that met the separability, legal and contractual criteria in FASB ASC 805, *Business Combinations*, if applicable) (A3.2.4[c])

Additional information about the MPF and Application of the MPF is available at www.aicpa.org/interestareas/fairvaluemeasurement/resources/fvm-performance-framework.html.

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Questions and Answers—Application of the Valuation Method Selection Process

11.98 This section includes questions and answers related to the application of the valuation method selection process. Appendix B includes a detailed example that illustrates application of the valuation method selection process.

11.99 *Question 1*: The acquiree is a licensee in a non-exclusive license for a routine IP. The license has a five-year term and the 3% royalty rate is at market. How might the fair value of the intangible rights asset be estimated?

Answer: The IP is considered routine and readily replaceable in that it is not a pivotal asset and the license agreement is non-exclusive. The replacement cost approach, based on the avoided costs of identifying replacement IP and negotiating the terms of the license agreement, will generally provide a reasonable measure of the fair value of the intangible rights asset.

11.100 *Question 2*: As part of a business combination, the acquirer identifies certain pivotal IP owned and commercialized by the acquiree. Market royalty rates for the exclusive rights to comparable underlying IP in a similar stage of commercialization are available. In addition, these royalty rates are within a narrow range and there was no upfront payment. Does the exclusive royalty rate reflect the value of both the underlying intangible asset and the commercial rights?

Answer: In general, no. Exclusive rights to the IP enhance the market opportunity and, therefore, the licensee would be willing to pay a higher royalty rate than it would otherwise pay for nonexclusive rights. The incremental royalty for exclusivity of the underlying IP does not necessarily correlate with the commercial rights of the subject pivotal IP. Exclusivity premiums secure market access in the defined territory or field of use enabling the licensee to reduce competitive risks and rationalize the investments required to develop the commercial rights. When the IP is pivotal and owned by the acquiree, the fair value of the IP (underlying intangible asset) and commercial rights would be recognized in aggregate and may be measured under the income approach with a method such as the MPEEM (disregarding any royalty payments for the underlying IP) or based on a simulated royalty analysis capturing both the underlying IP and the commercial rights.

11.101 *Question 3*: Assume the same facts as in Question 2; however, the exclusive rights to the IP are not owned but are licensed by the acquiree at market rates. How does this impact the valuation of the commercial rights?

Answer: In this scenario, the measurement of the intangible rights asset is limited to the value of the commercial rights. Since the acquiree obtained the commercial rights by means of a license agreement, the economic rights are the same as if they were owned except the value of the underlying IP would be excluded by deducting the royalty payment.

11.102 *Question 4:* Does the valuation method selection process imply that all pivotal IP-based intangible assets should be valued using the relief from royalty method and all pivotal relationship-based intangible assets using an MPEEM?

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Answer: No, the selection of valuation methods depends on the facts and circumstances. However, for many pivotal assets some form of income approach is likely to be applied as they are most able to capture the commercial rights attribute of pivotal intangible assets.

11.103 *Question 5:* How does the valuation method selection process apply if only a single pivotal intangible asset is identified for valuation?

Answer: The valuation method selection process would be applied to quantify and include the commercial rights of the subject pivotal intangible asset and its overall contribution to the earnings of the entity relative to the other assets of the entity. The selection of valuation method depends on facts and circumstances, but the objective is to capture the value associated with the subject pivotal intangible asset, inclusive of its commercial rights value. The task force observes this could be done using various methods under the income approach, including the relief from royalty or MPEEM, though the task force also notes a MPEEM is more commonly applied when there is a single pivotal intangible asset as it fully captures the excess profit of the subject pivotal intangible asset. If, for example, the single pivotal intangible asset was a brand, use of the relief from royalty in conjunction with an observed market royalty rate might not be appropriate as such royalty rates may not fully capture the commercial rights related to the asset. In this case the MPEEM might better capture the commercial rights; however, the relief from royalty could also be applied if used in conjunction with a simulated royalty rate that captures the value of the commercial rights.

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Chapter 12

Valuation Approaches and Techniques

Introduction

12.01 This chapter discusses valuation approaches and techniques. The classification of valuation approaches and techniques used in this guide reflects the views of the Business Combinations Task Force (task force). However, the task force acknowledges that there is some diversity in views in the valuation profession regarding certain characterizations. For instance, although this guide classifies the *relief from royalty method* as a method under the income approach, some practitioners believe that it is a form of the market approach. There are likely other examples of different views on characterizations. However, the task force believes that categorization does not change the substance of the application of these methods or their results. This guide does not intend to definitively determine which method falls within which approach or which method is a subset of another method.

12.02 This chapter includes a number of illustrative examples demonstrating the application of valuation methods discussed herein. These examples are not intended to provide a comprehensive valuation analysis but only to highlight certain key elements of the valuation method being illustrated. Also, these examples are not intended to indicate that the valuation approach or method illustrated is the only appropriate way for valuing a particular asset or liability. The valuation method selection process for acquired intangible assets is discussed in chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," which also addresses why certain methods, particularly the inputs to those methods, are appropriate given the circumstances. Furthermore, the assumptions and inputs used in these examples are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

Cost Approach[1]

Overview

12.03 FASB *Accounting Standards Codification* (ASC) Master Glossary defines *cost approach* as "[a] valuation approach that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as current replacement cost)." As discussed in FASB ASC 820-10-55-3E, "[f]rom the perspective of a market participant seller, the price that would be received for the asset is based on the cost to a market participant buyer to acquire or construct a substitute asset of comparable utility, adjusted for obsolescence. That is because a market

[1] The "Cost Approach" section leverages information from the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #2: *The Valuation of Customer-Related Assets* (Valuation Advisory #2), which is available at the Appraisal Foundation's website at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

participant buyer would not pay more for an asset than the amount for which it could replace the service capacity of that asset."

12.04 The discussion of the cost approach in this section focuses on its application to intangible assets. While some of the concepts discussed herein may also be relevant to valuation of tangible assets, some differences in application exist that are not addressed here (for further discussion, see the "Property, Plant and Equipment" section in chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed"). For intangible assets, the valuation process under the cost approach typically begins with an estimation of the asset's replacement cost (direct and indirect) adjusted, where applicable, for obsolescence to estimate the replacement cost of the asset's current service potential (i.e., remaining useful life and cash-flow generating capacity). Obsolescence for an acquired intangible asset may include functional (technological) obsolescence and economic (external) obsolescence. Refer to Step 3 of the "Application of the Cost Approach to Acquired Intangible Assets" section below for additional discussion of functional and economic obsolescence.

Circumstances When the Cost Approach May be Appropriate

12.05 The use of a cost approach may be appropriate in certain circumstances when there is a relationship between replacement cost and fair value, including the valuation of: (*a*) routine intangible assets that can be substituted effectively through replacement or reproduction or (*b*) specific in-process research and development (IPR&D) projects in which the stage of development, although substantive, is so early that reliable information about anticipated future benefits does not exist.

Circumstances When the Cost Approach May Not be Appropriate

12.06 The cost approach is less commonly used to value assets which are intended to generate profits (that is, the value derived from those assets is expected to exceed costs incurred in developing those assets) and which already have an identifiable cash flow stream. Furthermore, for certain assets there may be little or no relationship between historical cost expended and fair value. For example, a great invention may cost little, in which case, fair value may far exceed cost. Conversely, a research and development (R&D) project may last for years without producing a commercially viable product, in which case, the cost approach may overstate the fair value of the technology.

Application of the Cost Approach to Acquired Intangible Assets

12.07 The application of the cost approach is accomplished by the following steps:

- Step 1: Estimate all direct and indirect costs required to replace or reproduce the subject intangible asset.
- Step 2: Estimate developer's profit and opportunity costs, where applicable.
- Step 3: If present, estimate functional and economic obsolescence and adjust for it.

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12.08 In summary, the following formula is used to estimate fair value under the cost approach:

$$\text{Fair Value} = \text{Direct Costs} + \text{Indirect Costs} + \text{Developer's Profit} + \text{Opportunity Costs} - \text{Obsolescence}$$

Based on specific facts and circumstances, all the previously listed components may not always be applicable; however, all components that a market participant would consider in the valuation of the acquired intangible assets should be included in an assessment. For example, developer's profit and opportunity cost may not always be applicable (for further discussion, see "Step 2: Estimate Developer's Profit and Opportunity Costs, Where Applicable").

Step 1: Estimate All Direct and Indirect Costs Required to Replace or Reproduce the Subject Intangible Asset

12.09 A *replacement cost new* (or replacement cost) is the cost required to replace the asset with a *comparable* new asset. A *reproduction cost new* (or reproduction cost) is the cost required to replace the asset with an *identical* new asset. Although replacement cost new is the most commonly used valuation technique under the cost approach, reproduction cost new may be an appropriate technique when complete and reliable historical cost information that reflects the current costs related to the subject asset is available. Furthermore, when the subject asset is modern and efficient, replacement cost new and reproduction cost new are generally equivalent.

12.10 The task force believes the cost of reproducing or replacing the asset should reflect pre-tax costs because capital investments are recorded gross of tax.[2] It is important to distinguish the cost approach as discussed herein from methods under the income approach that make reference to cost (such as the avoided cost or cost savings methods) because these methods are based on after-tax cost savings. Accordingly, the task force believes the cost approach requires no adjustment for incremental tax benefits from a "stepped-up" or new tax basis. When using the replacement cost approach, a *tax amortization benefit (TAB)* should not be reflected in the fair value measurement because replacement costs are recorded on a pretax basis. (For further discussion, see the "Tax Amortization Benefit" section later in this chapter.)

Step 2: Estimate Developer's Profit and Opportunity Costs, Where Applicable

Developer's Profit

12.11 Paragraph 6.2.1(c) of the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #2: *The Valuation of Customer-Related Assets* (Valuation Advisory #2), indicates that

[2] Gross of tax refers to the basis of exchange between market participants. For example, if a software vendor were providing a turn-key solution for $100, it is unrealistic that they would accept $75 (assuming 25% tax rate). Market participant seller would seek to recover costs and market participant buyer would perceive value in these costs and would, therefore, reimburse the seller. That is, the exit price notion required for fair value measurement is the pre-tax amount of $100.

Developer's profit reflects the expected return on the investment (direct plus indirect costs). Developer's profit can be calculated based on a reasonable profit margin on the development activities. This profit margin should include both the profit related to re-creation efforts as well as a return on the assets employed in the efforts, and should reflect a market participant perspective, using observable data, as available. Some estimated costs (e.g., costs paid to an outside marketing or staffing firm) may already be inclusive of a developer's profit.

Practical Guidelines for Estimating the Developer's Profit

12.12 The developer's profit can be estimated in one of the following ways:

- A percentage return on the development cost based on the operating margin reflective of a market participant cost structure (converted to a markup on the costs [profit margin/(1-profit margin)]);[3]
- A fixed amount based on the time spent to develop the subject intangible asset; or
- A fixed amount for the entire development process.

12.13 According to paragraph 6.2.1(c) of Valuation Advisory #2

The developer's profit can be estimated by reviewing market participant margins on similar activities. For instance, in deriving the developer's profit on sales and marketing activities, a reasonable metric may be to review margins of value added resellers or value added distributors. The actual margins of the subject business may also be reflective of an appropriate margin.

12.14 The choice of methodology used to estimate the developer's profit will depend on the nature of the intangible asset, industry practices with respect to the subject intangible asset, and the particular facts and circumstances.

12.15 An example of developer's profit is recruiting fees, which are typically considered as part of the assembled workforce fair value measurement under a replacement cost method. When the recruiting fees are based on an outside agency's fees, they already include a profit on the costs that would be incurred to replace the assembled workforce. This is, in essence, the normal profit earned by the agency for its services.

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[3] For example,

		Margin	Markup
Revenue	100	↓	250%
Operating Margin	40	40%	↑

Opportunity Costs

12.16 Paragraph 6.2.1(d) of Valuation Advisory #2 discusses opportunity costs in connection with customer-related intangible assets. The task force believes that opportunity costs are also relevant to consider when measuring other intangible assets and, therefore, included it in this guide.

> Opportunity costs represent foregone returns during the period that the recreation of the asset has an impact on the business. The premise behind this concept is that the costs incurred to re-create the asset could have otherwise been invested, which would have resulted in a return on a similar alternative investment. These costs are only present if the asset cannot be utilized while being created. If opportunity costs are significant, application of the cost approach might not be applicable.
>
> Opportunity costs may be calculated based on a reasonable rate of return on the expenditures (including developer's profit) while the asset is being created. For example, a reasonable rate of return on the costs may be estimated similar to the rates of return estimated for customer-related assets or other assets with a similar risk profile that would be valued using an income approach. Although consistent with deriving market rates of return on other intangible assets, direct market evidence typically is not available. A reasonable rate of return may be estimated by reviewing the WACC [weighted average cost of capital], IRR [internal rate of return] and other similar metrics.
>
> Opportunity costs can also be measured as lost profits or lost cash flows that occur as a result of not having the asset in place. For example, revenue and related profit is not received from existing customers while the customer-related asset is being re-created. The amount of profit lost is a function of the amount of time required to re-create the asset and the impact that the asset has on the business.
>
> Although developer's profit and opportunity costs both reflect an element of profit while the customer asset is being constructed, they relate to different elements. From a practical perspective, the developer's profit is the level of profit required on capital employed in the creation of the customer asset—i.e., the level of profit a third party would require if they were engaged in the activities of creating the customer-related assets. In contrast, opportunity costs reflect the cash flow foregone while the asset is being (re)created.

Practical Guidelines: When Opportunity Costs May Be Applicable

12.17 Including opportunity costs may be applicable when the historical investment accumulates without a *return on* investment during the asset development period. For example, if internally developed software (1) requires a development investment over an extended period, and (2) cannot be used until it is completed, then it would be appropriate to consider an opportunity cost in the measurement. An opportunity cost should be measured for each annual period based on the accumulated investment, which includes both development costs and a developer's profit, and is estimated by applying an expected rate of return on capital that would otherwise be available for investment. This could be the market participant WACC for the company or another selected market participant expected rate of return on capital. The development period and associated costs should exclude significant unproductive efforts such as unnecessary delays or dead ends and reflect

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the most direct path to completion. However, the development costs may include the impact of a learning curve for recreating the subject asset on the acquisition date (also sometimes referred to as *the measurement date*), provided it is consistent with market participant assumptions.

Example: Estimating Opportunity Costs for Software

12.18 Internal-use software was developed over a two-year period with a pre-tax development cost (or "investment") of $100 in each year, incurred ratably over the year. The software cannot be integrated into operations until it is completed and tested. In this case, the company has not benefited from a return on the investment during the development period. The following calculation depicts one way in which the opportunity cost could be considered when estimating fair value using the replacement cost new method (assuming a 10% rate of return):

	Year 1	Year 2	Total
Direct Costs	60	60	
Indirect Costs	25	25	
Developer's Profit	15	15	
Annual Investment	100	100	200
Average Cumulative Investment at Mid-Year*	50	150	
Opportunity Cost @ 10%	5	15	20
Replacement Cost New			220
Less: Obsolescence (25%)			55
Fair Value			165

*This example assumes consistent ratable spending and, therefore, mid-year convention is applied.

12.19 As demonstrated in the preceding example, if the investment is made ratably, the opportunity cost can be calculated directly as the rate of return applied to the total costs. The outcome would vary if the investment occurs at irregular intervals. When the development period is long or the expected rate of return is high, opportunity costs may be compounded. However, when the development period is short or the expected rate of return is low, the effect of compounding on the replacement cost may be minimal. For simplicity, the examples in this chapter do not use compounding.

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Practical Guidelines: Assessing When Opportunity Costs May Not Be Applicable

12.20 In circumstances when the subject intangible asset provides an economic return during the development period (e.g., individual members of an assembled workforce being productive after the initial training period), an opportunity cost should not be included in the fair value estimate.

Example: Database

12.21 A company aggregates data from an outside vendor and further processes it internally by analyzing it, supplementing it with other information and adding functionality. The data is packaged into a product for sale available in monthly, quarterly, and annual modules, containing up to three years of historical data, the latter being the most comprehensive product offering. Although the year-to-year comparisons are very useful to the company's clients (including the 3-year comparative product), the current (monthly) modules are considered the most relevant and valuable.

12.22 In this situation it may not be appropriate to include an opportunity cost in the valuation of the database as the company is (or was) able to derive economic benefit from the data on an ongoing (monthly) basis. In other words, the historical investment in the database has accumulated while providing a return during the development period.

Double Counting Between the Developer's Profit and the Opportunity Cost

12.23 Theoretically, there is no double counting when both a developer's profit and an opportunity cost are appropriately included in the analysis. A developer's profit relates to the routine operating profit margin (or markup) that a third party would earn to incur the development costs, and as such, it is simply a function of the development costs. Meanwhile, an opportunity cost is a more dynamic concept which examines the relationship of the investment in the asset to the return on investment that was forgone during its historical development period. The timing of asset deployment is central in an opportunity cost analysis.

Step 3: If Present, Estimate Functional and Economic Obsolescence and Adjust for It

12.24 Functional obsolescence represents the loss in value attributable to a reduction in an acquired intangible asset's utility due to its inefficiency relative to other less costly and more technologically advanced replacement assets. Functional obsolescence is observed in several different forms. If the subject asset has higher operating costs relative to a new asset, this may indicate functional obsolescence. If, in developing an asset's replacement cost new, that replacement cost is less than its reproduction cost, this may also indicate functional obsolescence.

12.25 Economic obsolescence represents the loss in value attributable to a reduction in an acquired intangible asset's utility caused by external factors that are independent from the characteristics of the asset or how it is operated. Increased costs which cannot be offset by an increase in price due to competition or limited demand, as well as a change in environmental or other regulations, inflation, or high interest rates may suggest the presence of economic obsolescence.

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Market Approach[4]

Overview

12.26 FASB ASC Master Glossary defines *market approach* as "[a] valuation approach that uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities, such as a business."

12.27 The market approach is seldom used to value intangible assets acquired in a business combination unless exchanges of individual assets comparable to the subject asset can be observed. In practice, sales prices of comparable intangible assets are seldom available because either (a) intangible assets typically transfer with the sale of a business, not individually, or (b) when they do transfer individually, they may not be comparable to the subject asset or the terms of these transactions may not be sufficiently disclosed to evaluate comparability.

12.28 The market approach typically requires no adjustment for incremental tax benefits from a "stepped-up" or new tax basis because the observed transaction multiple reflects all aspects of ownership.

Circumstances When the Market Approach May be Appropriate

12.29 The use of a market approach may be appropriate in certain circumstances when there is available meaningful market data from transactions of similar assets, including the valuation of assets that are subject to an auction process (such as FCC licenses for wireless spectrum and taxicab medallions). Other contract-based intangible assets (such as emission rights) can also be valued using the market approach. In addition, certain types of customer-related assets such as newspaper subscribers, pharmacy prescription data and lists, bank core depositors, loan customers, credit card customers, frequent flyer or shopper lists may be valued using the market approach.

Circumstances When the Market Approach May Not be Appropriate

12.30 The attributes of the subject asset may be sufficiently unique such that meaningful market-based data may not be available. Items such as payment terms (up-front payments, milestone payments, success fees) may be specific to the subject asset such that a meaningful comparison to available market data is difficult. In such cases, application of the market approach may not be appropriate.

Application of the Market Approach to Acquired Intangible Assets

12.31 The application of the market approach is accomplished by the following steps:

- Step 1: Identify and gather relevant market data, such as transactions involving the transfer or licensing of similar assets.

[4] The "Market Approach" section leverages information from Valuation Advisory #2.

- Step 2: Analyze the available relevant data and adjust it to align with the attributes of the subject intangible asset.

- Step 3: Apply the market metric to the appropriate subject intangible asset metric.

The steps are discussed in greater detail in the following paragraphs.

Step 1: Identify and Gather Relevant Market Data, Such as Transactions Involving the Transfer or Licensing of Similar Assets

12.32 Market data can be observed in transactions that are executed between market participants. This evidence can be found in various sources, such as the following:

- Prior company transactions involving intangible assets

- Analyst reports

- News articles

- Trade or industry publications

- Scholarly or academic publications

- Court case decisions

- Commercial databases

Step 2: Analyze the Available Relevant Data and Adjust it to Align with the Attributes of the Subject Intangible Asset

12.33 A valuation multiple used in the valuation of intangible assets should be derived based on comparable market transaction information. To the extent possible, the valuation multiple should be adjusted for differences between the subject asset and the comparable assets. The relative rights, obligations, and risk profiles of the assets should be considered when selecting an appropriate multiple. Judgment is required to determine if adjustments to market data can be completed without impacting the integrity of the methodology.

12.34 When determining whether the use of the market approach is appropriate in the valuation of the subject intangible asset, factors to consider include:

- Similarity of qualitative and quantitative characteristics between the subject asset and the comparable assets

- Availability of sufficient and verifiable data about the comparable assets

- Understanding whether the price of the comparable assets was obtained in an orderly transaction, or a forced liquidation or distress sale

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Selecting Comparable Transactions

12.35 Factors to consider when selecting comparable transactions to value an intangible asset using the market approach include:

- Transaction activity (frequency and recency of transactions)
- Economic benefit attributable to the subject intangible asset, including profit level and remaining economic life
- New technologies
- Barriers to entry
- Industry
- Market share
- Legal or regulatory protection
- Growth level and long-term growth expectations and whether they are consistent with historical performance or expected future trends for industry or economy, or both

Selecting Multiples

12.36 When selecting multiples to use in the valuation of an intangible asset under the market approach, the task force observes that:

- It may be helpful to arrange market information by category to identify market trends
- When sufficient information is available, it may be possible to
    - calculate pricing metrics to evaluate market information. Metrics tend to be non-financial in nature. For example, in the case of FCC license auctions, price per person of population in the geographic area (referred to as *POP*; one POP equals one person) or price per subscriber (as illustrated in the following example).
    - determine if adjustments for comparability are warranted by analyzing the difference in attributes of the subject asset and comparable assets (such as exclusivity, territory limits)

Step 3: Apply the Market Metric to the Appropriate Subject Intangible Asset Metric

12.37 The observed market multiple (after any adjustment) is applied to the equivalent metric of the subject asset. It is important that the application of the multiple be applied to the appropriate level of measurement.

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Illustrative Example: Market Approach

12.38 Company ABC acquired a portfolio of FCC wireless spectrum licenses in a business combination. In order to estimate the portfolio's fair value, a search for relevant FCC auction data was performed and two transactions with licenses comparable to the owned portfolio were identified. Data pertaining to the FCC auction spectrum was collected and analyzed including geographic coverage, total megahertz (MHz), and POP. Using this data, a price per MHz-POP "multiple" was estimated.

12.39 Similarly, a search for recent sales of spectrum with comparable characteristics in secondary market transactions was performed to identify how spectrum pricing may have changed since the auction date (since auctions only occur periodically). Differences (premiums or discounts) between the auction data and the secondary market data were considered to form a view as to whether the primary market data (underlying auction multiples) should be adjusted.

12.40 In this example, auction price (A), MHz (B), and POP (C) are based on the observable data obtained as of the auction date. Current population data in the market area (G) is generally available on an annual basis. Based on the observable secondary transaction data (F) and (G), an adjusted $/MHz-POP multiple (J) is developed for the acquired portfolio based on the average for the observed secondary transactions (the average was used in this case because both transactions are believed to be equally indicative). As the population in the respective markets may change between the initial auction and the observable secondary transaction, it is beneficial to compute an adjusted MHz-POP multiple instead of looking at changes in the market value directly. The fair value of the spectrum portfolio is calculated as follows:

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		Comparable Portfolio 1	Comparable Portfolio 2	Subject Portfolio
Initial Auction:				
Auction Price	**(A)**	$10,500	$6,500	$21,350
MHz (Available)	**(B)**	12	12	24
POP	**(C)**	500	300	500
MHz-POP	**(D) = (B) x (C)**	**6,000**	**3,600**	**12,000**
$/MHz-POP	**(E) = (A) / (D)**	$1.75	$1.81	$1.78
Observed Secondary Transactions:				
Secondary Transactions	**(F)**	$13,125	$7,800	N/A
MHz (Available)	**(B)**	12	12	N/A
POP	**(G)**	525	290	N/A
MHz-POP	**(H) = (B) x (G)**	**6,300**	**3,480**	N/A
$/MHz-POP	**(I) = (F) / (H)**	$2.08	$2.24	N/A
Valuation of Subject Portfolio				
MHz (Available)				24
POP				510
MHz-POP				**12,240**
Adjusted $/MHz-POP	**(J)**			**$2.16**
Fair Value of Portfolio	**(K) = (J) x (H)**			**$26,438**
Fair Value of Portfolio (Rounded)				**$26,400**

Income Approach

Overview

12.41 As stated in FASB ASC 820-10-55-3F, "[t]he income approach converts future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount. When the income approach is used, the fair value measurement reflects current market expectations about those future amounts."

12.42 The term *income*, as used when referring to techniques under this approach, implies anticipated future benefits (sometimes referred to as *economic earnings* as opposed to the notion of accounting earnings or net income), in the form of *net cash flows*. The income approach involves two basic steps. The first is development of prospective net cash flows expected to accrue to an investor resulting from ownership of an asset or collection of assets. The second step involves discounting the prospective cash flow to a present value.

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12.43 The *International Glossary of Business Valuation Terms*[5] defines *discounted cash flow (DCF) method* as "a method within the income approach whereby the present value of future expected net cash flows is calculated using a discount rate." It requires forecasting cash flows for a discrete period and discounting those amounts to present value at a rate of return that considers the risk of the cash flows. The future economic benefits to be discounted are generally a stream of periodic cash flows attributable to the asset being valued, but they could also take other forms under specific circumstances (for example, a lump sum payment at a particular time in the future without any interim cash flows). The DCF method converts prospective net cash flows expected to result from ownership of the asset being valued to a present value. It can be used to value entire entities, segments of entities, ownership interests, collection of assets, and individual assets (such as real estate, power plants, etc.). Other valuation techniques under the income approach (which are discussed later in this chapter) isolate cash flows for a particular asset and are used to value individual assets within a collection of assets (versus the entire collection of assets within the identifiable cash flow stream).

Economic Life

12.44 The attributes of the specific asset will determine the length and characteristics (i.e., survival patterns and cut offs) of the prospective revenue stream. There are two distinct but related concepts for the life of an asset: economic life and useful life. The "Pending Content" in FASB ASC Master Glossary defines *economic life* as "[e]ither the period over which an asset is expected to be economically usable by one or more users or the number of production or similar units expected to be obtained from an asset by one or more users."[6] FASB ASC Master Glossary defines *useful life* as "[t]he period over which an asset is expected to contribute directly or indirectly to future cash flows." Furthermore, FASB ASC 350-30-35-2 states that

> The useful life of an intangible asset to an entity is the period over which the asset is expected to contribute directly or indirectly to the future cash flows of that entity. The useful life is not the period of time that it would take that entity to internally develop an intangible asset that would provide similar benefits.

The task force observes that useful life may be less than, but will not exceed, economic life. For a discussion of the concept of useful life and factors to be considered when estimating it, see the "Determining the Useful Life of Intangible Assets" section in chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree."

12.45 For valuation purposes, the relevant concept is economic life as opposed to useful life. When estimating economic life, it is important to consider facts and circumstances and use judgment. The

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[5] The *International Glossary of Business Valuation Terms* has been adopted by a number of professional societies and organizations, including the AICPA, and is included in appendix B of Statement on Standards for Valuation Services No. 1, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset* (AICPA, *Professional Standards*, VS sec. 100).

[6] This definition represents the "Pending Content" in FASB ASC which was added by FASB Accounting Standards Update (ASU) No. 2016-02. See footnote 17 in the "Leases" section of chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree," for information regarding the effective date of ASU No. 2016-02.

following examples illustrate that, in some cases, the determination may be straightforward while in other cases, it may be more complex.

Example 1 – Migrating Technology: Company T was acquired in a business combination. As of the measurement date, Company T had an existing technology in place that was used to provide services to key customers. The underlying technology is constantly evolving and the next generation of technology to replace the existing one is currently under development. A market participant expectation is to transition to this new technology ratably over the next three years. The asset level prospective financial information (PFI) would only reflect those revenue streams associated with the acquired existing technology. Accordingly, the revenue stream associated with the existing technology would reflect the decline in revenue associated with the migration to the new technology, which will be considered in estimating the economic life.

Example 2 – Pharmaceutical: Company T has a compound that was placed in service in prior years and is patent protected for another 10 years. This legal term may represent a supportable economic life that is consistent with a market participant perspective when there is no meaningful competitive effort in process and the compound is being received favorably due to its efficacy as a treatment for a particular condition. If the compound has some viability as a generic offering beyond the end of the patent's legal term, an economic life that is longer than the patent life may be supportable.

Alternatively, assume in the preceding example that Company C (which is the primary competitor of Company T) has introduced a therapeutic compound that is more effective at treating the condition with less complications for patients. A shift in market share is observable and a market participant would expect Company T's compound to be viable for 5 years. In this case, the task force believes the remaining legal life of Company T's patent may not accurately reflect a market participant's view of the economic life of the related compound and a shorter life may be more reasonable. The PFI may also be adjusted to reflect attrition in the projected cash flows that corresponds to the market's reaction to the more favorable compound offered by Company C.

Example 3 – Branded Asset (Trade name): As of the measurement date, Company A acquires Company T, a well-known retailer in the outdoor apparel industry. Company T's lead brand (in connection with a number of supporting brands) has existed for 30 years and has held steady to growing market share in this space. Company T supports its lead brand with generous marketing spend and, consistent with market participant assumptions, Company A has no plans to replace the brand. An indefinite life assumption for the lead brand may be supportable as the economic benefit horizon of the asset will exceed a foreseeable point in time and a terminal value would be computed as part of the valuation.

Alternatively, assume that Company A acquires in a business combination a lesser known subsidiary of Company T, including a portfolio of supporting brands. Consistent with market participant assumptions, Company A intends to utilize these brands as part of a marketing campaign over a 7 to 10-year period. In this case, the economic life is best expressed in a finite term of 7 to 10 years.

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See Valuation Advisory #2, which discusses economic and useful lives and amortization patterns and provides examples related to customer-related intangible assets. For a discussion regarding economic life of leasehold improvements, see the "Economic Life of Leasehold Improvements and Lease Term Used in Measurement of the Related Lease Liability" section in chapter 13.

12.46 In situations in which an acquired asset is defensive in nature, the economic life would be considered in the context of a market participant. In these situations, the pattern of economic life may reflect a gradual retirement of the asset.

Revenue, Cash Flow, or Profit Splitting under the Income Approach

Introduction

12.47 Valuation methods under the income approach used to value intangible assets vary but common to all of them are the use of some form of PFI (subsequent references to PFI encompass both the entity level or collection of assets level of PFI) and a discount rate commensurate with the risk of the PFI to compute present value. Fair value measurements computed using an income approach are more precise when PFI is prepared at the lowest level possible when considering the asset subject to the fair value measurement. Doing so also mitigates the impact of measurement bias that may be inherent in certain valuation approaches.

12.48 This section describes six methods that may be used to split the PFI prior to the application of a specific income method to estimate the fair value of an intangible asset (subsequently referred to as *profit split methods*). Determining the appropriate level at which the PFI is split would consider the availability of information and the nature of the subject assets. An assessment of unallocated expenses as well as shared assets should be made to obtain the most refined measure of income attributable to the subject collection of assets. These methods are not intended to be an exhaustive list and other methods may be appropriate.

12.49 PFI inputs may be derived from a variety of sources, each of which should be evaluated on its own merit. Transfer pricing studies (when they are available) are one potential source of relevant assumptions. When they exist, but are not relied upon, the studies should be evaluated to assure that the underlying assumptions are not inconsistent. Transfer pricing analyses may utilize different underlying assumptions regarding the characteristics of the assets and their economic lives and these should be considered in any comparisons. Chapter 11 also discusses a variety of other sources of information.

Revenue, Cash Flow, or Profit Split Methods

12.50 Revenue, cash flow, or profit-split methods are applied when an apportionment can be made in an objective and supportable manner. The following six methods may be used to split the revenue, cash flow, or profit metrics. The first three align with operating groups that consist of collections of assets while the last three methods are applied to allocate profit to collections of assets or individual assets *within* an operating group:

- Business unit split (e.g. polymers business)
- Geographic split (e.g. Europe)

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- Functional split (e.g. manufacturing or distribution)
- Operating asset group split (e.g. product lines)
- Asset class split (e.g. relationship-based or intellectual property [IP]-based intangible assets)[7]
- (Individual) asset-specific split (e.g. manufacturing technology)

12.51 Certain of these methods are commonly used in combination with each other to allocate PFI to an appropriate level consistent with the unit of account and asset recognition criteria. Specifically, a business unit, geographic and/or functional split may be applied as an initial step to isolate the PFI. In turn, that PFI split is further apportioned to the subject intangible asset through one of the three asset-split methods (operating asset group, asset class and asset-specific). For example:

> The acquiree operates globally and prepares its business plan in a bottom-up manner beginning with the development of PFI for each geographic region. Customer relationship attributes (e.g. longevity and profitability) vary across regions and are, therefore, valued independently. There is sufficient guideline public company information to isolate the financial performance of the distribution function. A functional income split within a specific geography could be used to isolate the local profitability and asset base for the distribution function and the multiperiod excess earnings method (MPEEM) could be applied in the valuation of the customer relationships. This is commonly referred to as a *distributor method* (which is discussed in paragraphs 12.135–.137).

Business Unit Split

12.52 Many entities are organized and operate along distinct lines of business. These may take the form of segments, operating units, or subsidiaries. In some cases, a profit split based on reporting units may also provide a reasonable basis to perform the valuation analysis. When distinct business units are present and their operations are independent, the fair value of the assets may be measured in the context of the business unit PFI to the extent this is consistent with the unit of account applicable to the subject asset.

Geographic Split

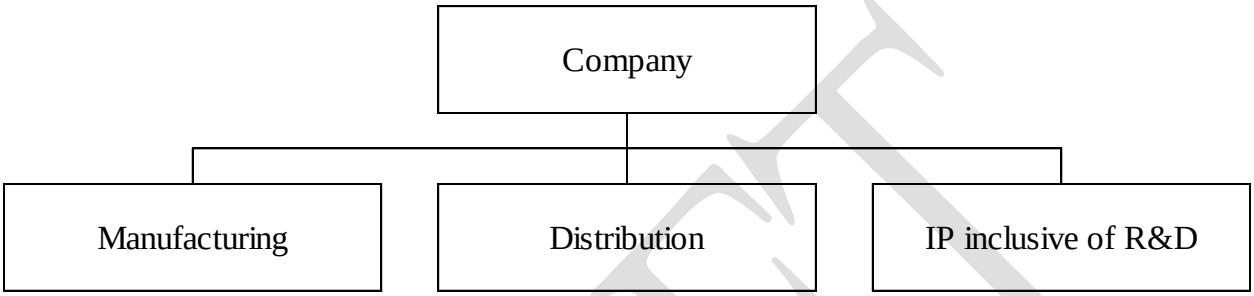
12.53 Certain global entities may operate distinct geographic units that align with the subject intangible assets. Regional brands or trade names are examples of such assets.

Functional Split

12.54 Many businesses are a combination of three broad functions: distribution, manufacturing, and IP (inclusive of R&D). However, there are some businesses that act predominantly in one

[7] Chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," provides considerations for evaluating an intangible asset's PFI in the context of its type (relationship-based or IP-based) and contributions to excess profit (routine or pivotal).

capacity or another. For example, there are businesses that are contract manufacturers, and there are businesses that are purely distributors. Even fully integrated companies might be analyzed on a disaggregated basis, particularly large global companies. For example, an integrated company may have manufacturing in one country, an IP development function in another country, and a distribution function in all countries where customer relationships are created. Each one of these three functions contribute to the returns of the integrated business. An entity's functions and related assets might be identified as follows:



Typical assets:
- Working capital
- Fixed assets
- Manufacturing IP
- Assembled workforce

Typical assets:
- Working capital
- Fixed assets
- Relationship-based intangibles
- Assembled workforce

Typical assets:
- Working capital
- Fixed assets
- Trade name, technology
- Assembled workforce

12.55 The distribution function provides a return based primarily on its relationship-based assets. The manufacturing function is more centered on fixed assets in the context of an integrated entity (in contrast, independent contract manufacturing entities would likely also have relationship-based assets). The IP function is focused on providing a return based on the development and exploitation of IP. Supporting assets (such as working capital, fixed assets, and assembled workforce) will be present in all three functions in various degrees.

12.56 Functional split analyses provide the foundation for what is often referred to as the *disaggregated method*. The Distributor Method to value customer relationships is the most common application of functional analysis or disaggregated method. For a discussion of the Distributor Method, please refer to section 5.3 of Valuation Advisory #2. In general, when the economic benefit of an asset can be derived largely within the confines of a specific function, the fair value measure of that asset is more precise.

12.57 An important element in the application of functional analysis is benchmarking the functional profitability and asset levels to market-based indicators, with the intent of supporting the cash flow or profit-split among the various functions based on market participant assumptions. Be aware of overlapping functions and take them into consideration when performing the benchmarking analysis on guideline public companies.

Considerations for Allocating Profit to Assets within an Operating Group

12.58 When subject assets (or some subset thereof) produce a measurable economic benefit only in combination with one another, a revenue, cash flow, or profit-splitting exercise is the preferred

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way to isolate individual asset values and avoid double counting when measuring fair value. For example, a relief from royalty method could be characterized as a form of a profit-split technique that can be used independently or as a profit splitting contributory asset charges (CAC) in the context of the MPEEM. Paragraph 3.5.06 of the Appraisal Foundation's VFR Valuation Advisory #1: *The Identification of Contributory Assets and Calculation of Economic Rents* (Valuation Advisory #1),[8] provides the following examples of factors that may be considered to support a split:

- a clearly delineated revenue split between assets,
- a rate of return analysis on marketing expenses versus R&D expenses,
- a projected revenue pattern associated with different generations of a product,
- the migration of relative product contributions between assets, or
- the relative contribution of [enabling] technologies as compared to [existing] technologies.[9]

12.59 The task force believes that the simultaneous use of two or more MPEEM models to value two or more intangible assets that, in combination, generate one cash flow stream is not an acceptable form of a profit split. The discussion of profit splitting methods, as well as chapter 11, provide alternatives to the notion of a cross-charge and appendix B, "Valuation Method Selection Process Example," provides an illustration of these profit splitting methods.

Operating Asset Group Split

12.60 In many instances, the way an entity manages its operations will naturally delineate collections of assets. For example, individual brands or product lines may be uniquely managed and have specific PFI and strategic plans. In these circumstances, it may be appropriate to split the business or operating unit PFI by brand or product line when determining the fair value of the subject intangible assets.

12.61 When brand or product line income and related strategic plans are prepared at a variable cost level, fixed costs may need to be allocated. In addition, it may be appropriate to apply a CAC if certain additional contributory assets are required to generate the subject asset's identified income or profit.

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[8] The Appraisal Foundation's VFR Valuation Advisory #1: *The Identification of Contributory Assets and the Calculation of Economic Rents* (Valuation Advisory #1), is available at the Appraisal Foundation's website at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

[9] Please note that the terminology in this last factor differs from that in Valuation Advisory #1 because it was conformed to reflect the elimination of the concept of *core or base technology*. Furthermore, the term ***applied*** *technologies* was replaced with ***existing*** *technologies*. For further information, see the "Core Technology" section in chapter 2 of the AICPA Accounting and Valuation Guide: *Assets Acquired to Be Used in Research and Development Activities.*

12.62 The level of aggregation for valuation purposes is an important consideration when applying this method. Useful lives of any component assets should be evaluated and industry practices should be considered in determining whether a brand or product line's assets should be valued in aggregate or further disaggregated. For example, it is common practice in the pharmaceutical industry to treat currently marketed products as an aggregate asset. For additional guidance and discussion, see the AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*.

Asset Class Split

12.63 Collections of assets often include multiple pivotal assets that have different asset classifications (e.g., relationship-based vs. IP-based intangible assets). Due to challenges with identifying comparable market royalty rate proxies, an asset-specific split can be used to derive simulated royalties.

12.64 The asset class split method can be applied to classifications of assets that align with specific expense categories contained in the PFI. For example, R&D expense can generally be correlated with technology intangible assets whereas advertising & promotion (A&P) expense generally aligns with marketing intangible assets. More detailed PFI, such as trade name-specific advertising expense, would facilitate the application of this form of profit splitting at a more asset-specific level. However, for purposes of this discussion, the asset classes will be limited to two general classes of IP-based intangible assets: technology and marketing intangible assets. This method is based on an economic value-added perspective that capitalizes certain costs which have an economic benefit beyond the period in which they are incurred rather than expensing them. This method is generally applied in the following way:

Step 1

Identify the asset classes and related expense categories that will be reclassified as "investments" and "capitalized."

Step 2

Identify and analyze historical expenses for each of the asset classes from a market participant perspective, which may involve removing certain excess inefficiencies from historical costs. The period over which the expenses would be accumulated depends on the period of the economic benefit of the respective "capitalized" expenses (subsequently referred to as the *period of economic benefit*). While obtaining a complete history of the respective expenses is ideal, the lack of all historical data would not preclude the use of this method, as it may be possible to make reasonable approximations of asset-class specific expenses.

Step 3

Estimate the period of economic benefit for technology intangibles (R&D) and marketing intangibles (A&P), which will vary based on the facts and circumstances of each entity. This period essentially is used to "amortize" the accumulated pre-tax expenses in a waterfall calculation. The calculation is extended until a stable "investment" level is achieved. The following illustrative calculation assumes that $100 of annual expense (increased 3% annually)

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has been “capitalized” and “amortized” over five years (see appendix B, Schedule 7.1 for additional detail):

	Year 1	Year 2	Year 3	Year 4	Year 5	Steady State
"Capitalized" Expense	$ 100.0	$ 103.0	$ 106.1	$ 109.3	$ 112.6	$ 116.0
growth	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*
Straight-line "amortization" (5 years)						
Year 1	10.0	20.0	20.0	20.0	20.0	10.0
Year 2		10.3	20.6	20.6	20.6	20.6
Year 3			10.6	21.2	21.2	21.2
Year 4				10.9	21.9	21.9
Year 5					11.3	22.5
Steady State						11.6
Total "Amortization"	10.0	30.3	51.2	72.7	95.0	107.8
Beginning Balance	-	90.0	162.7	217.6	254.2	271.8
add: "Capitalized" Expense	100.0	103.0	106.1	109.3	112.6	116.0
less: "Amortization"	10.0	30.3	51.2	72.7	95.0	107.8
Ending Balance	90.0	162.7	217.6	254.2	271.8	280.0
Average Balance	45.0	126.4	190.2	235.9	263.0	275.9
Average Balance / Expense ("Capitalized" Expense Ratio)	0.45 x	1.23 x	1.79 x	2.16 x	2.34 x	**2.38 x**

Several other factors may be integrated into this type of analysis, including irregular expense patterns, opportunity costs, and economic obsolescence. The overall intent is to arrive at a reasonable level of invested capital in the asset class (asset class invested capital) upon which to apply the rate of return on invested capital.

Schedule 7.1 in appendix B provides an additional sensitivity analysis of this steady state relationship. It is based on economic lives ranging from 2 to 20 years and constant annual growth rates of 0%, 3% and 5%.

Step 4

Estimate the after-tax rate of return to apply to each of the asset class invested capital amounts. The selection of these rates considers the nature of the assets and related risk associated with achieving the expected return on investment.

Step 5

Apply the selected rates of return to the calculated asset class invested capital amounts to arrive at the asset class *return on invested capital* (ROIC), which are used as a proxy for splitting the

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excess profits. The intent of this analysis is to provide one indication of the relative contributions of the pivotal assets to the excess profits.

A 2.38x capitalized expense ratio is applied to the technology intangibles. It was derived in step 3 based on an assumed period of economic benefit of the technology expenditures of 5 years. The period of economic benefit of the marketing expenditures is assumed to be 10 years and a 4.55x capitalized expense ratio (see sensitivity analysis provided in Schedule 7.1 of appendix B) is applied to the marketing intangibles. These ratios are applied to the asset class development expenses to estimate the respective average balances of the capitalized expenses and a 20% rate of return on invested capital is assumed. The percentages of total ROIC of 57% and 43% provide an indication of the relative contributions to the excess profits.

	Technology Intangibles	Marketing Intangibles
Economic Life of Expenditure	5	10
Capitalized Expense Ratio	2.38 x	4.55 x
Development Expense	50	20
Average Balance	119	91
Rate of Return on Invested Capital	20%	20%
ROIC	24	18
% of Total ROIC	57%	43%

The relative contributions of the respective pivotal assets to the excess profits should also consider other assessments. Evaluating the functions within a business unit, their relationship with the identified assets, as well as their unique risk and return propositions, aids in the attribution of the excess profits to the respective pivotal assets. Schedule 7 (Owned) in appendix B applies this method in conjunction with other assessments to arrive at a pivotal asset profit split assessment between brand IP and relationships.

Step 6

Select an income approach method to apply to the respective asset classes and incorporate the relative ROIC as appropriate. The following table calculates the simulated royalties for both pivotal asset classes to demonstrate a reconciliation to the total implied royalties.

Calculate the excess profit for the subject collection of assets (a MPEEM with CACs applied for contributory assets valued with the replacement cost or market approaches and routine intangibles). Allocate the excess profit based on the relative ROIC percentages calculated in step 5. The excess profit calculation is net of ongoing development expenses; therefore, development expenses are added back as they represent the return of the existing intangibles.

Assume that, based on an assessment of the entity's operations and the outcome of the relative ROIC analysis in step 5, simulated royalty rates are derived as follows:

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		Implied Royalties		
		Technology Intangibles	Marketing Intangibles	Total
Revenue		1,000	1,000	1,000
Excess Profit (a)	22%	220	220	
% of Total ROIC		57%	43%	
Allocated Net Excess Profit		125	95	220
Plus: Development Expense		50	20	70
Existing Intangibles Implied Excess Profit		175	115	290
Implied Royalty (Pre-tax)		17.5%	11.5%	29.0%

(a) See Schedule 6 (Owned) in appendix B for a sample calculation

The implied 17.5% royalty rate would be considered in selecting a simulated royalty for use in a relief from royalty analysis for the technology intangibles. The MPEEM is then applied to the marketing intangibles with the 17.5% royalty serving as the CAC for the use of the technology intangibles. Alternatively, the simulated royalty may be applied to the marketing intangibles with the MPEEM applied to the technology intangibles.

Schedule 8 (Owned) in appendix B provides another example of an estimate of a simulated royalty. In summary, this type of asset class split is presented to perform a split among asset classes by estimating a simulated royalty.

12.65 Another type of asset class split can be based off an analysis of the push vs. pull marketing attributes of the product or service. In push marketing, the premise is to promote products by pushing them onto customers (for example, bubble gum at the front counter where companies are vying for optimal shelf/location, which requires marketing expense). In pull marketing, the premise is to pull customers to the products (for example, a customer goes to a department store to buy shoes of a particular luxury brand. In this case, although marketing efforts are made to support the brand, no significant retail location or push marketing is required due to the brand recognition inherent in the pull marketing model). These attributes influence the magnitude of the respective royalty rate and may be useful in the ultimate selection of a royalty rate.

12.66 Additional assessments and analysis discussed in chapter 11 and appendix B should also be considered when applying this method.

Asset-Specific Split

12.67 An (individual) asset-specific profit split generally takes the form of a royalty payment. Common to license agreements, specified royalty payments represent the cash flows that are paid for access to intangible assets in a specific field of use and geography. Individual intangible assets, rather than a collection of assets, are normally licensed; therefore, market royalty rates provide an

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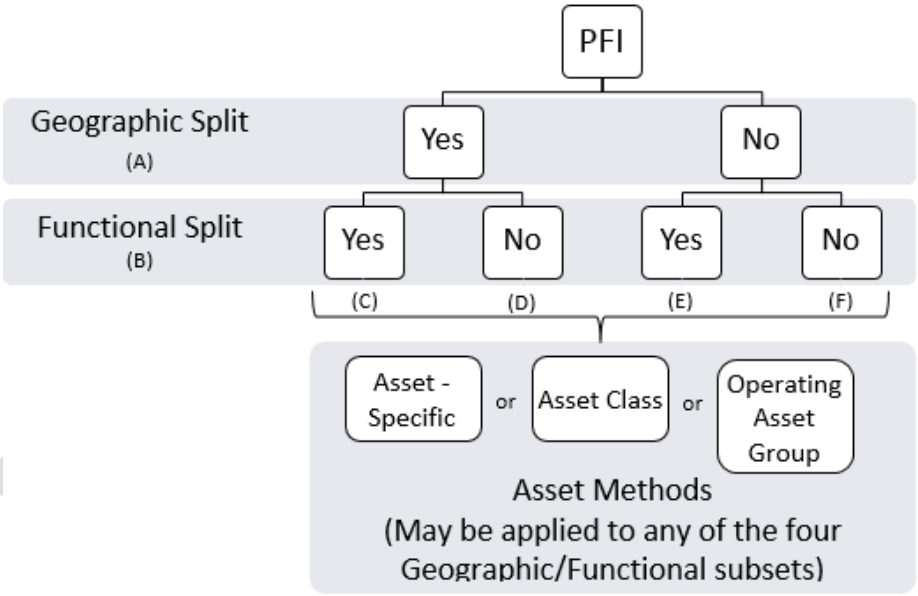
initial reference point for the appropriate amount of income that should be apportioned (or split from the collection of assets) to the intangible asset.

12.68 Chapter 11 and appendix B provide an additional discussion of asset-specific splits and emphasize the need to consider whether the subject intangible asset is routine or pivotal. If it is a pivotal asset valued with the relief from royalty method, then it is likely that the royalty rate would exceed market royalty rates and capture a portion of the commercial value in the form of a simulated royalty. Appendix C, "Routine Royalties – Sample Investment Return Analysis," provide additional considerations when evaluating routine royalty rates.

Profit Split Example

12.69 The following example summarizes one of several ways in which the profit splitting methods may be integrated to identify the lowest level income/cash flow attributable to the subject intangible asset. The use of other methods may be appropriate.

Profit Split Application Example



A	Geographic split may be applicable if the acquiree has operations in numerous geographies with attributes (e.g. local margins and tax rates) that should be considered in the analysis (for example, exclusive geographic rights).
B	Functional split may be applicable if adequate third-party functional profit benchmarks are available.

C	Profit split is isolated to a specific function within a discrete geography. For example, customer relationships measured with the MPEEM within the distribution function for operations in a specific country or region (asset-specific).
D	Profit is isolated by geography, but a functional split is determined not to be appropriate. For example, the European marketing rights to a pharmaceutical product (operating asset group).
E	The subject asset is managed and valued on a global basis within a specific function. For example, a manufacturing process technology valued with the MPEEM within the global manufacturing function (asset-specific).
F	Geographic and functional splits are determined not to be appropriate and the subject intangible assets are valued globally in the context of the overall operations. For example, the technology and marketing intangible assets are both determined to make similar contributions to the entity's profitability and an asset class profit split is based on global PFI without a functional split (asset class).

Valuation Techniques under the Income Approach

12.70 The subsequent sections discuss the following valuation methods under the income approach:

- Relief from royalty method
- Cost savings method
- "With and without" method
- Greenfield method
- Multiperiod excess earnings method
- Other methods

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Relief From Royalty Method[10]

Overview

12.71 The premise of the relief from royalty method is that ownership of the subject asset *relieves* the owner of the need to license the asset from a third party. Thus, by owning the intangible asset, the owner avoids making royalty payments to license the asset. The relief from royalty method discounts the avoided cash outflows to present value to estimate the fair value of the intangible asset. A relief from royalty method is often appropriate for IP-based intangible assets. For instance, trademarks and trade names, patents, and developed product technology are examples of intangible assets that frequently are licensed in exchange for a royalty payment.

12.72 The task force believes it is important to critically assess the attributes of an acquired asset and identify whether the intangible asset is routine or pivotal in nature to determine whether the use of a market royalty rate or a simulated royalty rate is more appropriate in the circumstances.

12.73 Comparable rates for most technologies may be more difficult to find than trademarks / trade names because numerous unique attributes of technology make it more difficult to establish comparability. In those cases where comparable rates are difficult to find or if the subject asset is considered pivotal, simulated or adjusted royalty rates, taking into consideration qualitative value drivers of the subject intangible asset, would also be considered a properly supportable royalty rate and would be used. See the "Income Approach Methods – Substance over Form" section in chapter 11 for additional guidance on royalty rates.

12.74 Support for royalty rate includes

- Existing licensing agreements for comparable IP entered into by the acquirer or the acquiree
- Indicative industry rates or other broad benchmarks with reasonable justification
- Simulated royalty rates

12.75 When assessing observed market royalty rates for reasonableness, the valuation specialist would consider the attributes that transfer with the subject asset, including:

- *The comparability of the bundle of rights transferred.* The valuation specialist would also evaluate whether the observed royalty rate reflects the all-inclusive rate commensurate to the complete set of rights associated with the subject asset. Frequently, a licensor may split the benefits associated with an asset with a licensee for a number of reasons (for example, lower investment to exploit a territory, ability to test new markets, ability to align with complimentary goods or services). For example, if the observed

[10] Although SSVS No. 1 categorizes the relief from royalty method as a method under the market approach, other sources of valuation literature classify it under the income approach. However, as indicated in paragraph 12.01, the Business Combinations Task Force (task force) believes that categorization does not change the substance of the application of this method.

market transaction conveys worldwide rights and the subject asset is geographically restricted, there would be limited relevant inference to be drawn from this transaction. In such cases, the valuation specialist could remove this transaction from consideration or otherwise adjust the indication to make it more relevant. Likewise, an agreement that provides for exclusive use of the asset may not provide supportable data for an asset that does not have exclusive terms. Additional consideration may require the assessment of whether a brand asset is considered business-to-business (B2B) or business-to-consumer (B2C).

- *Relationship of observed market royalty rate to commercial rights transferred.* It is important to understand if the observed market royalty rate for the use of an intangible asset reflects commercial rights value. This would consider the stage of development of the intellectual property, the extent to which the licensor has invested historically to develop the market for the products or services that include the licensed intangible asset, and the functional split between the licensor and the licensee. For example, a licensor may demand a higher royalty rate for a well-established brand in a market where historically it has made significant marketing investments to enhance the brand's recognition. In this case, the licensee may agree to a lower profit split (pay a higher royalty) because it benefits significantly from the licensor's in-market advertising and does not have to incur significant incremental advertising expense to establish the brand. In this example, there may be an element of commercial rights value embedded in the royalty rate. This is in contrast to a less established brand where the licensee would be responsible for future marketing investments to create market awareness and commercial value above and beyond the underlying IP.

- *The economic terms of the agreement.* An observed royalty rate should be analyzed to determine whether it compensates the licensor for all functions (ownership rights and responsibilities) associated with the asset. Such an analysis would include consideration of expenses incurred by the licensee versus expenses otherwise considered to be the responsibility of the licensor. A royalty rate that is "gross" would consider all functions associated with ownership of a licensed asset to reside with the licensor, while a royalty rate that is "net" would consider some or all functions associated with the licensed asset to reside with the licensee.

  The task force believes that in many cases royalty rates derived from available databases reflect net royalty rates; however, observed royalty rates in certain industries (such as franchise-based industries) are predominantly gross. If the agreement was determined to be a gross royalty, the licensee would not be responsible for maintenance expenses (such as advertising and legal) and the valuation of the subject asset should be adjusted to capture the net economic benefit of the asset (i.e., providing the licensor with the return on and of investment). In other words, a gross royalty may include the reimbursement of certain expenses (for example, maintenance, advertising, product development or legal costs to maintain the rights), which should be adjusted from the asset PFI by either adjusting the royalty rate or deducting the expenses.

  Some royalty rates reflect up-front payments in addition to a periodic remittance. Therefore, consideration should be given as to whether any adjustment to either the PFI

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or the royalty rate is needed to ensure that there is an 'apples-to-apples' application of benefit and risk. Also, consideration should be given to the level of measurement at which the royalty rate is applied. For example, rates could be based on revenue (wholesale or retail), gross profit, units, or some other measure. The rate used in the valuation should accurately reflect these terms. There should also be consistency and symmetry between the basis of the royalty rate and any CACs applied in MPEEM. For example, if a CAC is based on a gross royalty rate, the licensor would be reimbursed for incurring these additional costs. Therefore, the cash flows in the PFI would need to be adjusted to remove these additional costs. If the CAC were based on a net royalty, an adjustment for these costs would not be made. It is important to think through the process of how all costs are reflected in both the relief from royalty model as well as any CAC's used in other models.

- *Other terms of the agreement.* Royalty rates could be based on perpetual existence or limited to a discrete period of time. Additionally, the initial execution date of the market transaction may indicate that a particular observation is dated and, therefore, may not be relevant to the analysis.

12.76 When selecting the royalty rate, the valuation professional should consider various factors including the following:

- The criteria used to search for third-party licensing agreements and the rationale for using or excluding an initial list of data in the analysis
- The lists and data produced during the search
- The process used in analyzing the third-party licensing agreements and support for the selection of the royalty rate used
- The rationale for using or excluding licensing arrangements of the acquiree when determining a reasonable royalty rate
- The reasonableness of all rules of thumb methods considered and used in estimating or supporting a royalty rate to value the subject asset
- Identification of sufficient excess earnings or cash flow to provide economic support for the selected royalty rate

12.77 Generally, the relief from royalty method is applied in situations such as the following:

- the importance of the intangible asset to a business or product is similar to that of a comparable licensed asset.
- the intangible asset can be reasonably separated from other assets, and it is practical and possible to license it separately.

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- the rights of ownership can be compared to the rights under a license (for example, similar geographic market coverage, duration, exclusivity, limitation, technology, and type of customer).

Other Considerations

12.78 *Inventory Step-up.* When a subject IP intangible asset contributes to a step-up in inventory, an adjustment to the PFI in the relief from royalty may be required to eliminate any double counting of value (see the "Inventory" section in chapter 13 for a detailed discussion of inventory valuation, step-up presented in Schedule D-1 in appendix D, "Abbreviated Example of Valuing Finished Goods Inventory," and inventory scenario in appendix B). To the extent that the subject IP did not contribute to the inventory step-up, no adjustment would be needed.

12.79 *Contract Liabilities.* If an intangible asset valued with the relief from royalty method is needed to fulfill a performance obligation arising from a contract with a customer acquired in a business combination, the revenue attributable to the performance obligation should be included in the valuation of the asset (for further discussion, see the "Assets and Liabilities Associated with Acquired Contracts with Customers" section in chapter 6 and the "Interplay of Contract Liabilities and the Valuation of Certain Intangible Assets" section in chapter 13).

Application of Relief From Royalty Method to Acquired Intangible Assets

12.80 Application of the relief from royalty method generally involves the following steps:

- Step 1: Isolate the prospective revenue stream related to the subject intangible asset.
- Step 2: Determine the appropriate hypothetical royalty rate for use of the subject intangible asset.
- Step 3: Assess whether the royalty rate identified in step 2 is stated as a gross or net royalty.
- Step 4: Calculate the present value of the after-tax avoided royalty payments using a discount rate appropriate for the subject intangible asset.
- Step 5: Compute the related income tax benefits resulting from the amortization of the subject intangible asset for income tax purposes.

The steps are discussed in greater detail in the following paragraphs.

Step 1: Isolate the Prospective Revenue Stream Related to the Subject Intangible Asset

12.81 The starting point for application of the relief from royalty method is to identify the prospective revenue (or other measurable metric) stream expected to be derived from use of the asset being valued. The hypothetical royalty rate will be applied to this revenue stream.

12.82 The valuation specialist would need to consider, when appropriate, such issues as consistency with market participant assumptions, apportionment of revenue to various assets,

probability-weighting, technology migration, economic life and so forth (some of which are discussed in the "Prospective Financial Information for use in the IRR" section in chapter 10, "Internal Rate of Return Analysis," and the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section of this chapter) when identifying the appropriate market participant level of prospective revenues.

Step 2: Determine the Appropriate Hypothetical Royalty Rate for Use of the Subject Intangible Asset

12.83 To appropriately apply the relief from royalty method for valuing an acquired intangible asset, it is critical to develop a hypothetical royalty rate that reflects the comprehensive rights of use by virtue of the ownership of the asset. As with the valuation of any other asset or liability and consistent with guidance in FASB ASC 820, *Fair Value Measurement*, development of inputs for this method using either observed market data (such as observed royalty rates in actual arm's length negotiated licenses) or a simulated royalty analysis, can be utilized in the relief from royalty analysis. The task force believes it is not appropriate to solely rely on "rules of thumb," such as a certain percentage of earnings before interest and taxes (EBIT), without having performed the quantitative and qualitative analysis outlined in this section. Furthermore, the PFI should be evaluated to ensure that there is sufficient cash flow to support the royalty rate.

12.84 Because most acquired intangible assets have unique characteristics, the royalty rate selection process requires judgment. In certain instances, the underlying IP is licensed or sublicensed to other third parties. The actual royalty rate charged by the company to other parties for use of the IP may be a reasonable proxy for the appropriate royalty rate to use within the valuation. However, in the absence of actual royalty rate transactions, market-based royalty rates for similar IP are often used. Market royalty rates can be obtained from numerous third-party data vendors and publications.[11]

12.85 Based on the level of comparability, actual licensing fees or comparable market rates are adjusted to reflect the attributes of the subject intangible asset. Examples of such adjustments may include consideration to the usage of the subject asset in accordance with the expectations of market participants. For example, market royalty rates may reflect only limited usage of comparable assets, such as instances in which use is restricted to specific geographic locations, applications, or time periods. Other factors that may exist would also need to be considered. A market participant's use of the asset may differ from this type of limited use, thereby warranting an adjustment to the royalty rate.

Step 3: Assess Whether the Royalty Rate Identified in Step 2 is Stated as a Gross or Net Royalty

12.86 If a gross royalty is derived in step 2, the relief from royalty model should reflect a deduction of the additional ownership expenses (such as supporting legal, advertising or R&D expenses associated with the asset) to arrive at the net economic benefit inherent in the asset. If the royalty derived in step 2 is a net royalty, no such adjustment is required.

[11] As of the date of publication of this guide, third-party data vendors and publications included, but were not limited to, LexisNexis, RoyaltySource Online, ktMINE, and Licensing Economic Review.

Step 4: Calculate the Present Value of the After-Tax Avoided Royalty Payments Using a Discount Rate Appropriate for the Subject Intangible Asset

12.87 The valuation specialist would select a discount rate to apply to the after-tax cash flows (that is, avoided royalty payments) that is consistent with the risk inherent in those cash flows. See the "Rates of Return for Assets and Liabilities" section of this chapter for a discussion on discount rates.

Step 5: Compute the Related Income Tax Benefits Resulting From the Amortization of the Subject Intangible Asset for Income Tax Purposes

12.88 The fair value of an asset valued using the relief from royalty method should incorporate the tax benefits resulting from the amortization of the intangible asset for income tax purposes. For further information, refer to the "Tax Amortization Benefit" section of this chapter. A valuation specialist would need to ensure that if tax benefits are separately valued as part of valuation methodology, they are not, in effect, double-counted if already considered in the royalty rate utilized.

Illustrative Example: Relief From Royalty Method

12.89 Company A acquired Company T in a business combination. Among assets acquired are Company T's trademark (an indefinite-lived asset) and software (a finite-lived asset). Company A applied the relief from royalty method following the steps outlined in this section to estimate the fair value of these two assets. While less common, a gross royalty rate was observed for the software; however, a net royalty rate was used for the trademark. Obsolescence/migration curve is used for software.

Indefinite Lived Trademark

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Terminal
Revenue (1)		$ 345,100	$ 355,453	$ 366,117	$ 377,101	$ 388,414	$ 400,066	$ 412,068	$ 424,430	
Net Royalty Rate @	*6.5%*	22,432	23,104	23,798	24,512	25,247	26,004	26,784	27,588	28,416
Tax Rate (2)		5,608	5,776	5,950	6,128	6,312	6,501	6,696	6,897	7,104
After Tax Benefit		16,824	17,328	17,848	18,384	18,935	19,503	20,088	20,691	21,312
Terminal Value										193,745
Present Value Factor (3) @	*14.0%*	0.9366	0.8216	0.7207	0.6322	0.5545	0.4864	0.4267	0.3743	0.3743
Present Value of Royalty Relief		15,757	14,237	12,863	11,622	10,499	9,486	8,572	7,745	72,519
Total Present Values		163,300								
Tax Amortization Benefit		20,039								
Fair Value (Rounded)		$ 183,000								

Notes:

1) Revenue growth rate is assumed into perpetuity	3.0%
2) Assumed tax rate	25.0%
3) Mid period discounting reflected	

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Software 8 Year Life

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Revenue (1)		$ 345,100	$ 355,453	$ 366,117	$ 377,101	$ 388,414	$ 400,066	$ 412,068	$ 424,430
Obsolescence/Migration Factor		85.0%	70.0%	60.0%	45.0%	30.0%	20.0%	10.0%	2.0%
Revenue Attributable to Software		293,335	248,817	219,670	169,695	116,524	80,013	41,207	8,489
Net Royalty Rate (2)		30,800	26,126	23,065	17,818	12,235	8,401	4,327	891
Tax Rate (3)		7,700	6,532	5,766	4,455	3,059	2,100	1,082	223
After Tax Benefit		23,100	19,594	17,299	13,363	9,176	6,301	3,245	668
Present Value Factor (4) @	*14.0%*	0.9366	0.8216	0.7207	0.6322	0.5545	0.4864	0.4267	0.3743
Present Value of Royalty Relief		21,635	16,098	12,467	8,448	5,088	3,065	1,385	250
Total Present Values		68,436							
Tax Amortization Benefit		8,398							
Fair Value (Rounded)		$ 77,000							

Notes:

1) Revenue growth rate	3.0%
2) Net royalty rate calculated as:	
Gross Pretax Rate	12.0%
Less: Advertising	1.0%
Less: Legal Maintenance	0.5%
Net Royalty Rate	10.5%
3) Assumed tax rate	25.0%
4) Mid period discounting reflected	

Cost Savings Method[12]

Overview

12.90 The cost savings method has elements of both the income approach and the cost approach. However, it is typically considered to be a form of the income approach. The premise of the cost savings method is that an asset may afford its owner cost savings (that is, a reduced or eliminated cash outflow) over the best alternative to the asset. These cost savings represent the value of owning the intangible asset. The present value of the future net after-tax cost savings represents the fair value of the intangible asset, provided the cost savings would be available to market participants if they owned the intangible asset.

12.91 There is a difference between a cost savings method and a cost approach. As indicated in paragraph 4.3.1 of Valuation Advisory #2, the premise of the cost approach is that an investor would pay no more for an asset than the amount for which the utility of the asset could be replaced. The cost savings method considers prospective net costs avoided by owning the asset.

12.92 The cost savings method may be appropriate when the subject asset contributes value by

[12] The "Cost Savings Method" section leverages information from Valuation Advisory #2.

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reducing costs. It is more commonly used for routine intangible assets, which are discussed in chapter 11.

Application of Cost Savings Method to Acquired Intangible Assets

12.93 Application of the cost savings method generally involves the following steps:

- Step 1: Identify the cost savings provided by the subject intangible asset.
- Step 2: Calculate the present value of the net after-tax cost savings using a discount rate appropriate for the subject intangible asset.
- Step 3: Compute the related income tax benefits resulting from the amortization of the subject intangible asset for income tax purposes.

The steps are discussed in greater detail in the following paragraphs.

Step 1: Identify the Cost Savings Provided by the Subject Intangible Asset

12.94 Important to this method is an estimate of the hypothetical costs saved or expenses avoided due to the use of the subject intangible asset (for example, reduced manufacturing or marketing costs). Cost savings are measured on a net basis. That is, direct cost savings achieved by owning the asset are reduced by future incremental expenses required to implement the cost savings, if any.

12.95 When the subject intangible asset is expected to decay over time due to functional obsolescence, economic obsolescence, or both (e.g., certain technology related assets), the cost savings should reflect a commensurate reduction over the economic life of the intangible asset.

Step 2: Calculate the Present Value of the Net After-Tax Cost Savings Using a Discount Rate Appropriate for the Subject Intangible Asset

12.96 The valuation specialist would select a discount rate to apply to the after-tax cash flows (that is, cost savings) that is consistent with the risk inherent in those cash flows. See the "Rates of Return for Assets and Liabilities" section of this chapter for a discussion on discount rates.

Step 3: Compute the Related Income Tax Benefits Resulting From the Amortization of the Subject Intangible Asset for Income Tax Purposes

12.97 The fair value of an asset valued using the cost savings method should incorporate the tax benefits resulting from the amortization of the intangible asset for income tax purposes. For further information, refer to the "Tax Amortization Benefit" section of this chapter.

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Illustrative Example: Cost Savings Method[13]

12.98 Company A acquires Company T in a business combination. Company T is based in the U.S. and owns a proprietary manufacturing process which reduces material waste and results in annual cost savings of $120,000 over a period of three years. In order to achieve these cost savings, Company T incurs incremental expenses of $20,000 per year to operate the proprietary manufacturing process. Market participants would receive the same net cost savings of $100,000 over the same period if they owned the manufacturing process. Assuming a discount rate of 12.5% and a tax rate of 25%, the fair value of the proprietary manufacturing process is estimated as follows (numbers may not foot due to rounding):

Cost Savings Method

	Year 1	Year 2	Year 3
Cost Savings	$ 120,000	$ 120,000	$ 120,000
Expenses Associated with the Cost Savings	20,000	20,000	20,000
Net Cost Savings	**100,000**	**100,000**	**100,000**
Less: Income Taxes @ 25%	25,000	25,000	25,000
Net Operating Income	**75,000**	**75,000**	**75,000**
Present value factor @ 12.5% (1)	0.9428	0.8381	0.7449
Present Value of Cash Flows	**70,710**	**62,858**	**55,868**
Sum of PV (rounded)	**189,000**		
Plus: Tax Amortization Benefit	25,000		
Fair Value (rounded)	**$ 214,000**		

(1) Based on mid-period convention

With-and-Without Method[14]

Overview

12.99 The *with-and-without method* is a form of the income approach. The underlying PFI is generally estimated at the entity level (or for a collection of assets) in two separate scenarios: a "with" scenario (i.e., the set of assets includes the subject intangible asset, and is often referred to as the *base case*) and a "without" scenario (i.e., the set of assets excludes the subject intangible

[13] See Example 5.4 in Valuation Advisory #2 for the application of the cost savings method when valuing customer-related assets.

[14] The "With-and-Without Method" section leverages information from Valuation Advisory #2.

asset).[15] The difference between the fair values computed in each scenario serves as the basis for estimating the fair value of the subject intangible asset. It can also be computed as the difference between cash flows in the "with" and "without" scenarios. The with-and-without method utilizes certain subjective inputs and assumptions that may be challenging to derive.

12.100 In practice, this method is often used to measure the fair value of non-competition agreements. Accordingly, the discussion that follows is focused on valuing non-competition agreements. If the with-and-without method is applied to other intangible assets, such as customer-related assets, refer to Valuation Advisory #2 for additional guidance.

Application of With-and-Without Method to Acquired Intangible Assets

12.101 Application of the with-and-without method generally involves the following steps:

- Step 1: Estimate the PFI with the subject intangible asset in place ("with" scenario).
- Step 2: Estimate the PFI without the subject intangible asset in place ("without" scenario) over the expected period of economic benefit.
- Step 3: Estimate a discount rate that is appropriate for the subject intangible asset.
- Step 4: Estimate the difference between the "with" and "without" scenarios.
- Step 5: Compute the related income tax benefits resulting from the amortization of the subject intangible asset for income tax purposes.

The steps are discussed in greater detail in the following paragraphs.

Step 1: Estimate the PFI with the Subject Intangible Asset In Place ("With" Scenario)

12.102 The PFI with the subject intangible asset in place should be estimated based on market participant assumptions. In practice, the PFI used in the "with" scenario is often the same as the operating cash flows of the relevant business unit.

Step 2: *Estimate the PFI Without the Subject Intangible Asset In Place ("Without" Scenario) Over the Expected Period of Economic Benefit*

12.103 The "without" scenario captures the estimated PFI (in both amounts and timing) without the subject asset. In some circumstances, it may be appropriate to consider several "without" scenarios and weigh each outcome based on its relative probability of occurrence. When developing the "without" scenario(s), the following adjustments may be considered:

- *Loss of Revenue and/or slower revenue growth*: An entity estimates revenue within PFI assuming the subject intangible asset is not in place. This may include adjusting the

[15] The intent of the with-and-without method is to arrive at the expected cash flows for the respective scenarios. The task force recommends, when appropriate, considering and weighing several different scenarios in order to arrive at the "without" scenario. However, the level of rigor involved in identifying, considering and weighing different scenarios will depend on specific facts and circumstances.

"with" PFI downward to reflect the loss of customers to competitors (both existing and new customers), or to reflect a reduction in selling prices to regain market share.

- *Fixed versus Variable Costs:* An entity may modify its expense structure during the period of economic benefit. These costs should be viewed from a market participant perspective. The PFI should also consider the impact of any additional expenditures necessary to react to the incremental level of competition that would exist in the absence of the non-competition agreement, such as marketing or compensation expenses.

- *Capital Expenditures and Depreciation:* An entity may modify its capital investment outlay during the time necessary for the PFI to recover to the level reflected in the "with" scenario. This change in capital investment over time would also affect the estimated depreciation incurred in each period. If the expected period of economic benefit is relatively short, then altering the capital outlay may not be necessary.

- *Working Capital:* An entity may modify its working capital investment in the "without" scenario. For example, certain working capital components (e.g., accounts receivable and payable) may scale quickly with changes in revenue, while other working capital components (e.g., inventory) may be more fixed in nature.

- *Expected Period to Reestablish the Asset:* The expected period to reestablish the asset is the period of time over which there is a difference in the PFI between the "with" and "without" scenarios. However, this concept is not applicable to non-competition agreements due to their nonrenewable nature. Instead, the expected period of economic benefit is used for a non-competition agreement, which often aligns to its contractual term. For assets other than non-competition agreements, the expected period to reestablish the asset often does not align with the period of economic benefit.

Step 3: Estimate a Discount Rate that is Appropriate for the Subject Intangible Asset

12.104 The valuation specialist would select a discount rate for the after-tax cash flows that is consistent with the risk inherent in those cash flows. See the "Rates of Return for Assets and Liabilities" section of this chapter for a discussion on discount rates. The discount rates used in the "with" and "without" scenarios are the same because differences in risks are reflected in the PFI.

Step 4: Estimate the Difference Between the "With" and "Without" Scenarios

12.105 Once an appropriate discount rate is determined, the valuation specialist calculates the present value of the after-tax PFI under each scenario, and then calculates the difference between the two present value amounts computed. Alternatively, one can first determine the difference in the cash flows between the "with" and "without" scenarios and then compute the present value of this cash flow difference.

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Step 5: Compute the Related Income Tax Benefits Resulting From the Amortization of the Subject Intangible Asset for Income Tax Purposes

12.106 The fair value of an asset valued using the with-and-without method should incorporate the tax benefits resulting from the amortization of the intangible asset for income tax purposes. For further information, refer to the "Tax Amortization Benefit" section of this chapter.

Illustrative Example: With-and-Without Method[16]

12.107 Company A acquires Company T. In connection with the business combination, the Chief Executive Officer (CEO) of Company T signs a non-competition agreement[17] for a period of three years. Using market participant assumptions, Company A estimates that Company T could lose 10% of estimated revenue and incur a 50% increase in variable operating expenses if the CEO were to compete (i.e., without the non-competition agreement in place) and that the PFI will recover to original expectations in Year 5. Given that the CEO is close to retirement age, the expected likelihood of the CEO competing was deemed to be fairly low at 10%. The discount rate is 12.5% and the tax rate is 25%. The estimated fair value of the non-competition agreement is calculated as follows (numbers may not foot due to rounding):

	Scenario: With Non-Compete					*Scenario: Without Non-Compete*				
	Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Revenue	**$ 10,000**	**$ 10,500**	**$ 11,025**	**$ 11,576**	**$ 12,155**	**$ 10,000**	**$ 9,450**	**$ 9,923**	**$ 10,418**	**$ 12,155**
Less: Cost of Goods Sold	5,000	5,250	5,513	5,788	6,078	5,000	4,725	4,962	5,209	6,078
Gross Profit	5,000	5,250	5,512	5,788	6,077	5,000	4,725	4,961	5,209	6,077
Gross Profit Margin (%)	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*	*50%*
Less: Fixed Operating Expenses	1,000	1,050	1,103	1,158	1,216	1,000	1,050	1,103	1,158	1,216
Less: Variable Operating Expenses	1,000	1,050	1,103	1,158	1,216	1,000	945	992	1,042	1,216
Less: Incremental Operating Expenses	-	-	-	-	-	-	473	496	521	-
Operating Income	**3,000**	**3,150**	**3,306**	**3,472**	**3,645**	**3,000**	**2,257**	**2,370**	**2,488**	**3,645**
OI Margn (%)	*30%*	*30%*	*30%*	*30%*	*30%*	*30%*	*24%*	*24%*	*24%*	*30%*
Less: Income Taxes @ 25%	750	788	827	868	911	750	564	593	622	911
Net Operating Income	**2,250**	**2,362**	**2,479**	**2,604**	**2,734**	**2,250**	**1,693**	**1,777**	**1,866**	**2,734**
Plus: Depreciation		500	525	551	579		500	525	551	579
Less: Incremental Working Capital @ 15%		(75)	(79)	(83)	(87)		83	(71)	(74)	(261)
Less: Capital Expenditures		(525)	(551)	(579)	(608)		(525)	(551)	(579)	(608)
Net Cash Flows		**2,262**	**2,374**	**2,493**	**2,618**		**1,751**	**1,680**	**1,764**	**2,444**
Present value factor @ 12.5% (1)		0.9428	0.8381	0.7449	0.6622		0.9428	0.8381	0.7449	0.6622
Present Value of Cash Flows (Rounded)		**2,130**	**1,990**	**1,860**	**1,730**		**1,650**	**1,410**	**1,310**	**1,620**

Sum of PV (With Scenario)	7,710
Sum of PV (Without Scenario)	5,990
Difference Between Scenarios	**1,720**
Times: Probability Factor	10%
Indicated Value (Rounded)	**170**
Plus: Tax Amortization Benefit	23
Fair Value	**$ 193**

(1) Based on mid-period convention

16 See Examples 5.3 and Example B.4 in Valuation Advisory #2 for the application of with-and-without method when valuing customer-related assets.

17 For additional details, refer to the "Noncompetition Agreements" section in chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed." For a discussion regarding whether the noncompetition agreement would be a part of the business combination or a separate transaction, see the "Determining What is Part of the Business Combination Transaction" section in chapter 8, "Other Accounting Topics."

12.108 If a non-competition agreement valued under the with-and-without method is a contributory asset for a different asset valued under the MPEEM, an issue arises in the application of CACs due to the non-renewable nature of non-competition agreements. Estimating an appropriate CAC is based on a profit split over the expected period of economic benefit assumed for the subject asset. See Exhibits D-1 and D-1a in the toolkit from Valuation Advisory #1, which illustrate calculation of CAC for non-competition agreements. In addition, if an asset other than a non-competition agreement valued under the with-and-without method is a contributory asset for a different asset valued under the MPEEM, the task force believes that the calculation of the CAC would be based on the principles outlined for CACs related to assembled workforce. See Exhibits A-8, B-8 and C-4a in the toolkit from Valuation Advisory #1, which illustrate calculation of CAC for assembled workforce.

Greenfield Method

Overview

12.109 The general premise of the Greenfield method assumes a business commences operations with only the subject intangible asset in place. The business must incur start-up costs and invest in other assets (e.g., various tangible assets, a workforce, customers) to assemble a business. The cash flows of the start-up business are discounted to present value (including the addition of a TAB, where applicable) to estimate the fair value of the subject asset.

12.110 The Greenfield method is a variation of the MPEEM. However, unlike the MPEEM, which accounts for contributory assets by subtracting economic rents from the cash flows to isolate only those cash flows attributable to the subject asset, the Greenfield method subtracts the investment cash outflows required to build, buy or lease the contributory assets from the positive cash inflows that the business generates. The Greenfield method also excludes the value associated with the assemblage of the acquired business (also referred to as *going concern value*), since the business must be assembled around the subject asset.

12.111 The theoretical underpinning of incremental or excess cash flow methods, such as the Greenfield method, is that the net present value (NPV) of the contributory assets is zero (i.e., the present value of the cash inflows from contributory assets is perfectly offset by the present value of cash outflows incurred to use the contributory assets). The 'NPV equals zero' premise in essence equates cost with value, which may be a reasonable presumption for many tangible assets, but may be less applicable for many intangible assets. This is due to the fact that there is generally less correlation between cost and value for intangible assets than for tangible assets.

12.112 The Greenfield method typically reflects two general stages of a business' life cycle: the initial build-out stage (subsequently referred to as the *ramp-up period*) and the stage during which a normalized level of growth and margin is achieved (subsequently referred to as the *terminal value*). The pattern of forecast and length of the ramp-up period, as well as assumptions regarding terminal value, will vary based on the facts and circumstances for each subject asset.

12.113 The Greenfield method is a direct value method that is often used to value certain operating rights (which are discussed in the "Operating Rights" section of chapter 11). Direct value methods are discussed in FASB ASC 805-20-S99-3. Examples of assets that may be

valued with the Greenfield method include broadcasting licenses, cable franchises, wireless spectrum licenses, satellite orbital slots in the communications industry, and certificates of need issued in the healthcare industry.

Application of Greenfield Method to Acquired Intangible Assets

12.114 The Greenfield method utilizes a number of subjective inputs and assumptions that may be challenging to derive. Application of the Greenfield method generally involves the following steps:

- Step 1: Estimate the PFI for the subject intangible asset.
- Step 2: Estimate a discount rate that is appropriate for the subject intangible asset.
- Step 3: Compute the related income tax benefits resulting from the amortization of the subject intangible asset for income tax purposes.

The steps are discussed in greater detail in the following paragraphs.

Step 1: Estimate the PFI for the Subject Intangible Asset

12.115 When determining PFI for the subject intangible asset, the analysis should include:

- *Ramp-up period's time horizon:* The ramp-up period reflects the time required to build the operational infrastructure necessary to begin commercializing the business (e.g. build a wireless network, construct satellites), as well as the time required to gain customers and reach a stabilized level of market share. It is important to perform a detailed analysis to support the development of an appropriate ramp-up period. The nature of inputs and assumptions applied during the ramp-up period may differ from the manner in which the business has been historically created and is currently operated.
- *Normalization point:* Normalization is typically reached when the start-up business achieves operating results that are consistent with those of the acquired business (e.g., similar customer level, revenue, profit, or other metric). Alternatively, there may be circumstances in which the acquired business may not be representative of a market participant's expected normalized state for the start-up business and there is no assumed convergence with the acquired business. For example, when radio broadcast licenses are valued using the Greenfield method, a market average operating margin is typically assumed as the right to broadcast at a particular frequency and transmitter power should not capture the incremental value of above average programming or be penalized for below average programming. In either case, the determination of the normalized level is subjective and requires a detailed analysis that considers, among other things, market participant views, industry factors, and market conditions.
- *Ramp-up period's operating costs and capital expenditures:* The amount invested to build or buy contributory assets may include, for example, costs to create a wireless network that is comprised of towers, equipment, and software, as well as continued

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investment which may extend beyond the initial portion of the ramp-up period. Operating cost structures that are representative of a scaled, assembled business may serve as a starting point when developing the cost structure of the start-up phase of the ramp-up period when deemed to be in-line with market participant expectations. However, cost structure adjustments are often required for various reasons which, for example, may include the following:

- The fixed and variable nature of certain expenses in a business which has scale vs. the start-up business

- Costs in the acquired business may be tied to legacy infrastructure, which would be designed or implemented differently in the start-up business. As such, certain costs may be adjusted during the ramp-up period to account for these differences and align with the ramp-up period of the start-up business

- Technology, design, or other considerations of a start-up business as of the measurement date may differ from those of the acquired business (e.g., relying on newer technologies available, greater efficiency of infrastructure design, etc.)

- Embedded off-market components of existing contracts

- Impact of scale on supply agreements and pricing.

- *Considerations for leasing contributory assets:* In some circumstances related to intangible assets, there may be a concern with the NPV equals zero premise (discussed in paragraph 12.111). This may be mitigated by using CACs. For example, if a start-up business requires the use of trade name, a charge for the trade name (consistent with its economic value) can be deducted from the cash flows in lieu of the investment to develop it (this approach is reflected in the illustrative example that follows).

- *Operating tax assumptions:* Operating tax assumptions when implementing a Greenfield method include: the appropriate tax rate, net operating losses, tax depreciation of investments that are capitalized for tax purposes. When using the Greenfield method, the start-up business may generate significant losses, particularly during the ramp-up period when substantial investments are made, which give rise to net operating losses (NOLs) to shield future income. In keeping with the start-up nature of the business, the future tax benefits of NOLs generated during the start-up period should be reflected in the value of the subject asset based on the pattern of taxable income within the Greenfield method computation. The task force notes that only NOLs generated during the ramp-up period within the Greenfield method should be considered in the value of the subject asset, no acquired or future forecast NOLs of the acquiree should be considered in the value of the subject asset. Investments during the ramp-up period, as well as consequential changes during the normalized period that are capitalized for tax purposes, generally require specific modeling of tax-basis depreciation expenses differently from the acquired business. This different pattern of depreciation expense may also extend beyond the initial ramp-up period despite any

assumed convergence with the acquired business in other areas such as revenue growth or operating margins.

Step 2: Estimate a Discount Rate that is Appropriate for the Subject Intangible Asset

12.116 The cash flows in the Greenfield method are expected to reflect the risk associated with the start-up nature of the business. Accordingly, while the WACC of the acquired business may serve as a starting point when selecting a discount rate, it should be adjusted as necessary to reflect the differential risk of the cash flows of the subject asset. Refer to the "Rates of Return for Assets and Liabilities" section of this chapter for further discussion.

Step 3: Compute the Related Income Tax Benefits Resulting From the Amortization of the Subject Intangible Asset for Income Tax Purposes

12.117 The fair value of an asset valued using the greenfield method should incorporate the tax benefits resulting from the amortization of the intangible asset for income tax purposes. For further information, refer to the "Tax Amortization Benefit" section of this chapter.

Illustrative Example: Greenfield Method

12.118 The Greenfield method relies on inputs that are highly subjective and will depend on the nature of the industry in which the acquiree operates. Significant judgment will be required when developing these assumptions. The following example illustrates one way in which calculations can be performed to develop PFI metrics such as revenue, expense, capital expenditures, depreciation, and net operating losses.

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Greenfield example table 1 of 6
Discounted cash flow

	Ramp-up period										
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	***Terminal***
Total revenue [1]	**$ 4,788**	**$ 13,576**	**$ 26,410**	**$ 45,835**	**$ 63,470**	**$ 77,740**	**$ 86,206**	**$ 90,579**	**$ 93,365**	**$ 96,188**	**$ 99,074**
Less: Operating expenses [2]	14,324	19,562	31,708	44,323	54,940	61,164	65,102	67,028	69,090	71,179	73,315
Less: Trade name royalty [3]	96	272	528	917	1,269	1,555	1,724	1,812	1,867	1,924	1,981
EBITDA	**(9,632)**	**(6,258)**	**(5,826)**	**595**	**7,261**	**15,021**	**19,380**	**21,739**	**22,408**	**23,085**	**23,778**
EBITDA margin	-201.2%	-46.1%	-22.1%	1.3%	11.4%	19.3%	22.5%	24.0%	24.0%	24.0%	24.0%
Less: Tax depreciation [4]	1,253	3,399	4,932	5,847	6,398	6,730	7,030	7,588	8,016	8,385	9,412
EBIT	**(10,885)**	**(9,657)**	**(10,758)**	**(5,252)**	**863**	**8,291**	**12,350**	**14,151**	**14,392**	**14,700**	**14,366**
Less: Tax expense [5]	-	-	-	-	216	2,073	3,088	3,538	3,598	3,675	3,592
Debt Free Net Income (DFNI)	**(10,885)**	**(9,657)**	**(10,758)**	**(5,252)**	**647**	**6,218**	**9,262**	**10,613**	**10,794**	**11,025**	**10,774**
Plus: Tax depreciation [4]	1,253	3,399	4,932	5,847	6,398	6,730	7,030	7,588	8,016	8,385	9,412
Less: Capital expenditures [6]	8,760	8,760	8,760	7,504	8,053	5,518	6,931	9,058	9,337	9,619	9,907
Less: Working capital investment (divestment) [7]	96	176	257	389	353	285	169	87	56	56	58
DFCF	**(18,488)**	**(15,194)**	**(14,843)**	**(7,298)**	**(1,361)**	**7,145**	**9,192**	**9,056**	**9,417**	**9,735**	**10,221**
Present value factor [8]	0.9535	0.8668	0.7880	0.7164	0.6512	0.5920	0.5382	0.4893	0.4448	0.4044	
Present value of cash flow	**$ (17,628)**	**$ (13,170)**	**$ (11,696)**	**$ (5,228)**	**$ (886)**	**$ 4,230**	**$ 4,947**	**$ 4,431**	**$ 4,189**	**$ 3,937**	

Value summary

Value of discrete period	$ (26,874)
Terminal value	59,048
Value of created NOLs [9]	5,204
After-tax value	**37,378**
Plus: Tax amortization benefit	5,607
Fair Value	**$ 42,985**

Terminal value

Terminal period cash flow	$ 10,221
Divided by: Capitalization rate	7.0%
Terminal value	146,014
Multiplied by: Present value factor	0.4044
Present value of terminal value	**$ 59,048**

Assumptions:

Trade name royalty (pre-tax)	*2%*
Long-term growth rate	*3%*
Terminal period opex as a % of revenue	*74%*
Tax rate	*25%*
Terminal period capex as a % of revenue	*10%*
Depreciation as a % of capex (terminal period)	*95%*
Working capital as a % of revenue	*2%*
Discount rate	*10%*
TAB Factor	*15%*

Footnotes:

[1] Refer to Greenfield example table 2 of 6
[2] Refer to Greenfield example table 3 of 6
[3] Total revenue * Trade name royalty rate (pre-tax) of 2%
[4] Refer to Greenfield example table 5 of 6
[5] EBITDA * Tax rate of 25%, if EBITDA greater than 0
[6] Refer to Greenfield example table 4 of 6
[7] Change in revenues from prior year * Working capital as % of revenue of 2%
[8] Reflects mid-period convention
[9] Refer to Greenfield example table 6 of 6

Greenfield example table 2 of 6
Revenue detail

	Ramp-up period									
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Market:										
EOY total market number of customers	300,000	306,000	312,000	318,000	325,000	331,000	338,000	341,000	345,000	348,000
# of customers % growth		2.00%	1.96%	1.92%	2.20%	1.85%	2.11%	0.89%	1.17%	0.87%
Business customers:										
EOY market share (% of Total market average customers)	2.8%	4.8%	9.4%	14.1%	17.5%	19.4%	20.0%	20.0%	20.0%	20.0%
Beginning number of customers	-	8,400	14,688	29,328	44,838	56,875	64,214	67,600	68,200	69,000
Less: beginning number of customers lost [1]	-	1,680	2,938	5,866	8,968	11,375	12,843	13,520	13,640	13,800
Plus: beginning number of customers replaced [1]	-	1,680	2,938	5,866	8,968	11,375	12,843	13,520	13,640	13,800
Plus: gross growth customers	9,333	6,987	16,267	17,233	13,374	8,154	3,762	667	889	667
Less: growth customers lost during year [2]	933	699	1,627	1,723	1,337	815	376	67	89	67
Ending number of customers	8,400	14,688	29,328	44,838	56,875	64,214	67,600	68,200	69,000	69,600
Average number of customers	4,200	11,544	22,008	37,083	50,857	60,545	65,907	67,900	68,600	69,300
Business revenue:										
Average annual revenue per customer	$ 1.140	$ 1.176	$ 1.200	$ 1.236	$ 1.248	$ 1.284	$ 1.308	$ 1.334	$ 1.361	$ 1.388
Multiplied by: Average number of customers	4,200	11,544	22,008	37,083	50,857	60,545	65,907	67,900	68,600	69,300
Total revenue	**$ 4,788**	**$ 13,576**	**$ 26,410**	**$ 45,835**	**$ 63,470**	**$ 77,740**	**$ 86,206**	**$ 90,579**	**$ 93,365**	**$ 96,188**
Growth	*NMF*	*183.5%*	*94.5%*	*73.6%*	*38.5%*	*22.5%*	*10.9%*	*5.1%*	*3.1%*	*3.0%*

Assumptions:

Revenue per customer growth years 8 to 10	*2%*
Annual churn rate	20%

Footnotes:

[1] This illustrates the costs not only of growing as well as the cost of maintaining (represents customer churn without increasing the customer base). The beginning number of customers replaced contributes to customer acquisition cost.
[2] Mid-year assumed.

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Greenfield example table 3 of 6
Cost detail

	Ramp-up period									
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Fixed operating expenses:										
Total fixed expenses [a]	$ 7,800	$ 8,000	$ 8,300	$ 8,400	$ 8,500	$ 8,600	$ 8,800			
Customer-driven variable operating expenses:										
Average number of customers [1]	4,200	11,544	22,008	37,083	50,857	60,545	65,907			
Average annual cost per customer	0.720	0.720	0.732	0.732	0.744	0.744	0.756			
Total customer-driven variable expenses [b]	3,024	8,312	16,110	27,145	37,838	45,045	49,826			
Acquisition-driven variable operating expenses:										
Number of replacement customers added [1]	-	1,680	2,938	5,866	8,968	11,375	12,843			
Number of growth customers added [1]	9,333	6,987	16,267	17,233	13,374	8,154	3,762			
Total number of customers added	9,333	8,667	19,205	23,099	22,342	19,529	16,605			
Average cost per addition	0.375	0.375	0.380	0.380	0.385	0.385	0.390			
Total addition-driven variable expenses [c]	3,500	3,250	7,298	8,778	8,602	7,519	6,476			
Total operating expenses [2]	**$ 14,324**	**$ 19,562**	**$ 31,708**	**$ 44,323**	**$ 54,940**	**$ 61,164**	**$ 65,102**	**$ 67,028**	**$ 69,090**	**$ 71,179**
As a percent of revenue	*299.2%*	*144.1%*	*120.1%*	*96.7%*	*86.6%*	*78.7%*	*75.5%*	*74.0%*	*74.0%*	*74.0%*

Assumptions:
Total operating expenses as % of revenue years 8 to 10 — *74.0%*

Footnotes:
[1] Refer to Greenfield example table 2 of 6
[2] Total operating expenses = a+b+c

Greenfield example table 4 of 6
Capital expenditure detail

	Ramp-up period									
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Capital expenditure category:										
Capital expenditure type 1	$ 5,000	$ 5,000	$ 5,000	$ 4,000	$ 5,000	$ 3,000	$ 4,000			
Capital expenditure type 2	500	500	500	450	315	284	284			
Capital expenditure type 3	3,000	3,000	3,000	2,800	2,500	2,000	2,500			
Capital expenditure type 4	10	10	10	9	6	6	6			
Capital expenditure type 5	200	200	200	200	200	200	113			
Capital expenditure type 6	50	50	50	45	32	28	28			
Total capital expenditures	**$ 8,760**	**$ 8,760**	**$ 8,760**	**$ 7,504**	**$ 8,053**	**$ 5,518**	**$ 6,931**	**$ 9,058**	**$ 9,337**	**$ 9,619**
As a % of revenue	183.0%	64.5%	33.2%	16.4%	12.7%	7.1%	8.0%	10.0%	10.0%	10.0%

Assumptions:
Years 8 - 10 capex as a % of revenue — *10.0%*

Greenfield example table 5 of 6
Depreciation

	Ramp-up period									
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total capital expenditures [1]	$ 8,760	$ 8,760	$ 8,760	$ 7,504	$ 8,053	$ 5,518	$ 6,931	$ 9,058	$ 9,337	$ 9,619
7-year MACRS annual depreciation percentages [2]	14.3%	24.5%	17.5%	12.5%	8.9%	8.9%	8.9%	4.5%		
Depreciation waterfall:										
Year 1	1,253	2,146	1,533	1,095	780	780	780	394		
Year 2		1,253	2,146	1,533	1,095	780	780	780	394	
Year 3			1,253	2,146	1,533	1,095	780	780	780	394
Year 4				1,073	1,838	1,313	938	668	668	668
Year 5					1,152	1,973	1,409	1,007	717	717
Year 6						789	1,352	966	690	491
Year 7							991	1,698	1,213	866
Year 8								1,295	2,219	1,585
Year 9									1,335	2,288
Year 10										1,376
Total depreciation	**$ 1,253**	**$ 3,399**	**$ 4,932**	**$ 5,847**	**$ 6,398**	**$ 6,730**	**$ 7,030**	**$ 7,588**	**$ 8,016**	**$ 8,385**

Footnotes:
[1] Refer to Greenfield example table 4 of 6
[2] For simplicity purposes, a single tax life has been used. In practice, multiple lives based on asset type(s) may be used.

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Greenfield example table 6 of 6
NOLs

	Ramp-up period									
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
EBIT [1]	**$ (10,885)**	**$ (9,657)**	**$ (10,758)**	**$ (5,252)**	**$ 863**	**$ 8,291**	**$ 12,350**	**$ 14,151**	**$ 14,392**	**$ 14,700**
Less: Interest expense	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Pre-tax income	(11,885)	(10,657)	(11,758)	(6,252)	(137)	7,291	11,350	13,151	13,392	13,700
Beginning NOL balance	-	11,885	22,542	34,300	40,552	40,689	33,398	22,048	8,897	-
Plus: New NOLs	11,885	10,657	11,758	6,252	137	-	-	-	-	-
Less: NOLs used	-	-	-	-	-	7,291	11,350	13,151	8,897	-
Ending NOL balance	11,885	22,542	34,300	40,552	40,689	33,398	22,048	8,897	-	-
NOLs used	-	-	-	-	-	7,291	11,350	13,151	8,897	-
Multiplied by: Tax rate [1]	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Tax savings from NOLs	-	-	-	-	-	1,823	2,838	3,288	2,224	-
Present value factor [1]	0.9535	0.8668	0.7880	0.7164	0.6512	0.5920	0.5382	0.4893	0.4448	0.4044
Present value of cash flow	**-**	**-**	**-**	**-**	**-**	**1,079**	**1,527**	**1,609**	**989**	**-**
Present value of created NOLs	**$ 5,204**									

Footnotes:
[1] Refer to Greenfield example table 1 of 6

Multiperiod Excess Earnings Method

Overview

12.119 The MPEEM assumes that the subject asset is part of a collection of assets that generates an identifiable stream of prospective cash flows when operated together. Thus, the PFI underlying the MPEEM is associated with a collection of assets, rather than a single asset. CACs attributable to all assets in the collection other than the subject asset are then deducted from the net (or after-tax) cash flows to isolate the remaining or "excess earnings" attributable solely to the subject asset being valued. A CAC represents the amount that would be charged to an entity by a market participant to “rent” or “lease” the asset in a hypothetical transaction (also referred to as *economic rents*). The excess earnings amount is discounted to present value to derive the subject asset’s fair value.

12.120 In general, the MPEEM is used to value intangible assets that have the ability to generate economic returns to their owners. Assets that generate excess profits are typically pivotal to the entity and can be broadly categorized as relationship-based or IP-based assets (for additional discussion, see chapter 11).

Application of MPEEM to Acquired Intangible Assets[18]

12.121 The application of the MPEEM generally involves the following steps:

- Step 1: Isolate the PFI related to the collection of assets that includes the subject intangible asset.

[18] For illustrative examples of how to apply the multiperiod excess earnings method (MPEEM) to in-process research and development (IPR&D) assets, please refer to paragraphs 6.137–.138 and 6.184–.200 in the AICPA Accounting & Valuation Guide, *Assets Acquired to be Used in Research and Development Activities*. For illustrative examples of how to apply MPEEM to customer-related assets, please refer to Valuation Advisory #2.

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- Step 2: Apply CACs for assets that contribute to the generation of cash flows of the collection of assets to isolate the cash flows attributable to the subject intangible asset.

- Step 3: Calculate the present value of the excess earnings using a discount rate appropriate for the subject intangible asset.

- Step 4: Compute the related income tax benefits resulting from the amortization of the subject intangible asset for income tax purposes.

These steps are discussed in greater detail in the following paragraphs.

Step 1: Isolate the PFI Related to the Collection of Assets That Includes the Subject Intangible Asset

12.122 The collection of assets that includes the subject asset will vary based on facts and circumstances. In some instances, the collection of assets may align with the entity as a whole, while in other circumstances it may represent a portion of an entity (e.g., line of business, geography, function, or product line). See the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section of this chapter for further discussion and guidance on allocating the PFI.

12.123 If an intangible asset valued with MPEEM is needed to fulfill a performance obligation arising from a contract with a customer acquired in a business combination, the revenue attributable to the performance obligation should be included in the valuation of the asset (for further discussion, see the "Assets and Liabilities Associated with Acquired Contracts with Customers" section in chapter 6 and the "Interplay of Contract Liabilities and the Valuation of Certain Intangible Assets " section in chapter 13).

12.124 A relationship asset, which is the expectation of future business with customers, is distinctly different from a contract liability, which is the obligation from prior business to deliver goods or services to a customer. As they are distinct units of account, as well as one being an asset and one being a liability, the task force believes that any PFI used to value a relationship-based asset should exclude recognition of revenue and related expenses associated with a customer contract liability. (See section 9.3, "Deferred Revenue," in Valuation Advisory #2 for a discussion of alternatives for making customer contract liability-related adjustments to PFI.)

12.125 An IP-based asset may either be the sole item delivered in satisfaction of a customer contract liability or may be used in satisfying a customer contract liability. In either case, if the subject asset is an IP-based asset, the task force believes the PFI should include recognition of revenue and related expenses associated with a customer contract liability.

Step 2: Apply CACs for Assets That Contribute to the Generation of Cash Flows of the Collection of Assets to Isolate the Cash Flows Attributable to the Subject Intangible Asset[19]

12.126 CACs are based on the concept that the owner of a contributory asset reasonably expects to get a return *on* and *of* (if appropriate) the fair value of the asset that is commensurate with the

[19] For further information on contributory asset charges (CACs), see Valuation Advisory #1.

risk of that asset and the returns earned by market participants on similar assets. The contributory assets for which a charge should be taken may include not only assets purchased in the specific business combination or existing in a particular point in time, but all assets that would be required by market participants to generate the overall cash flows of the collection of assets. The acquirer already may own some of these assets or may need to purchase them in a separate transaction, if they are necessary to generate the future cash flows in the aggregate. Consider the following example: a trade name is needed to generate cash flows for the collection of assets being used to value a certain asset with the MPEEM. However, the acquirer may plan not to use a trade name of the acquiree but replace it with a name it already owns. In this case, provided such plans are consistent with market participant assumptions, a CAC for use of the acquirer's existing name would need to be applied despite the fact that the acquired name will no longer be used since the use of a trade name will still be required to generate the future cash flows of the collection of assets.

12.127 Contributory assets may include:

- *Working capital*. Realizing cash flows from a product or service requires working capital for net investment in receivables, inventory, and other short-term assets. Working capital makes a contribution to the asset by allowing and supporting the normal business cycle. The required level of working capital represents the level that market participants would consider appropriate to support the subject intangible asset. Because working capital supports business operation without loss in value due to economic depreciation, only a return *on* working capital would be considered in CAC calculation. Note that the composition and level of working capital may change over the prospective period, therefore, the level of charge could be different year by year over the prospective period. However, the level of working capital forecasted in any given year within that period should reflect a normalized level. Accordingly, excess or deficit working capital balances as well as one–time purchase accounting adjustments (such as the amount of inventory step-up over pre-combination book value) should be excluded.

- *Inventory step-up.* An adjustment may be required for inventory step-up in the MPEEM to eliminate any double counting of value, depending upon the asset being valued using the MPEEM and the source of the inventory step-up. Inventory step-up in a business combination is the result of measuring value added to inventory that is not captured in on-going inventory cost accounting. Typical value elements captured in inventory step-up are returns on manufacturing assets and IP used in creating the inventory (see the "Inventory" section in chapter 13 for a detailed discussion of inventory valuation). The potential for double counting value between inventory step-up and an asset valued using an MPEEM arises from two sources: 1) the nature of the asset being valued and 2) CACs.

  The nature of the subject intangible asset (relationship-based or IP-based) and whether it is used in the disposal process is the first consideration in assessing the need to eliminate double counting. The task force observes that the inventory step-up should not include value for assets typically used in the disposition

process, such as relationship-based assets. Accordingly, the task force believes when the MPEEM is used to value a relationship-based asset, there is no double counting of the value created by the relationship-based asset and the inventory step-up. However, when the MPEEM is used to value an IP-based intangible asset, there is greater potential for double counting value as IP is frequently one of the value elements that give rise to an inventory step-up. Only the portion of the step-up due to the IP valued by the MPEEM requires adjustment, as other portions of the step-up are accounted for by CACs as discussed subsequently. The task force believes best practice is to compute an implied royalty rate for the IP asset utilized to create the inventory[20] based upon the undiscounted excess earnings (adjusted for taxes) and apply it to the sale value of the inventory to approximate the amount of the step-up due to IP. This amount can then be used to adjust the excess earnings (for an example of this adjustment, see the inventory scenario in appendix B).

Once the double counting of the value created directly by the subject intangible asset valued with the MPEEM and the inventory step-up is eliminated then adjustments for contributory assets are considered. The inventory step-up is often directly the result of utilizing contributory assets (such as fixed assets and certain other IP) to create the inventory.

There are two ways of avoiding double counting value created by contributory assets. One option is to adjust the excess earnings for the amount of the inventory step-up and reduce the revenue base for computing the relevant CACs by the amount of revenue expected from sale of the inventory. Under this method, it is important to carefully evaluate the relationship between the CACs and the inventory step-up. For example, the return of fixed assets may be reflected in the inventory carrying amount through a depreciation expense, therefore, limiting the double count subject to adjustment to the return on the fixed assets. The other option is not to adjust the excess earnings for the inventory step-up and not to adjust the revenue base for the relevant CACs. The two options should result in similar values for the asset valued using the MPEEM. In the first option, the use of contributory assets in the forecast period is reduced for use of assets in creating the inventory. In the second option, forecast use of contributory assets is considered a proxy for both prior and future use. While there may be some timing differences between the two options, the task force recommends the second option as it is simpler to implement.

For example, assume first year PFI reflects an annual run rate of 1,000 units, there are 200 units in inventory, the required return for an asset utilized in creating the inventory is $1 per unit and an element of the inventory step-up is the $1 per unit return on an asset utilized in creating the inventory. In applying the MPEEM, the

[20] An implied royalty rate for an IP asset valued with the MPEEM can be computed in the same manner that was applied to estimate the implied relationship royalty in Schedule D-3 of appendix D, "Abbreviated Example of Valuing Finished Goods Inventory." Note that the relationships are considered to be a disposal asset in the inventory valuation and do not contribute to the inventory step-up; therefore, no adjustment would be made for the inventory step-up in the customer MPEEM calculation.

CAC is $1,000 (1,000 units x $1/unit) and the inventory step-up is $200 (200 units x $1/unit). If both were applied to the MPEEM, total charges would relate to 1,200 units and would amount to $1,200; however, the annual run rate of 1,000 units reflected in the PFI indicates a total CAC of $1,000, (effectively recovery for 200 units already in inventory plus production and sale of an additional 800 units for a total of 1,000 units). Accordingly, total CACs should be consistent with the overall level of asset utilization and recovery. Reflecting CACs based on 1,200 units would be inconsistent with the overall utilization of 1,000 units.

As the adjustment related to IP-based intangibles is limited only to the value that the subject IP-based asset has created in the inventory and is reflected in the step-up, relationship-based intangible assets valued with the MPEEM will not require any double counting adjustment.

- *Fixed assets*. Fixed assets allow for the physical production of products, the workspace for the marketing, sales, and logistics functions for both tangible and intangible products, the facilitation of general management functions and corporate overhead. Although the exact nature of the contribution of a particular fixed asset to a specific acquired intangible asset is most likely unknowable, a reasonable allocation method should be used (for example, assigning fixed asset charges on the basis of revenue). Fixed assets mostly are "wasting" assets that require replacement or replenishment, or both, to sustain their productive capacity. Both return *of* and return *on* fixed assets would be charged to the intangible assets that those fixed assets support. Note that similar to working capital, the composition and required level of fixed assets may change over the prospective period, therefore, the level of charge could be different year by year over the prospective period. See Valuation Advisory #1 for several ways to calculate fixed asset CACs.

- *Intangible assets*. Intangible assets other than the subject asset may contribute to the cash flows of the collection of assets. Paragraphs 11–45 of FASB ASC 805-20-55 include examples of intangible assets that meet the criteria for recognition as a separate asset apart from goodwill, including marketing-related intangible assets, customer-related intangible assets, artistic-related intangible assets, contract-based intangible assets, and technology-based intangible assets. In addition, certain elements of a business may make a contribution to future cash flows, even if they are not recognizable as intangible assets under FASB ASC 805, *Business Combinations*, such as assembled workforce and trained staff. Required levels of intangible assets serve as a basis for applying CACs. For further discussion about contributory asset changes for intangible assets and the potential for applying CACs for elements of goodwill other than recognizable intangible assets, refer to Valuation Advisory #1.

- *Leased assets*. When a lease is acquired in a business combination and the acquiree is the lessee in the arrangement, the acquirer generally retains the acquiree's lease classification and remeasures the acquired lease liability and related right-of-use asset as if the lease were a new lease of the acquirer at the

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acquisition date (see the "Leases" sections in chapter 6 and chapter 13 for further discussion of leases in a business combination). The task force generally believes no CACs should be separately calculated and applied in the MPEEM related to the right-of-use asset because the PFI should already reflect the contractual cash lease expense for the use of the leased asset. If the acquired right-of-use asset has been adjusted to reflect terms that are favorable or unfavorable relative to market rates, the task force believes the PFI used for the MPEEM should be adjusted to reflect market terms.

When a lease is acquired in a business combination and the acquiree is the lessor in the arrangement, depending upon the asset being valued, it may be appropriate to consider a CAC in the MPEEM because these items are cash flow generating assets for a lessor.

12.128 The task force believes that when calculating the CAC associated with intangible assets valued using a cost approach (such as customer lists, internally developed software, assembled workforce, or trade names), it is often appropriate to assume that costs to maintain and enhance[21] intangible assets (that is, return *of* those intangible assets) are part of the operating expense structure of the entity's business. As such, only the return *on* contributory intangible assets will be charged to the subject intangible asset. Prospective expenses would need to be analyzed to determine the appropriate level of maintenance and enhancement costs included in relation to the full return *of* the subject assets.

12.129 Many contributory assets benefit more than one asset. The total CAC related to a particular contributory asset would need to be assigned across all the assets that benefit from that contributory asset in proportion to its usage. For example, a collection of assets that uses twice as much of a contributory asset than another collection of assets would incur twice the CAC. CACs should generally be assigned based on objective information about contributory asset usage. When objective, reliable information is not available, reasonable assumptions may be used. Although CACs generally are assigned to assets based on the relative revenue of each collection of assets, this approach may not always be appropriate. For example, for a collection of assets with significant operating leverage the usage of a particular contributory asset may not grow with revenue, rather it may grow with the level of certain operating expenses.

12.130 The valuation specialist needs to consider the possibility that the level of required contributory assets may change over time. For example, a technology-based business may have high scalability relative to fixed assets and possibly other assets (for example, a software company may be able to grow revenue ten-fold without significantly increasing its fixed assets). In this case, applying a stable charge for the entirety of the prospective period would not be appropriate. The capacity and current asset usage expected by market participants would need to be considered when determining the required amount of each contributory asset over the life of the subject asset.

[21] For a discussion regarding the growth adjustment, please see Valuation Advisory #1, section 3.7, "Special Adjustments for Growth Investments in Contributory Intangible Assets Valued Using the Cost Approach."

12.131 The required rates of return for the contributory assets need to be commensurate with the relative risk associated with investment in each particular asset. See the "Rates of Return for Assets and Liabilities" section of this chapter for further discussion of applicable rates of return.

12.132 CACs are applied throughout the prospective period, assuming investment in the applicable contributory asset is replaced over time as it is depreciated or amortized and the subsequent new investment requires the same return as the original investment. For example, in a case where a subject asset with an economic life of six years requires the use of a contributory asset that has an economic life of three years, a CAC would be applied over the entire six-year period. Note that if CAC is applied over a period longer than the economic life of the asset, the cost of replacing or otherwise developing the future version of that asset should not also be included as an expense in the PFI. This would not be the case, however, for contributory assets that are not otherwise replaced and simply expire (for example, a noncompetition agreement).

Step 3: Calculate the Present Value of the Excess Earnings Using a Discount Rate Appropriate for the Subject Intangible Asset

12.133 The valuation specialist would select a discount rate to apply to the after-tax cash flows (that is, excess earnings) that is consistent with the risk inherent in those cash flows. See the "Rates of Return for Assets and Liabilities" section of this chapter for a discussion on discount rates.

Step 4: Compute the Related Income Tax Benefits Resulting From the Amortization of the Subject Intangible Asset for Income Tax Purposes

12.134 The fair value of an asset valued using the MPEEM should incorporate the tax benefits resulting from the amortization of the intangible asset for income tax purposes. For further information, refer to the "Tax Amortization Benefit" section of this chapter for further discussion.

Distributor Method

12.135 The distributor method is a variation of the MPEEM used to value customer relationships. The distributor method is used in conjunction with the functional split analysis discussed in the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section of this chapter. The underlying premise of the method is that customers contribute to the value of the enterprise in proportion to the function of a distributor. Hence, the starting point is the application of a margin consistent with that of a distributor applied to the customer revenues. Distributor margins can be obtained from companies that are engaged in distribution. CACs are then deducted from the distributor margins to arrive at the excess earnings attributable to customers.

12.136 CACs are based on the types and levels of assets a distributor would typically use rather than the types and levels of assets used by the business as a whole. Typically, these contributory assets include working capital, fixed assets, and assembled workforce.

12.137 Using the distributor method in conjunction with the functional splitting of prospective cash flows for a collection of assets does not preclude an acquirer from using the MPEEM to

value another asset that has common PFI, because the distributor margin effectively splits the profits between customers and another asset without using cross charges. The distributor margin would be the base for the customer contributory charge in the MPEEM for the other asset. See Valuation Advisory #2 for further discussion of the distributor method.

Other Income Approach-Based Methods

12.138 Other valuation methods and techniques under the income approach include the following:

- Decision tree analysis[22]
- Monte Carlo analysis[23]
- Options-based methods[24]

12.139 While the task force recognizes that these other methods can be used in many circumstances to value intangible assets, as of the writing of this guide, they are not commonly used in practice. Therefore, they are not included in this guide; however, this does not intend to preclude their use.

Tax Amortization Benefit

12.140 The task force believes that the fair value of an intangible asset acquired in a business combination determined using an income approach would consider the expected tax expense

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[22] For detailed discussion of a decision tree analysis, readers should refer to the AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*, which provides an example of a decision tree analysis.

[23] For information on the Monte Carlo and other numerical simulation and scenario analysis techniques, readers may refer to the following publication: Johnathan Mun, *Modeling Risk: Applying Monte Carlo Risk Simulation, Strategic Real Options, Stochastic Forecasting, and Portfolio Optimization* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2010). Less technical discussions scenario valuation approaches can be found in the following two publications: Francis Clauss, *Corporate Financial Analysis with Microsoft Excel* (McGraw-Hill Companies, 2010) and Tim Koller, Marc Goedhart, and David Wessels, *Valuation: Measuring and Managing the Value of Companies* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2010). Furthermore, Richard Razgaitis' book *Dealmaking Using Real Options and Monte Carlo Analysis* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2003) is also a useful reference for Monte Carlo and real options techniques.

In addition, the Appraisal Foundation's VFR Valuation Advisory #4, *Valuation of Contingent Consideration* (Valuation Advisory #4), also discusses the Monte Carlo analysis. It is available at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

[24] For information on the real options method, readers may refer to the following publications: AICPA Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (see appendix G, "Real Options"); Thomas E. Copeland and Vladimir Antikarov, *Real Options, Revised Edition: A Practitioner's Guide* (London, UK: Texere, 2003); Martha Amram and Nalin Kulatilaka, *Real Options: Managing Strategic Investment in an Uncertain World* (Boston: Harvard University Press, 1999); Johnathan Mun, *Real Options Analysis: Tools and Techniques for Valuing Strategic Investments and Decisions* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2002); and Timothy Luehrman, *Investment Opportunities as Real Options: Getting Started on the Numbers* (*Harvard Business Review*, July 1998).

In addition, Valuation Advisory #4 discusses application of option pricing methods to value contingent consideration.

resulting from the taxable income attributable to the subject intangible asset. A key component in calculating taxable income is the amortization of the subject intangible asset for income tax purposes, which results in a TAB. Tax considerations need to be based on assumptions related to the tax attributes expected by a market participant buyer. A TAB is generally applied in the income approach but not under the market approach or the cost approach. A TAB is not appropriate under the market approach because it is assumed that tax benefits are already factored into observed market prices. A TAB is not appropriate under the cost approach because the costs already incorporate tax benefits.

12.141 In the case of a taxable transaction (i.e., asset sale), when the local tax jurisdiction allows an entity to amortize a subject intangible asset for tax purposes, fair value includes the associated tax benefits of the acquired assets. When a non-taxable transaction (i.e., stock sale) occurs without a corresponding change in the bases of assets acquired and liabilities assumed for tax purposes, some have argued that no tax benefit should be included in the fair value of the intangible assets acquired because the acquirer will not amortize the intangible assets acquired for income tax purposes. However, under FASB ASC 820, the fair value of the asset is an exit price that maximizes the economic benefit to market participants without regard to the manner in which the asset was purchased. The task force believes that the exit price should include the tax benefit because individual intangible assets generally would be sold among market participants in a taxable transaction.

12.142 Further, the task force notes that the practice of including a TAB, regardless of transaction structure, was the result of an interpretation of paragraph 129 of the Basis for Conclusions of FASB Statement No. 109, *Accounting for Income Taxes*. While this paragraph was not codified, the task force believes it provides relevant guidance and is, therefore, included in this guide. That paragraph stated the following

> Paragraph 89 of [APB] Opinion 16 stated that ". . . the fair value of an asset to an acquirer is less than its market or appraisal value if all or a portion of the market or appraisal value is not deductible for income taxes." The Board believes that the net result is the same whether amounts assigned to the individual assets acquired and liabilities assumed are pretax or net-of-tax. For example, assume (a) that the pretax market or appraisal value of depreciable assets acquired in a purchase business combination is $1,000, (b) that the tax basis of those assets is zero, and (c) that the enacted tax rate is 40% for all years. If net-of-tax, the assigned value of those assets would be $600. If pretax, the assigned value of those assets would be $1,000, and there would be a $400 deferred tax liability. Under either approach, the net result of allocating the purchase price is the same. The Board concluded that the amounts assigned to assets and liabilities in a purchase business combination should not be net of any related deferred tax liability or asset.

12.143 A TAB can be modeled by including amortization expense in the computation of taxable income by a circular reference to the concluded value. Amortization reduces taxable income which results in reduced tax expense. The amortization expense is then added back to after-tax income to arrive at available cash flow. The concept of the circular reference can be represented by the following equation:

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$$V = PVCF + [V * PVA * T]$$

Where:

V	=	Fair value of the asset
PVCF	=	Present value of cash flows excluding amortization of the asset (the asset cash flows)
PVA	=	Present value of an annuity of 1/N paid over the tax amortization period
N	=	Tax amortization period and is used to determine PVA
T	=	Tax rate
TAB	=	Tax amortization benefit

As can be seen, V (fair value) appears on both sides of the equation representing the circular reference discussed previously. The equation can be solved such that V only appears on one side of the equation resulting in a closed form solution, as follows:

$$V = PVCF / (1 - PVA * T)$$

Based on the concepts discussed earlier, fair value (V) is equal to present value of asset cash flows plus the TAB:

$$V = PVCF + TAB$$

Substituting this relationship into the preceding equation results in the following:

$$PVCF + TAB = PVCF / (1 - PVA * T)$$

Which, after further steps, results in the following equation and is most widely used in practice for applying a TAB.

$$TAB = PVCF \times [1/(1-PVA*T) - 1]$$

12.144 The following are several assumptions that need to be considered when computing a TAB for an intangible asset from the perspective of a market participant:

- the applicable tax amortization rules

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- the applicable tax rate
- the appropriate discount rate.

Applicable Tax Amortization Rules

12.145 The task force believes that the tax amortization rules applied should generally reflect the tax legislation in the jurisdiction where the asset is owned as that jurisdiction is generally where a new tax basis in the asset would be established. However, if there are no tax benefits possible (i.e., the tax legislation in the subject jurisdiction does not permit market participants to recognize a new tax basis under any circumstance), then the fair value of the assets should not include a TAB.

Applicable Tax Rate

12.146 The tax rate applied to compute the TAB should generally be consistent with the tax legislation of the jurisdiction where the subject intangible asset is owned and with the tax rate applied to develop the after-tax cash flows related to the subject intangible asset. The task force believes that the tax rate applied to compute the TAB will typically be a statutory tax rate.[25] However, in some circumstances the tax rate applied to develop the after-tax cash flows related to the intangible asset will be different than the statutory rate used to compute the TAB. For example, when the PFI reflects book depreciation, an effective tax rate may be used to reflect the effect of tax depreciation to derive a cash tax expense.

Appropriate Discount Rate

12.147 Conceptually, a *discount rate* represents the expected rate of return (that is, yield) that an investor would expect from an investment. The magnitude of the discount rate depends on the perceived risk of the cash flows being discounted. The task force understands that there is diversity in practice in the selection of the discount rate used to compute a TAB. Some believe the same discount rate used to discount the subject intangible asset cash flows should also be used to calculate the TAB because the risk of the TAB is the same as the risk of the asset cash flows. Others believe the WACC for the overall entity should be used to calculate the TAB because once tax basis is established by the amount paid, the risk of realizing the TAB is consistent with that of the entity as a whole. The task force observes that when expected cash flows are used for the subject intangible asset, there may be little difference between the discount rate for those cash flows and that of the entity as a whole. However, when conditional cash flows are used for the intangible asset cash flows, the risk of these cash flows may be different from the risk of the entity. In this circumstance, the task force believes it is generally appropriate to use one discount rate for the asset cash flows and a discount rate more consistent with the overall entity for computing the TAB. When two discount rates are used and they are significantly different, the task force recommends computing a single average discount rate when performing a weighted average return on assets (WARA) analysis (in effect an internal rate of

[25] The term *statutory tax rate* is synonymous with the term *enacted tax rate*, which is predominantly used in FASB ASC 740, *Income Taxes*.

return [IRR] for the asset). For a discussion regarding the basis of cash flows, refer to paragraph 12.169 of the "WARA Analysis" section.

12.148 The following table illustrates the calculation of the TAB for an asset with a straight-line tax amortization period of 15 years (as would be the case under the current U.S. tax law, presuming Internal Revenue Code Section 197 treatment). The same calculation can also be applied to other periods and amortization patterns that are not straight-line. In this calculation, the fair value of the asset is inclusive of the TAB itself.

Assumptions	
PVCF	$ 10,000
Tax amortization period (years)	15
Tax rate:	25%
Discount rate	15%

Year	Midyear Convention	Present Value Factor	1 / Tax Amortization Period	Present Value of Amortization
1	0.5	0.9325	0.067	0.0622
2	1.5	0.8109	0.067	0.0541
3	2.5	0.7051	0.067	0.0470
4	3.5	0.6131	0.067	0.0409
5	4.5	0.5332	0.067	0.0355
6	5.5	0.4636	0.067	0.0309
7	6.5	0.4031	0.067	0.0269
8	7.5	0.3506	0.067	0.0234
9	8.5	0.3048	0.067	0.0203
10	9.5	0.2651	0.067	0.0177
11	10.5	0.2305	0.067	0.0154
12	11.5	0.2004	0.067	0.0134
13	12.5	0.1743	0.067	0.0116
14	13.5	0.1516	0.067	0.0101
15	14.5	0.1318	0.067	0.0088
PVA			**1**	**0.4180**
TAB		PVCF x [1/(1-PVA*T)-1]		**$ 1,167**
PVCF				10,000
Fair value of asset				**$ 11,167**

12.149 In many cases, a subject intangible asset that derives cash flows in more than one jurisdiction may be valued as a single asset in a business combination. For example, customer relationships with different jurisdictions might be valued as a single asset. Doing so would require a weighted average tax rate for the asset cash flows and a weighted average TAB factor. One way to compute a weighted average TAB factor might be to compute TAB factors for each significant jurisdiction and weight them by an appropriate metric such as revenue or EBIT. This

computation is illustrated in the following table. A similar approach might be taken to compute a weighted average tax rate.

Tax Jurisdiction	TAB Factor (PVA*T)[1]	EBIT	Weighted EBIT Factor	Weighted TAB Factor
A[2]	0	70	35%	0
B	0.12	50	25%	0.03
C	0.17	80	40%	0.07
Total		200	100%	**0.10**

[1] TAB factor is defined as the (PVA*T) component of the equation in paragraph 12.143.

[2] Country A does not consider subject intangible asset's amortization to be tax deductible.

Questions and Answers—Tax Amortization Benefit

12.150 *Question 1:* Company A acquires Company T in a business combination and recognizes a liability associated with an unfavorable customer contract valued using an income approach. Should a TAB be considered in the value of the liability?

Answer: Generally, a TAB should not be applied as liabilities are valued on a pre-tax basis.

12.151 *Question 2:* Company A acquires the assets of Company T in a business combination structured as an asset acquisition for income tax purposes resulting in an increase in the tax basis of the assets, and for financial reporting purposes, the fair value of an intangible asset is measured using a discounted cash flow method. In addition, the acquired intangible asset is deductible for income tax purposes on a straight-line basis over a 15-year life. Company A values the acquired intangible assets using a discounted cash flow method with a 15% discount rate.[26] Further, assume the following regarding the acquired intangible asset:

[26] For ease of demonstration in this example, the same discount rate was used for the tax amortization benefit (TAB) and for the underlying intangible asset.

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	Year 1	Year 2	Year 3
Estimated:			
Pre-tax cash flows	$ 2,000	$ 2,000	$ 2,000
Income Taxes at 25%	500	500	500
After-tax cash flows	1,500	1,500	1,500
Present value factor at 15%	0.933	0.811	0.705
Present value of after-tax cash flows	1,399	1,216	1,058
Sum			**$ 3,673**

This $3,673 of discounted cash flows also generates an income tax benefit from its tax amortization over a 15-year period. The present value of that benefit has been calculated to be $429, giving rise to an overall value for the asset of $4,102. Should the fair value of the intangible be $3,673, representing its value before consideration of tax deductibility, or $4,102, representing the value because the acquired intangible asset is amortizable for income tax purposes?

Answer: $4,102. As discussed in paragraph 12.140, the fair value of an intangible asset includes the tax benefits resulting from the amortization of that intangible asset for income tax purposes.

12.152 *Question 3* Assume the same facts as in question 2 except that the transaction was structured as a nontaxable business combination. Because the transaction was structured as nontaxable instead of taxable, no change occurs in the bases of the assets acquired for income tax purposes. Assuming the intangible asset under analysis was internally generated by Company T, it has no tax basis to Company A in this transaction. Should the fair value of the intangible asset be $3,673, representing its value without assuming tax deductibility (that is, reflecting that no tax benefits will result from the asset), or $4,102, representing the value assuming the acquired intangible asset is amortizable for income tax purposes irrespective of the asset's actual tax attributes?

Answer: $4,102. As discussed in paragraph 12.140, the fair value of an intangible asset includes the tax benefits resulting from the amortization of that intangible asset for income tax purposes. In addition, as discussed in paragraph 12.141, the tax benefits associated with the amortization of that intangible asset are included in the fair value of the intangible asset without regard to whether the transaction was structured as a taxable (that is, change in tax bases of assets acquired) or nontaxable business combination (that is, no change in tax bases of assets acquired). This is because the exit value to a market participant buyer of the asset would include consideration of the tax deductibility of the asset.

Rates of Return for Assets and Liabilities

12.153 Development of rates of return on individual assets and liabilities is a key aspect of the valuation of assets and liabilities in a business combination. Such rates have two applications: 1)

directly when an asset or liability is valued using an income approach, and 2) for developing CACs when the MPEEM is used to value an acquired asset. For the most part, such rates are not directly observable in the market but, rather, must be derived. The typical starting point is the overall or average rate of return for the operating value of the entity which is typically a WACC. The selected rates are tested using a WARA analysis (discussed in the "WARA Analysis" section later in this chapter) to ensure that, on a value weighted basis the selected rates approximately equal to the WACC for the entity. This guidance presumes the use of an expected cash flow / expected return (under the expected present value technique). If a conditional cash flow (under the discount rate adjustment technique) is used to value the asset, the discount rate used to value the asset would not be an appropriate basis for computing a CAC for the asset (for further discussion, see the "Expected Present Value Technique versus Discount Rate Adjustment Technique" section in chapter 10).

Considerations for Assets

12.154 The *required rate of return* that is applied when measuring the fair value of an asset needs to be commensurate with the relative risk associated with investment in the asset. The level of debt financing that could be secured for a particular asset can serve as a proxy for the risk level associated with that asset. The starting point will typically be the inputs used to compute the WACC for the entity, the market participant cost of equity and debt for the entity. These rates represent debt and equity sections of the balance sheet and on a weighted basis the WACC. From an investor perspective the required rates of return for debt and equity capital are assessed among other factors based on the risk of the entity as a whole as well as the relative mix of debt and equity. Conceptually, the WACC should also equal the WARA. That is the assets collectively must earn a weighted average return in order to approximate the WACC.

12.155 The valuation specialist may use a loan-to-value ratio[27] approach when developing the required rate of return for specific classes of assets. It may also be helpful to consider how market participants would finance specific assets, including how they would consider the respective risks and rates of return associated with those assets. Other factors to consider include standalone market value, implied required rates of return for assets that have independent cash flows, and market value.

12.156 When an asset is unique, has limited value on a standalone basis and represents a significant portion of the entity's total net assets, a required rate of return that is close to the overall WACC may be appropriate. For example, specialized tangible assets used in a utility company generally represent a substantial portion of the entity's total net assets, thereby warranting a rate of return similar to that of the overall entity. Generally, specialized inventory, fixed assets without alternative uses, and intangibles have risk characteristics that are considered similar to the risk of the overall entity and, therefore, a return closer to the WACC would be applied. In contrast, this may not be the case when an asset is easily liquidated and more generic in nature.

[27] *Loan-to-value ratio* is lending risk assessment ratio that financial institutions and other lenders examine before approving a loan. It is calculated as the amount of the loan divided by the value of the collateral, expressed as a percentage.

12.157 The following table provides a summary by asset class of factors to consider when estimating rates of return using the relative debt/equity financing assumptions.

Asset	*Commonly Considered Basis of Rate of Return*
Working capital	Blend of short-term borrowing rates (for example, working capital lines or short-term revolver rates) and cost of equity for market participants. Relative amounts of debt and equity may vary for risk factors such as average collection period for accounts receivable, the time to convert inventory to cash and the relatively unique nature of inventory.
Fixed assets (for example, property, plant, and equipment)	Blend of a borrowing rate[28] for similar assets for market participants (for example, terms offered by vendor financing, rates on longer term borrowings, or rates implied by operating leases, finance leases, or both (typically segregated between return *of* [that is, recapture of investment] and return *on* asset), and cost of equity). The more specialized and unique the assets are, the greater the level of equity financing to be considered.
Intangible assets	Rates appropriate to the risk of the subject intangible asset. Market evidence would be used whenever available. In other cases, rates would need to be consistent with the relative risk of other assets in the analysis, with rates being higher for riskier assets. Additionally, intangible assets often are not financed with significant debt and, therefore, would require a higher proportion of equity financing. Intangible assets valued by means other than an income approach, such as cost or market approach, generally do not have direct cash flow risk and, accordingly, would be expected to have a rate of return no greater than the entity cost of equity.

Considerations for Liabilities

12.158 FASB ASC 820 states that an entity should consider its own risk of non-performance when measuring the fair value of liabilities (e.g., the entity's own credit rating). Generally, an entity will select a risk-free rate consistent with the terms of the liability arrangement, and adjust it based on a credit spread that is consistent with the entity's non-performance risk. Further adjustments may be required if non-credit related risks give rise to additional variability in the related cash flows. The task force recommends directly adjusting the cash flows to reflect all other risks. For example, a bond obligation based solely on contractual cash flows is often limited to non-performance risk that would be captured in the developed rate of return. In contrast, when measuring a liability where cash flows are not contractual, there may be risk in addition to non-performance risk due to uncertainty around the cash flows.

Analyzing the Selected Net Asset Rates of Return

12.159 In practice, stratified rates of return are often applied to classes of assets. When this occurs, it is necessary to perform additional analysis to ensure that the selected rates of return

[28] For further discussion regarding borrowing rates, see paragraph 4.2.06 in Valuation Advisory #1.

reconcile to the average rate of return for the entity (typically, the WACC). The two diagnostic analyses most often performed are the WARA analysis and the implied capital structure analysis. In general, the task force believes primary reliance should be placed on the WARA analysis and, when appropriate, be supplemented with the implied capital structure analysis.

WARA Analysis

12.160 The WARA analysis is a diagnostic used to assess the relative reasonableness of the selected rates of return on various classes of assets. The WARA analysis involves reconciling the rates of return assigned to the individual assets, on a fair-value-weighted basis, to the estimated WACC (or the transaction's IRR, if the PFI does not represent market participant expected cash flow assumptions). The same rates of return used as discount rates to value assets or to develop CACs should be reflected in the WARA.

12.161 The WARA analysis can be performed using two alternative perspectives:

> *Top-down perspective* – The top-down perspective is applied by setting the WARA equal to the estimated WACC or IRR and solving for an implied rate of return on *economic goodwill*.[29] The reasonableness of the rates of return attributable to individual assets is assessed in the context of the implied rate of return on economic goodwill and the estimated WACC or IRR (see also the "Consideration of Tax Amortization Benefit in a WARA Analysis" section of this chapter for additional discussion).
>
> *Bottom-up perspective* – The bottom-up perspective is applied by selecting a required rate of return on economic goodwill and calculating the WARA. The calculated WARA is then compared to the estimated WACC or IRR. The reasonableness of the rates of return attributable to individual assets, including economic goodwill, is assessed in the context of the calculated WARA relative to the estimated WACC or IRR.

12.162 Regardless of the perspective used, the overall objective of the analysis is the same. When evaluating the results of a WARA analysis, a reasonable rate of return on economic goodwill, whether implied (top-down) or selected (bottom-up) considers a transaction's facts and circumstances and the risks associated with the cash flow to justify investment in economic goodwill. The task force believes the rate of return on economic goodwill should not be less than the WACC as economic goodwill represents, at a minimum, the future blended average assets of the entity. The estimated WACC is an indicator of a market participant's expected return of the overall entity and is compared with the computed WARA to identify whether the rates of return applied to the individual assets require further adjustment. The task force believes that, in

[29] The term *goodwill* as it is used in the context of a WARA analysis refers to *economic goodwill* rather than the FASB ASC accounting definition of goodwill. *Economic goodwill* is the residual amount that results from subtracting the fair value of the identifiable assets, including working capital, from the operating value of the entity adjusted to reflect a taxable transaction (that is, inclusion of the TAB). Simply stated, it represents future cash flows of the entity not associated with separately identified assets. It excludes the effect of accounting adjustments such as deferred taxes. Accordingly, the term *economic goodwill* is used in the remainder of this section. Also see the example in paragraphs 12.172–.176.

general, the top-down perspective is preferable because it is consistent with the residual computation of goodwill. However, when the economic goodwill balance is small, the bottom-up perspective may be appropriate because it avoids potentially anomalous implied returns on economic goodwill that may arise when using the top-down perspective.

12.163 The following table illustrates a WARA analysis using the top-down perspective. The assumed rates of return are selected for each asset in accordance with the asset's risk profile (see the "Rates of Return for Assets and Liabilities" section of this chapter for a discussion of asset rates of return). WACC and the cost of equity are assumed to be 12% and 15%, respectively. The WARA analysis results in an implied rate of return on economic goodwill of 15.7%. This rate exceeds the selected rates for the intangible and other assets, indicating that those selected rates may be reasonable. In addition, the economic goodwill rate is higher than the cost of equity. However, arriving at the conclusion that the economic goodwill rate of return is reasonable is not solely a quantitative assessment. Qualitative factors should also be considered such as the risk of realizing the cash flows associated with economic goodwill relative to that of the identified assets. For example, if a significant component of the economic goodwill is attributed to achieving synergy and growth that is not reflected in the identified intangible assets, a greater difference in the implied rate of return on economic goodwill and the selected rates for the intangible assets may be reasonable. Conversely, if a significant component of the goodwill is largely attributed to future replacement of the acquired intangible assets, a lesser difference between these rates may be appropriate. Given the significant amount of economic goodwill in this example, a bottom-up perspective was not considered to be appropriate.

Assets		**Fair Value**	**% of Total**	**After-Tax Rate of Return**	**Weighted Avg Rate of Return**
Normalized working capital	[1]	$ 40	8.9%	4.0%	0.4%
Fixed assets		60	13.3%	7.0%	0.9%
Trademarks/trade names		30	6.7%	12.0%	0.8%
Customer relationships		70	15.6%	12.0%	1.9%
Developed technology		50	11.1%	12.0%	1.3%
IPR&D		30	6.7%	13.0%	0.9%
Assembled workforce		10	2.2%	12.0%	0.3%
Economic goodwill		160	35.6%	15.7%	5.6%
Entity's adjusted operating value	[1]	**450**	**100.0%**		**12.0%**
Plus:					
Excess working capital	[1]	20			
Entity's purchase price	[1]	**$ 470**			

1 The entity's purchase price was $470 (in a taxable transaction). Normalized working capital was estimated to be $40. Since acquired working capital amounted to $60, $20 was therefore considered excess and treated as a non-operating asset. Accordingly, the entity's purchase price of $470 was adjusted to remove the non-operating asset of $20 to arrive at the entity's adjusted operating value of $450.

12.164 The example in the table in paragraph 12.163 illustrates a WARA analysis which includes normalized asset levels and non-operating assets and liabilities. However, there may be

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other considerations when performing a WARA analysis which need to be considered (such as the basis of cash flows – expected or conditional, taxable vs. non-taxable transactions).

12.165 A WARA analysis typically reflects a reconciliation of individual operating asset values to the operating value of the acquired business as a whole. Accordingly, adjustments to the purchase price for normalized levels of assets and or non-operating assets or liabilities may be required. If the acquiree has an excess or deficit of working capital, the purchase price should be reduced by the excess or increased by the deficit and the normalized level of working capital used as the fair value of the asset. The purchase price would also be reduced or increased by the amount of any non-operating assets and non-operating liabilities, respectively. However, since the WARA analysis reflects ongoing operating value only, non-operating assets and liabilities are not otherwise reflected in the calculation (i.e., they are not assigned a required rate of return). The task force also believes that one-time purchase accounting adjustments (e.g., inventory step-up and assets or liabilities related to off-market contracts) should generally be excluded from the WARA analysis while making appropriate corresponding adjustments to the operating value.

12.166 Alternatively, if inventory step-up is included in the WARA and the corresponding adjustment to operating value is not made, the task force believes it should be a separate line in the analysis and carry a weighted rate of return that is consistent with the value elements that give rise to the step-up (e.g., returns on manufacturing assets and intellectual property). See the "Inventory" section in chapter 13 for a detailed discussion of inventory valuation. When there is inventory step-up, the total value of assets that give rise to the step-up is bifurcated in two components: in the inventory step-up and the separate valuation of the asset, accordingly for consistency the components should carry the same rate of return. In lieu of a detailed analysis of value components, the task force observes the WACC is an appropriate rate of return for the inventory step-up in a WARA analysis (see inventory scenario in appendix B for an illustration).

12.167 *Considerations when an acquiree is a lessee.* When a lease liability and related right-of-use asset net approximately to zero and the PFI used to estimate the operating value of the entity reflects the contractual cash lease expense, such lease-related assets and liabilities should generally be excluded from the WARA analysis. If the amounts differ significantly (i.e., the lease is off-market at the acquisition date) and an asset is valued using the MPEEM, then a net asset or net liability associated with the lease should be reflected in the WARA analysis at an appropriate rate of return to offset the use of a market lease rate in the MPEEM (see the "Leases" sections in chapter 6 and chapter 13 for further discussion of leases in a business combination).

12.168 *Considerations when an acquiree is a lessor*. For sales-type and direct financing leases, the recognized assets include a lease receivable and an unguaranteed residual asset. For operating leases, the recognized assets include the underlying leased asset. Because these items are cash flow generating assets for a lessor, they would be included in a WARA analysis at an appropriate rate of return.

12.169 *Consideration for expected versus conditional cash flows in WARA analysis.* The basis of the cash flows of the entity and that of the individual assets should be consistent when performing a WARA analysis. Mixing the basis of cash flows and rates of return in a WARA analysis diminishes the usefulness of the analysis. When the basis of the cash flows for the entity and individual assets are expected cash flows, the WARA should generally be reconciled to the

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estimated WACC of the particular entity. Because the estimated WACC is consistent with a weighted average expected return on assets, implicitly when using expected cash flows for individual assets, rates of return applied to individual assets must be their respective expected rates of return. Likewise, when the basis of the cash flows for the entity and individual assets are conditional cash flows, the WARA is typically reconciled to the IRR for the entity indicated by the transaction. Because the IRR for the entity is a weighted average conditional return on assets, implicitly when using conditional cash flows for individual assets, rates of return applied to individual assets must be their respective conditional rates of return. The task force notes that when some of the acquired assets are not valued using an income approach and, thus, do not bear the conditional risk of the cash flows, it may be appropriate to use expected rates of return for those assets. This may be the case even though intangible assets valued with the income approach are based on conditional cash flows and conditional rates of return such that WARA reconciles to the entity IRR.

Consideration of Tax Amortization Benefit in a WARA Analysis

12.170 When calculating the WARA, if the tax benefits related to the fair value of the assets acquired (typically TAB) are not reflected in the overall PFI (for example, a nontaxable transaction), an adjustment should be made to the purchase consideration used in the WARA calculation so that the purchase consideration and asset values are on a consistent basis. That adjustment should include the TAB inherent in the recognized intangible assets, economic goodwill and any incremental tax depreciation related to the fair value of the tangible assets. If this adjustment is not applied, the potential exists to understate the implied *economic goodwill* and, therefore, distort the WARA analysis. For further discussion, see paragraphs 4.3.03 and 4.3.08 in Valuation Advisory #1. The approach of adjusting the purchase consideration may be most appropriate when there is a significant difference between the tax basis and fair value of the tangible assets and the intangible assets are valued using a variety of approaches.

12.171 An alternate approach to adjusting the purchase consideration is to adjust the asset values for TAB. This alternative approach is applicable only when: (i) there is little difference between the tax basis and fair value of the tangible assets or (ii) there are not significant tangible assets; and any intangible assets are valued using an income approach inclusive of applicable TAB. In this circumstance the TAB is a readily identifiable component of the asset fair value and easily removed, resulting in the intangible assets being on the same basis as the purchase consideration.

Example of Transaction Consideration Adjustment

12.172 This example assumes the following:

- A taxable transaction with consideration of $710 million;
- A nontaxable transaction with consideration of $620 million (with no other differences between the taxable and nontaxable scenarios);
- Acquired working capital of $100 million with a required rate of return of 4%;
- An acquired intangible asset of $500 million inclusive of a TAB valued using expected cash flows discounted at 13%; and
- WACC of 12%.

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12.173 In the taxable transaction, the implied economic goodwill is $110 million. In the nontaxable transaction in which the TAB value is included in the value of the acquired intangible asset ($500 million) but not reflected in the PFI that supports the transaction consideration of $620 million, the resulting economic goodwill is $20 million.

12.174 A top-down WARA analysis (shown in the following table) is performed for both transactions, which results in an implied rate of return for economic goodwill of 14.7% for the taxable transaction and 27% for the nontaxable transaction.

- The implied rate of return for economic goodwill in the taxable transaction (14.7%) is deemed reasonable in the context of the WACC, the rate of return on the acquired intangible asset and qualitative factors for the transaction.
- In contrast, the implied rate of return for economic goodwill in the nontaxable transaction (27%) appears unreasonably high in the context of the WACC, the rate of return on the acquired intangible asset and qualitative factors for the transaction.

	Taxable Transaction (in millions)	Rate of Return	Nontaxable Transaction (in millions)	Rate of Return
Working capital	$100	4.0%	$100	4.0%
Intangible asset fair value (including TAB)	$500	13.0%	$500	13.0%
Economic goodwill	$110	14.7%	$20	27.0%
Transaction consideration	$710	12.0%	$620	12.0%

12.175 Because the PFI supporting the transaction consideration of $620 million excludes the incremental cash flows associated with the tax savings that would be realized in a taxable transaction, an adjustment of $90 million should be added to the transaction consideration for use in the WARA analysis. This adjustment makes the transaction consideration consistent with the intangible asset fair value which includes a TAB that makes up a significant component of the total of $90 million of tax savings available for a taxable transaction. By adjusting the transaction consideration, the WARA analysis for the nontaxable transaction would be the same as for the taxable transaction. This would result in an implied rate of return on economic goodwill of 14.7% for both transaction that is deemed reasonable and which would also indicate that the selected rates of return for the identified assets would also be deemed reasonable.

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12.176 The adjustment to the transaction consideration is illustrated in the following table:

	Taxable transaction	*Nontaxable transaction*
Transaction consideration	$710	$620
Asset fair value (including TAB)	600	600
Economic goodwill	110	20
Present value of TAB[1]	(included)	90
Adjusted transaction consideration	710 (unchanged)	710
Adjusted economic goodwill	110 (unchanged)	110

[1] Present value of TAB includes TAB on all intangible assets, including economic goodwill.

The concept of making an imputed adjustment to a nontaxable transaction price to arrive at a taxable transaction price equivalent involves considering all asset categories and comparing their fair values to their tax basis. The difference between fair values of the assets, including economic goodwill, and their tax bases would represent the foregone tax benefit that would be added as an adjustment to arrive at an imputed taxable value for the transaction. It should be noted that when this approach is used, the amount of economic goodwill for the WARA analysis will be different than that implied by the transaction consideration for a non-taxable transaction, as well as the amount of economic goodwill referred to in the "Financial Overlay" section of this chapter.

Implied Capital Structure Analysis

12.177 As outlined previously, the typical method to develop asset rates of return is to consider the relative amounts of debt and equity financing for each asset taking into account the relative risk of the asset, among other factors. To further assess the reasonableness of selected asset rates of return, an additional diagnostic analysis would be to compute the capital structure implied by the selected rates of return and compare the outcome to a market participant capital structure. This supplemental analysis is generally most applicable when reconciling the WARA to the WACC in the context of expected cash flows. The computation is illustrated in the following table.

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	A	B	C	D	E
	Fair Value	% Debt	% Equity	Implied Debt	Implied Equity
Working Capital	$ 500	80%	20%	$ 400	$ 100
Fixed Assets	700	60%	40%	420	280
Intangible Assets and Economic Goodwill	1,200	0%	100%	-	1,200
Total	$ 2,400	34%	66%	$ 820	$ 1,580

D = A*B
E = A*C

12.178 In this example, the capital structure implied by the selected funding ratios for individual assets is 34% for debt and 66% for equity. A market participant capital structure that is broadly consistent with this outcome might provide some further evidence that the selected rates of return for individual assets are reasonable. However, such an analysis should be used to supplement, and not replace, a WARA analysis as this analysis only addresses implied capital structure, while the WARA analysis tests that individual rates of return on a fair value weighted basis equal to the required rate of return for the entity. The implied capital structure analysis is indicative and directional in nature. The task force believes it is not necessary for the implied capital structure to match the average capital structure of the selected comparable companies used to estimate the WACC. For example, when a WACC indicates an all equity capital structure, basing the required rate of return for routine working capital and non-specialized fixed assets on that metric may overstate the relative risk of those assets. Likewise, a WACC that indicates very high levels of debt financing may not be an appropriate benchmark to use because it does not represent a sustainable capital structure.

Financial Overlay

Introduction

12.179 A financial overlay is a diagnostic analysis that may be considered to evaluate the contributions and interrelationships of both existing and future assets to the business unit PFI. The analysis looks beyond the assets and liabilities that are recognized for financial reporting purposes to identify and understand how and where the business expects to create value in the future (that is, economic goodwill[30]). This analysis can also help the modelling aspect of valuation analyses by ensuring all elements of the business unit PFI are appropriately evaluated and attributed to the existing and future assets. The task force believes that such an analysis is not required; however, it does provide incremental insight into the nature and composition of economic goodwill and may be a helpful supplement to a WARA analysis.

12.180 Chapter 10 discusses the calculation of an IRR in the context of operating value and establishes the relationship between operating cash flows and the asset values of a business unit.

[30] The amount of economic goodwill for the financial overlay analysis may be different than that implied by the transaction consideration for a non-taxable transaction.

This relationship is based on the premise that the highest and best use of nonfinancial assets is in an ongoing business in combination with other assets and liabilities. Under FASB ASC 820-10-35-10E, "[a]ssumptions about the highest and best use of a nonfinancial asset shall be consistent for all of the assets (for which highest and best use is relevant) of the group of assets or the group of assets and liabilities within which the asset would be used." A financial overlay assesses the operating cash flow of the business unit to ensure that it captures the economic benefits of all the existing and future assets, regardless of the valuation approach or method applied, in the context of the highest and best use of the business unit by a market participant.

Operating Cash Flow Assessment

12.181 Business unit PFI reflects the aggregate contributions of all the operating assets, including those that currently exist and are recognized in a business combination as well as those that will be purchased or created in the future. Regardless of whether the PFI is prepared using a top-down method, bottom-up method or a combination of the two, it is a measure of the economic benefit that a market participant would expect to derive from the business unit assets operating in conjunction with each other. Asset level PFI should be evaluated on its own merits, as well as in the context of the business unit PFI, to provide for internal consistency.

12.182 Absent a financial overlay, the valuation analysis places most of its emphasis on identifying and evaluating PFI for the respective income based intangible assets and applying the cost or market approach to the remaining assets. There is little or no focus placed upon the prospective cash flows that have not been attributed to a recognizable asset. Additionally, a WARA analysis is applied to assess the relative rates of return of the respective assets and the economic goodwill.

12.183 One attribute of a financial overlay is that it expands the analysis to include an assessment focused on the business unit prospective cash flows that have not been attributed to the recognizable assets. These cash flows, which underpin the value of the economic goodwill, define the long-term strategic direction of the business unit and provide a platform to evaluate how and where value will be created in the future. Such an analysis can consider the cash flows attributable to unrecognized assets in aggregate or in greater detail at the asset class or individual asset level (for example, significant next generation IPR&D projects that have not yet begun and do not have substance as of the measurement date).

12.184 Note that the evaluation of the future assets is used solely as a tool to evaluate the long-term prospects of the business unit, which are captured as goodwill in the financial statements. It uses past value creation successes as a benchmark for future expectations and, depending on the level of the analysis, can provide insight into the expected future mix of assets reflected in the economic goodwill such as:

- Will the ratio of relationship-based assets to IP-based assets remain constant or migrate over time because of a maturation of the business or a shift in strategy?

- Is the company expected to be more efficient in the future, as evidenced by increasing asset turnover, thereby, reducing the future proportions of working capital, fixed assets, or workforce?

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- Does the business unit plan on outsourcing certain functions or accessing next generation IP through license agreements?

12.185 The prospective cash flows can also be evaluated to ensure any allocations were proper, in addition to whether the PFI is internally consistent. For example:

- Is there an appropriate investment in fixed assets to support the productive capacity needed for the projected revenue growth?

- Are the marketing expenses sufficient to support a product launch or geographic expansion?

- Is the R&D expense aligned with the expectation of future IP development?

Model Integrity and Application

12.186 Valuation models developed for business combinations can be complex and rely on numerous calculations, assumptions, and allocations. A financial overlay provides a useful process to test the integrity of valuation models. When an income method(s) is applied to the prospective cash flows related to future or unrecognized assets, the entirety of the business unit's PFI will be linked to an asset, either existing or future, in one form or another. As such, the aggregate of the asset level cash flows in the financial overlay (adjusted for CACs for working capital, fixed assets and assembled workforce) reconcile to the business unit overall cash flow, thereby proving that all cash flows have been accounted for and that there is no double counting.

12.187 Appendix B provides a simplified example of how a financial overlay can be integrated into the valuation analysis. In that example, the business unit's operating cash flows are ascribed to the respective assets in the following manner:

- *Working Capital*: Income is assigned through a CAC for the initial and incremental amounts;
- *Fixed Assets*: CACs for the initial amounts, valued with the cost and market approaches, and projected capital expenditures;
- *Routine IP (Existing)*: Relief from royalty method (routine royalty);
- *Brand IP*: Relief from royalty method (simulated royalty);
- *Relationships (Existing)*: MPEEM;
- *Assembled Workforce*: CAC for the initial amount, valued with the cost approach, and future increases resulting from operating expense investments (note this example assumes that the assembled workforce does not increase in value therefore no adjustments for the growth investment were required);
- *Routine IP (Future)*: Relief from royalty method;
- *Relationships (Future)*: MPEEM.

12.188 The difference that results when reconciling the sum of the cash flows derived from application of the aforementioned valuation methods to the total operating cash flows is attributable to the CACs in the MPEEM and the cash flow adjustments (e.g., changes in working capital, depreciation and capital expenditures) made to the operating value.

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12.189 CACs come in two basic forms: (1) the calculation of the Return On and Of contributory assets (economic rent) valued with the cost or market approaches, and (2) a profit split commonly applied by deducting a royalty charge. Economic rent is generally calculated to capture both the initial (acquired) fair value of the asset as well as future investments to maintain and grow the respective asset type. CACs for future investments essentially replace each annual investment with a series of economic rents that are equivalent to the present value of the initial investment. This element of a CAC has the same economic impact as the incremental working capital and capital expenditure cash outflows in the prospective operating cash flows.

12.190 The other portion of the economic rents apply to the fair value of the acquired contributory assets measured with the cost or market approach. These CACs are incremental to the operating cash flows and, as such, they do not impact the reconciliation of the PFI. However, they are integrated into the financial overlay by deducting the CACs in the MPEEMs and removing the fair values from the operating value. This is discussed further in the financial overlay steps that follow.

12.191 The remaining elements of the operating cash flow are all reflected in the MPEEM and relief from royalty analyses.

12.192 The second form of CACs, royalty charges, shift value from the assets valued with the MPEEM to the assets valued with the relief from royalty method and as such are already fully accounted for in the cash flows supporting the respective assets.

12.193 The following steps are based on the toolkit from Valuation Advisory #1 (the toolkit) and reference the analysis performed in the Owned Scenario in appendix B of this guide. Refer to the toolkit for a detailed demonstration of a financial overlay.

Step 1

A financial overlay is performed in the context of the business unit's operating value and PFI. Any elements of entity-specific synergies are removed from the PFI. If entity-specific synergies are purchased in the transaction, they should also be removed from the total purchase price to arrive at operating value (see chapter 10).

Step 2

The IRR of the transaction, based on the market participant assumptions, is estimated and compared to the entity's WACC (see chapter 10). Schedule 2 (Owned) in appendix B indicates an IRR or discount rate of 15%, which is assumed to be consistent with a WACC analysis (range of 14.5% to 15.5%).

Step 3

CACs are calculated based on the fair value of the contributory assets. When the fair value exceeds the asset's tax basis, the tax benefit related to this incremental value (resulting from the hypothetical increase in the tax basis) would be included in the business unit PFI. This results in an increase in the operating value and is referred to as the *adjusted entity value* in the toolkit. The example in appendix B of this guide makes the simplifying assumptions that the tax basis of the fixed assets is equal to fair value and that the

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assembled workforce adjustment is not significant. When the step-up in the fixed asset value or contributory intangible assets measured with a cost approach are sizable, the adjustments to the entity value detailed in the toolkit should be considered.

Step 4

The analysis is performed using the same rate of return for all assets to ensure that all cash flows have been allocated to the assets and that the CAC calculations are mathematically correct. As stated previously, by including analyses of the future assets (future Relationships and future Routine IP in appendix B) all the business unit PFI will have been attributed to a recognizable or future asset. Furthermore, the CACs applied for the use of the contributory assets valued with a cost or market approach assign a portion of the business unit PFI to those assets (by deducting the CACs in the MPEEM analyses). Therefore, if all the business unit PFI has been properly reflected in the components of the valuation model, applying the IRR to all the assets (including the Return On CAC calculations) should result in the asset values reconciling to the operating value (adjusted, as needed, in step 3). When this step is applied to the owned scenario in the example in appendix B, the value indications are:

Working Capital	$190
Fixed Assets	189
Routine IP (existing)	82
Brand IP	777
Relationships (existing)	455
Assembled Workforce	50
Routine IP (future)	39
Relationships (future)	644
Total	2,426
Operating Value	2,439

The individual amounts reconcile to the operating value (difference of $13 is due to rounding and exclusion of the assembled workforce adjustment in Step 3). However, the individual amounts (other than the working capital, fixed assets, and assembled workforce) are not indications of fair value. The rates of return have not been adjusted to reflect the respective asset risk profiles (see the following step 5) and TABs are excluded.

Step 5

The analysis is modified to reflect the selected rates of return for the contributory assets, discount rates for the respective assets and to calculate the implied discount rate for the future assets. The example in appendix B results in an implied rate of return for the future assets of 17.04% as compared to the IRR of 15%. This implied return is another form of WARA analysis (see discussion that follows), calculated to be 16.90% in Schedule 1 (Owned) in appendix B.

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Step 6

The appropriate TAB is applied to the identifiable intangible assets valued with an income method to arrive at fair value.

Supplemental WARA Analysis

12.194 The financial overlay also supplements a WARA calculation. A WARA analysis solves for the rate of return on unidentifiable intangible assets (that is, economic goodwill) by reconciling the weighted average returns of all assets to the WACC or IRR, as appropriate. See the "WARA Analysis" section of this chapter for additional detail.

12.195 A financial overlay is a value-based calculation whereby the prospective cash flows are discretely discounted at an implied rate of return, and the outcome is compared to the economic goodwill. By incorporating the implied discount rate directly into the analysis, a financial overlay considers the timing and risk of the prospective cash flows, unlike a WARA. Both approaches provide a basis to assess the implied rates of return in a business combination.

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Chapter 13

Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed

Introduction

13.01 This chapter provides guidance on the application of valuation approaches and techniques (which are discussed in detail in chapter 12, "Valuation Approaches and Techniques") to measure fair value of certain identifiable assets acquired and liabilities assumed in a business combination for purposes of applying FASB *Accounting Standards Codification* (ASC) 805, *Business Combinations*. This chapter includes a number of illustrative examples demonstrating the application of valuation methods most commonly used in practice to value a particular asset or liability. These examples are not intended to provide a comprehensive valuation analysis but only to highlight certain key elements of the valuation method being illustrated that are specific to the subject asset or liability. Furthermore, the assumptions and inputs used in these examples are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

13.02 Although this chapter provides valuation guidance for a number of assets acquired and liabilities assumed, it does not cover all of them in detail. There are other available resources that address some of these topics in greater detail. For example, for detailed guidance related to the valuation of:

- Assets acquired to be used in research and development activities – refer to the AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*

- Customer-related intangible assets – refer to the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #2: *The Valuation of Customer-Related Assets* (Valuation Advisory #2)

- Contingent consideration – refer to the Appraisal Foundation's VFR Valuation Advisory #4: *Valuation of Contingent Consideration* (Valuation Advisory #4)

- Property, plant and equipment – refer to the guidance issued by the American Society of Appraisers and other organizations that issue guidance in this area (see the "Property, Plant and Equipment" section in this chapter for additional references).

13.03 Prior to selecting the valuation technique to value acquired intangible assets, the Business Combinations Task Force (task force) recommends referring to chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," and carefully assessing the attributes of the acquired asset(s) to determine whether they are pivotal or routine, owned or licensed or in the nature of reacquired rights. As noted in chapter 11, the selection of a valuation

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technique is driven by the nature of the respective asset(s) subject to valuation. Therefore, it is important to understand the underlying economics, the manner in which any particular asset interacts with other assets in the creation of commercial value or incremental profitability to the acquired business. It is also important to consider other general best practices (such as not using the multiperiod excess earnings method (MPEEM) to value multiple intangible assets that, in combination, generate one cash flow stream to avoid contributory asset cross charges). The task force believes the characteristics of the acquired intangible assets should drive the selection of the valuation technique as opposed to relying on defaults (such as defaulting to a relief from royalty method to value a trade name, trademark or brand).

Assets

Trade and Other Receivables

13.04 See the "Trade and Other Receivables" section in chapter 6, "Recognize and Measure the Identifiable Assets Acquired and Liabilities Assumed, and Any Noncontrolling Interests in the Acquiree," for a discussion of considerations related to trade and other receivables acquired in a business combination.

Inventory

Background

13.05 FASB ASC 805 requires that inventory acquired in a business combination is recognized and measured at the acquisition date fair value in accordance with FASB ASC 820, *Fair Value Measurement*. The FASB ASC Master Glossary defines *inventory* as

> The aggregate of those items of tangible personal property that have any of the following characteristics:
>
> a. Held for sale in the ordinary course of business
>
> b. In process of production for such sale
>
> c. To be currently consumed in the production of goods or services to be available for sale.
>
> The term inventory embraces goods awaiting sale (the merchandise of a trading concern and the finished goods of a manufacturer), goods in the course of production (work in process), and goods to be consumed directly or indirectly in production (raw materials and supplies). This definition of inventories excludes long-term assets subject to depreciation accounting, or goods which, when put into use, will be so classified. The fact that a depreciable asset is retired from regular use and held for sale does not indicate that the item should be classified as part of the inventory. Raw materials and supplies purchased for production may be used or consumed for the construction of long-term assets or other purposes not related to production, but the fact that inventory items representing a small portion of the total may not be absorbed ultimately in the production

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process does not require separate classification. By trade practice, operating materials and supplies of certain types of entities such as oil producers are usually treated as inventory.

13.06 This section focuses on valuation of inventory of physical goods that are not real property. Although this section may contain some useful information, such as valuation methodology relevant to valuations of other types of inventory, the numerous and varied aspects of these other types of inventory were not considered or contemplated in the preparation of this section.

13.07 The purpose of this section is to outline considerations for estimating the fair value of inventory. The task force recognizes that the methodology outlined in this section is very detailed. The purpose of providing such a level of detail is to illustrate one way of applying the principles involved in estimating fair value of inventory (which are discussed further in the "Key Inventory Valuation Principles" section). Other methodologies may be applied to achieve the principles outlined in this section. In addition, there may be situations in which it is not possible, necessary or practical to perform certain steps described in this section. This may occur, for example, due to materiality considerations or non-relevance of a particular step (for example, inventory holding costs may not be relevant when inventory turns over quickly). As a result, this section should not be utilized as a checklist in determining the necessary steps that are required in a given situation. When determining the extent of work to be performed in valuing a particular asset or liability (including inventory), it is important to exercise professional judgment and consider specific facts and circumstances of each situation. Illustrations of the valuation methodology described in this section are provided in appendix D, "Abbreviated Example of Valuing Finished Goods Inventory," and appendix E, "Detailed Example of Valuing Finished Goods and Work-In-Process Inventory."

13.08 For purposes of discussion in this section, it is assumed that subject inventory is homogeneous. In situations when it is not homogeneous, inventory with different characteristics (such as profit margins, risk, and intangible asset contributions) would be disaggregated into separate homogeneous groups for purposes of applying the principles laid out in this section.

Existing Financial Reporting Valuation Guidance

13.09 According to FASB ASC 820, the fair value of inventory would be the amount that would be received by the reporting entity in a sale of the inventory in its existing condition (i.e., finished goods, work in process (WIP) or raw materials) and location to a market participant at the measurement date. (Chapter 9, "Valuation Considerations in a Business Combination," provides a discussion of certain fair value concepts addressed in FASB ASC 820 and includes a section on "Market Participants".)

13.10 For nonfinancial assets (such as inventory), FASB ASC 820 requires consideration of the asset's highest and best use. (See the "Highest and Best Use for Nonfinancial Assets" section in chapter 9 for a detailed discussion). When valuing inventory in a business combination, the highest and best use is generally considered to be in combination with other assets as a group. The guidance in FASB ASC 820-10-35-10E(a)(1), indicates that

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> if the highest and best use of the asset is to use the asset in combination with other assets or with other assets and liabilities, the fair value of the asset is the price that would be received in a current transaction to sell the asset assuming that the asset would be used with other assets or with other assets and liabilities and that those assets and liabilities (that is, its complementary assets and the associated liabilities) would be available to market participants.

As such, if the highest and best use is in combination with a group of other assets, then it is assumed that the market participant will have or will acquire the complementary assets. For example, FASB ASC 820-10-55-3(c) states that

> An asset's use in combination with other assets or with other assets and liabilities might be incorporated into the fair value measurement through the market participant assumptions used to measure the fair value of the asset. For example, if the asset is work-in-process inventory that is unique and market participants would convert the inventory into finished goods, the fair value of the inventory would assume that market participants have acquired or would acquire any specialized machinery necessary to convert the inventory into finished goods.

When valuing inventory, if complementary assets are needed to either finish production of the inventory (for WIP) or facilitate the sale of the inventory, the economic cost of using the complementary assets (for example, rent or depreciation as well as the profit attributable to the use of the assets) would need to be considered in the completion and disposal efforts in the inventory valuation.

13.11 When valuing discontinued, excess or obsolete inventory, the highest and best use is generally considered to be on a standalone basis versus in combination with other assets as a group (for further discussions, see the "Discontinued Inventory" section).

13.12 There is limited guidance in FASB ASC which specifically addresses inventory valuation. However, FASB ASC 820-10-55-21(f) provides the following example regarding identifying level 2 inputs referencing the fair value measurement of inventory:

> *Finished goods inventory at a retail outlet.* For finished goods inventory that is acquired in a business combination, a Level 2 input would be either a price to customers in a retail market or a price to retailers in a wholesale market, adjusted for differences between the condition and location of the inventory item and the comparable (that is, similar) inventory items so that the fair value measurement reflects the price that would be received in a transaction to sell the inventory to another retailer that would complete the requisite selling efforts. Conceptually, the fair value measurement will be the same, whether adjustments are made to a retail price (downward) or to a wholesale price (upward). Generally, the price that requires the least amount of subjective adjustments should be used for the fair value measurement.

In this example, the fair value measurement is based on market participants that are other retailers that would complete the requisite selling efforts on the finished goods inventory.

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Key Inventory Valuation Principles

13.13 Conceptually, the fair value of inventory would provide the market participant seller with fair compensation for the efforts and costs previously incurred and assets used related to the inventory and, likewise, would provide the market participant buyer with fair compensation for its purchase, risk, future efforts and assets utilized to complete and dispose of the inventory post-measurement date.

13.14 As presented in the following diagram, the analysis of inventory can be thought of as an allocation of value created pre-measurement date versus post-measurement date. In theory, each expense is incurred with the expectation of earning a profit. The price that a market participant seller of that inventory would be willing to accept and a market participant buyer would be willing to pay would generally reflect the efforts contributed during that process.

- The fair value of inventory acquired in a business combination considers the value created prior to the acquisition date (also referred to as the *measurement date*) based on market participant assumptions. This value results from the process of procuring raw materials, assembling, and producing the inventory prior to the measurement date. It is comprised of the raw materials, the direct and indirect expenses that were required to bring the inventory to its current condition and location, as well as a pre-tax profit[1] or expected return on the expenses incurred, assets used or capital invested (subsequently referred to in this section as *profit* or *profits*).

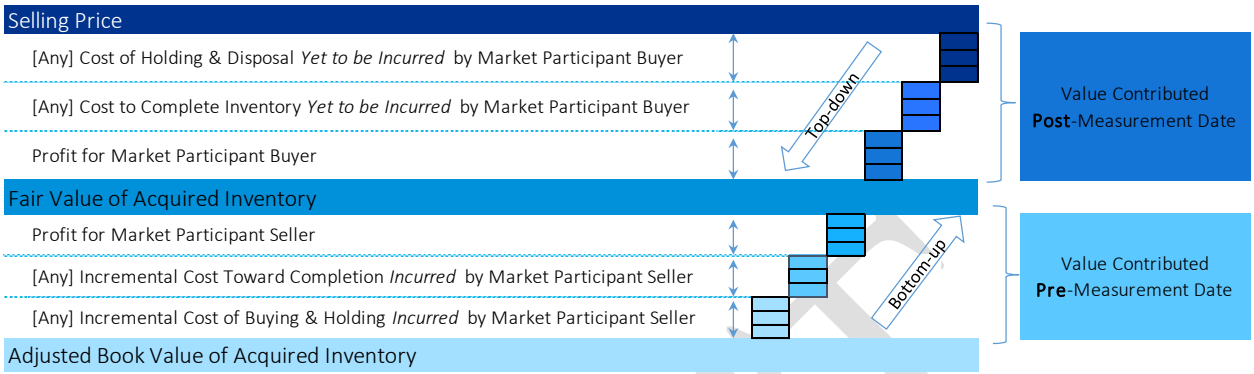
- The price that a market participant buyer would be willing to pay for inventory would allow compensation for their future expenses and assets utilized in the completion and disposal process plus related profits.

Therefore, the fundamental process of inventory valuation entails the identification of the appropriate expenses and profits in the value chain, beginning with the procurement of raw materials and ending with the sale of finished goods.

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[1] Profits are measured on a pre-tax basis to be consistent with the inputs used in the fair value measurement of inventory.

Figure 1: Top-down and Bottom-up Methods[2]



13.15 A fundamental premise of this guidance is that the fair value of inventory would generally be the same regardless of whether it is measured with the top-down or bottom-up method, as noted in FASB ASC 820-10-55-21(f). These methods begin at opposite ends of a continuum starting with the adjusted book value of inventory and ending with customer delivery. A variety of costs are incurred, tangible and intangible assets utilized, and profit earned throughout this continuum. Each of these elements make a defined contribution in creating the value of the inventory that can be divided between efforts that were completed before versus efforts that will be completed after the measurement date (subsequently, this bifurcation is referred to in this section as a *functional apportionment*). When using the top-down method, the amounts deducted from the selling price represent the portion of the value that will be contributed post-measurement date and, thus, allocated to the future actions of the market participant buyer. Conversely, amounts not deducted when using the top-down method, would have implicitly been added to the adjusted book value if valuing inventory using the bottom-up method. The consideration of all costs and related profits in the value chain allows the valuation results in both the top-down and bottom-up methods to be similar at any stage of inventory completion (closed form analysis).

13.16 When estimating fair value, FASB ASC 820-10-05-1C requires that valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs. The inventory valuation methodology described in this section is based on a comprehensive set of baseline prospective financial information (PFI). Any assumptions made to either the bottom-up or top-down approach imply a corresponding assumption in the other approach and, as such, the use of unobservable inputs is the same in either approach. However, there are a limited number of inventory categories for which the use of unobservable inputs may not be the same under each approach, with the most notable being raw materials (discussed in paragraphs 13.27–.31) and discontinued inventory (discussed in paragraph 13.62).

13.17 The discussion in this section begins with the estimate of selling price, which is followed by the functional apportionment process to divide each of the elements between the remaining

[2] Costs added to adjusted book value should be only incremental costs not already capitalized into book value of inventory. See the "Adjusted Book Value" section in paragraphs 13.22–.26 for further discussion about the adjusted book value.

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efforts and those that have been incurred prior to the measurement date. As such, the top-down and bottom-up methods are discussed in sync within the functional apportionment process.

13.18 Historically, the bottom-up method has been used less frequently than the top-down method for valuing finished goods and WIP inventory; however, the value estimated under both methods would generally be the same. If a model is set up as outlined in the following sections, the assumptions made for one method have an implicit impact on the other; as a result, there is minimal incremental effort to perform both methods. However, there is no requirement to perform both methods.

13.19 The top-down and bottom-up methods have elements of all three valuation approaches: cost, market and income (which are discussed in chapters 9 and 12). However, the bottom-up method reflects accumulated costs and is, therefore, generally aligned with the replacement cost method under the cost approach. The top-down method is generally aligned with the market approach.

13.20 The process for valuing finished goods and WIP inventory outlined in this Guide is based on a line-by-line analysis of the income statement, which would result in consistent outcomes under either method.

13.21 The following sections describe how to value inventory components disaggregated by stage of completion (raw materials, work-in-process and finished goods).

Adjusted Book Value

13.22 For the fair value of raw materials, WIP and finished goods, it is important to understand how the book value of inventory was derived, including accounting methods and adjustments (such as reserves[3]). Generally, book value captures all costs incurred by the acquiree (direct and indirect) to bring the inventory to its current condition and location. This includes both the cost of material as well as labor, other direct expenses and applicable overhead, including manufacturing depreciation. Under GAAP, the same inventoriable costs are recognized in cost of goods sold (COGS) in the income statement when the inventory is sold. Note that when PFI is prepared on a basis other than GAAP, manufacturing depreciation is often excluded from COGS if the PFI was created for purposes of deriving cash flows. In such cases, depreciation is often shown separately in the PFI. If this is the case, either manufacturing depreciation needs to be included in COGS for purposes of the inventory valuation or the acquiree's book value of inventory needs to be adjusted to remove manufacturing depreciation (that is, in the latter case, the book value of inventory will also be used in the valuation on a basis consistent with the PFI).

[3] Reserves may be related to a specific subset of inventories or, if the inventory is homogenous, they may be equally relevant to all inventory. For example, assume there is a gross book value of inventory of $100; reserve of $10, and net book value of $90. If the reserve of $10 is a general reserve applicable to the overall inventory, net book value of $90 may be used as a starting point for estimating the fair value of inventory. If the reserve of $10 is specific to a portion of the inventory, for instance $30 of the $100, then the proper starting point for estimating the fair value of inventory to which the specific reserve does not apply would be $70 and the remaining $30 (or $20, net of the reserve) would already be at net realizable value based on the FASB *Accounting Standards Codification* (ASC) definition (see footnote 8 in paragraph 13.29 for further discussion of net realizable value). In this situation, the only adjustment needed to arrive at fair value would be for profit allowance.

Either way, for purposes of the inventory valuation, costs included in book value as well as in COGS as detailed in the PFI need to be consistent to arrive at fair value.

13.23 Adjustments to book value may need to be considered to update to current cost and account for items such as shrinkage[4] and obsolescence[5] that are not already included in the book value. Book value would typically consider such adjustments but it could differ due to materiality, timing, and other factors. Additional adjustments may need to be considered if the book value per the acquiree's financial statements would differ from a market participant perspective. For the purpose of this section, the value after such adjustments are considered is subsequently referred to as the *adjusted book value*.

13.24 The acquiree's inventory accounting method (e.g., FIFO, LIFO) should be understood to determine if the adjusted book value already reflects current costs or if any adjustments are needed to the adjusted book value to reflect current replacement cost and to understand how any lower of cost and market (or NRV) adjustments have been calculated.

- FIFO assumes a company sells its oldest inventory first.
- LIFO assumes a company sells its newest inventory first.

13.25 LIFO inventory accounting results in a relatively aged cost base, which is more likely to exhibit a discrepancy from current replacement cost than if FIFO inventory accounting was used. Thus, the book value of raw materials may need to be adjusted to be based on the FIFO method by adding the LIFO reserve.[6] All else equal, in a rising cost environment, valuation of raw materials inventory that is based on LIFO is expected to result in a larger step-up from book value. If the inventory consists of commodity-type items with fluctuating prices, even the FIFO basis book value may need to be adjusted to reflect current replacement costs.

13.26 Other inventory accounting methods (e.g., average cost and specific identification) may exist and consideration should be given if they reflect current replacement cost or if adjustments are warranted.

Raw Material Valuation

13.27 The fair value of acquired inventory is a function of its stage of production. The fair value of raw materials is the price that would be received in a current sale between market participants. For example, assume that copper raw material (that is used in the production process) is acquired as part of a business combination. Its historical cost is $1.00 per pound and its current fair value is $1.10 per pound, which is based on the price that a market participant could sell the copper in its principal (or most advantageous) market taking into consideration its current condition and location. In this example, the acquirer should recognize the acquired copper inventories at $1.10 per pound.

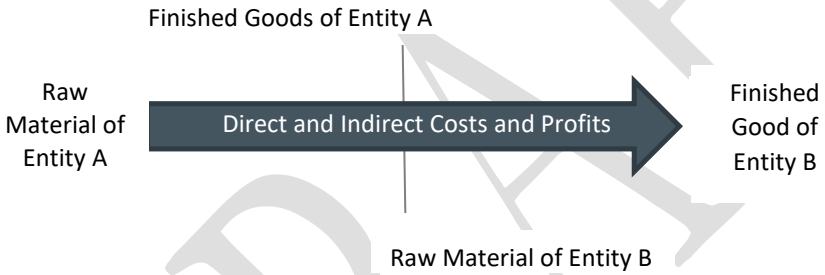
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4 Differences between accounting and actual inventory (due to theft, damage, miscounting, incorrect units of measure, evaporation, etc.)

5 Adjustments to value to capture obsolete, defective, excess and sub-normal goods.

6 In certain circumstances, other adjustments may be necessary in addition to adding the LIFO reserve.

13.28 Whether an inventory item is classified as a raw material or a finished good may depend on the nature of the business. One entity's finished good may be another entity's raw material. Thus, the valuation method(s) selected may vary by entity depending on where the inventory is within its conversion cycle, but this should not change the fair value of the inventory. The assumptions around the point at which the inventory is sold to a market participant should be consistent with the assumptions around the costs incurred, assets used and value created. The perspective of the market participant should be consistent within the PFI when deriving the selling price and the cost structure assumptions. Thus, the value of the inventory would not differ based on its classification alone. (See paragraphs 13.36–.43 for a detail discussion on identifying the baseline PFI).



13.29 Raw materials inventory[7] is often valued using the bottom-up method, where current replacement cost for a market participant is used, because typically there are fewer subjective assumptions. In situations when no value is contributed during the procurement process, merchandise inventory may have similar characteristics to raw materials (for further discussion of valuation of merchandise inventory, see Questions 1–3 in the "Questions and Answers to Illustrate Inventory Valuation" section later in this chapter). If there is observable market information, such information should be used to estimate the fair value of raw materials. In practice, the starting point for estimating the fair value of raw materials is often the book value per the acquiree's financial statements, which should be the lower of cost and net realizable value.[8]

13.30 The acquiree's book value is more likely to represent current replacement costs if inventory turns over quickly, prices of raw materials are less volatile and there have been no major changes in economic or market conditions. If additional costs have been incurred with respect to the inventory that are not already captured in the adjusted book value (which is

[7] While the accounting classification may indicate that the inventory is raw materials, there may be unrecorded value-added components in certain manufactured items.

[8] For purposes of determining the book value, *net realizable value* (NRV) is defined in the FASB ASC Master Glossary as "[e]stimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation." As used throughout this section, NRV is defined from the valuation perspective. The FASB ASC definition is consistent with the valuation definition except for the treatment of profit allowance. An allowance for profits on completion and disposal costs is deducted from the selling price to arrive at NRV under the valuation definition, but it is not deducted in arriving at NRV under the FASB ASC definition. In other words, NRV under the valuation definition would be lower than NRV under the FASB ASC definition by the amount of that allowance. For purposes of this section, the valuation definition of NRV is used because NRV is discussed in the valuation context and this definition is well understood in the valuation profession.

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discussed in the preceding "Adjusted Book Value" section), then it would be more appropriate to refer to the bottom-up method described in the "Finished Goods and WIP Valuation" section that follows for additional analysis. However, if no additional costs have been incurred, the adjusted book value would represent the current replacement cost, or fair value of raw materials.

13.31 In practice, fair value of raw materials may approximate book value as of the measurement date, if the following exists: inventory cost reflects its current fair value, any additional costs that have been incurred with respect to the inventory are minimal, and the reserves fully account for obsolete and defective goods as well as shrinkage.

Finished Goods and WIP Valuation

Selling Price

13.32 Selling prices can be derived directly from observed or listed selling prices on a per unit basis. This analysis may be carried out at the individual product (or SKU) level or at the business unit level as appropriate. Selling prices can also be derived indirectly through a gross margin analysis. In any case, the selling price used in the top-down method should be consistent with the baseline PFI used throughout the inventory valuation analysis (discussed further in the "*Step 1: Identify the baseline PFI*," section).

13.33 In general, a gross margin analysis estimates the selling price of the inventory by dividing the adjusted book value (which is discussed in the "Adjusted Book Value" section) of finished goods by one minus the gross profit margin percentage. The gross margin percentage is based on the selected baseline PFI. Other considerations include:

- Since the baseline PFI should be on the same basis as the adjusted book value, the cost method supporting the adjusted book value of finished goods should be consistent with the costs included in COGS.

- In some cases, the PFI may exclude significant components from COGS. For example, COGS may be presented without depreciation in the baseline PFI, if sourced from the deal model, with all depreciation below earnings before interest, taxes, depreciation, and amortization (EBITDA). In this case, the COGS would need to be adjusted to include manufacturing depreciation so that it is on the same basis as the adjusted book value of inventory, which includes depreciation. In addition, if COGS includes costs that are not capitalized in inventory, then they should be removed from COGS when calculating the gross margin for the selling price or the selling price should be appropriately viewed as net of those costs. For example, royalties may also be included in COGS, in which case a similar adjustment would need to be applied. The objective is to ensure that the COGS margin used to estimate the selling price and the costs capitalized into inventory are on the same basis.

Functional Apportionment

13.34 Since inventory turnover is often less than one year, sales of the inventory acquired as of the measurement date will be a subset of a company's future annual sales. Accordingly, an analysis typically begins with identifying a full year of PFI and that information is then

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converted to the requisite common size percentages (for example, gross margin percentage) for use in the inventory valuation. The following steps identify the appropriate PFI for the inventory valuation and perform the functional apportionment.

Step 1: Identify the baseline PFI.

Step 2: Adjust the baseline PFI to remove expenses benefiting future periods.

Step 3: Bifurcate expenses already incurred from those remaining to be incurred for finished goods.

Step 4: Bifurcate expenses already incurred from those remaining to be incurred to complete the WIP.

Step 5: Evaluate the resulting inventory profit.

13.35 These five steps are performed for both the top-down and bottom-up methods. As a result, there would generally be information available to implement both methods. An entity may choose to perform both methods concurrently to help assess that all expenses and profits are considered in the analysis; however, there is no requirement to do so.

Step 1: Identify the baseline PFI

13.36 Appropriate PFI should be identified as the basis to derive the assumptions in the inventory valuation. This PFI should be aligned with the conversion cycle of the subject inventory from the procurement to disposition. Because fair value is a market-based measurement, it is important to ensure that the assumptions underlying the selected PFI are consistent with market participant assumptions (subsequent references to *baseline PFI* imply that such PFI is consistent with market participant assumptions). As a starting point, it may be helpful to consider the acquiree's PFI for the initial projected period when the inventory is expected to be sold; however, adjustments may need to be made to reflect the perspective of a market participant that would purchase the inventory from the reporting entity.

13.37 Inventory and its related selling price, expenses, and profit are generally a subset of the first year of the PFI following the measurement date (i.e., following the business combination transaction). The assumption is that the annual margins reflected in the first year of the PFI (as adjusted in Step 2 to exclude future-benefit expenses [discussed in paragraph 13.44] that are unrelated to the subject inventory) are applicable to the inventory as such PFI provides a measure of the expected income during the year when the inventory will be sold.

13.38 However, this does not preclude the use of other observable market participant information such as information for prior periods, where (i) the facts and circumstances indicate that it would be a better proxy for the subject inventory; or (ii) the first year of the PFI is not sufficiently detailed. In addition, for businesses where there are seasonal cycles, the baseline PFI should be selected over a comparable seasonal period when the inventory is expected to be sold. If there are significant differences between projected and historical gross margins, this may require additional diligence to achieve a market participant perspective. The acquirer's PFI for similar inventory may be another data point.

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13.39 When evaluating baseline PFI, it is important to consider the nature of any intangible assets that contribute to the value of inventory. Consistent with the valuation of intangible assets under the income approach as discussed in chapter 12, the amortization of acquired intangible assets (those acquired in previous and current business combinations) and prepaid licenses (collectively referred to as *owned intangible assets*) is typically not included in the PFI used to value the inventory. In the case of intangible assets that are licensed with periodic payments (subsequently referred to as *licensed intangible assets*), the periodic costs would reduce profitability (which is defined as earnings before interest, taxes and amortization (EBITA) for valuation purposes) when compared to an entity that owns intangible assets or has prepaid licensed intangible assets.

13.40 It is important to be cognizant of the owned versus licensed relationship discussed in the preceding paragraph when evaluating profit allocation for inventory discussed in Step 5. In this context, PFI for entities with owned intangible assets generally demonstrates a higher level of profitability for the subject inventory than for the entities licensing those intangible assets with periodic payments, since amortization costs are generally excluded from the baseline PFI. As such, the return *on* and *of* owned intangible assets would be included in the total profit margin of the inventory. In Step 5, the profit margin can be allocated based on the assets utilized pre- and post-measurement date.

13.41 Alternatively, the profit contribution of the intangible asset (earned when the intangible is owned) can be treated as a cost (as if the intangible were licensed). Under this approach, a hypothetical implied royalty to value that intangible asset is reflected as an adjustment (cost) to the PFI for the use of the owned intangible asset. Modeling the hypothetical implied royalty helps to ensure that the royalty implied from the intangible valuation is consistent with the profit attributed to those assets in the inventory valuation. Additionally, presenting the benefit from these intangible assets as a cost (rather than part of the profit) provides the ability to make explicit assumptions within the functional apportionment analysis in the subsequent steps. Furthermore, by treating the profit as a cost, there is consistent treatment regardless of whether the intangible is licensed or owned by a market participant.

13.42 Whether the profit contribution is treated as a cost or profit, the contribution of the intangible asset to inventory value is the same if consistent assumptions about the functional apportionment of the intangible asset are made (i.e., inclusion of such amounts as a cost or profit should not impact the fair value measurement of inventory.) It should be noted that whether such amounts are considered a cost or profit for purposes of the fair value measurement does not impact whether such costs are considered disposal costs under FASB ASC 330, *Inventory*.

13.43 If the profit contribution of the intangible asset is treated as a cost, then the royalty rate considered in the intangible asset value would typically include both a return of and return on the asset. As such, when allocating the profits in Step 5, there should be no incremental layer of profit attributable to the intangible above such a royalty rate. In the example in appendix E, these royalties are treated in a manner consistent with the raw materials portion of COGS and classified as a non-value-added item, so no incremental profit is allocated.

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Step 2: Adjust the baseline PFI to remove expenses benefiting future periods

13.44 Expenses in any given period are comprised of period expenses that provide a current economic benefit ("current-benefit expenses"), as well as other expenses that have a future economic benefit ("future-benefit expenses"). Examples of future-benefit expenses include research and development ("R&D") related to new product development; marketing for a new product; recruiting to increase the size of the workforce; expansion into a new territory; depreciation of an R&D facility dedicated to future research; or restructuring costs. These future-benefit expenses are not required to procure, manufacture, market, or dispose of the current inventory and therefore do not drive the revenue earned in the current period. Future-benefit expenses should be removed from the baseline PFI as they do not contribute to the current costs of procuring, manufacturing or marketing (disposing) the inventory.

13.45 In addition, a portion of the indirect overhead expenses of the business (such as general and administrative expenses ("G&A"), corporate overhead,[9] and depreciation expense) may be related to future-benefit expenses. As an initial starting point, these indirect overhead expenses may be allocated between current and future benefit in proportion to the direct operating expenses. However, other assumptions to apportion the indirect overhead expenses may be appropriate.

13.46 In practice, expense line items in the baseline PFI can be bifurcated by assigning the percentage related to current versus future benefit. Removing the future-benefit direct and indirect expenses generally improves the margins and normalizes the income base used in the inventory valuation. This results in an "adjusted baseline PFI". This PFI captures all expenses and profits inherent in the inventory cycle that must be apportioned in this closed form analysis (e.g., all expenses and profits need to be identified as occurring either before or after the measurement date). Consequently, the top-down method would be consistent with the bottom-up method.

Step 3: Bifurcate expenses already incurred from those remaining to be incurred for finished goods

13.47 Each expense in the inventory cycle should be categorized as having been incurred and, therefore, contributed to the value of the finished goods inventory *or* remaining to be incurred during the disposal process. Each expense line item in the adjusted baseline PFI, whether it is direct or indirect, needs to be apportioned between the incurred expenses or those remaining to be incurred to dispose of the finished goods inventory.

13.48 Disposal costs generally align themselves with selling and marketing expenses while procurement and manufacturing expenses have typically already been incurred for finished

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[9] FASB ASC 330, *Inventory*, addresses the accounting principles and reporting practices applicable to inventory. FASB ASC 330-10-30-1 indicates that "[t]he primary basis of accounting for inventories is cost." Since inventory acquired in a business combination is measured at fair value and not at cost, the guidance in FASB ASC 330 is not applicable to estimating fair value of inventory. Specifically, FASB ASC 330 provides explicit guidance on capitalization of certain costs and requires that general and administrative expenses be expensed as incurred. However, those expenses would typically be considered by market participants who seek to recover all costs that are incurred as part of creating inventory and, therefore, would be considered when estimating fair value of inventory.

goods inventory. Classifying expenses as procurement, manufacturing, selling[10] or marketing is the beginning of this bifurcation process; however, the specific attributes of each company will dictate the category for each of the expenses. Further analysis should be based on the facts and circumstances (and is often unique by industry); however, some expense categories will tend to follow a certain trend. For example, maintenance R&D costs (which are typically ongoing expenses that may be incurred by the R&D staff subsequent to project completion and may include engineering product support) may be fully allocated to the manufacturing effort in the financial statements; however, there may be instances in which it may be part of the disposal effort if it relates to postcompletion support.

13.49 Current-benefit indirect overhead expenses can be associated with each function and should be analyzed in order to properly bifurcate between those associated with costs incurred versus remaining to be incurred for finished goods. Where appropriate, the expense allocation should also be consistent with the assumptions contained in the valuation of any relevant intangible assets (discussed in greater detail below).

Step 4: Bifurcate expenses already incurred from those remaining to be incurred to complete the WIP

13.50 The methodology for valuing WIP inventory is the same as that used for finished goods inventory but with an additional deduction for the cost and profit to convert WIP into a finished good. WIP can exist at any point in the continuum between raw material inputs and finished goods. The stage of completion (or percent complete) of WIP inventory is dependent on the timing of: raw material inputs and other inventoriable costs;[11] direct and indirect current-benefit operating expenses; and the utilization of tangible and intangible assets in the completion of a finished good.

13.51 The WIP analysis is performed on the subset of the adjusted baseline PFI assumed to have been contributed to finished goods in Step 3 of the functional apportionment. These costs can be further bifurcated into the completed portion that relates to the effort of procuring raw materials and manufacturing WIP already incurred pre-measurement date versus those costs that relate to the incremental effort remaining to be incurred for the WIP post-measurement date to bring it to its finished state. The completion costs should account for any remaining effort in connection with transforming the WIP into finished goods.

Step 5: Evaluate the resulting inventory profit

13.52 The valuation of inventory involves an allocation of profit between the profit earned pre-measurement and the profit to be earned post-measurement. In practice, whether profit earned is proportional to expenses is based on facts and circumstances (see the "Other Profit Allocation

[10] Shipping costs borne by the seller of inventory are considered to be part of the disposal costs.

[11] Inventoriable costs are the costs to purchase or manufacture products which will be resold, plus the costs to get those products in place and ready for sale (e.g., costs of the direct materials, direct labor, freight in, and manufacturing overhead incurred in manufacturing the product).

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Considerations Under Step 5" section that follows). The following are examples of general considerations for estimating the appropriate inventory profit:[12]

- The materials portion of COGS may not be a value-added cost because it does not contribute any of the profit to the inventory. For example, a car manufacturer's raw materials would include steel, but the total direct labor and overhead used in assembly (subsequently referred to as *burden*) is the portion that adds value. Therefore, in this case, the materials portion of COGS would not typically be considered in the functional apportionment. Refer to paragraphs E.07 and E.15 in appendix E for additional discussion and example of implementation.

- Intangible assets may be owned or licensed from third parties. When intangible assets are licensed, the baseline PFI would include this cost. When intangible assets are owned, baseline PFI will reflect the incremental profitability of owning the intangible assets. However, whether intangible assets are (or would be) owned or licensed by a market participant, the fair value of the inventory should be the same at the same stage of the conversion cycle continuum. As noted in paragraphs 13.40–.41, the contribution of owned intangible assets may be modeled as a cost as if they were hypothetically licensed. The example in appendix E provides a detailed analysis of modeling the contribution of intangible assets as a cost. Regardless of whether intangible assets are owned or licensed, analysis is required to determine whether the intangible assets are part of the procurement/manufacturing process (become an attribute of the inventory) or are related to the selling effort. Intangible assets that are used in procurement part of the manufacturing process or that are added to the goods are considered a component of the fair value of the finished goods inventory. On the other hand, intangible assets expected to be utilized as part of the disposal process would be considered part of disposal costs or selling profit and, therefore, would be excluded from the fair value of the finished goods inventory. For valuing the WIP inventory, a similar assessment would be performed to determine at what point during the inventory continuum the intangible assets contribute value.

  There are a number of factors that need to be considered when evaluating intangible assets and how much of their value is added to the inventory during manufacturing versus their use in the disposal of the inventory. See Questions 4–6 in the "Questions and Answers to Illustrate Inventory Valuation" section later in this chapter for further discussion of the factors to consider when evaluating whether intangible assets have been contributed to inventory.

- If these intangible assets are valued separately, the profit associated with the intangible assets should be consistent between the inventory valuation and the intangible valuation. Because the profit related to the intangible is reflected in the selection of a royalty rate, this royalty rate can serve as a proxy for the cost and profit created by

[12] In addition to references to appendix E, "Detailed Example of Valuing Finished Goods and Work-In-Process Inventory," included in this and the following paragraph, please see the example in appendix D, "Abbreviated Example of Valuing Finished Goods Inventory," for an alternative presentation and discussion of Step 5.

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utilizing the intangible. If the intangible is valued using the MPEEM, the excess profits derived can also be a source for the profit allocation. Refer to paragraphs E.05–.06 in appendix E for additional discussion.

  - An intangible asset may be used in the manufacturing process driving some of the excess profits earned in the sale of inventory over and above a contract manufacturing margin. This type of intangible would generally be fully contributed to finished goods and may be partially contributed to WIP.

  - A marketing intangible such as a company trade name may be utilized in the selling or disposal of the inventory.

  - In some cases, there may be a bundled intangible asset which may contain attributes of technology, trade name, relationships and so on. This would require an assessment of how to apportion the overall profit to each attribute between the manufacturing and the disposal effort.

- The profit accumulated in the bottom-up method plus that deducted in the top-down method should be consistent with the profit in the adjusted baseline PFI.

13.53 In practice, as discussed in Step 1 and illustrated in the example in appendix E, the adjusted baseline PFI may be further adjusted such that the profit contribution of intangible assets is treated as a cost and modeled as a hypothetical royalty. As a result, the profit on the costs incurred and costs that remain to be incurred may be an output of the above steps. When the profit contribution of the intangible assets is treated as a cost, the royalty rate captures the profit associated with the intangible asset and, therefore, there should be no incremental layer of profit attributable to the intangible above such a royalty rate.

Other Profit Allocation Considerations Under Step 5

13.54 Notwithstanding the profit allocation method outlined in Step 5, the task force recognizes that valuation specialists may rely upon the assumption that manufacturing and disposal costs not otherwise adjusted for implied royalties are a reasonable proxy for the profit allocation. This presumes that there is a direct relationship between these costs and the excess profit created by the related intangible assets. However, in certain instances, intangible asset profit contributions are not correlated to costs, particularly in the case of *pivotal assets*.[13] The profit allocation method outlined in Step 5 recognizes the potential for disproportionate contributions of intangible assets relative to their costs.

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[13] Chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," describes different types of intangible assets and provides a thought process for selecting the appropriate valuation methods to value them. That guidance distinguishes between pivotal and routine intangible assets. *Pivotal assets* provide an owner or licensee with the ability to create a significant amount of the excess profit in the business unit or value chain. Their functions are not available from alternative sources because they are unique or scarce assets. An iconic brand name is an example of a pivotal asset. *Routine assets,* on the other hand, are not unique or scarce; they provide functionality that can be accessed from a third party in an arm's length transaction (IP-based) or the functions and activities that provide a routine profit (relationship-based). Internally used software is an example of a routine asset.

13.55 There is a high degree of judgment and subjectivity in an inventory analysis and this Guide is not intended to preclude the use of a cost allocation methodology for profit allocation. The overriding objective is to implement a process that aligns with the nature of the business and the company's assets.

13.56 The task force believes that if a cost allocation method is used to allocate profit, that allocation should be evaluated in the context of valuations of all assets acquired in the business combination to ensure that the allocated profit reflects the contributions of the respective intangible assets. Consider the following example: the entity concludes that total profit on inventories expressed as a percentage of revenue is 15%, which should be allocated between the activities of the acquiree and the acquirer. Based on the relative proportion of manufacturing vs. disposal costs, an initial cost allocation results in 5% of profit allocated to the acquiree activities related to the acquired finished goods inventory. However, the valuation of manufacturing fixed assets and technology acquired in the same business combination, which have been used to manufacture the finished goods inventory, indicates a required profit of 3% for the manufacturing of fixed assets and 5% for the technology, for a total of 8%.[14] Therefore, the initial cost allocation of 5% is insufficient to cover the 8% required profit for the acquiree activities, and would need to be adjusted. Once the acquiree's profit is adjusted, it results in allocation of 7% profit to the acquirer activities, which based on the valuation of customer relationships and trade name intangible assets is sufficient to cover the profit inherent in those valuations as well as that on the acquirer disposal costs, working capital and fixed assets related to the disposal effort. For a more detailed example, see Schedule D-2 in appendix D.

PCC Alternative Under Step 5

13.57 Companies that have elected the PCC alternative to not recognize separately from goodwill customer-related intangible assets that are not capable of being sold or licensed independently from the other assets of the business would not be precluded from applying Step 5 and other steps outlined in this section simply because a valuation of the customer-related intangibles was not prepared. Private companies that have made this election can still follow the principles laid out in this section by either:

- Limiting the analysis to the bottom-up method which does not typically require the identification of profit associated with customer-related intangibles; or

- Utilizing Approach B described in Schedule D-3 of appendix D as a general proxy to estimate a royalty rate that would approximate the profit contribution of a customer relationship-based asset if it would have been valued using the MPEEM absent the election of the PCC alternative.

Holding (Opportunity) Costs

13.58 Holding costs may need to be estimated to account for the opportunity cost associated with the time required for a market participant to sell the inventory. In other words, this represents the foregone return on investment during the time to sell the inventory.

[14] These percentages are based on assumptions used in the overall business combination analysis.

13.59 When assessing and estimating holding costs that a market participant may consider, there are various factors that should be considered:

- It is important to make sure that they are not already included in the other assumptions in the inventory valuation. If the analysis of disposal costs is based on earnings before taxes (EBT), then interest expense may already be considered directly as part of the disposal cost. Alternatively, if profit allowance is based on EBITA, then it may reflect profit that is used to cover the cost of funding and, therefore, already accounts for the holding costs. For example, the profit embedded in EBITA compensates the holder of inventory over the continuum of inventory cycle.

- A market participant would often consider holding costs in situations where inventory is stored for extended period of time before the point of sale. The inventory valuation would also consider the cost of storage and handling the inventory, or the risk associated with holding the inventory (for example, insurance, shrinkage, obsolescence, etc.)

- To the extent that holding costs are applied to inventory, a reasonable approach is to use a pre-tax financing rate for a period of time consistent with the holding period of inventory. Other adjustments may also be necessary to properly reflect a market participant perspective.

Finished Goods and WIP Valuation Summary

13.60 The functional apportionment of the adjusted baseline PFI described above isolates the respective expenses and profits along the inventory continuum. By converting these amounts to percentages and margins they may then be applied in the valuation of inventory.

- The top-down method would begin with estimating the selling price of the acquired finished goods inventory and then deducting the costs and profits related to the disposal effort based on the percentage of revenue derived above. WIP would include a further reduction for the expenses and profit related to the completion effort.

- The bottom-up method is based on a conversion of the expenses and profit to a percentage of COGS. It would then start with the adjusted book value of finished goods or WIP and adding the expenses and profit derived based on a percentage of COGS.

The comprehensive inventory example in appendix E provides detailed calculations of these steps as well as a demonstration of the impact of intangible assets in the profit allocation.

Other Issues in Practice

13.61 The following discussion elaborates on issues that arise in practice and summarizes how the valuation specialist might consider certain issues in the valuation.

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Discontinued Inventory

13.62 Inventory valuation assumptions should be considered from the perspective of a market participant, whether or not the acquirer plans to discontinue certain inventory in the future. That is, the objective of the fair value measurement remains the same – it is the price that would be received in a sale of the inventory in its existing condition and location between market participants at the measurement date. Similar to the measurement of fair value for other inventory, a market participant buyer of discontinued inventory would often be expected to base its purchase price on the amount that it would be able to receive for selling the inventory. When valuing discontinued inventory, the highest and best use is generally considered to be on a standalone basis versus in combination with other assets as a group. In those cases, a top-down method is used, and the fair value of the discontinued products is based on the selling price that a market participant would expect to receive for those products as well as the cost and profit association with the disposition of this inventory. The same considerations may be used when valuing excess or obsolete inventory.

- If market participants would be expected to sell the products in the wholesale or retail market, then fair value should be measured based on the expected selling price achieved by the wholesaler or retailer adjusted for their costs of disposal and an expected profit allowance. Note that these market participant expectations should also be reflected in the PFI used throughout the analysis.

- If, however, market participants would be expected to sell the product in the scrap market,[15] the inventory would be valued using the proceeds expected to be received based on the scrap market prices (i.e., liquidation value).

- If market participants would only be able to sell the inventory for a de minimis amount (either because market participants would not be able to sell the inventory in any of the markets mentioned above, or because they could not earn an adequate profit), then fair value associated with the inventory would be de minimis.

Relationship to Other Acquired Assets

13.63 It is generally expected that market participant assumptions used in the inventory valuation will be consistent with market participant assumptions used in the valuation of other complimentary assets or liabilities used in combination. For example, in an analysis of contract liabilities, assumptions with respect to which costs have current benefit and which costs are value added would generally be consistent with those of the inventory analysis. If assumptions between the proportion of each cost already incurred are the same for contract liabilities as they are for inventory, the resulting profit allowance would be consistent as well.

13.64 Questions arise as to whether it is appropriate to record both inventory and backlog as separate assets at the acquisition date. The task force has observed that they are often recorded as separate assets since inventory represents the fair value of efforts incurred to date and actual

[15] Scrap value is the worth of a physical asset's individual components when the asset itself is deemed no longer usable. The individual components (i.e., scrap) are worth something if they can be put to other uses. In some cases, scrap materials may be used as is, or in other cases they may be processed before they can be reused.

tangible products acquired while backlog represents the anticipated sale of the inventory to a customer. Please see the "Pre-Sold Inventory and Backlog" section that follows for additional discussion on the interrelationship between the inventory and backlog valuation models.

13.65 It is important to avoid double counting of profits associated with inventory. To avoid this double counting, the inventory step-up would need to be deducted from the assets that created value prior to the measurement date. Such assets would be contributed to the inventory prior to the measurement date and, in part, drive the inventory step-up. Thus, the fair value of any intangible asset assumed to have been contributed to inventory should reflect a reduction to avoid a double count. In practice, the assets that contribute to the inventory step up can be more easily identified in the bottom-up method in which the contribution to inventory value from each intangible asset can be observed.

- If the customer relationships and trade name are assumed to be intangible assets that create value as the inventory is sold, then that value is included in the intangible assets and is not included in the fair value of the inventory.

- If manufacturing intangible assets are the only assets that are assumed to be contributed prior to the measurement date (not part of the disposal effort), then it would be appropriate to reduce the valuation of the manufacturing IP[16] for the related portion of the inventory step-up. The step-up would be a reduction to the pre-tax profit for that asset in the period(s) where the inventory is sold, and then the adjusted cash flow would be tax-effected and discounted to present value.[17]

For further discussion regarding the relationship to other acquired assets, see the "Multiperiod Excess Earnings Method" section in chapter 12.

13.66 When performing the weighted average return on assets ("WARA") analysis, the inventory step-up may also need to be considered and included as a separate line item. Since the relevant portion of the amount of the step-up has been deducted from the asset(s) that contributed to it, the rate of return applied to the step-up would be similar to those assets.

Pre-Sold Inventory and Backlog

13.67 There is diversity in perspectives about whether pre-sold inventory should be valued higher than unsold inventory. In cases in which there is pre-sold inventory based on actual customer orders as of the measurement date, the task force observes the following positions are used in practice:

- Pre-sold inventory has the *same* fair value as unsold inventory. This position is based on the concept that pre-acquisition selling costs and related activities do not contribute to the fair

[16] Manufacturing IP includes all types of IP used or contributed during the production process. In this example, it encompasses everything other than the brand. In appendix B, *Valuation Method Selection Process Example*, it is referred to as *routine IP*. For further discussion of manufacturing IP, see Question 4 in paragraph 13.73.

[17] If the manufacturing IP is valued using an MPEEM, the implied royalty rate (which is generally derived based on Year 1 PFI, as illustrated in Schedule D-3 in appendix D) would be calculated before deducting the step-up.

value of the inventories and, therefore, are excluded. In addition, pre-sold inventory is often interchangeable with unsold inventory and, therefore, should have the same value. As a result, the pre-sold inventory would be valued assuming the same selling cost as unsold inventory. However, the benefit of having pre-sold inventory would be captured in the backlog customer-based intangible asset. As such, there is no step-up attributable to the pre-selling efforts and, thus, nothing is deducted from backlog.

- Under an alternative position, pre-sold inventory has a *higher* value than unsold inventory. This position is based on the fact that certain selling and marketing costs have already been incurred pre-measurement date and, therefore, it is not necessary to incur these costs post-measurement date. Under this position, a portion of the backlog intangible asset is assumed to have been captured within the inventory value and, therefore, the step-up in inventory attributable to the selling effort would be deducted from the backlog customer-based intangible asset to avoid double-counting. If it is known which particular inventory items have been pre-sold, those individual items can be valued separately and would generally result in a higher value than unsold inventory. However, if the presold and unsold inventory are homogenous and valued at a portfolio level, then it also may be appropriate to include the step-up attributable to the selling effort for the portion of inventory that has been pre-sold and allocate across the entire portfolio such that the per-unit inventory value is the same. Both approaches would generally result in equivalent total values of inventory.

13.68 Additional considerations around the nature of the pre-sold inventory may also be a factor (for example, whether the orders are cancellable).

Questions and Answers to Illustrate Inventory Valuation

13.69 The following questions and answers are provided only to illustrate certain concepts related to inventory valuation discussed earlier in this section and are not intended to establish requirements. Furthermore, the assumptions and inputs used in these questions and answers are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

13.70 *Question 1:* The acquiree is a reseller of various branded goods, including household goods such as beauty products and cosmetics, personal care products, convenience foods, seasonal merchandise, and greeting cards. The acquiree's products are produced by various manufacturers. The acquirer is a larger publicly traded competitor of the acquiree. In its press release, the acquirer indicated that the primary strategic rationale for the acquisition was due to a strong brand awareness of the acquiree. As such, the acquirer indicated the acquiree will continue to operate under its existing trade name and not be replaced by the acquirer's trade name. How should the marketing intangible assets of the acquiree be treated in the inventory valuation?

Answer: The sole marketing intangible asset of the acquiree consists of its corporate trade name which was considered pivotal to its operations. The acquirer will use the acquiree's corporate trade name and market participants would similarly be expected to maximize the value of their acquired assets by using them in combination. Thus, when valuing the inventory, the royalty selected in the valuation of the corporate trade name may be included as a disposal cost when

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performing the top-down method (because the reseller's brand is utilized during the disposal effort when the inventory is sold to the customer) and not included as a cost incurred in the bottom-up method (because the reseller's brand is not considered an attribute of the inventory, since the inventory reflects other manufacturers' brands). The royalty expense can be considered a proxy for the profit on costs associated with the acquired pivotal marketing intangible asset. The task force acknowledges that there may be situations in which the market participant buyer may replace the acquiree's corporate trade name with its own. In such situations, if the inventory selling price would consider the market participant buyer's corporate trade name, then the inventory's exit value will be dependent on the use of an established name in the marketplace. Therefore, it would be appropriate to include a hypothetical royalty expense for the use of that trade name as a disposal cost.

13.71 *Question 2:* Assume the same company was acquired as in Question 1. When estimating the reasonable profit allowance on disposal costs, is it reasonable to assume that the adjusted profit margin would be proportional to the costs incurred and, therefore, assume the same cost-based profit percentage?

Answer: No. Since the value added or profit earned by a reseller is generally driven by its marketing and other selling efforts, it is generally more appropriate to exclude COGS (i.e., the amount paid by the acquiree for the branded merchandise) from total current benefit expenses and, therefore, the total current benefit EBITA should only be allocated among the expenses of a reseller that creates value (i.e., selling and marketing and allocated overhead). Since the profit associated with the corporate trade name was treated as separate royalty expense, any direct support expenses and associated profit attributed to the corporate trade name should be excluded from the remaining current benefit profit. Remaining profit should be re-allocated among the value-added operating expenses needed to perform routine functions. By excluding COGS as a valued added cost and treating the corporate trade name as intangible asset used in the disposal process, this has the effect of reducing the inventory step-up to appropriately reflect that remaining profit to be earned by a reseller during the selling effort.

13.72 *Question 3:* Assume the same company was acquired as in Question 1 except the corporate trade name was considered a *routine asset*.[18] Are adjustments to the inventory valuation approach required to account for the fact the trade name is now determined to be a routine versus pivotal asset?

Answer: Not necessarily, but a profit split assessment when selecting the royalty rate should consider the routine or contributory nature of the trade name. Alternatively, the cost approach may be employed to value the trade name. In this case, the profit can be allocated in proportion to value added operating expenses, including direct support marketing expenses associated with routine corporate trade name.

[18] See footnote 13 in paragraph 13.54 for a description of a routine asset.

13.73 *Question 4*: The acquiree is in the business of manufacturing and selling branded products. The acquiree owns both the brands as well as the proprietary IP underlying the product and the manufacturing process. In this scenario the acquiree uses three types of IP i) brand IP[19], ii) technology IP and iii) manufacturing process IP[20]. How should each of these three types of IP be treated in valuing WIP and finished goods inventory?

Answer: It depends on when each type of IP is contributed during the inventory conversion cycle (i.e., during procurement, manufacturing, or disposal). For each type of IP, the following table can be used to identify when elements of that IP are contributed and the implication with respect to the proportion of the IP that has been utilized with respect to inventory.

Determining Whether IP has been Contributed or Remains to be Contributed to Inventory[21]

When the IP is Contributed:	Contributed or Remaining	
	WIP	Finished Goods
Procurement	Contributed	Contributed
Beginning of Manufacturing	Contributed	Contributed
Throughout Manufacturing	Partial	Contributed
End of Manufacturing	Remaining	Contributed
Disposal/Selling Effort	Remaining	Remaining

Depending on the nature of the IP, it may be contributed at various points in the inventory conversion cycle. Typically, if the IP is *added* to the inventory, there is likely a specific point in time when it is contributed, whereas if it is *used* to produce the inventory, it may be contributed throughout the manufacturing process.

Determining whether IP is contributed as part of the manufacturing process and, therefore, represents an inventoriable cost or whether it is used as part of the selling and disposal effort, is an important consideration for the acquirer. Subsequent to the business combination, this determination will help identify whether this element of IP should be capitalized into inventory (and ultimately becomes part of COGS) or capitalized into the IP intangible asset and reported as amortization as part of operating expenses. Consistent treatment in both the valuation analysis

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[19] FASB ASC 805-20-55-18 provides the following guidance regarding brands

> The terms brand and brand name, often used as synonyms for trademarks and other marks, are general marketing terms that typically refer to a group of complementary assets such as a trademark (or service mark) and its related trade name, formulas, recipes, and technological expertise. This Subtopic does not preclude an entity from recognizing, as a single asset separately from goodwill, a group of complementary intangible assets commonly referred to as a brand if the assets that make up that group have similar useful lives.

[20] Manufacturing process IP refers to IP that is used during the production process. Examples include instructions on manufacturing or assembly, know-how, etc.

[21] The thought process outlined in this table can also be used to assess when other costs and assets are contributed to inventory.

and subsequent reporting is important as this would ensure that there is no double counting of amortization from IP that is deemed to be contributed as part of the manufacturing process post business combination.

For technology IP and manufacturing process IP, it may be possible to identify a specific point in time in which the IP is contributed. One aspect to consider is the timing of the contribution of key components of the product. If a key component is contributed at a specific point in the inventory lifecycle (for example, software is added to an electronics product at the end of production), this would suggest that the IP was similarly contributed at that point in time. However, if there are multiple key components that are contributed throughout the process (for example, proprietary technology is contributed to a hardware product throughout manufacturing process), this would suggest that the IP is not contributed at a specific point in time. Therefore, in this instance, the IP may contribute value ratably based on the percentage of completion.

In general, if no distinct point in the process can be identified, the simplifying assumption would be that the process and technology IP contributes value over the entirety of the manufacturing process in line with the estimate for the percentage of completion of the WIP.

For brand IP, the extent to which it has been contributed to the inventory depends on what elements are subsumed within the brand IP. While the brand asset is typically valued in aggregate, this asset may encompass various elements, particularly when brands are valued using the MPEEM. If there are elements of the brand that are associated with the disposal process, those would be contributed at the time of disposal, however if no disposal elements are identified, then other brand elements would be contributed to inventory during the manufacturing process and therefore be part of the finished goods inventory fair value. To help identify the proportion of a brand that has already been contributed to the WIP and the finished goods inventory at the measurement date, it may be helpful to consider the relative importance of the following elements to the customer's purchasing decision:

- *Product design and logo elements:* Product design and logo elements (including trademarks and trade names that are on the product) are generally the most common elements of a brand. In many cases, these elements of the brand IP are contributed towards the end of the manufacturing process, such as a logo being stitched onto a shirt or packaging for the item. For well recognized brands, the product design and logo elements play a significant role in the customer purchasing decision because they convey the attributes of the product that customers consider important, such as reliability and performance attributes for electronics. As a result, in such cases, the brand IP would already be contributed to finished goods inventory during the manufacturing process.

- *Recipe:* In the food and beverage industry, the recipe may be part of the brand IP value and may play an important role in the customer purchasing decision. If the recipe is used at the beginning of the manufacturing process, this would suggest that it is contributed at the beginning. Alternatively, if there is a distinct step at the end that contributes a key characteristic to the end product, this would suggest that it is contributed at that point in time. In any case, the recipe would generally be fully contributed to finished goods inventory.

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- *Buying experience:* There may be cases where there are disposal elements associated with the brand. For certain goods, such as luxury goods, where there is a tightly controlled distribution channel that assures authenticity, the buying experience associated with the brand can be a significant part of the customer purchasing decision. Elements of tightly controlled distribution may include owning their own stores, controlling distributors, controlling market pricing, requiring purchase only at a licensed retailer, and/or having a uniform look and presentation across various stores. For instance, if a high-end clothing manufacturer sells some shirts that display their logo and others that do not for the same price, then the buying experience at the company store or the company's section of a department store may play a larger factor in the customer's purchasing decision. Conversely, if products are only sold online, the buying experience is less important. If applicable, this buying experience element is contributed at the time of disposal.

- *Other considerations:* Certain brands have a dual use where retailers use the brand to identify their stores and use the brand to identify their products (i.e., house brands). In other instances, companies may offer in-store marketing to retailers carrying their brands which prominently uses the product brand. These are situations where a portion of the brand IP is used at the time of disposal.

Oftentimes, the product design and logo elements may be the most important elements in the brand value, which would typically be contributed to finished goods inventory during manufacturing. In any case, when a brand encompasses multiple elements, a careful analysis to identify disposal elements might be required and the overall brand value contribution would have to be allocated accordingly between elements included in inventory and elements used in the disposal efforts.

13.74 *Question 5*: The acquiree is a manufacturer of branded goods selling various well-recognized brands, inclusive of designs and logos, through third party retail channels. The acquiree owns most of its brands including all associated trademarks, patents, and designs. For two of its branded products in Europe, the acquiree licenses the trademark and formula from another manufacturer. The acquiree has been highly successful in commercializing these licensed products earning EBIT margins **(**before the royalty payment**)** comparable to its owned brands of approximately 20%, while paying a 4% royalty for sales in Europe.[22] The 4% royalty is also in line with observed license transactions for similar pre-commercialized branded goods in the European market. The acquiree credited various advertising and promotion efforts, strong distributor relationships, and manufacturing process know-how to its success, albeit acknowledged that the manufacturing process is routine and the same process is used by its competitors. How can the marketing intangibles of the acquiree be treated when allocating inventory profit for the fair value measurement of branded product inventory in this circumstance?

Answer: The marketing intangible assets of the acquiree consist of its product brands, corporate trade name, and distributor relationships. Its brands and distributor relationships were pivotal to the operations of the acquiree, while the corporate trade name was considered routine in nature.

[22] Based on the license agreement, no upfront payment was made. The 4% royalty is determined to be a market rate for the rights that were granted under the license.

It is assumed that market participants would also have such assets. The valuation specialist valued the brands and the corporate trade name under the relief from royalty method and the distributor relationships using the MPEEM. The simulated royalties for the owned brands and corporate trade name were estimated to be 8% and 1%, respectively, based on an assessment of comparable license transactions, return on invested capital metrics, and profit split analytics. The implied royalty resulting from the MPEEM for the distributor relationships was 12%, which was estimated as the implied royalty to make the present value of year 1 cash flows before tax amortization benefit to be zero.

When considering the impact of the marketing intangibles on the fair value of inventory, a functional apportionment of the marketing intangibles was performed. The profit associated with distributor relationships and corporate trade name all related to disposal activities while the profit associated with the brands was the value added during manufacturing.

In this example, there were no significant disposal elements that were part of brand IP and, therefore, the full 8% was deemed contributed during the manufacturing process.

For the inventory related to the licensed brands in Europe, the 8% simulated royalty has 2 components: 1) the 4% license payment and 2) the incremental value created during the commercialization represented by the intangible rights asset. While the first component is a cost and the second is an element of profit, both were deemed to be contributed during the manufacturing process and, therefore, included in the inventory value.

The cost related to the license payment was treated as an inventoriable item whether the expense appears in COGS or operating expenses contributing to the inventory step-up. The acquirer would analyze the royalty arrangement to determine whether an obligation has been incurred to the licensor as of the measurement date for use of licensed brands. If a liability is not incurred and, therefore, not recorded, the amount of the license payment is netted against the fair value of the inventory to avoid double counting the impact of the inventory step-up and the license expense on the income statement when the inventory is sold. The task force believes that similar inventory should be valued consistently irrespective of whether the brands are owned or licensed. Note that when the liability is not recorded and, instead, netted against the fair value of inventory, the recognized inventory using the licensed IP will be less than had the IP been owned.

13.75 *Question 6*: The acquiree is in the business of developing, manufacturing and marketing generic pharmaceutical products. For each product, a composite intangible asset is recognized (referred to as *currently marketed product*) that represents the composite value of acquired intellectual property, formularies and distribution rights, FDA approvals, and trade names. How can the benefit of the acquiree's intangible assets be treated in relation to the inventory valuation?

Answer: A higher, sometimes significantly higher, fair value of inventory of pharmaceutical products compared to their adjusted book value is generally due to identifiable intangibles. Certain attributes of the composite value manifest themselves in the fair value of the inventory.

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In order to allocate the profit earned before and after the measurement date, an implied royalty rate from the intangible asset valuation can be derived. In this example, there was only one identified intangible asset – currently marketed product. An assessment would be required regarding how the implied royalty may be apportioned between the procurement, manufacturing and disposal functions of the inventory. It was determined that the technology (formulas and manufacturing process know-how) portion of the value is utilized during the manufacturing process and is considered an attribute of the inventory, while the trade name and commercial elements of the value are utilized at the time the inventory is sold. A functional apportionment considered various methods to split the implied royalty including observed market royalties for generic pharmaceutical products, which would provide insight into relative contributions of underlying technology and trademarks/trade names for similar intangible assets, a qualitative assessment of differentiating factors driving customer purchasing decisions, as well as a quantitative return on invested capital analysis of historical spend by expense category (e.g., maintenance and new product R&D, advertising and promotion, and selling, etc.).

The task force acknowledges that the assignment of certain elements of the currently marketed technology IP as either a manufacturing or disposal function requires judgment. For example, an FDA approval is generally considered to be an authorization to market a drug; however, the clinical trials required for the approval may be considered an attribute of the compound itself and could be considered an attribute of the inventory (part of the manufacturing process).

Property, Plant and Equipment

13.76 This section provides an overview of considerations used in valuing property, plant and equipment. Detailed guidance on valuation of property, plant and equipment is beyond the scope of this guide. Valuation specialists involved in valuing property, plant and equipment in a business combination or for other financial reporting purposes are encouraged to consult other resources.[23]

13.77 Similar to other assets, the valuation process of property, plant and equipment typically includes consideration of three widely accepted and commonly applied valuation approaches: the cost approach, the income approach and the market or sales comparison approach.

[23] The following resources provide additional information regarding valuation of property, plant and equipment:

- American Society of Appraisers, Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets
- USPAP, Uniform Standards of Professional Appraisal Practice
- Royal Institution of Chartered Surveyors, RICS Valuation – Professional Standards Global
- The Appraisal Institute, a global professional association of real estate appraisers, provides various resources and publishes literature in this area. For further information, refer to the Appraisal Institute's website at http://www.appraisalinstitute.org/.

Valuation Techniques

Cost Approach

13.78 The cost approach may be viewed as a general way of estimating the value of property, plant and equipment by quantifying the cost to replace the asset with another having equivalent utility, sometimes described as future service capability.

13.79 The initial step in the process of valuing property, plant and equipment produces an estimate of the reproduction cost new or replacement cost new for the asset being valued, which can be described as follows:

- *Reproduction cost new* is the current cost of an identical new asset.

- *Replacement cost new* is the current cost of a similar new asset having the nearest equivalent utility to the asset being valued.

13.80 Simply stated, replacement cost new is based on a modern, more efficient asset with lower combined capital or operating costs, or both. Although replacement cost new is the usual starting point when applying the cost approach, reproduction cost new may also be used. When the subject asset is modern and efficient, replacement cost new and reproduction cost new are generally equivalent. In cases when reproduction cost new may be more easily determined, deducting excess capital costs, a form of functional obsolescence (defined below), from reproduction cost new will result in an estimate of replacement cost new.

13.81 For real property assets, reproduction cost new is the estimated cost to construct, at current prices as of the measurement date, an exact duplicate or replica of the building being valued, using the same materials, construction standards, design, layout, and quality of workmanship and embodying all the deficiencies and superadequacies (items that are too good for their purpose) of the subject building. For personal property assets, reproduction cost new may be estimated using the trending method, in which percentage changes in applicable price indices are applied to historical costs to convert them into indications of current costs.

13.82 Once either replacement or reproduction cost new is estimated, adjustments for depreciation resulting from physical deterioration, functional (or technical) obsolescence, and economic (or external) obsolescence are generally necessary to reflect the condition of the asset being valued and can be described as follows:

- *Physical deterioration* represents the loss in value due to the decreased usefulness of a fixed asset as the asset's useful life expires. This can be caused by factors such as wear and tear, deterioration, physical stresses, and exposure to various elements.

- *Functional obsolescence* represents the loss in value due to the decreased usefulness of a fixed asset that is inefficient or inadequate relative to other more efficient or less costly replacement assets resulting from technological developments.

- *Economic obsolescence* represents the loss in value of a fixed asset caused by external factors, independent from the characteristics of the asset or how it is

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operated. (For further discussion, see the "Bargain Purchases and Economic Obsolescence Considerations" section in this chapter.)

Income Approach

13.83 When applied to real property, the income approach is often referred to as the "income capitalization approach," which has two methods: direct capitalization method and yield capitalization method. These methods provide an indication of the present value of anticipated future benefits to be derived from ownership of the real property.

13.84 The income approach is typically not used to value individual items of personal property, because personal property assets generally do not produce earnings individually; rather, they ordinarily contribute to earnings in concert with other economic factors of production. However, in some instances, it may be possible to quantify the cash flows generated directly by a group of such assets (e.g., a facility, a production line or an electric power plant) and apply the discounted cash flow method. The cash flows will typically reflect all forms of obsolescence so that no further adjustment is required unlike under the market and cost approaches.

Market Approach

13.85 When applying the market approach (also referred to as the *sales comparison approach*) to real property, comparisons are made between other similar (comparable) properties in the immediate area or in competing areas that have been sold, for which contracts of sale have been agreed, or which listings have been arranged compared to the subject property. Adjustments are made to the price data to reflect differences between each comparable property and the subject property for such factors as property rights conveyed, financing and other conditions of the sale, expenditures made immediately after purchase, the timing of the sale, zoning, location, and physical characteristics such as size, age, and condition. The adjusted prices per unit of physical measurement are applied to the analogous statistic of the subject property to estimate the value of the subject property.

13.86 When applying the market approach to personal property, market pricing data is obtained and may be adjusted to reflect differences between the comparable asset and the subject asset for such factors as age, utility, physical deterioration, and functional and economic obsolescence. The adjusted prices are applied to the subject asset to estimate the value of the personal property. The following three methods within the market approach may be applied in the valuation of personal property: direct match method, comparable match method, and percent to cost method.

Appropriateness of Valuation Approaches

13.87 For real property assets, the income and market approach are the preferred valuation approaches because these assets are generally income producing or located in areas that have similar assets that have been transacted or listed, or both. The cost approach may be used in certain circumstances including but not limited to the following:

- when the asset is specialized in nature or
- when the asset is relatively new or

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- when there is a lack of reliable available market data or
- when the components of the real property need to be separately valued.

13.88 For personal property assets, the market approach may be more appropriate when an active secondary market for assets with similar characteristics exists. Absent market data and when reliable replacement cost new is available, the replacement cost method of the cost approach may be used. However, in many instances, when reliable replacement cost new and market data is not readily available, the trending method under the cost approach may be used.

Internal-Use Software

Overview

13.89 FASB ASC 350-40 provides guidance on accounting for the cost of computer software developed or obtained for internal use and for determining whether the software is for internal use. Specifically, FASB ASC 350-40-15-2A states that

> Internal-use software has both of the following characteristics:
>
> a. The software is acquired, internally developed, or modified solely to meet the entity's internal needs.
>
> b. During the software's development or modification, no substantive plan exists or is being developed to market the software externally.

13.90 FASB ASC 350-40-55-1 provides examples illustrating when computer software is for internal use. FASB ASC 350-40-55-2 provides examples illustrating when computer software is not for internal use.

Valuation Techniques

13.91 Internal-use software is generally a supporting or contributory asset with no direct identifiable revenue or cash flow streams. Given this, the task force believes generally it would not be appropriate to apply the income approach which involves the isolation of the revenue or cash flow streams directly related to the asset.

13.92 The market approach is seldom used to value internal-use software except in certain cases in which there may be sufficient observable asset pricing data. For example, if market evidence pertaining to pricing comparable software packages exists, it may be appropriate to value internal-use software under the market approach based on applicable pricing multiples (e.g., price per module). The difficulty in applying this approach relates to the scarcity of reasonably comparable transactions, particularly when the subject asset is internal-use software that has been custom built to unique specifications.

13.93 The task force believes the cost approach may be the most appropriate technique to value internal-use software, given that there is no identifiable stream of economic benefits associated

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with internal-use software and it can generally be easily reproduced. Value is measured in terms of the cost associated with the replacement of the internal-use software.

Cost Approach

Application Considerations

13.94 To estimate the replacement cost for internal-use software, the valuation specialist would need to consider all relevant component costs associated with the software. Since internal-use software is generally developed internally, it is likely that the entity has maintained records from the creation or development of the internal-use software. When estimating replacement cost for internal-use software, historical costs adjusted for inflation and other factors may be a reasonable starting point. When using historical costs, the valuation specialist would need to consider whether a similar amount of effort would be required to replicate the internal-use software or whether new technology would permit a more efficient deployment of effort. The task force generally believes that excessive costs associated with pursuing wrong paths before arriving at a viable version of internal-use software would not be considered in the replacement cost of the software. However, the task force acknowledges that the cost estimate should include normal learning curve effects (for example, debugging) for replacing the software on the measurement date provided it is consistent with market participant assumptions.

Direct Costs

13.95 Direct costs are expenses that can be directly linked to the replacement of the internal-use software. An example may include software developer time. Fully burdened labor costs (including payroll taxes and fringe benefits for development personnel) generally represent the most significant component cost in the creation of internal-use software. Direct costs should reflect the current costs that would be incurred to develop the internal-use software of equal utility.

Indirect Costs

13.96 Indirect costs are expenses that cannot be directly linked to the creation of a specific internal-use software, such as lease expense for assets used in the development of the software (e.g., rent of building and/or equipment used in development), depreciation of assets used in development effort (e.g., depreciation of the computer used in development), utilities and operating expenses, which indirectly contribute to the internal-use software development. Similar to direct costs, historical indirect costs should be stated on a current cost basis.

Developer's Profit and Opportunity Costs

13.97 Developer's profit relates to the "mark-up" that a third party would earn to incur the development costs. In other words, when internal-use software is created, the expectation is that both a "return of" the investment (material, labor and overhead) and a "return on" assets used in the development effort will be achieved. The following are ways to estimate developer's profit:

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- As a percentage return on the development cost (that is, mark-up on material, labor and overhead) derived from operating margins of entities engaged in contract software development; or

- Fixed dollar amount based on the time spent to develop the internal-use software.

13.98 Opportunity costs represent the foregone return on investment during the development of internal-use software. Given the nature of internal-use software, opportunity costs may be calculated based on a reasonable rate of return on the expenditures (including developers profit) while the internal-use software is being developed. In other words, the costs incurred to replace the internal-use software could have been invested elsewhere, which would have resulted in a return on an alternative investment. Given the routine nature of internal-use software typically valued with the cost approach, opportunity costs do not include lost business profits during the time required to replace the internal-use software.

Obsolescence

13.99 Forms of obsolescence for internal-use software include incurable functional (technological) obsolescence and economic (external) obsolescence.

13.100 Functional (technological) obsolescence represents the loss in value due to the decreased usefulness of internal-use software that is inefficient or inadequate relative to other more efficient or less costly replacement internal-use software resulting from technological developments.

13.101 Economic obsolescence represents the loss in value of internal-use software caused by external factors, independent from the characteristics of the asset or how it is operated. For further discussion of EO, see the "Bargain Purchases and Economic Obsolescence Considerations" section in this chapter.

13.102 In determining the obsolescence of the internal-use software, the following factors are typically considered:

- Number of years the internal-use software has been in use relative to the expected useful life of the internal-use software;

- Portion of the internal-use software being used;

- Whether sections of the internal-use software were developed by old techniques or the obsolescence has already been considered in the development of replacement costs; and

- Historical experience of the entity relative to any prior versions of the internal-use software, any planned implementations of future versions, industry norms or alternative internal-use software, the design intent of the developers, and so on.

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Taxes / Tax Amortization Benefit

13.103 As discussed in the "Cost Approach" section in chapter 12, the task force believes taxes and a tax amortization benefit (TAB) are not considered in the valuation of internal-use software using the cost approach.

Illustrative Example: Using Cost Approach to Value Internal-Use Software

Company T was acquired by Company A in a business combination. Management identified internal-use software as an identifiable intangible asset of Company T. Management indicated development of the software would require management involvement and other resources and provided an overhead estimate to account for this element of the development (inclusive of developer's profit). Further evaluation indicated that the software had an initial estimated useful life of six years and the software was developed three years ago. Company A applied the cost approach to estimate the fair value of the software.

Key assumptions used:

- Estimated hours to complete the re-development of the software: 8,000 hours over 2-year period
- Estimated hourly rate for outsourced coding and development from third-party developer: $150/hour (adjusted for inflation and including developer's profit[24])
- Overhead expenses (inclusive of developer's profit): $360,000.
- Opportunity cost:[25] 10% of total expenditures (direct costs, indirect costs, and developer's profit)[26]
- Obsolescence factor: 50%, based on the software's remaining useful life of three years as a percentage of the initial useful life of six years.

Internal-Use Software	
Estimated Hours to Complete	8,000
Estimated Cost per Hour	$150
Total Direct Cost	$1,200,000

[24] Developer's profit should be calculated separately if not included in direct costs or indirect costs.

[25] The calculations of opportunity cost and obsolescence are based on the simplified assumptions given in this example. Other assumptions and calculations may be appropriate based on facts and circumstances.

[26] Opportunity costs should capture the effects of compounding in instances where it is deemed significant; however, the impact on the time to replace (i.e., 2 years) would not be significant in this example; therefore, for simplicity purposes, compounding is not reflected.

Plus: Overhead (Indirect costs)	360,000
Sum of Direct and Indirect Costs	1,560,000
Plus: Opportunity Cost @ 10%	156,000
Total Costs	1,716,000
Less: Obsolescence @ 50%	858,000
Fair Value of Internal-Use Software	**$858,000**

Assembled Workforce

Overview

13.104 According to FASB ASC 805-20-55-6, "an assembled workforce … is an existing collection of employees that permits the acquirer to continue to operate an acquired business from the acquisition date. An assembled workforce does not represent the intellectual capital of the skilled workforce—the (often specialized) knowledge and experience that employees of an acquiree bring to their jobs. Because the assembled workforce is not an identifiable asset to be recognized separately from goodwill, any value attributed to it is subsumed into goodwill." Although the assembled workforce is not recognized separately from goodwill, the application of some valuation methodologies may still require measuring its fair value for purposes of calculating contributory asset charges (CACs), which are necessary inputs in the determination of the fair value of other recognized identifiable intangible assets. In these cases, the acquired assembled workforce would be valued per the guidance below.

13.105 The intellectual capital that has been created by a skilled workforce may be embodied in the fair value of an entity's other intangible assets that would be recognized at the acquisition date because the employer retains the rights associated with those intangible assets. For further discussion of the relationship of intellectual capital and intangible assets, see chapter 11.

Valuation Techniques

13.106 An assembled workforce is generally a supporting or contributory asset with no direct identifiable revenue or cash flow streams. Given this, the task force believes generally it would not be appropriate to apply the income approach which involves the isolation of the revenue or cash flow streams directly related to the asset.

13.107 The market approach is seldom used to value an assembled workforce except in rare cases due to the difficulty in obtaining observable asset pricing data.

13.108 The task force believes the cost approach may be the most appropriate technique to value an assembled workforce, given that there is generally no identifiable stream of economic benefits associated with an assembled workforce. Value is measured in terms of the cost associated with the replacement of the acquired workforce.

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13.109 Replacement costs should include all direct and indirect costs associated with replacing the assembled workforce at the measurement date, including costs that did not result in the successful addition of a new employee.

13.110 The cost approach typically requires no adjustment for incremental tax benefits from a "stepped-up" or new tax basis. When using the cost approach, a TAB should not be reflected in the fair value measurement because costs are measured on a pretax basis.

Cost Approach

Application Considerations

13.111 To estimate the replacement cost for an assembled workforce, the valuation specialist would need to consider all relevant component costs associated with the asset. The valuation of an assembled workforce relies in some part on the headcount required to efficiently and effectively operate the business. The task force observes that market participant assumptions are often consistent with the post combination structure of the workforce necessary to operate the acquired business, which may include some reductions in or increases to the workforce. The structure of the workforce reflected in the valuation may therefore look differently than the workforce in place pre-combination. Additionally, the task force believes that there should be consistency in the assumed workforce structure, the related PFI and any CACs that impact the valuation of other assets.

Direct Costs

13.112 Direct costs are expenses that can be directly linked to the replacement of the assembled workforce. Examples include agency fees, advertising costs, interview time, training and any other out-of-pocket expense incurred to replicate the acquired workforce. These costs may vary depending on the position being filled. For example, executive positions may pay an agency fee based on the salary of the employee which would result in a higher cost of procurement for these employees relative to others. Direct costs should reflect the current costs that would be incurred to replace the assembled workforce as of the measurement date. It is appropriate to consider the replacement cost of the assembled workforce relative to current practices in the marketplace as market participant trends can evolve over time. For example, outsourcing and offshoring activities are means by which companies seek to attain efficiency in their overall human capital cost structure.

Indirect Costs

13.113 Indirect costs are expenses that are related to converting the workforce to full utility. These indirect costs represent the inherent inefficiencies associated with an untrained workforce. To derive this component of cost, an estimate of unproductive time is multiplied by the corresponding fully burdened rate to estimate the total unproductive time cost.

13.114 Normal inefficiencies may be appropriate to include in a cost build-up because they are inherent to the nature of replacing the workforce and cannot be avoided even with knowledge of the most productive hiring strategy. Examples of these costs may include advertising, interview time, travel, and other incidental costs directed toward the recruitment and qualification process

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of employees that do not result in successful hires (i.e., the "fully-loaded" cost per employee should include unsuccessful recruiting attempts). However, inefficient efforts that are deemed to be irrelevant to the replacement of the workforce asset should be excluded from the total cost build-up analysis.

Developer's Profit and Opportunity Costs

13.115 As discussed in chapter 12, the cost approach typically considers a developer's profit and opportunity costs when estimating the replacement cost of an intangible asset. However, for an assembled workforce, this may not be necessary. For example, when direct external costs (such as agency fees) are based on rates that would be charged by third parties to provide equivalent services, the price observed would include an element of profit. Therefore, this component of developer's profit would not be required.

13.116 Likewise, incremental opportunity costs do not generally need to be considered because the typical indirect cost associated with the assembled workforce already reflects the lack of productivity during the training period.

Noncompetition Agreements

Overview

13.117 Noncompetition or "noncompete" agreements are legal agreements that prohibit or restrict a person's or business' ability to compete with a company in a certain market for a specified period of time. The accounting considerations for noncompete agreements are discussed in the "Noncompetition Agreements" section of chapter 6.

Valuation Techniques

13.118 The task force believes that the with-and-without method within the income approach is appropriate for the valuation of noncompete agreements, as evidenced by the impact of competition on the relevant PFI. The unique nature of noncompete agreements restricts the application of the market approach. The cost approach is not suitable to value noncompete agreements when the impact of competition would be on the income-generating capacity of a company or business unit.

With-and-Without Method

13.119 The "With-and-Without Method" section in chapter 12 describes this method in greater detail. In the context of noncompete agreements, the valuation is completed under two categories of scenarios: one in which a company's cash flows are protected by the covenant not to compete and one in which the company's cash flows are assumed to be "impaired" by the competition of the covenantor over the period of economic benefit of the noncompete agreement (which, in most cases, would be the contractual term but sometimes may be different). The difference in the present value of the cash flows under the two categories of scenarios are then probability weighted (based on the likelihood of the covenantor competing), and the present value of the TAB is added to arrive at the value of the noncompete agreement.

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13.120 The following discussion highlights some of the considerations for the valuation of noncompete agreements.

1. *Enforceability limitations:* The valuation specialist should understand the extent to which the terms of the noncompete agreements would be enforceable within the jurisdiction applicable to the noncompete. Certain jurisdictions may invalidate noncompete agreements that exceed a given number of years, and others may invalidate certain types of business or employment restrictions.

2. *Key variables:* The with-and-without method is applied for the valuation of noncompete agreements based on two key variables, a) the expected impact of competition and b) the probability of competition.

    a. *Expected impact of competition:* The valuation specialist should understand the nature of the potential impact and timing of the competition, which may include revenue loss, customer solicitation, delays on projects, profitability reductions, as well as the loss of employees. In evaluating the potential impact of competition, the valuation specialist should understand the feasibility of such competition from the covenantor, based on analysis of factors such as the time to start a competing business, availability of viable competitive facilities, and the amount of required capital.

        In estimating the potential impact of competition on a company's cash flows, the valuation specialist should consider the fixed and variable inputs to the estimation of the cash flows, and whether the company would experience increased cost levels. The subject cash flows would need to reflect the portion of the business upon which the covenantor can have an impact. In addition, if the covenantor can impact certain cash flows of the acquirer, it would be expected that such cash flows are reflected in the PFI used for the valuation analysis of the noncompete.

    b. *Probability of competition:* In the case that the covenantor is an individual, the probability of competition may depend on the age, personal circumstances, experience, position, and earnings potential of the covenantor (that may be contingent on the acquiree's performance), their desire to continue in the restricted industry, as well as their desire to compete.

        In the case that the covenantor is an entity, such as one that has sold a portion of its operations or a related party, the probability of competition would be expected to depend on the entity's business profile, adjacent and complementary businesses for the entity, as well as other criteria that would impact its investment decisions such as the types of assets that would be required for competition.

    The discount rate used in the valuation of noncompetes should be the weighted average cost of capital from a market participant perspective.

3. *Employees affected by nonsolicitation terms:* Noncompetition agreements can include nonsolicitation terms that limit competition by restricting a party from soliciting employees of a company for a specified period of time. If the employees that would likely be

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solicited by the covenantor are not assigned to revenue generating activities, the nonsolicitation agreements can be valued using the cost approach. However, if the employees that would likely be solicited by the covenantor are assigned to revenue generating acitivites, the impact of their competition should be incorporated in the cash flow based analysis.

4. *Scenario analyses:* The task force believes that the use of multiple competition scenarios would be appropriate in the valuation of noncompete agreements. Additionally, in the event that a company has multiple noncompete agreements, the valuation specialist should consider how the presence of multiple covenantors may impact their individual probabilities of competition, as well as the impact of their competition.

5. *Contributory asset charges:* Exhibits D-1 and D-1a in the toolkit from the Appraisal Foundation's VFR Valuation Advisory #1: *The Identification of Contributory Assets and Calculation of Economic Rents* (Valuation Advisory #1),[27] address the issue of the application of CACs to the various intangible assets for the value of the noncompete agreement. In addition to the methods described in the toolkit, the task force believes that the annuity-based approach considering the term of the agreement is also acceptable.

Trademarks, Trade Names and Brand Assets[28]

Overview

13.121 Paragraphs 16–18 of FASB ASC 805-20-55 provide guidance on trademarks, trade names and brand assets (this guidance is included in paragraph 6.32 of this guide.) Specifically, FASB ASC 805-20-55-16 states that "[t]rademarks are words, names, symbols, or other devices used in trade to indicate the source of a product and to distinguish it from the products of others." Trademarks, trade names and other marks are often registered with governmental agencies or are unregistered, but otherwise protected.

13.122 Strategically, brand assets are intended to convey a meaning to end users, creating a favorable image of products and/or services to the market. The objective is to attract customers to all of a company's products or services, which may include those that have registered trademarks or trade names (such as a product line). As such, the concept of brand assets is broader and more comprehensive than that of a trademark or trade name. FASB ASC 805-20-55-18 states the following:

> The terms *brand* and *brand name*, often used as synonyms for trademarks and other marks, are general marketing terms that typically refer to a group of complementary assets such as a trademark (or service mark) and its related trade name, formulas, recipes, and technological expertise. This Subtopic does not preclude an entity from recognizing,

[27] The Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #1: *The Identification of Contributory Assets and the Calculation of Economic Rents*, and its related toolkit are available at the Appraisal Foundation's website at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

[28] This section would also be applicable to artistic-related intangible assets discussed in paragraphs 29–30 of FASB ASC 805-20-55.

as a single asset separately from goodwill, a group of complementary intangible assets commonly referred to as a brand if the assets that make up that group have similar useful lives.

13.123 Furthermore, it is possible that a brand may align with a specific component of a business, such as an IP or technology platform, a well-known domain name or a process that is unique to a product or service. When valuing a brand, it is important to carefully align economic components encompassed in the brand and their contribution. In a business combination these types of assets may be valued independently or in the aggregate depending on facts and circumstances.

Valuation Techniques

13.124 Generally, trademarks, trade names and brand assets are valued using one or more valuation techniques under the income approach. These techniques are described in greater detail in chapter 12. Market and cost approaches may be used if facts and circumstances warrant their use. The following lists examples of valuation approaches and techniques that may be employed to value trademarks, trade names and brand assets, as well as factors which, when present, may indicate that a particular valuation approach or technique may be more appropriate than others:

- *Income Approach - Relief From Royalty Method*
    - The availability and quality of observable royalty data
    - When observable royalty data is not available or not relevant based on economic characteristics of the asset being valued, the ability to estimate royalty rates using other means. Other means may involve simulated royalty rates as discussed in the "Simulated Royalty Rates" section in paragraphs 11.22–.24, the "Asset Class Split" section in paragraphs 12.63–.66 and the "Relief From Royalty Method" section in paragraphs 12.71–.89.
    - The economic life and pattern of decay (if any) is ascertainable and supportable
- *Income Approach - Multi-Period Excess Earnings Method*
    - Customers are obtained / retained due to the market position of the trade name or trademark
    - The economic life and pattern of attrition is ascertainable and supportable
    - Portfolio of the appropriate grouping of assets that supports the trade name or trademark is known
- *Market Approach*
    - Seldom used due to the lack of observable market values for similar assets, except in certain cases in which there may be sufficient observable asset pricing data

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- *Cost Approach*
    - Trade name or trademark is routine in nature and provides nominal market advantages
    - The trademark or trade name is not fully developed and/or supported in the market

Questions and Answers - Trademarks and Trade Names

13.125 *Question 7:* When selecting the appropriate royalty rate to use in the relief-from-royalty method, what distinction is made for business-to-business transactions compared to business-to-consumer transactions?

Answer: Generally, royalty rates observed for business-to-business transactions are lower than those observed for business-to-consumer transactions. Therefore, it is important to understand the terms of the asset subject to valuation and match those to available market data to obtain the most representative set of comparable transactions.

13.126 *Question 8:* What are the sources for market royalty rates to be used in the relief from royalty analysis?

Answer: Royalty rates can be found in existing licensing agreements or from subscription databases. The data should be analyzed to screen for the most comparable transactions. Note that terms, such as upfront fees and the original issue date, can impact the magnitude of the royalty rate.

13.127 *Question 9:* How is the valuation of a trade name impacted by the intended use of the acquirer?

Answer: The valuation inputs should be based on those that would be utilized by a market participant. These inputs may or may not be the same as those of the acquirer. See paragraph 13.176 for additional discussion on defensive assets.

13.128 *Question 10:* What life should be used in the valuation of a trade name or trademark?

Answer: The life used in the analysis should reflect the attributes of the trade name or trademark being valued. Some of these assets will transition over time as a company or the underlying industry grow and evolve. Additionally, a trademark or trade name may be discontinued in favor of newer branded assets. The life pattern of an asset in this case should reflect the impact of the company no longer supporting the asset with marketing spend, provided it is consistent with market participant assumptions.

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Patented and Unpatented Technology

Overview

13.129 Technology is the collection of techniques, skills, methods, and processes used in the production of goods or services. Technology can be the knowledge of techniques and processes that is separable or is capable of being documented. Those assets can generally be classified as patented and unpatented technology. A patent is a right granted from the government or other authorities that confers on the creator the sole right to make, use or sell an invention for a set period of time. As some companies do not aggressively pursue patents, unpatented or proprietary technology also should be considered when accounting for a business combination.

Valuation Techniques

13.130 Generally, patented and unpatented technology is valued using one or more valuation techniques under the income approach. These techniques are described in greater detail in chapter 12. Market and cost approaches may be used if facts and circumstances warrant their use. The following lists examples of valuation approaches and techniques that may be employed to value patented and unpatented technology, as well as factors which, when present, may indicate that a particular valuation approach or technique may be more appropriate than others:

- *Income Approach - Relief From Royalty Method*
    - Acquired customer relationships are considered pivotal
    - The availability and quality of observable royalty data across all strata (term, gross v. net, upfront payments, measurement metric, etc.)
    - Consideration of alternate means of developing inputs for royalty rates which may involve simulated royalty rates as discussed in the "Simulated Royalty Rates" section in paragraphs 11.22–.24, the "Asset Class Split" section in paragraphs 12.63–.66 and the "Relief From Royalty Method" section in paragraphs 12.71–.89.
    - Technology is not unique or complicated in terms of development effort (for example, time or cost or both)
    - Significant development effort was incurred
    - Patents or unpatented know-how are key to the product
- *Income Approach - Multi-Period Excess Earnings Method*
    - Customers are obtained / retained due to the quality of the technology
    - Technology is unique (for example, contains features that competitive products do not have or contains comparable features that are superior to competitors' products)

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- Significant development effort was incurred
- Patents or unpatented know-how are key to the product

- *Market Approach*
  - Seldom used due to the lack of observable market values for similar assets, except in certain cases in which there may be sufficient observable asset pricing data

- *Cost Approach*
  - Technology is not pivotal in nature and portions or elements of it can be readily procured in open markets and modified for immediate use
  - Technology is not currently generating revenue or profit and not expected to for the foreseeable future
  - Limited cost incurred (for example, time or cost or both) to develop technology
  - Technology would be used only for a short time
  - Use of the technology is uncertain at the time of acquisition
  - Technology will be combined with the acquirer's product offerings but there is not corresponding increase in revenue or profit

In-Process Research and Development Assets

13.131 Under FASB ASC 805, the acquirer recognizes acquired in-process research and development (IPR&D) assets at fair value as of the acquisition date. For purposes of measuring the fair value of IPR&D assets, the cost approach is applied only in limited circumstances. For example, the cost approach may be used to value dedicated, single purpose fixed assets used in research and development (R&D) activities, assets that can be substituted effectively through replacement or reproduction, or IPR&D projects that are in initial stages of development in which robust prospective financial information (PFI) does not exist. The market approach is seldom used to value IPR&D assets due to the lack of observable market values for similar assets. In most instances, the income approach is used to value IPR&D assets.

13.132 Detailed discussion of acquired IPR&D assets is beyond the scope of this guide. For in-depth guidance on IPR&D assets, refer to the AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*, which provides guidance and illustrations regarding the initial and subsequent accounting for, valuation of, and disclosures related to acquired IPR&D assets.

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Digital Assets

13.133 In a business combination, acquired digital assets classified as identifiable intangible assets, as well as digital assets that meet the definition of a financial asset, are recognized and measured at fair value as of the acquisition date. Detailed discussion of acquired digital assets is beyond the scope of this guide. For a high-level overview of these assets, see the "Digital Assets" section of chapter 6. For in-depth guidance on digital assets, refer to the AICPA Practice Aid, "Accounting for and Auditing of Digital Assets," which provides nonauthoritative guidance on how to account for and audit digital assets and is available on the AICPA website. This practice aid also addresses certain fair value measurement considerations related to these assets (see Questions and Answers 16–21 in the "Accounting Subgroup" section of the practice aid). Public companies should also refer to the guidance in SEC Staff Accounting Bulletin (SAB) No. 121 (which is available on the SEC website).

Customer-Related Intangible Assets

13.134 Under FASB ASC 805, the acquirer recognizes acquired customer-related intangible assets at fair value as of the acquisition date. For customer-related intangible assets, the income approach is most commonly used while the cost approach may also be used in certain circumstances. The market approach is seldom used to value these assets due to the lack of observable market values for similar assets.

13.135 The relationships that an acquiree has with a single customer may encompass more than one type of a customer-related intangible asset (e.g., customer relationship, customer list or backlog). This may lead to questions about whether different customer-related intangible assets that pertain to the same customer may be measured and recognized separately or as a single unit of account. The appropriate unit of account for customer-related intangible assets would be determined by the reporting entity and valuation would follow that determination. For further discussion, see the "Unit of Account for Customer-Related Intangible Assets" section in chapter 6.

13.136 Detailed discussion of acquired customer-related intangible assets is beyond the scope of this guide. For in-depth guidance on customer assets, refer to Valuation Advisory #2,[29] which provides guidance and illustrations regarding the valuation of customer-related intangible assets. Also refer to chapter 11 which further elaborates on relationship-based intangible assets.

Interplay of Contract Liabilities and the Valuation of Certain Intangible Assets

13.137 In certain business combinations, the acquiree may have a contract liability at the acquisition date. The purpose of this section is to discuss how to consider the contract liabilities

[29] The Appraisal Foundation's VFR Advisory #2: *The Valuation of Customer-Related Assets*, is available at the Appraisal Foundation's website at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

when valuing certain intangible assets. The "Pending Content" in FASB ASC 805-20-25-28C[30] requires that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with FASB ASC 606, *Revenue from Contracts with Customers*. This requirement is the result of amendments in FASB Accounting Standards Update (ASU) No. 2021-08, *Business Combinations (Topic 805)–Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. These amendments do not affect the accounting for other assets or liabilities that may arise from revenue contracts with customers in accordance with FASB ASC 606, such as refund liabilities, or in a business combination, such as customer-related intangible assets and contract-based intangible assets. For example, if acquired revenue contracts are considered to have terms that are unfavorable or favorable relative to market terms, the acquirer should recognize a liability or asset for the off-market contract terms at the acquisition date (for further discussion, see the "Intangible Assets Associated with Contracts with Customers" section later in this chapter which, among other things, discusses off-market intangible assets or liabilities arising from customer contracts).

13.138 The relationship between contract liabilities and the valuation of certain intangible assets (valued with an income approach) that contribute to the fulfillment effort of the contract liability should be considered. As such, for assets that contribute to the fulfillment effort going forward, that contribution should be included in the asset value.

13.139 Prior to the adoption of ASU No. 2021-08, a contract liability was generally recognized in an acquirer's financial statements if it represented a legal obligation, and FASB ASC 805 required those obligations to be recorded at fair value. In many situations, the contract liability recognized by applying the FASB ASC 606 approach will be higher than the liability's fair value, primarily because it will not be subject to the same downward adjustment that usually resulted from fair value measurement (for example, selling and marketing efforts already expended). Paragraph BC41 in the "Background Information and Basis for Conclusions" section of ASU No. 2021-08[31] indicates that

> The Board believes that the corresponding increase to the acquired contract liabilities balance for those adjustments will generally be recognized in goodwill. The Board also believes that the resulting effects to the contract liabilities balance from these amendments should not affect how entities consider which underlying assets contribute to fulfilling contract liability obligations.

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[30] The "Pending Content" in FASB ASC 805-20-25-28C was added by FASB Accounting Standards Update (ASU) No. 2021-08, *Business Combinations (Topic 805)–Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*.

ASU No. 2021-08 is effective for public business entities for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2022. For all other entities, ASU No. 2021-08 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2023. ASU No. 2021-08 should be applied prospectively to business combinations that occur after the effective date. Early application is permitted for public business entities for periods for which financial statements have not yet been issued and for all other entities for periods for which financial statements have not yet been made available for issuance.

[31] This and other paragraphs from the "Background Information and Basis for Conclusions" section of ASU No. 2021-08 were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

13.140 Contract liabilities are separate units of account from customer relationships and other customer contract-related intangible assets. For further details, see Valuation Advisory #2 and the "Multiperiod Excess Earnings Method" section in chapter 12.

Intangible Assets Associated with Contracts with Customers

Overview

13.141 This section addresses intangible assets associated with contracts with customers that are accounted for under FASB ASC 606. While this section is applicable to all customer contracts (including short-term contracts), the task force observes that some of the concepts discussed in this section are more prevalent in long-term customer contracts than in short-term customer contracts. Therefore, this section predominantly focuses on long-term contracts. Most common examples of long-term contracts are construction-type and production-type contracts with customers for which specifications are provided by the customer for the construction of facilities or the production of goods or the provision of related services.

13.142 FASB ASC 605-35-15-3[32] provides examples of construction-type and production-type contracts which include, but are not limited to, the following:

a. Contracts in the construction industry, such as those of general building, heavy earth moving, dredging, demolition, design-build contractors, and specialty contractors (for example, mechanical, electrical, or paving). In general the type of contract here under consideration is for construction of a specific project…

b. Contracts to design and build ships and transport vessels.

c. Contracts to design, develop, manufacture, or modify complex aerospace or electronic equipment to a buyer's specification or to provide services related to the performance of such contracts.

d. Contracts for construction consulting service, such as under agency contracts or construction management agreements.

e. Contracts for services performed by architects, engineers, or architectural or engineering design firms.

f. Arrangements to deliver software or a software system, either alone or together with other products or services, requiring significant production, modification, or customization of software.

[32] Please note that certain paragraphs in FASB ASC 605-35, *Revenue Recognition—Provision for Losses on Construction-Type and Production-Type Contracts*, (including FASB ASC 605-35-15-3) have not been superseded by FASB ASC 606, *Revenue from Contracts with Customers*, and have been retained to provide guidance on loss provisions for construction-type and production-type contracts. For further discussion on loss contracts, see the "Loss Contracts" section later in this chapter.

13.143 The "Pending Content" in FASB ASC 805-20-25-28C[33] requires that an entity (acquirer) recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with FASB ASC 606. This requirement is the result of amendments in ASU No. 2021-08. These amendments do not affect the accounting for other assets or liabilities that may arise from revenue contracts with customers in accordance with FASB ASC 606, such as refund liabilities, or in a business combination, such as customer-related intangible assets and contract-based intangible assets. For example, if acquired revenue contracts are considered to have terms that are unfavorable or favorable relative to market terms, the acquirer should recognize a liability or asset for the off-market contract terms at the acquisition date.

Valuation Considerations

13.144 Customer contract intangibles, such as those associated with construction-type and production-type contracts, are generally categorized as pivotal relationship-based intangible assets. The existence of pivotal IP-based intangibles needed to fulfil the customer contract should also be assessed to the extent there are multiple pivotal intangible assets within the business. As discussed in chapter 11, pivotal relationship-based intangible assets make significant contributions to the value chain and excess profits of a business unit and, since they are not licensed, the MPEEM under the income approach is the preferred form for their fair value measurement. The correlation between intellectual capital and customer contracts / relationships is consistent with the attributes of relationship-based intangible assets outlined in chapter 11 and is an important consideration for estimating the fair value of pivotal customer contract intangibles. In the case when pivotal IP-based intangibles are also needed to fulfil the contract, a simulated royalty approach can be employed to capture the excess profit attributable to the IP as part of a profit split assessment (for further discussion, see the "Simulated Royalty Rates" section in paragraphs 11.22–.24 and the "Revenue, Cash Flow, or Profit Splitting under the Income Approach" section in chapter 12).

13.145 The application of the cost approach may be considered if the customer contract intangibles are determined to be routine in nature. Replacement cost as well as cost savings or avoided cost income methods are commonly used to measure the routine contributions. Routine intangible assets do not lend themselves to the application of the MPEEM and the relief from royalty is not commonly applied because these assets are generally not licensed. Furthermore, the market approach is rarely employed for valuing customer contract intangibles due to the lack of transactions for similar assets.

13.146 FASB ASC 805-20-55-20 provides the following list of examples of customer-related intangible assets:

a. Customer lists

b. Order or production backlog

c. Customer contracts and related customer relationships

[33] The "Pending Content" in FASB ASC 805-20-25-28C was added by ASU No. 2021-08. See footnote 30 in paragraph 13.137 for information regarding the effective date of ASU No. 2021-08.

d. Noncontractual customer relationships.

13.147 Paragraphs 23–24 of FASB ASC 805-20-55 state the following:

> **55-23** If an entity establishes relationships with its customers through contracts, those customer relationships arise from contractual rights. Therefore, customer contracts and the related customer relationships acquired in a business combination meet the contractual-legal criterion, even if confidentiality or other contractual terms prohibit the sale or transfer of a contract separately from the acquiree.
>
> **55-24** A customer contract and the related customer relationship may represent two distinct intangible assets. Both the useful lives and the pattern in which the economic benefits of the two assets are consumed may differ.

13.148 The appropriate unit of account for customer-related intangible assets would be determined by the reporting entity and valuation would follow that determination. For further discussion, see the Customer Contract Examples and the "Unit of Account for Customer-Related Intangible Assets" section in chapter 6.

13.149 Under FASB ASC 805, in addition to separately recognizing acquiree's contract assets and contract liabilities in accordance with FASB ASC 606, the following intangible assets associated with customer contracts may also be recognized:

1. Customer contract intangible asset

    a. A customer contract is an intangible asset for the inherent or in-place value of the contract that exists as of the acquisition date. The fair value of a customer contract is generally estimated assuming at-market pricing terms over its economic life, which may or may not equal the contract term depending on assumptions made regarding renewals and extensions of additional products and services added on to the contract, if any. A common example of customer contract intangible is order or production backlog, which arises from contracts such as purchase or sales orders. Other examples of customer contracts include construction contracts, service agreements, and government contracts, among others.

    b. Depending on the nature of the contract, a customer contract intangible asset is commonly measured either under the income approach if pivotal or under the cost approach if routine.

    c. Due to the separate recognition of contract assets and contract liabilities in accordance with FASB ASC 606, these assets and liabilities should be excluded from the value of the customer contract intangible asset. That is, revenues and expenses associated with contract liabilities should not be taken into account in the analysis of customer contract. For a contract asset, the valuation of the customer contract would disregard the related future billings and should be performed using accrual-based estimates from the measurement date through the life of the contract. In this scenario, the acquirer would include the contract asset in accordance with FASB ASC 606 in its opening balance sheet.

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2. Off-market intangible asset (or liability)[34]

    a. An off-market intangible asset or liability is recognized to the extent that the pricing terms of the customer contract are not "at market" at the acquisition date (generally referred to as the "off-market component"). Long-term contracts may be unique because they are tailored to specific customer needs. These contracts are generally negotiated on an arm's length basis (that is, at market terms) and, therefore, they are often not considered off-market unless facts and circumstances indicate otherwise and there have been changes in such facts and circumstances since the contract was entered into.

    b. Commonly measured as the present value of the amount by which the current contract pricing terms deviate from what a market participant could achieve.

    c. However, in certain circumstances, it may be appropriate to measure the off-market component based on the difference between any "off-market" gross margin(s) of the contract(s) and "at market" gross margin(s). For example, it might be appropriate to use the gross margin approach when prices of materials required to fulfill the contract unexpectedly increase significantly since the contract inception.

3. Customer relationships associated with customer contracts

    a. Customer relationships meet the contractual-legal criterion if an entity has a practice of establishing contracts with its customers, regardless of whether a contract exists at the acquisition date.

    b. Customer relationships represent the expectation of obtaining future contracts from existing customers. They are generally measured under the income approach. To avoid double counting, revenue and expenses from customer contracts (including renewals) are excluded from the customer relationship valuation.

13.150 As noted in FASB ASC 805-20-55-24, a customer contract and the related customer relationship may represent two distinct intangible assets. As discussed previously, the appropriate unit of account for customer-related intangible assets would be determined by the reporting entity and valuation would follow that determination. For further discussion, see the "Unit of Account for Customer-Related Intangible Assets" section in chapter 6. The task force observes that there are some situations when customer contract intangibles are subsumed into a single valuation (the fair value of the customer contract is bundled with the related customer relationship), while at other times, fair values may be estimated for one or more of the intangibles separately. However, the unit of account determination typically would not impact the aggregate fair value assigned to the assets. Considerations on whether to separate or group

[34] This section discusses valuation considerations related to customer contracts with off-market terms. While this discussion is applicable to all customer contracts, the Business Combinations Task Force (task force) observes that off-market terms are more prevalent in long-term customer contracts, especially those with fixed pricing terms, than in short-term customer contracts where pricing is likely to be adjusted more frequently. Valuation considerations related to off-market vendor contracts are discussed in the "Off-Market Vendor Contracts" section of this chapter.

these intangibles are based on the nature and terms of the contract and related customer relationship, including the following:

- Type of a contract. For example, the vendor may have purchase orders in place with existing customers that determine agreed upon pricing for a certain period of time, but these purchase orders would not constitute a separate customer contract asset distinct from the customer relationship intangible.

- Prior history of obtaining multiple contracts/projects from the same customer.

- Nature of contracts. For example, certain aerospace and defense contracts require significant upfront engineering and development costs and the duration of the contracts can be more than 10 years before a renewal option. The next contract with the same customer will require a similar investment process. As a result, typically such contracts would not have a separate customer relationship intangible asset associated with them.

- Nature of the customer. For example, a customer contract with the government is often valued as a single customer contract intangible asset that would include cash flows from the existing contract terms as well as cash flows from the probability of renewals from contract options and re-competes for a similar product or service. All future contracts with the government typically would not have a separate customer relationship intangible asset associated with them.

Illustrative Example: Valuation of Customer Contract Intangibles

13.151 Company A acquired Company T in a business combination on December 31, 2X21 (the acquisition date). Company A accounts for revenue contracts in accordance with FASB ASC 606. Company T has a contract to construct a building on the customer-owned land. Company A determined that the input measure, based on costs incurred, provides the appropriate measure of progress towards the completion of the contract. After reviewing the contract as part of its accounting for the business combination, Company A determined that pricing terms of the contract were favorable relative to recent comparable transactions. Based on the facts and circumstances, Company A management determined that the off-market component, customer contract, and related customer relationship intangible assets should be recognized as separate units of account and instructed the valuation specialist to value each component separately. Company T has a history of winning multiple contracts with the same customer base due to the strong reputation and customer service capabilities of its sales force. Company A provided the following relevant aspects of the contract to the valuation specialist:

- Terms and estimates for Company T's customer contract:
    - Transaction price: $262,500
    - Total estimated costs: $200,000
    - Costs incurred through December 31, 2X21: $50,000
    - Progress toward completing the contract: 25% ($50,000/$200,000)

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- Estimated costs to complete the contract: $150,000
- Amounts billed through December 31, 201X: $0
- Contract asset (costs in excess of billings as of December 31, 2X21: $65,625 (25%x $262,500))[35]
- Remaining contract term: 2 years
- Current market price for a comparable contract: $250,000

13.152 Company A recorded assets acquired as part of the business combination as outlined in the following schedules.

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[35] The contract asset should be recognized and measured under FASB ASC 606.

Schedule 1

Fair Value Summary and WARA

	WARA (Asset Deal [Taxable Transaction])[1]					Financial Overlay (Stock Deal [Non-taxable Transaction])[13]		
	Present Value	TAB[11]	Fair Value	Rate of Return[12]	Weighted Return		Present Value	Rate of Return[12]
Working capital[2]	$ 50,000		$ 50,000	7%	$ 3,500	Working capital[2]	$ 50,000	7%
Contract asset[3]	65,625		65,625	7%	4,594	Contract asset[3]	65,625	7%
Fixed assets[4]	20,000		20,000	9%	1,800	Fixed assets[4]	20,000	9%
Customer contract[5]	9,783	1,340	11,123	11%	1,224	Customer contract[5]	9,783	11%
Customer relationships (existing)[6]	95,459	13,078	108,537	13%	14,110	Customer relationships (existing)[6]	95,459	13%
Favorable contract intangible[7]	6,409	878	7,287	11%	802	Favorable contract intangible[7]	6,409	11%
Assembled workforce[8]	10,000		10,000	12%	1,200	Assembled workforce[8]	10,000	12%
Economic goodwill[9]			133,104	16%	21,093	Customer relationships (future)[14]	115,861	16%
Total			405,676	12%	48,322		373,137	
Operating value[10]			373,137	12%		Operating value[10]	373,137	
less: Working capital			50,000					
Contract asset			65,625					
Fixed assets			20,000					
Residual intangibles and economic goodwill			237,512					
TAB[11]			32,539					
Operating value (Taxable transaction)			**$ 405,676**					

[1] The top down method of the WARA diagnostic is performed based on the fair value of the respective assets (inclusive of the TAB).

[2] 10.0% of prior year revenue.

[3] The contract asset is measured in accordance with FASB ASC 606 on revenue from contracts with customers. FASB ASC Master Glossary defines contract asset as "An entity's right to consideration in exchange for goods or services that the entity has transferred to a customer when that right is conditioned on something other than the passage of time (for example, the entity's future performance)." In this case, contract asset represents the revenue recognized to date in excess of billings as of the acquisition date (see Schedule 3). As of the acquisition date, there have been no billings to date based on the terms of the contract. In addition, it is included as part of working capital in the BEV analysis (see Schedule 2).

[4] Fair value of fixed assets estimated using the cost and market approaches as of the acquisition date. Detailed calculations are not provided in this example.

[5] See Schedule 3.

[6] See Schedule 4.

[7] See Schedule 3.

[8] Fair value of assembled workforce estimated using the cost approach. Detailed calculations are not provided in this example.

[9] This is a residual calculation equal to the difference between the operating value adjusted to a taxable transaction and the fair value of the recognizable assets and assembled workforce.

[10] See Schedule 2. Assumes a non-taxable transaction.

[11] The tax amortization benefit of 13.7% is calculated based on a 15-year straight-line amortization, 25% tax rate and a 12% discount rate (WACC/IRR) utilizing a mid-period convention.

[12] Rates of return are estimated based on a weighting of debt and equity financing for the respective assets.

[13] A financial overlay is applied without adjustments for the tax amortization benefits included in the intangible asset fair value measurements and the WARA.

[14] Represents the value of future customer relationships which is the primary component supporting economic goodwill. See Schedule 5.

Schedule 2

Business Unit PFI and Business Enterprise Value

PFI[1]

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Terminal
Revenue	$ 500,000	$ 550,000	$ 605,000	$ 635,250	$ 654,308	$ 673,937	$ 694,155	$ 714,980	$ 736,429	$ 758,522	$ 781,278	$ 804,716
Cost of goods sold (COGS)[2]		435,500	481,000	508,200	523,446	539,150	555,324	571,984	589,143	606,818	625,022	643,773
Gross profit		114,500	124,000	127,050	130,862	134,787	138,831	142,996	147,286	151,704	156,256	160,943
Existing selling and marketing expenses[2]		5,444	6,013	6,353	6,543	6,739	6,942	7,150	7,364	7,585	7,813	8,047
Future selling and marketing expenses[2]		5,444	6,013	6,353	6,543	6,739	6,942	7,150	7,364	7,585	7,813	8,047
General and administrative expenses[2]		43,550	48,100	50,820	52,345	53,915	55,532	57,198	58,914	60,682	62,502	64,377
EBITDA		60,062	63,874	63,524	65,431	67,394	69,415	71,498	73,644	75,852	78,128	80,472
Depreciation[3]		9,682	9,972	10,271	10,580	10,897	11,225	11,561	11,908	12,265	12,633	13,011
EBIT		50,380	53,902	53,253	54,851	56,497	58,190	59,937	61,736	63,587	65,495	67,461
Taxes[4]		12,595	13,476	13,313	13,713	14,124	14,548	14,984	15,434	15,897	16,374	16,865
Debt-free net income		37,785	40,426	39,940	41,138	42,373	43,642	44,953	46,302	47,690	49,121	50,596
Plus: Depreciation		9,682	9,972	10,271	10,580	10,897	11,225	11,561	11,908	12,265	12,633	13,011
Less: Capital expenditures[3]		(10,300)	(10,609)	(10,927)	(11,255)	(11,593)	(11,941)	(12,299)	(12,668)	(13,048)	(13,439)	(13,842)
Less: Changes in working capital		(11,563)	(12,719)	(6,995)	(4,407)	(4,539)	(4,675)	(4,816)	(4,960)	(5,109)	(5,262)	(5,420)
Debt free after tax cash flows		25,604	27,070	32,289	36,056	37,138	38,251	39,399	40,582	41,798	43,053	44,345
Present value factor @12%[5]		0.9449	0.8437	0.7533	0.6726	0.6005	0.5362	0.4787	0.4274	0.3816	0.3407	
Present value of debt-free net cash flows		**$ 24,194**	**$ 22,838**	**$ 24,323**	**$ 24,250**	**$ 22,302**	**$ 20,509**	**$ 18,861**	**$ 17,346**	**$ 15,952**	**$ 14,670**	

Value summary

Present value of debt-free cash flows	205,245
Present value of terminal period cash flows	167,892
Operating value	**$ 373,137**

Terminal value

Terminal period cash flow	44,345
Divided by: Capitalization rate	9.0%
Terminal value	492,722
Multiplied by: Present value factor	0.3407
Present value of terminal period	**$ 167,892**

PFI assumptions[1]

Revenue growth		10%	10%	5%	3%	3%	3%	3%	3%	3%	3%	3%
COGS %[2]		79%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Existing selling and marketing expenses % of revenues		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Future selling and marketing expenses % of revenues		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
General and administrative expenses % of revenues		8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Depreciation % of revenues		1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Tax rate		25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Capital expenditures % of revenues		1.9%	1.8%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
Working capital (includes contract assets) % of revenues		23.1%	23.1%	23.1%	23.1%	23.1%	23.1%	23.1%	23.1%	23.1%	23.1%	23.1%
EBITDA margin		11%	11%	10%	10%	10%	10%	10%	10%	10%	10%	10%
EBIT margin		9%	9%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Weighted average cost of capital (Discount rate)[6]	12%											
Terminal growth rate[7]	3%											
Year 0 capital expenditures[3]	10,000											
Depreciation to capital expenditures ratio[3]	94%											
Contributory charges												
Working capital[8]	7%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	
Fixed assets[8]	9%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	
Assembled workforce[8]	12%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Charges for the use of other contributory assets % of revenues		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	

[1] PFI and PFI assumptions provided by management.

[2] Gross profit is higher in Years 1 and 2 because of the off-market pricing resulting from favorable customer contract terms. Gross profit was estimated to be 20% of revenue in Years 3 and beyond. SG&A adjusted in Year 1 and 2 to exclude off-market revenue. The existing selling and marketing expenses were estimated to be 50% of total selling and marketing expenses as a percentage of revenue based upon management discussions and analysis of key categories of historical spend.

[3] Year 0 capital expenditures estimated by management to be $10 million. Capital expenditures are projected to grow 3% annually (which is less than revenue growth due to an expected increase in asset utilization). A waterfall calculation based on a 5-year RUL results in depreciation of 94% of capital expenditures. The tax basis in intangible assets was assumed to be zero for this example.

[4] 25% tax rate applied to EBIT.

[5] Present value factor based on a 12% WACC and mid-period convention.

[6] Weighted average cost of capital/discount rate estimated using the Capital Asset Pricing Model for similar guideline public companies.

[7] Terminal growth rate based on long-term construction growth and real gross domestic product estimates.

[8] See Schedule 7 for the contributory asset charge calculations on working capital, fixed assets, and assembled workforce. Contract assets are treated as working capital and assumed to be at normalized levels.

Schedule 3

Valuation of Customer Contract Intangible Asset

Customer contract	**Market Participant**			**Off-Market**[11]		
	Year 0	**Year 1**	**Year 2**	**Year 0**	**Year 1**	**Year 2**
Revenue[1]	$ 62,500	$ 112,500	$ 75,000	$ 3,125	$ 5,625	$ 3,750
COGS[2]		90,000	60,000			
Gross profit		22,500	15,000			
Selling and marketing expenses		0	0			
General and administrative expenses		9,000	6,000			
EBITDA		13,500	9,000			
Depreciation		1,980	1,236			
EBIT		11,520	7,764		5,625	3,750
Taxes[3]		2,880	1,941		1,406	938
Debt-free net income		8,640	5,823		4,219	2,812
Less: Charges for the use of contributory assets[4]		(2,251)	(1,474)			
Debt free after tax cash flows		6,389	4,349			
Present value factor @ 11%[5]		0.9492	0.8551		0.9492	0.8551
Present value of excess earnings		**$ 6,064**	**$ 3,719**		**$ 4,004**	**$ 2,405**
Value summary						
Total present value		9,783			6,409	
Tax amortization benefit[6]		1,340			878	
Fair value of customer contract		**$ 11,123**			**$ 7,287**	
Assumptions[7]						
		Year 1	**Year 2**			
Revenue % recognized		60%	40%			
COGS %		80%	80%			
Selling and marketing expenses % of revenues[8]		0%	0%			
General and administrative expenses % of revenues		8%	8%			
Depreciation % of revenues		1.8%	1.6%			
Tax rate		25.0%	25.0%			
Charges for the use of contributory assets % of revenues		2.0%	2.0%			
EBITDA margin		12%	12%			
EBIT margin		10%	10%			
Discount rate[9]	11%					
Tax amortization benefit factor	13.7%					
Total revenues over the contract term[10]		250,000			262,500	
Estimated costs to complete the contract		200,000	80%		200,000	76%
Costs incurred through acquisition date		50,000			50,000	
Remaining estimated costs to complete contract		150,000			150,000	
Amounts billed through acquisition date		0			0	
Contract asset as of acquisition date[10]		62,500			65,625	
Progress toward completing the contract		25%			25%	
Remaining contract term		2			2	
Revenues to be recognized over remaining contract term[1]		187,500			196,875	

[1] Remaining customer contract revenue as of the acquisition date is $197,000 of which $9,375 is favorable relative to market participant pricing. Based on progress to date, $62,500 of customer contract revenue was recognized prior to the acquisition date. Phasing assumptions provided by management.

[2] COGS was 80% of revenue which is based of analysis of similar contracts of the company and competitors and consistent with market participant expectations.

[3] 25% tax rate applied to EBIT.

[4] See Schedule 2. Contract assets are treated as working capital and assumed to be at normalized levels.

[5] Present value factor based on a 11% discount rate and mid-period convention.

[6] The tax amortization benefit of 13.7% is calculated based on a 15-year straight-line amortization, 25% tax rate and a 12% discount rate (WACC/IRR) utilizing a mid-period convention.

[7] See Schedule 2.

[8] Management indicated there was no additional selling and marketing expenses required to sell the customer contract.

[9] Discount rate for customer contract is estimated as WACC less 100 basis points which considers the lower risk of the customer contract relative to the business and how it would be expected to financed with debt and equity.

[10] Total contract revenue was estimated by management to be $262,500 of which $12,500 was determined to be favorable relative to market pricing. Since the contract was 25% complete, a contract asset of $65,625 was recognized as the acquisition date calculated as 25% times $262,500.

[11] Valued using the present value of the after-tax differential in actual pricing relative to market participant pricing terms.

Schedule 4

Valuation of Customer Relationships (Existing) Associated with Customer Contract

Customer relationships (existing)

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue including customer contract[1]	$ 500,000	$ 515,000	$ 530,450	$ 546,364	$ 562,755	$ 579,638	$ 597,027	$ 614,938	$ 633,386	$ 652,388	$ 671,960
Probability of retention[2]		100%	90%	80%	70%	60%	50%	40%	30%	20%	10%
Existing customer revenue including customer contract		515,000	477,405	437,091	393,929	347,783	298,514	245,975	190,016	130,478	67,196
Less: Off-market pricing of customer contract[3]		(5,625)	(3,750)	0	0	0	0	0	0	0	0
Less: Customer contract[3]		(112,500)	(75,000)	0	0	0	0	0	0	0	0
Existing customer revenue excluding customer contract		396,875	398,655	437,091	393,929	347,783	298,514	245,975	190,016	130,478	67,196
COGS		317,500	318,924	349,673	315,143	278,226	238,811	196,780	152,013	104,382	53,757
Gross profit		79,375	79,731	87,418	78,786	69,557	59,703	49,195	38,003	26,096	13,439
Existing selling and marketing expenses[4]		3,969	3,987	4,371	3,939	3,478	2,985	2,460	1,900	1,305	672
General and administrative expenses		31,750	31,892	34,967	31,514	27,823	23,881	19,678	15,201	10,438	5,376
EBITDA		43,656	43,852	48,080	43,333	38,256	32,837	27,057	20,902	14,353	7,391
Depreciation		6,986	6,571	7,067	6,370	5,623	4,827	3,977	3,073	2,110	1,087
EBIT		36,670	37,281	41,013	36,963	32,633	28,010	23,080	17,829	12,243	6,304
Taxes[5]		9,168	9,320	10,253	9,241	8,158	7,003	5,770	4,457	3,061	1,576
Debt-free net income		27,502	27,961	30,760	27,722	24,475	21,007	17,310	13,372	9,182	4,728
Less: Charges for the use of contributory assets[6]		(7,940)	(7,836)	(8,538)	(7,696)	(6,795)	(5,833)	(4,807)	(3,714)	(2,550)	(1,314)
Debt free after tax cash flows		19,562	20,125	22,222	20,026	17,680	15,174	12,503	9,658	6,632	3,414
Present value factor @ 13%		0.9407	0.8325	0.7367	0.6520	0.5770	0.5106	0.4518	0.3999	0.3539	0.3132
Present value of excess earnings		**$ 18,402**	**$ 16,754**	**$ 16,371**	**$ 13,056**	**$ 10,201**	**$ 7,748**	**$ 5,649**	**$ 3,862**	**$ 2,347**	**$ 1,069**

Value summary

Present value of debt-free cash flows	95,459
Tax amortization benefit[8]	13,078
Fair value of customer relationships (existing)	**$ 108,537**

Assumptions

Revenue growth[9]		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
COGS %		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Selling and marketing expenses % of revenues		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
General and administrative expenses % of revenues		8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Depreciation % of revenues		1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Tax rate		25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Charges for the use of contributory assets % of revenues		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
EBITDA margin		11%	11%	11%	11%	11%	11%	11%	11%	11%	11%
EBIT margin		9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
		99	62								
Discount rate[10]	13%	1,980	1,236								
Economic life (Straight-Line)[2]	10	6,986	6,571								
Tax amortization benefit factor	13.7%	715	2,165								
		9,780	10,034								
		9,682	9,972								
		98.43	62.01								

[1] See Schedule 2.

[2] Existing customer relationship revenue is assumed to decline linearly over a 10-year period terminating in the tenth year for demonstration purposes only. Attrition analyses generally result in nonlinear decay patterns (e.g. an exponential decay) and revenue is projected based on attrition curves. See The Appraisal Foundation's Valuation for Financial Reporting Advisory #2, The Valuation of Customer-Related Assets, for a detailed discussion of attrition analyses and their application.

[3] See Schedule 3.

[4] The existing selling and marketing expenses were assumed to be 50% of total selling and marketing expenses as a percentage of revenue based upon management discussions and analysis of key categories of historical spend.

[5] 25% tax rate applied to EBIT.

[6] See Schedules 2 and 6.

[7] Present value factor based on a 13% discount rate and mid-period convention.

[8] The tax amortization benefit of 13.7% is calculated based on a 15-year straight-line amortization, 25% tax rate and a 12% discount rate (WACC/IRR) utilizing a mid-period convention.

[9] Revenue growth for existing customers assumed to grow in line with the long-term growth rate per Schedule 2.

[10] Discount rate for customer relationships is estimated as WACC plus 100 basis points based on the assumed mix of debt and equity financing.

Schedule 5

Valuation of Customer Relationships (Future)

Customer relationships (future)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Terminal
Future customer revenue[1]	$ 35,000	$ 127,595	$ 198,159	$ 260,379	$ 326,154	$ 395,641	$ 469,005	$ 546,413	$ 628,044	$ 714,082	$ 804,716
COGS	28,000	102,076	158,527	208,303	260,923	316,513	375,204	437,130	502,435	571,266	643,773
Gross profit	7,000	25,519	39,632	52,076	65,231	79,128	93,801	109,283	125,609	142,816	160,943
Existing selling and marketing expenses[2]	1,475	2,026	1,982	2,604	3,262	3,956	4,690	5,464	6,280	7,141	8,047
Future selling and marketing expenses[3]	5,444	6,013	6,353	6,543	6,739	6,942	7,150	7,364	7,585	7,813	8,047
General and administrative expenses	2,800	10,208	15,853	20,830	26,092	31,651	37,520	43,713	50,244	57,127	64,377
EBITDA	(2,719)	7,272	15,444	22,099	29,138	36,579	44,441	52,742	61,500	70,735	80,472
Depreciation[4]	715	2,165	3,204	4,210	5,274	6,398	7,584	8,835	10,155	11,546	13,011
EBIT	(3,434)	5,107	12,240	17,889	23,864	30,181	36,857	43,907	51,345	59,189	67,461
Taxes[5]	(859)	1,277	3,060	4,472	5,966	7,545	9,214	10,977	12,836	14,797	16,865
Debt-free net income	(2,575)	3,830	9,180	13,417	17,898	22,636	27,643	32,930	38,509	44,392	50,596
Less: Charges for the use of contributory assets[6]	(700)	(2,508)	(3,871)	(5,087)	(6,373)	(7,731)	(9,166)	(10,680)	(12,277)	(13,960)	(15,732)
Debt free after tax cash flows	(3,275)	1,322	5,309	8,330	11,525	14,905	18,477	22,250	26,232	30,432	34,864
Present value factor @15.8472750659696%	0.9291	0.8020	0.6923	0.5976	0.5158	0.4453	0.3844	0.3318	0.2864	0.2472	
Present value of excess earnings	**$ (3,043)**	**$ 1,060**	**$ 3,675**	**$ 4,978**	**$ 5,945**	**$ 6,637**	**$ 7,102**	**$ 7,382**	**$ 7,513**	**$ 7,523**	

Value summary

Present value of debt-free cash flows	48,772
Present value of terminal period cash flows	67,089
Fair value of customer relationships (future)	**$ 115,861**

Terminal value

Terminal period cash flow	34,864
Divided by: Capitalization rate	13%
Terminal value	271,373
Multiplied by: Present value factor	0.2472
Present value of terminal period	**$ 67,089**

Assumptions

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Terminal
Revenue growth		n/a	265%	55%	31%	25%	21%	19%	17%	15%	14%	13%
COGS %		80%	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Existing selling and marketing expenses % of revenues		1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Future selling and marketing expenses % of revenues		16%	5%	3%	3%	2%	2%	2%	1%	1%	1%	1%
General and administrative expenses % of revenues		8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Depreciation % of revenues		1.8%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
Tax rate		25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Charges for the use of contributory assets % of revenues		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
EBITDA margin		-8%	6%	8%	8%	9%	9%	9%	10%	10%	10%	10%
EBIT margin		-10%	4%	6%	7%	7%	8%	8%	8%	8%	8%	8%
Discount rate[7]	15.8%											
Terminal growth rate[8]	3%											

[1] Business unit PFI per Schedule 2 less customer contract revenue (including off-market pricing) per Schedule 3 and existing customer revenue per Schedule 4.

[2] The existing selling and marketing expenses applies to future relationships as an ongoing expense after the relationship is established.

[3] Future relationship selling and marketing expenses are applicable only to the development of new relationships. Therefore, 100% of the business unit expense from Schedule 2 are included.

[4] Total depreciation allocated on the basis of revenues of new customers relative to the total business.

[5] 25% tax rate applied to EBIT.

[6] See Schedules 2 and 6.

[7] See financial overlay on Schedule 1.

[8] Based on long-term growth rate per Schedule 2.

Schedule 6

Contributory Asset Charges (CAC)
Routine Assets Valued with the Cost or Market Approaches

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue[1]		$ 544,375	$ 601,250	$ 635,250	$ 654,308	$ 673,937	$ 694,155	$ 714,980	$ 736,429	$ 758,522	$ 781,278
Beginning balance fixed assets[2]		20,000	20,618	21,255	21,911	22,586	23,282	23,998	24,736	25,496	26,279
add: incremental investment[1]		10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	13,439
less: Return of (depreciation)[1]		9,682	9,972	10,271	10,580	10,897	11,225	11,561	11,908	12,265	12,633
Ending balance		20,618	21,255	21,911	22,586	23,282	23,998	24,736	25,496	26,279	27,085
Average balance fixed assets		20,309	20,937	21,583	22,249	22,934	23,640	24,367	25,116	25,888	26,682
Mid-period adjustment factor		0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449
Return on[3]	9%	1,727	1,781	1,835	1,892	1,950	2,010	2,072	2,136	2,202	2,269
Fixed asset CAC (% revenue)		0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Average balance assembled workforce[2]		10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048
Mid-period adjustment factor		0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449	0.9449
Return on[3]	12%	1,134	1,168	1,203	1,239	1,276	1,315	1,354	1,395	1,436	1,479
Assembled workforce CAC (% revenue)		0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Working capital CAC (% revenue)		1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Total CAC (% revenue)		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

Working capital		
Beginning balance[4]		115,625
add: Incremental investment		11,563
Ending balance		127,188
Average balance		121,407
Mid-period adjustment factor		0.9449
Return on[3]	7%	8,030
Percent of revenue		1.5%

[1] See Schedule 2. Revenue excludes the favorable contract revenue and is based on market participant assumptions. Tax depreciation is assumed to equal 'return of'.

[2] Beginning balances of fixed assets and assembled workforce are shown on Schedule 1. The average balance of the assembled workforce was grown at the long-term growth rate of 3.0% based on management's expectations.

[3] See Schedule 1 for assumptions regarding the return on contributory assets.

[4] Cash free, debt-free net working capital per Schedule 1 (inclusive of contract assets). Contract assets are treated as working capital and assumed to be at normalized levels.

Illustrative Example: Contract Research Organization with Renewals

13.153 Company T is a contract research organization ("CRO") that specializes in pharmaceutical research. On January 1, 2X20, Company D, a pharmaceutical manufacturing company, engaged Company T to perform research on the efficacy of a new drug. Company D contracts with Company T whenever it is in the development stage of a new drug, and they have worked together on numerous previous projects., The first phase of the research has a contract term of 4 years, ending on December 31, 2X23, based on Company D's drug approval timeline. Additionally, Company T and Company D agreed that, if the drug is successful in the first phase of testing, the contract will be extended for 3 more years through December 31, 2X26.

13.154 On December 31, 2X21, Company A acquired Company T. After reviewing the contracts as part of its accounting for the business combination, Company A determined that the pricing terms of the contract were at market. Based on the facts and circumstances, Company A management determined that a customer contract (or backlog) intangible asset and a customer relationship intangible asset should be recognized as two separate units of account and instructed the valuation specialist to value each component separately. Based on their knowledge of Company T and Company D's contract, they valued the customer contract intangible asset with a term of 2 years plus an additional term of 3 years probability adjusted for the likelihood of the

drug making it to the second phase of testing. Additionally, the customer relationship intangible asset associated with the customer contract was valued based on the expectation that Company T and Company D would continue to work together on other development projects.

Illustrative Example: Defense Industry

13.155 On January 1, 2X20, Company T, an airplane manufacturer, signed a contract with the US Department of Defense (USDD), to produce 20 F35 fighter jets over 3 years. The USDD's budget calls for a total of 60 F35's to be produced within 10 years. Company T believes it is probable that they will produce the remaining 40 F35s for the USDD given their experience in designing and manufacturing the jet. Additionally, the USDD's budget calls for production of 100 F40 fighter jets starting in 2X26, to be completed within 10 years. Production of the F40s requires different design and manufacturing specifications and will be subject to a future request for proposal process that Company T plans to bid on.

13.156 On January 1, 2X22, Company A acquired Company T. After reviewing Company T's existing customer contracts as part of its accounting for the business combination, Company A determined that the pricing terms of the contract for the F35s were at market. Based on the facts and circumstances, Company A's management determined that recognizing a single customer contract intangible asset that reflects both the value attributable to fulfilling the current order of 20 F35 jets required under the existing contract and the value attributable to expected future orders for the F35 (i.e., 40 jets) is appropriate. Based on their knowledge of the business, the valuation specialists engaged to perform the valuation for the business combination determined a contract term of 1 year plus an additional term of 8 years, probability adjusted for the likelihood of Company T being engaged by the USDD to finish out the manufacturing of the remaining budgeted F35 jets. A customer relationship asset related to the F40s was not recognized given that any future contract for the F40s will be subject to a request for proposal.

Illustrative Example: Power Plant

13.157 Company T is a power plant developer. On January 1, 2X20, Company T won a contract to develop a power plant for Country W. Country W routinely contracts out for the development of its power plants and uses a request for proposal process for each power plant. Additionally, prior to the acquisition, Country W signed a contract with Company T to continue servicing the plant after construction.

13.158 On December 31, 2X21, Company A acquired Company T. After reviewing Company T's existing customer contracts as part of its accounting for the business combination, Company A determined that the pricing terms of the contract with Country W were at market. Based on the facts and circumstances, Company A management determined that a customer contract intangible asset should be recognized. An additional customer relationship asset related to potential future contracts with Country W to develop additional power plants was not recognized given the nature of the business and that new power plants generally go through a request for proposal and tender process.

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13.159 Additionally, Company A determined that a service agreement intangible asset should also be separately recognized as Company T has a contractual agreement to continue to service the power plant after construction is complete.

Illustrative Example: Electrical Engineering

13.160 Company T, a small-scale electrical engineering firm, is regularly contracted with Company C (without a tender process), a large construction company in Company T's area. Company T currently has a large contract, which was won via a tender process, to complete an office building project with Company C.

13.161 On December 31, 2X20, Company T is acquired by Company A. After reviewing Company T's existing customer contracts as part of its accounting for the business combination, Company A determined that the pricing terms of the tendered contract were at market. Based on the facts and circumstances, Company A management measured and recognized a customer contract intangible asset representing the future cash flows related to the customer contract for the tendered contract. Company A management measured and recognized a separate customer relationship intangible asset related to the ongoing relationship with Company C (i.e., the asset valuation would consider the future cash flows related to customer C that are not attributable to the tendered customer contract).

Illustrative Example: Off-Market Pricing Terms

13.162 Company A acquired Company T in a business combination. At the acquisition date, Company T had in place 20 multi-year customer contracts to provide maintenance services. Because Company T routinely enters into similar types of service contracts with many different customers, market participant pricing of these maintenance contracts can be readily determined as of the acquisition date. Company A determined that four out of 20 contracts were outside the range of market pricing terms as of the acquisition date and, as a result, made a determination that they were off-market, two of which were favorable to current market prices and two were unfavorable.

13.163 Given their similar characteristics, Company A determined that for convenience it was appropriate to value the Company T's 20 service contracts as a single pool. In making that determination, Company A assessed that the contracts had similar characteristics. However, given that four of the 20 acquired customer contracts had pricing terms that were off-market as of the acquisition date, Company A valued the off-market components of those contracts separately from the valuation of the pool. The pool of 20 contracts (consisting of 16 at-market contracts and at-market components of the four off-market contracts) was valued using the MPEEM taking into consideration the current market pricing terms.

13.164 When valuing off-market components, Company A valued the two favorable components separately from the two unfavorable components due to different valuation assumptions made by market participants applicable for intangible assets (favorable components) versus liabilities (unfavorable components). Specifically, the two favorable components were valued as a single pool based on the after-tax pricing differential between the pricing terms of those contracts and the current market prices discounted at after-tax discount rate, including a TAB. Whereas the two

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unfavorable components were valued as a single pool based on the pre-tax pricing differential between the pricing terms of those contracts and the current market prices discounted at a pre-tax discount rate, and excluding a TAB.

Operating Rights

Overview

13.165 Operating rights (also known as *enterprise assets*) are a unique form of pivotal IP-based intangible rights assets. In general, operating rights are defined by the following key characteristics (that also impact their fair value):

- Regulations or legal agreements governing the initial access, use, and/or transfer of the asset
- Scarcity of the asset because there are physical, governmental, or legal limitations on the number of similar assets available.

It is a combination of these factors that distinguishes operating rights from permits or licenses that are easy to obtain and not limited in number. Routine operating licenses and permits, which are not scarce in nature, are not covered in this section.

13.166 Essentially operating rights are a commercial right to exploit assets that are retained by the asset or IP owner (e.g., government entity). In other words, they are a distinct form of intangible rights assets. Intangible assets classified or designated as operating rights typically include (but are not limited to) the following:

- FCC and other government granted licenses (for example, wireless or broadcast spectrums, casino licenses, taxi medallions, forest or water right permits, liquor licenses, or environmental permits)
- Commercial franchises (for example, fast food restaurant)
- Governmentally granted monopolies or franchises (such as in the cable industry)

13.167 Operating rights are generally considered pivotal assets because there is only a limited number of assets available and they provide the licensee with the opportunity to commercialize the underlying right to create excess profit within the operations. This scarcity could have a significant impact on fair value. Operating rights could represent all, or a sub-set, of an entity.

13.168 Acquirers of operating rights have historically recognized these assets as intangible assets whenever such licenses or rights were obtained in a business combination. These operating rights have generally comprised a significant portion of the fair value of an acquiree because of the legal necessity to possess such rights in order to operate a business, as well as their scarcity. Historically, many entities assigned value to operating rights acquired using the residual method. Under the residual method, the purchase price was assigned to each of the other identified tangible and intangible assets and acquired liabilities, and the remainder of the purchase price was recorded as the operating right. This method was an accounting convention rather than a

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valuation methodology that directly measured the value of the operating right. When the residual method was used to value operating rights, goodwill was generally not recognized.

13.169 However, SEC Topic No. D-108 (which was subsequently codified as FASB ASC 805-20-S99-3) clarified that

> The SEC staff does not believe that the application of the residual method to the valuation of intangible assets can be assumed to produce amounts representing the fair values of those assets… Accordingly, the SEC staff believes the residual method should no longer be used to value intangible assets other than goodwill. Rather, a direct value method should be used to determine the fair value of all intangible assets required to be recognized at fair value under Topic 805.

Valuation Techniques

13.170 Operating rights are valued using either the market or income approaches. Under the income approach, operating rights are typically valued using either the Greenfield method or MPEEM. A market approach may be used if facts and circumstances warrant its use. For example, there may be an observable market for liquor licenses. Additionally, in the wireless communications industry, FCC licenses are regularly bought, sold or swapped by market participants with disclosed terms. Given the pivotal nature of these assets, the cost approach is rarely utilized. See chapter 12 for further discussion of the MPEEM and Greenfield methods.

Greenfield Method and MPEEM

13.171 The Greenfield method assumes a business is started with only one owned intangible asset, in this case the operating rights, with the remainder of the business to be assembled around it. The MPEEM assumes the subject asset is part of a collection of assets which generates an identifiable stream of prospective cash flows. Conceptually, both methods should yield similar results within a reasonable range.

13.172 For indefinite lived operating rights that require the inclusion of a terminal value component in the valuation or have significant startup expenses, the Greenfield method is typically more suitable because it requires that the time, effort and expense associated with the startup phase of the business be explicitly considered in the PFI. Additionally, the task force observes that the Greenfield method becomes more appropriate when there is relevant market data to benchmark average operating performance.

13.173 The task force acknowledges that there is diversity in practice with respect to which valuation method is applied. The MPEEM is often used to value cable franchises, whereas the Greenfield method is often used to value FCC licenses. In the application of the MPEEM, additional consideration should be given to the CACs related to the time, effort, and expense that went into the development and start-up of the business (often referred to as *going concern*). Refer to paragraphs 2.2.14–.16 of Valuation Advisory #1 for additional guidance. See chapter 12 for further discussion of the MPEEM and Greenfield methods.

Intangible Rights Assets and Reacquired Rights

13.174 *Intangible Rights Assets.* Chapter 11 describes different types of intangible assets and provides a thought process for selecting the appropriate valuation methods to value them. The valuation method selection process recognizes that pivotal IP-based intangible assets have two elements of value: (1) the underlying IP and (2) the commercial value or excess profits that can be created by exploiting, investing in and commercializing the underlying IP. When the underlying IP is owned, the commercial value is referred to as *commercial rights* and they are combined with the underlying IP and measured in aggregate as a single asset. If the acquiree accesses the underlying IP through a contract or agreement, the underlying IP is not owned (or recognized) but the commercial rights are owned and controlled. Where pivotal underlying IP is accessed and controlled through a contract or agreement, the commercial rights are referred to as *intangible rights assets* to distinguish them from commercial rights.

13.175 *Reacquired Rights.* As discussed in the "Reacquired Rights" section in chapter 8, "Other Accounting Topics," when a preexisting relationship exists, it should also be evaluated for the existence of a reacquired right. FASB ASC 805-20-25-14 provides that

> As part of a business combination, an acquirer may reacquire a right that it had previously granted to the acquiree to use one or more of the acquirer's recognized or unrecognized assets. Examples of such rights include a right to use the acquirer's trade name under a franchise agreement or a right to use the acquirer's technology under a technology licensing agreement.

Relationship based intangible assets are not subject to licensing transactions and, therefore, do not give rise to reacquired rights. See chapter 11 for a detailed discussion of IP-based and relationship-based intangible assets.

Defensive Intangible Assets

13.176 The FASB ASC Master Glossary defines a *defensive intangible asset* as "[a]n acquired intangible asset in a situation in which an entity does not intend to actively use the asset but intends to hold (lock up) the asset to prevent others from obtaining access to the asset." While such assets are not being actively used, they are likely contributing to an increase in the value of other assets owned by the acquirer. Therefore, consistent with FASB ASC 805-20-30-6, an acquirer should measure the fair value of a defensive intangible asset in accordance with FASB ASC 820-10 assuming its highest and best use by market participants. Paragraphs 6.88–.90 and 6.110–.111 in chapter 6 discuss initial and subsequent accounting for defensive intangible assets. When measuring the fair value of defensive intangible assets, it is important to use an appropriate valuation technique which properly captures its economic benefits.

Liabilities

Trade Accounts Payable and Notes Payable

13.177 See the "Trade Accounts Payable and Notes Payable" section in chapter 6 for a

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discussion of accounting considerations related to trade accounts payable and notes payable acquired in a business combination. Generally, settlement amount of trade accounts payable and notes payable approximates their fair value due to their short-term nature. With respect to long term trade accounts payable and notes payable, given the lack of observable markets or observable inputs for the transfer of these liabilities, they are often measured using an income approach and discounted at the present value of the amounts to be paid, incorporating an appropriate discount rate reflective of nonperformance risk inherent in the amounts payable from a market participant view.

Loss Contracts[36]

Background

13.178 In certain business combinations, the acquiree may have a loss contract at the acquisition date. FASB ASC 805-10-55-21(b)(1) describes a *loss contract* as a "contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it." While similar in nature, a loss contract is not necessarily the same as an unfavorable contract, which is a contract that is unfavorable in terms of current market terms.

13.179 Loss contracts are most prevalent in construction-type and production-type contracts for which specifications are provided by the customer for the construction of facilities or the production of goods or the provision of related services. However, loss contracts may exist in other types of contracts with customers. The task force notes that loss contracts are most common among fixed-price and unit-price contracts but there may be situations when they occur for other types of contracts.

13.180 Within the government contracting space, the acquiree should assess whether the arrangement would qualify as research and development (R&D) activities whereby the costs would be recognized as R&D expenses and offset by the expected reimbursement from the customer rather than a loss contract. FASB ASC 912-730, *Contractors—Federal Government—Research and Development*, provides guidance to government contractors related to identifying R&D activities included in government contracts and the accounting for such activities. Specifically, FASB ASC 912-730-15-2 lists conditions that need to be met in order for the arrangement to be considered R&D.

13.181 The purpose of this section is to outline methodologies and assumptions that may be used to estimate the fair value of a loss contract.

Loss Contract Liability Valuation

13.182 The fair value of the loss contract liability acquired in a business combination is measured as the price that a market participant would require to assume this liability. Each loss contract is typically valued individually rather than as a group because of the unique pricing

[36] This section reflects provisions of ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*, as amended.

terms, facts and circumstances surrounding it, including any cost or performance issues that created the losses.

13.183 Conceptually, the fair value should provide the market participant transferee[37] with fair compensation including profit for the efforts and costs left to be incurred related to the contract; allowing the market participant transferee to be fairly compensated for its risk, future efforts and assets utilized to complete the contract post-acquisition date.

Valuation Techniques

13.184 The most common method used to measure the fair value of a loss contract is the discounted cash flow method under the income approach (also sometimes referred to in practice as the *margin differential* or *bottom-up methods*). Under this method, the fair value of a loss contract liability is typically estimated as the costs to complete the contract (which may include certain overhead items or the use of intangible assets, or both), plus a market participant profit, net of remaining revenue under the loss contract.

13.185 A market approach may also be employed and would entail the analysis of comparable transactions to the loss contract being valued. In practice, the selection of a methodology is primarily determined by the availability of information. Because the market data needed for the market approach is often not available, the discounted cash flow method is used more frequently in practice and discussed in greater detail in the following section.

Discounted Cash Flow Method

13.186 The following steps outline a process that may be used for valuing loss contract liabilities:

Step 1: Estimate the remaining contract revenue to be earned after the acquisition date

Step 2: Estimate the remaining contract costs expected to be incurred to complete the contract obligations

Step 3: Estimate a market participant profit

Step 4: Estimate the net economic loss, including any market participant profit resulting from the contact, and discount to the present value

Step 1: Estimate the remaining contract revenue to be earned after the acquisition date

13.187 The revenue expected to be earned on the contract is the amount of consideration that the entity expects to receive in exchange for transferring promised goods or services to the customer, which should be determined in accordance with FASB ASC 606, and is based on the specific contractual terms of the loss contract being valued. When estimating the remaining revenue, it is important to consider all relevant contract terms, which may include variable consideration (for

[37] Market participant transferee is the party that assumes the contract liability; market participant transferor is the party that transfers the contract liability.

example, potential price redeterminations), reimbursable costs, change orders, cancellation provisions, or contract options.

13.188 The valuation specialist should understand revenue recognition policies and contract pricing methods (for example, a fixed price) as it relates to the subject loss contract. Often the contract may have a total contract value which represents the total revenue expected to be earned over the term of the contract. In this case, estimates need to be made regarding the progress made towards completion of the contract. Generally, the revenue is estimated over the remaining contract term and the exercise of options for contract renewal are not considered unless they are under the control of the customer. Acquiree controlled options and renewals of a loss contract should not be considered unless there is persuasive evidence that a market participant would renew these onerous contract terms. The task force believes these situations would be rare but may include strategic actions that would be considered by market participants.

Step 2: Estimate the remaining contract costs expected to be incurred to complete the contract obligations

13.189 The costs used in arriving at the estimated loss on a contract would include all direct and indirect costs (including expected cost overruns) related to the contract and would be based on the specific contractual terms of the subject loss contract. Indirect costs may include a portion of the overhead operating expenses of the business (such as general and administrative expenses [G&A], corporate overhead, and depreciation expense) provided a market participant would incur such costs to satisfy the contract obligation. These indirect overhead expenses may be allocated based on a percentage of revenue or using other appropriate assumptions. Direct and indirect costs may include costs associated with contract options for renewals as discussed in the preceding paragraph.

13.190 Costs associated with activities conducted prior to the acquisition date that have been incurred (e.g., costs that a market participant assuming the liability would not incur) should be excluded from the costs estimated to complete the contract obligation. Common examples of costs remaining to be incurred include cost of sales (COS), expenses pertaining to update or support services and repairs, R&D expenses pertaining to design specifications, post-acquisition customer support costs, as well as related overhead costs that would be incurred by a market participant to complete the obligation.

Step 3: Estimate a market participant profit

13.191 As discussed in paragraph 13.183, the fair value should include a provision for profit because a market participant assuming the obligation would require a profit for the efforts and costs left to be incurred related to the contract.

13.192 This profit can be estimated by considering the profitability of contracts in the marketplace that are similar in terms of risk, future efforts and assets utilized to execute them. A single blended profit margin on costs related to the contract that reflects the future contract-related activities is generally applied. The selection of the appropriate profit margin requires judgement, is dependent on specific facts and circumstances of the loss contract(s) being valued and should be consistent with market participant assumptions. The profit margin may be derived

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through an analysis of similar contracts of the acquiree and acquiror, information available in the marketplace, business cases or competitive bids for comparable contracts, or profit margins for entities engaged in similar activities, which would include the use of intangible assets.

13.193 When an entity owns or licenses intangible assets which contribute to profitability of the entity, the contribution of those intangible assets would be included in the total profit margin of the entity and the entity's collection of contracts. Intellectual property underlying the product or service is often required in the completion of the loss contract. The appropriate profit margin should take into account the value contribution of the intangible assets by either 1) including the profit contribution as a royalty (as if the intangible assets were licensed) and, therefore, treating it as an expense or (2) allocating the profit margin based on assets utilized post-acquisition date. Alternatively, contributions of intangible assets over the contract life cycle may be assessed qualitatively.

Step 4: Estimate the net economic loss, including any market participant profit resulting from the contract, and discount to the present value

13.194 To derive the fair value of the loss contract liability, the sum of the remaining costs to complete the contract (estimated in Step 2) and the market participant profit on those costs (estimated in Step 3), is netted with the remaining contract revenue (estimated in Step 1) and then discounted to the present value at an appropriate discount rate (Step 4, see the following discussion). Loss contract liabilities should generally be valued using pre-tax cash flows because a market participant would not accept payment net of taxes to assume a liability and no TAB should be applied.

13.195 The discount rate used in the valuation should reflect the rate at which market participants would finance an obligation of similar magnitude and term and should also consider the credit risk. A yield curve or single fixed rate reflecting the term of the loss contract and risk profile of the acquirer are appropriate bases to utilize when developing the discount rate in the fair value measurement. While it may be appropriate to add an incremental adjustment to reflect risk factors specific to the liability that could impact the fair value measurement, the task force would generally expect the discount rate to be in line with the duration adjusted cost of debt if the liability can be optimally financed with debt. This would often be less than a market participant pre-tax weighted average cost of capital.

13.196 The risks associated with uncertainty of costs projected to meet the obligation and, in some cases, the revenue projected to be derived from the contract, would generally be reflected in the cash flow estimates. Scenario analysis techniques such as Monte Carlo simulation may be applicable if high levels of uncertainty exist regarding cost expectations (and in some cases revenue) through the remaining duration of the loss contract.

Other Valuation Considerations

13.197 The PFI used to value customer-related intangible assets (such as customer relationships and customer contracts) should exclude revenue and related expenses (and resulting losses) associated with the loss contract.

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13.198 If other intangible assets (for example, developed or marketing IP) are required by market participants to complete the loss contract and, therefore, are considered when estimating the remaining costs to complete the loss contract and the profit thereon, then the revenue associated with loss contract would be considered in the valuation of these intangible assets. If the intangible assets are unrelated to completing the loss contract, then the revenue associated with the loss contract would not be considered in the valuation of these intangible assets.

Example: Valuation of a Loss Contract

13.199 Company A, a diversified government contractor, acquired Company T, a specialized defense contractor, in a business combination on December 31, 2X21 (the acquisition date). Company T has a production-type contract to produce electrical systems for the US Navy. Company T uses the input method under FASB ASC 606, on the basis of costs incurred, to measure progress towards the completion of the contract, which was deemed appropriate by Company A. As of the acquisition date, Company A determined that Company's T contract with the US Navy is a loss contract and instructed the valuation specialist to value it separately for the business combination analysis. The relevant terms of the contract and valuation assumptions were as follows:

a. Estimate at completion (EAC):
    i. contact value - $25 million
    ii. costs to complete - $30 million
    iii. loss - $5 million (-20% margin)
b. Incurred to date (ITD):
    i. sales - $5 million
    ii. costs - $6 million
    iii. loss - $1 million
c. Estimate to complete: costs - $24 million
d. Percentage of completion (POC): 20% (ITD costs / EAC costs to complete)
e. Remaining loss provision - $4 million (EAC loss * (1- POC))
f. 4 years remaining on the contract with remaining revenue expected to be recognized on pro-rata basis
g. Profit margin on comparable contracts - 12% as determined by the valuation specialist, which translates into a profit margin on costs of 13.6% [3]
h. Discount rate - 5.0% (pre-tax)

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PFI ($000s)	Year 1	Year 2	Year 3	Year 4	Total
Remaining revenue to be earned	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 20,000
Direct costs to be incurred [1]	4,500	4,500	4,500	4,500	18,000
Indirect costs to be incurred [2]	1,500	1,500	1,500	1,500	6,000
Remaining contract costs to be incurred	6,000	6,000	6,000	6,000	24,000
Market participant profit [3]	818	818	818	818	3,273
Net economic contract loss [4]	(1,818)	(1,818)	(1,818)	(1,818)	(7,273)
Present value factor [5]	0.9759	0.9294	0.8852	0.8430	
Present value	(1,774)	(1,690)	(1,609)	(1,533)	(6,606)
Fair value of loss contract liability	**$ (6,606)**				

Notes:

[1] Direct costs include cost of goods sold, research and development and depreciation related to the loss contract.

[2] Indirect costs include allocated overhead (general and administrative and corporate costs). These costs exclude selling expenses that were incurred prior to acquisition date.

[3] The market participant profit margin, which includes the use of intangible assets, was derived through an analysis of similar contracts and was estimated to be 12%. Since the market participant profit was applied to the remaining contract costs it was translated to be 13.6% and calculated as (1/(1-12%)) -1.

[4] Net economic contract loss calculated as remaining contract revenue to be earned less remaining contract costs to be incurred plus the market participant profit.

[5] Based on a pre-tax discount rate of 5.0%.

Contingent Consideration

13.200 Contingent consideration is often used when the buyer and seller cannot agree on the consideration for the acquired business. The FASB ASC Master Glossary defines *contingent consideration* as follows:

> Usually an obligation of the acquirer to transfer additional assets or equity interests to the former owners of an acquiree as part of the exchange for control of the acquiree if specified future events occur or conditions are met. However, contingent consideration also may give the acquirer the right to the return of previously transferred consideration if specified conditions are met.

13.201 All contingent consideration arrangements are measured at fair value on the acquisition date. For further information, see Valuation Advisory #4,[38] which outlines best practices in the valuation of contingent consideration for financial reporting purposes. Also see the "Contingent Consideration" section in chapter 5, "Measuring the Consideration Transferred," which discusses accounting for contingent consideration.

Items That Might be Assets or Liabilities

Off-Market Vendor Contracts

Overview

13.202 Favorable and unfavorable contracts, collectively referred to as *off-market contracts*, are contracts whose terms are not at market levels at the acquisition date. Off-market contracts are typically due to their pricing being inconsistent with current market transactions for the same or similar items that are covered by the contract. As indicated in FASB ASC 805-10-55-21(b)(1), "[a]n unfavorable contract is a contract that is unfavorable in terms of current market terms. It is not necessarily a loss contract in which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it."

13.203 This section discusses off-market vendor contracts. Valuation considerations related to off-market revenue contracts are discussed in the "Intangible Assets Associated with Contracts with Customers" section of this chapter. Real estate and personal property off-market contracts are discussed in the "Leases" section of this chapter.

13.204 The valuation of off-market contracts may also be required for measuring the gain or loss on the settlement of a preexisting relationship, and in the context of reacquired rights. This is further described in the "Settlement of Preexisting Relationships" and "Reacquired Rights" sections in chapter 8.

13.205 Off-market contracts are typically observed when events and circumstances change from the time of the contract inception to the acquisition date. Off-market contracts may also arise due to other reasons, such as the following:

- The strong position and negotiating leverage of one of the parties may allow it to obtain favorable contract terms
- A party may agree to unfavorable contract terms to gain market share given competitive dynamics.

13.206 The valuation of an off-market component focuses specifically on estimating the fair value of the above or below market terms of the contracts. Given numerous factors that can

[38] The Appraisal Foundation's VFR Valuation Advisory #4, *Valuation of Contingent Consideration,* is available at https://www.appraisalfoundation.org/imis/TAF/Resources/Guidance/TAF/Valuation_Advisories.aspx?hkey=d74f24ae-8dcb-412e-947f-6df153626ae2.

impact profit margins, profit margins should not be the sole factor in determining whether the contract is off-market.

13.207 The following scenarios provide examples related to the evaluation of off-market vendor contracts:

1. *Supply-Purchase Agreement:* Company A agreed to purchase electrical components from Company B at a fixed price for five years beginning 2X14. At the time of the original agreement, the pricing was at market. As a result of softening of demand conditions in 2X16 (which are expected to remain at such levels through 2X19), the market price for those electrical components dropped 15% below the agreed upon price. As such, Company A currently has an unfavorable contract with Company B.

2. *Trade Name In-Licensing Agreement:* Media Company C entered into a ten year, 1% royalty trade name licensing arrangement with a music artist in 2X10, when he was relatively unknown outside the Seattle area. By 2X16, the music artist had gained popularity globally without any contributed efforts of Media Company C but rather due to his abilities. As a result, the artist can command 10% royalty rates for his trade name, based on various similar licensing arrangements. Given that Media Company C continued to license his trade name at 1%, it has a favorable contract with the music artist.

3. *Patent In-Licensing:* University D developed and patented technology that was then licensed to an early-stage biotechnology company in 2X11. The biotech company used the in-licensed patent in its development of a drug candidate and was responsible for all aspects of the development, including the funding of all clinical trials. In 2X21, the biotech company obtained FDA approval for the product with multi-billion-dollar sales potential and was then immediately purchased by a large pharmaceutical company.

   To the extent additional licensing agreements have been entered into for similar technology, the terms of these agreements should be evaluated to determine if the subject contract is off-market. The task force believes that the appreciation in value realized by the biotech company would generally be related to its own research and development efforts and does not indicate that the original license agreement was off-market.

Valuation Techniques

13.208 The task force observes that the income approach is predominantly used for the valuation of the off-market components of contracts, while the market and cost approaches are rarely used. The lack of disclosed transaction information for comparable contracts restricts the application of the market approach. The cost approach is not used because it is not capable of capturing the off-market element.

With-and-Without Method

13.209 The task force observes that a form of the with-and-without method within the income approach is most commonly used in practice for the valuation of off-market components. See the "With-and-Without Method" section in chapter 12 for a general discussion of this method; this

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section focuses on the application of this method to off-market contracts, which involves consideration of two different scenarios:

> *Scenario 1:* the subject revenue or expense stream is estimated based on the actual contract's terms.
>
> *Scenario 2:* the subject revenue or expense stream is estimated based on market terms.

13.210 The difference between the PFI estimated under each scenario is tax-effected in the case of favorable contracts since these are assets, but not in the case of unfavorable contracts since these are liabilities. This difference is then discounted to present value at an appropriate discount rate to estimate the fair value of the off-market component of the contract and TAB is applied, as appropriate.

13.211 The overall economics, market dynamics and the contractual terms should be analyzed to understand how market terms were determined. Prior to relying upon terms observed in other contracts, the valuation specialist should assess whether the contracts are comparable, and information is sufficient and reliable. Pricing from forward curves should be considered, when available (e.g., for traded commodities). In addition, the valuation specialist would need to evaluate whether the off-market contract would be expected to be renewed after the initial contract term. The task force observes that renewal of contracts with off-market terms would be rare unless the party for which the contract is favorable has an option to renew it.

13.212 Similar to other intangible assets valued under the income approach, the valuation of intangible assets arising from favorable contract terms should be done using after-tax cash flows. Furthermore, the economic benefit from the tax amortization of the favorable contract intangible asset should also be included in the valuation.

13.213 The discount rate used in the valuation of the favorable contract should be the same as that used for the valuation of the at-market contract, had the at-market contract been separately valued. As provided in the "Rates of Return for Assets and Liabilities" section in chapter 12, the discount rate for the at-market contract can be estimated based on the debt and equity mix used to finance this asset, and by maintaining consistency with the relative risks of other assets in the analysis.

13.214 In certain cases, high level of uncertainty regarding market pricing and purchase volume expectations through the remaining duration of the favorable contract may require the use of scenario analyses such as Monte Carlo simulation.

13.215 In contrast, unfavorable contract terms give rise to liabilities, which should generally be valued using pre-tax cash flows. There is no TAB associated with liabilities arising from unfavorable contracts. The discount rate used in the valuation should reflect the rate at which market participants would finance an obligation of similar magnitude and term and should also consider the credit risk. A yield curve or single fixed rate reflecting the term of the unfavorable contract and risk profile of the acquirer are appropriate bases to utilize when developing the discount rate in the fair value measurement. While it may be appropriate to add an incremental adjustment to reflect risk factors specific to the liability that could impact the fair value measurement, the task force would generally expect the discount rate to be in line with the

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duration adjusted cost of debt if the liability can be optimally financed with debt. This would often be below a market participant pre-tax weighted average cost of capital. The risks associated with uncertainty of costs projected to fulfill the obligation would generally be reflected in the cash flow estimates. Scenario analysis techniques, such as Monte Carlo simulation, may be applicable if high levels of uncertainty exist regarding market pricing and purchase volume expectations through the remaining duration of the unfavorable contract.

13.216 While valuing favorable contracts using scenario analysis, the future likely outcomes considered may include those when the contract is at-market, as well as when the contract is unfavorable. Given the range of these outcomes, it is important to evaluate if the contract is indeed off-market. A probability weighted scenario analysis may demonstrate that the contract is not off-market. The same considerations would be applicable to scenario analysis for unfavorable contracts.

Other Valuation Considerations

13.217 MPEEM used in the valuation of intangible assets should be based on PFI that reflects market rates for contracts rather than off-market rates by removing the favorable or unfavorable terms from the PFI. The fair value of the favorable or unfavorable aspect of the contracts should be considered in the WARA analysis as these contracts are a component of the purchase price. Exhibit D-2 of the toolkit from Valuation Advisory #1 provides an example.

Leases[39]

13.218 According to the "Pending Content" in FASB ASC Master Glossary, *lease* is "[a] contract, or part of a contract, that conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration." For accounting purposes, leases are classified by lessees as either operating or finance and by lessors as sales-type, direct financing, or operating based on the guidance in the "Pending Content" in FASB ASC 842, *Leases*. For further discussion of accounting considerations related to leases, see the "Leases" section in chapter 6.

13.219 The following table (which also appears in paragraph 6.142 of the "Leases" section in chapter 6) lists assets and liabilities recognized at the acquisition date:

[39] This section reflects provisions of ASU No. 2016-02, *Leases (Topic 842)*, as amended. The "Pending Content" in FASB ASC referred to in this section represents guidance that was added or amended by ASU No. 2016-02 and its subsequent amendments.

See footnote 17 in the "Leases" section of chapter 6 for information regarding the effective date of ASU No. 2016-02.

Reporting entities that have not yet adopted ASU No. 2016-02, as amended, should follow the guidance in FASB ASC 840, *Leases*.

	Asset	Liability
Acquiree is a *lessee** in an operating or finance lease	*Right-of-use asset* equal to the lease liability as adjusted to reflect favorable or unfavorable terms of the lease when compared with market terms *Leasehold improvements* recorded at fair value *Intangible assets associated with the lease*, such as in-place lease value, if any	*Lease liability* equal to the present value of the remaining lease payments (that is, the lease liability is based on contractual terms)
Acquiree is a *lessor* in an operating lease	*Favorable lease terms* relative to market *Property, plant, and equipment* equal to the fair value of the underlying asset *Intangible assets associated with the lease*, such as in-place lease value or customer relationships, if any	*Unfavorable lease terms* relative to market
Acquiree is a *lessor* in a sales-type or a direct financing lease	*Net investment in lease* equal to the sum of: *Lease receivable*, which is the present value of the remaining lease payments and guaranteed residual value, and *Unguaranteed residual asset*, which is the difference between the fair value of the underlying asset** and lease receivable *Intangible assets associated with the lease*, such as in-place lease value or customer relationships, if any	N/A

* The "Pending Content" in FASB ASC 805-20-25-28B provides a practical expedient which allows the acquirer not to recognize assets or liabilities at the acquisition date for leases for which the acquiree is a lessee and that, at the acquisition date, have a remaining lease term of 12 months or less. This includes not recognizing an intangible asset if the terms of an operating lease are favorable relative to market terms or a liability if the terms are unfavorable relative to market terms.

** The "Pending Content" in FASB ASC 805-20-30-25 provides that "[t]he acquirer shall take into account the terms and conditions of the lease in calculating the acquisition-date fair value of an underlying asset that is subject to a sales-type lease or a direct financing lease by the acquiree-lessor."

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13.220 When an acquiree is a lessee, according to the "Pending Content" in FASB ASC 805-20-30-24, the right-of-use asset would be measured at the same amount as the lease liability as adjusted to reflect favorable or unfavorable terms of the lease when compared with the prevailing market terms (as disussed later in the "Favorable and Unfavorable Leases" section). Consistent with the "Pending Content" in FASB ASC 805-20-30-24, the lease liability would be measured based on the present value of the remaining contractual lease payments, as if the lease were a new lease of the acquirer at the acquisition date.

13.221 The following sections discuss some of the considerations related to in-place lease value, favorable or unfavorable leases, discount rate for the lease, and the relationship between economic life of leasehold improvements and lease term used in measurement of the related lease liability.

In-Place Lease Value

13.222 A lease could have in-place value even if the lease is determined to be at market terms. According to the "Pending Content" in FASB ASC 805-20-25-10A, "[a]n identifiable intangible asset may be associated with a lease, which may be evidenced by market participants' willingness to pay a price for the lease even if it is at market terms. For example, a lease of gates at an airport or of retail space in a prime shopping area might provide entry into a market or other future economic benefits that qualify as identifiable intangible assets…" Such identifiable assets are recognized at fair value in the acquisition accounting. The concept of in-place lease value is most common to real property assets since it is a vital economic influencer of value.

13.223 The following provides a brief overview of considerations related to in-place lease value depending on the acquired lease position (lessor or lessee) and lease classification:

- *The acquirer of a lessee in an operating or finance lease* may also identify value of the in-place lease(s). An example may be an in-place lease intangible asset in instances where the lease provides the lessee with additional economic benefits beyond the leased asset. Although it is rare for these types of contracts to have in-place lease value, consideration should be given as to whether or not a separate identifiable lease intangible asset is present

- *The acquirer of a lessor in operating leases* may identify and separately value the in-place leases.

- *The acquirer of a lessor in sales type or direct financing leases* may also identify and separately value the in-place lease(s). Consideration should be given to other economic components of the net investment in the lease such as the remaining term of the lease and the overall asset value subject to the lease. An in-place lease may or may not incrementally enhance the value of the net investment in a sales-type or direct financing lease.

13.224 Intangible assets associated with in-place leases are reported separately from the underlying leased asset in the financial statements and, therefore, require a discrete valuation for financial reporting purposes.

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13.225 From the lessor's perspective, economic benefits related to in-place leases are intended to reflect the incremental or contributory value associated with the asset that is leased and generating rental income compared to one that is unutilized, idle, or vacant. It includes lost rental income at market lease rates during the expected time to secure replacement tenants under existing market conditions (commonly referred to as expected *lease-up* or *absorption period*). The presumed lost rents and expenses incurred over the lease-up or absorption period would typically be discounted to present value on a pre-tax basis at an appropriate rate of return that considers the physical and economic risks in the asset. Observed overall property yields and market participant data would need to be considered when determining the relevant pre-tax discount rate to be applied.

13.226 In addition, the value related to in-place leases may reflect the value associated with avoiding the costs of originating the acquired in-place leases, as well as the value associated with the avoidance of holding costs that would be incurred if an asset intended to be leased was acquired without a lessee. Origination costs comprise the costs to execute similar leases, including marketing costs, leasing commissions, legal, and other related costs. Holding costs may include property taxes, insurance and other normal operating expenses.

Favorable and Unfavorable Leases

13.227 In-place leases may also be favorable or unfavorable relative to prevailing market terms. The valuation of favorable and unfavorable leases requires consideration of all relevant factors. Under the "Pending Content" in FASB ASC 842, the manner in which favorable and unfavorable leases are valued and recorded is dependent on the types of leases (classification), as well as the parties to the leases, which include the lessor (landlord or property owner) and lessee (tenant or renter).

13.228 According to the "Pending Content" in FASB ASC 805-20-25-12

> Regardless of whether the acquiree is the lessee or the lessor, the acquirer shall determine whether the terms of each of an acquiree's operating leases are favorable or unfavorable compared with the market terms of leases of the same or similar items at the acquisition date. If the acquiree is a lessor, the acquirer shall recognize an intangible asset if the terms of an operating lease are favorable relative to market terms and a liability if the terms are unfavorable relative to market terms. If the acquiree is a lessee, the acquirer shall adjust the measurement of the acquired right-of-use asset for any favorable or unfavorable terms in accordance with paragraph 805-20-30-24.

13.229 The following summarizes the treatment of favorable and unfavorable leases depending on the acquired lease position (lessor or lessee) and lease classification:

- *When the acquiree is a lessee in an operating or finance lease,* although leases may be favorable or unfavorable at the acquisition date, intangible assets related to favorable leases and the liabilities for unfavorable leases are not reported separately in the financial statements. Rather, consistent with the "Pending Content" in FASB ASC 805-20-30-24, the acquirer should measure the acquired right-of-use asset at the same amount as the lease liability (that is, at the present

value of the remaining lease payments) as adjusted for any favorable or unfavorable terms relative to market.

- *When the acquiree is a lessor in an operating lease*, an acquirer would separately capture the extent to which the in-place lease is favorable or unfavorable at the measurement date. Intangible assets for favorable leases and liabilities for unfavorable leases are reported separately from the underlying leased asset in the financial statements and, therefore, require a discrete valuation for financial reporting purposes. There are a number of factors to consider when determining whether an acquired operating lease where the acquiree is a lessor is favorable or unfavorable and when valuing the off-market component in such a lease; some of these factors are discussed in the section that follows.

- *When the acquiree is a lessor in a sales-type or a direct financing lease*, the off-market features of a sales-type or direct financing lease are not measured as a separate asset or liability, but are implicitly included in the net investment of the lease.

13.230 In valuing lease interests acquired, all lease terms need to be evaluated in determining whether a lease is favorable or unfavorable. For example, fixed rental payments, purchase options, renewal provisions, condition, warranties, maintenance and return provisions, contingent rental payment adjustments based on revenues or price adjustments, and so on. The effect of these additional lease provisions should be viewed from the perspective of market participants as of the measurement date.

13.231 When evaluating whether a lease is favorable or unfavorable, the evaluation of the leased asset should generally be based on the condition of the asset as of the lease commencement date and would not incorporate any subsequent improvements or alterations. The value associated with an improved or altered state would typically be captured in the fair value of the associated leasehold improvements.

13.232 In the event a lease contract contains future renewal options granted to the lessee, the options should be evaluated to understand the extent to which those renewal options are favorable or unfavorable. Favorable renewal options may be further evaluated to determine the probability of one or more renewal options being exercised in the future. Typically, it is expected that the lessee would exercise favorable renewal options that are more likely than not to be exercised from a market participant perspective. However, a lessee's business interests and strategic priorities from a market participant perspective may also need to be considered in determining whether to include or exclude future renewal options in the analysis.

Considerations When the Acquiree is a Lessor in an Operating Lease

13.233 On a tenant-by-tenant or renter-by renter basis, contractual rent (that is stated in the lease contract) is compared to prevailing market rent with the corresponding market lease terms as of the acquisition date for the remaining term of the lease. The difference between the contractual rent and the prevailing market rent for the lease is then discounted to present value on a pre-tax basis at an appropriate discount rate to estimate the value of the asset or liability associated with

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the favorable or unfavorable lease. The applicable pre-tax discount rate applied to favorable and unfavorable leases would need to reflect the physical and economic risks of the asset. Observed overall property yields and market participant data would need to be considered when determining the relevant pre-tax discount rate.

13.234 When determining whether the terms of each of an acquiree's operating leases are favorable or unfavorable compared with the market terms of leases of the same or similar items at the acquisition date, the acquirer should evaluate the age and condition of the leased asset as well as the terms of the lease.

13.235 For real property operating leases, consideration should also be given to landlord inducements (such as tenant improvement allowance) that may have been included in the contractual rent. If the contractual rent did not include any allowance for tenant improvements, it may be inappropriate to compare the contractual rent to a market rent that is inclusive of landlord reimbursed tenant improvement allowances. In addition, tax, legal or regulatory changes since lease inception should also be considered when evaluating for off-market terms.

13.236 According to paragraph BC415 in the "Background Information and Basis for Conclusions" section of ASU 2016-02, *Leases (Topic 842)*,[40] "[p]repaid or accrued rent should not be recognized because such amounts do not meet the definition of an asset or a liability in Concepts Statement 6 under the acquisition method of Topic 805, *Business Combinations*. Instead, the remaining lease payments required under the terms of the lease are considered in evaluating whether the terms of the lease are favorable or unfavorable at the acquisition date." Therefore, if the lease payments change significantly over the term of the lease, this may result in a conclusion that the terms and conditions of the remaining lease at the acquisition date are off-market (for example, because the remaining lease payments may be significantly less than or greater than the lease payments would be for a new lease with a term equal to the remaining lease term at the acquisition date).

Discount Rate for the Lease

13.237 The discount rate for the lease is dependent on whether the acquiree is a lessor or lessee. The "Pending Content" in FASB ASC Master Glossary defines *discount rate for the lease* as follows:

> For a lessee, the discount rate for the lease is the rate implicit in the lease unless that rate cannot be readily determined. In that case, the lessee is required to use its incremental borrowing rate.
>
> For a lessor, the discount rate for the lease is the rate implicit in the lease.

[40] This and other paragraphs from the "Background Information and Basis for Conclusions" section of ASU No. 2016-02 were not codified in FASB ASC; however, the task force believes these paragraphs provide helpful guidance and, therefore, decided to incorporate them in this guide.

Furthermore, the "Pending Content" in FASB ASC 842-20-30-3[41] provides lessees that are not public business entities with a practical expedient that allows them to "use a risk-free discount rate for the lease instead of its incremental borrowing rate, determined using a period comparable with that of the lease term, as an accounting policy election made by class of underlying asset." The "Pending Content" in FASB ASC 842-20-50-10 provides that an entity that makes the risk-free rate election is required to "disclose its election and the class or classes of underlying assets to which the election has been applied."

13.238 Therefore, when the acquiree is a lessor, the acquirer should use the rate implicit in the lease when calculating the lease receivable. The "Pending Content" in FASB ASC Master Glossary defines the *rate implicit in the lease* as

> The rate of interest that, at a given date, causes the aggregate present value of
>
> (a) the lease payments and
>
> (b) the amount that a lessor expects to derive from the underlying asset following the end of the lease term
>
> to equal the sum of
>
> (1) the fair value of the underlying asset minus any related investment tax credit retained and expected to be realized by the lessor and
>
> (2) any deferred initial direct costs of the lessor.
>
> However, if the rate determined in accordance with the preceding sentence is less than zero, a rate implicit in the lease of zero shall be used.

13.239 The task force believes this rate should include consideration of relevant market factors including the following: the cost of capital of the lessor, credit worthiness of the lessee, market rates for similar property or equipment, and the marketability of the property.

13.240 In contrast, when the acquiree is a lessee, the acquirer will generally use its incremental borrowing rate when measuring the ROU asset and the corresponding lease liability since many of the inputs needed to calculate the rate implicit in the lease are not readily determinable from the lessee's (and, therefore, the acquirer's) perspective. For example, initial direct costs of the lessor and the lessor's estimate of the residual value of the underlying asset may not be known or readily available.

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[41] The "Pending Content" in FASB ASC 842-20-30-3 and FASB ASC 842-20-50-10 quoted here reflects the amendments made by FASB issued ASU No. 2021-09, *Leases (Topic 842)–Discount Rate for Lessees That Are Not Public Business Entities*. Entities that have *not* yet adopted FASB ASC 842 as of November 11, 2021, are required to adopt the amendments in this ASU at the same time that they adopt FASB ASC 842 (see footnote 17 in the "Leases" section of chapter 6 for information regarding the effective date of FASB ASC 842.) For entities that have adopted FASB ASC 842 as of November 11, 2021, the amendments in this ASU are effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Earlier application is permitted.

13.241 The "Pending Content" in FASB ASC Master Glossary defines the *incremental borrowing rate* as

> The rate of interest that a lessee would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment.

As discussed previously, the "Pending Content" in FASB ASC 805-20-30-24 states that

> For leases in which the acquiree is a lessee, the acquirer shall measure the lease liability at the present value of the remaining lease payments, as if the acquired lease were a new lease of the acquirer at the acquisition date.

In a manner consistent with how an entity would determine the incremental borrowing rate for a new lease, the acquirer should evaluate whether the incremental borrowing rate at the acquirer level or the acquiree level would be appropriate on the basis of the terms and conditions of the lease arrangement at the acquisition date.

13.242 The incremental borrowing rate may be observable if sufficient debt issuances with similar terms on a secured basis are available. An acquirer may need to consider other observable and non-observable data in order to derive the incremental borrowing rate. The selected incremental borrowing rate should be consistent with the elements described in paragraph 13.241, including consideration of the following:

- The rate of interest that a lessee would have to pay - Implies an entity-specific rate.
- Borrow on a collateralized basis - The collateral considered does not have to be the leased asset. It can be the leased asset, but it may also be any form of collateral that a creditor would be expected to accept to secure a borrowing for a similar term.
- Similar term - Typically the remaining lease term.
- Similar economic environment - The jurisdiction and the time at which the lease is entered into, and the currency in which the lease payments are denominated.

Economic Life of Leasehold Improvements and Lease Term Used in Measurement of the Related Lease Liability

13.243 When estimating the fair value of leasehold improvements when the acquiree is a lessee in an operating or finance lease, an entity may consider the economic life of the leasehold improvement which could differ from the lease term used to measure the lease liability.

13.244 According to the "Pending Content" in FASB ASC 805-20-30-24, "[f]or leases in which the acquiree is a lessee, the acquirer shall measure the lease liability at the present value of the remaining lease payments, as if the acquired lease were a new lease of the acquirer at the acquisition date." As indicated in paragraph BC415 in the "Background Information and Basis for Conclusions" section of ASU 2016-02, *Leases (Topic 842)*, measuring the acquired lease as if it were a new lease involves reassessing, among other things, the lease term. The task force

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believes that the lease term would be assessed from the acquirer's perspective taking into account any renewal or purchase options that the acquirer is reasonably certain to exercise. The "Pending Content" in FASB ASC 842-10-55-26 provides examples of economic factors to consider in the assessment of whether a lessee is reasonably certain to exercise or not to exercise an option to extend the lease at the commencement date.

13.245 Fair value measurements, on the other hand, do not adhere to the notion of a single outcome as being reasonably certain. As indicated in the table in paragraph 13.219, leasehold improvements are recorded at fair value and reported separately from the lease liability and right-of-use assets in the financial statements. Therefore, they require a discrete valuation for financial reporting purposes utilizing market participant assumptions. When there is uncertainty with regard to renewing a lease or exercising a purchase option, this uncertainty is evaluated in the context of expected outcomes and a probability assessment is commonly applied when estimating the expected lease term, inclusive of renewals or purchase options. A lessee's business interests and strategic priorities from a market participant perspective may also need to be considered in determining whether to include or exclude future renewal or purchase options in the analysis. The resultant expected lease term represents the economic life of the leasehold improvements, which may be different from the lease term used to measure the lease liability.

Bargain Purchases and Economic Obsolescence Considerations

Overview

13.246 Business combinations generally occur with a sufficient level of income to provide for a return on all assets, including the fixed assets. However, in circumstances when there is an insufficient amount of income to provide for a return on all assets, including the fixed assets, economic obsolescence (EO) may be present. If EO is present, its application to assets should be considered when estimating their fair value. EO is typically applied to assets valued using valuation methods under the market and cost approaches but not under the income approach because it generally considers EO in the cash flows based on market participant assumptions.

13.247 If a transaction initially appears to be a bargain purchase, this may be an indication that EO is present. (See the "Bargain Purchase" section in chapter 7, "Recognizing and Measuring Goodwill or a Gain from a Bargain Purchase," for further discussion of bargain purchases.) According to paragraph B371 in FASB Statement No. 141(R), *Business Combinations*, the FASB considers "bargain purchases to be anomalous transactions—business entities and their owners generally do not knowingly and willingly sell assets or businesses at prices below their fair values. However, bargain purchases have occurred and are likely to continue to occur. Circumstances in which they occur include a forced liquidation or distress sale in which owners need to sell a business quickly, which may result in a price that is less than fair value."[42]

[42] FASB Statement No. 141(R), *Business Combinations*, was codified in FASB ASC 805. The quoted language is an excerpt from paragraph B371 of FASB Statement No. 141(R). Paragraph B371 was part of the "Basis for Conclusions" section, none of which was codified in FASB ASC. However, the task force believes that paragraph B371 provides helpful guidance and, therefore, decided to incorporate it into this guide.

13.248 If a bargain purchase is initially identified, FASB ASC 805-30-30-5 provides the following

> Paragraph 805-30-25-4 requires the acquirer to reassess whether it has correctly identified all of the assets acquired and all of the liabilities assumed before recognizing a gain on a bargain purchase. As part of that required reassessment, the acquirer shall then review the procedures used to measure the amounts this Topic requires to be recognized at the acquisition date for all of the following:
>
> a. The identifiable assets acquired and liabilities assumed
>
> b. The noncontrolling interest in the acquiree, if any
>
> c. For a business combination achieved in stages, the acquirer's previously held equity interest in the acquiree
>
> d. The consideration transferred.

This reassessment generally involves revisiting the methodologies applied and assumptions used to value the acquired business and the individual assets acquired and liabilities assumed, to make sure EO is appropriately considered. EO may also be present when there is no bargain purchase (for example, in an underperforming business unit).

Key Considerations When Identifying and Quantifying EO

13.249 The considerations discussed in the following paragraphs are not all-inclusive, and an entity should consider other relevant factors when identifying or quantifying EO. As with any fair value estimate, the facts and circumstances should be considered and professional judgment should be applied.

13.250 *Practical Considerations.* When different valuation specialists are engaged to value specific assets within an acquired set of assets (for example, personal property, real estate, intangible assets), the task force recommends that all specialists collectively discuss at the outset the current and prospective financial condition of the entity, its underlying business units, whether EO should be considered and, if so, whether the effects of EO are temporary or permanent (rather than developing individual asset valuations in isolation and then reconciling those values to the value of the acquired set as a whole only at the end of an engagement).

13.251 *Intangible Asset and Inventory Considerations.* In situations when EO is suspected (for example, when a bargain purchase is initially identified), the intangible asset and inventory workstream would review the methodologies applied and the underlying assumptions. Examples of factors to consider include, but are not limited, to the following:

- Have valuation approaches been appropriately reconciled?
- When applying a relief from royalty method, does the selected royalty rate consider the economic situation of the acquiree (low profitability typically leads to the selection of a lower royalty rate)?

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- When the asset has a finite life (e.g., customer relationships), has the attrition analysis properly considered the current and future economic environment (which may indicate an attrition pattern different from historical patterns)?

- When applying a cost approach, have there been appropriate adjustments to reflect time and cost to reproduce or replace the intangible asset?

- Do the discount rates applied to the intangible assets properly reflect the risk inherent in the PFI?

- Does the inventory valuation properly reflect the expected margin and costs to dispose over the disposal period?

13.252 *Personal and Real Property Considerations.* In situations when EO is suspected (for example, when a bargain purchase is initially identified), the personal and real property workstreams would review the methodologies applied and the underlying assumptions. Examples of factors to consider include, but are not limited, to the following:

- Has EO been considered and quantified at the lowest level of cash flows for an asset grouping, as appropriate?

- There are various considerations that are made regarding the depreciated replacement cost new (DRCN),[43] quantification of obsolescence, and how the asset value fits within the business:

    - How was DRCN derived and is it inclusive of all functional obsolescence, including but not limited to possible replacement cost superadequacies, excess capital costs, excess operating costs, or deferred maintenance? Has facility/asset utilization or equipment efficiency been factored into the DRCN?

    - What inputs and assumptions were used regarding physical depreciation, such as historical age or effective age of assets, normal useful lives, in-use hold factors, and depreciation methods?

    - Have the following forms of EO been considered or quantified in the context of both current operations and expected future operations?

        - Changes in demand generators (e.g., local employers)

        - Impacts of new regulation or zoning

        - Industry-specific trends (e.g., changing technologies)

[43] *Depreciated replacement cost new (DRCN)* is replacement cost new adjusted to reflect any losses in the asset's value due to physical deterioration or functional obsolescence or both.

- Supply chain disruptions
- Analysis of industry and comparable company returns (for example, return on invested capital)
- Comparable market transactions
- Externally-caused excess operating costs (energy, labor, etc.)
- Supply/demand relationships – both inputs and products
- Replacement cost of facility versus present value of the facility's future expected cash flows
- Equity price changes, reduced earnings/margin erosion

- Qualitatively, there may be certain indicators that EO is present including, for example, structural industry changes and idle/shutdown plants at other companies. While quantification may not be possible using these qualitative indicators, further investigation and analysis would be prudent.

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Appendix A

Detailed Example of an Internal Rate of Return Analysis

> ***Note:*** The example in this appendix is provided only to demonstrate concepts discussed in the preceding chapters and is not intended to establish requirements. Furthermore, the assumptions and inputs used in this example are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

Overview

A.01 The business enterprise value (BEV) and internal rate of return (IRR) analyses provide the foundation for the valuations performed in a business combination and aid in the assessment as to whether the prospective operating cash flows and IRR are consistent with market participant assumptions. The example in this appendix applies three adjustments to the prospective financial information (PFI) that may be provided to a valuation specialist at the onset of an analysis. The intent is to demonstrate how an IRR analysis may be applied to evaluate and adjust the PFI provided by the entity to reflect market participant assumptions with the goal of providing the context to apportion or allocate the operating cash flows to the respective assets and liabilities in a business combination.

A.02 The following is a demonstration of how some selected issues may be integrated into a sample analysis and it is not intended to be all-inclusive. Other adjustments discussed in this appendix, as well as those that are not mentioned, may need to be considered and applied as appropriate.

A.03 The following example focuses on the assessment of the transaction PFI and includes three types of adjustments that may be applicable to isolate the operating value and calculate the IRR.

Nonoperating Assets:	The acquiree has undergone a restructuring and much of its prior corporate headquarters is leased to third parties. The nonoperating asset is real estate associated with excess office space. Its fair value is measured independently and deducted from the transaction BEV to estimate the operating value. In addition, the related nonoperating net rental income is removed from revenue.
Entity-Specific Synergies:	The acquirer's distribution network and customer relationships are uniquely complementary to the acquiree and its products. The incremental sales and gross profit exceeded market participant expectations. Therefore, the revenue and gross profit unique to the acquirer are removed from the PFI.
Expected Cash Flows:	The 5-year PFI incorporates optimistic growth and other assumptions. This optimistic PFI is evaluated and adjusted to

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reflect market participant expectations of growth, margins and projection period.

Summary of IRR Example Schedules

A.04 The following is a brief overview of schedules included in the IRR example. Each schedule represents a step in the analysis in this example. Further detail is provided in the respective schedules. Please note that some totals in the schedules may not add due to rounding.

Schedule 1 – Management Optimistic Case ROI Analysis

Management assessed the transaction based on optimistic projections to evaluate the potential return on investment (ROI) including all elements of cash flow. The analysis indicated a ROI of 20.5%, well above the acquirer's 15% hurdle rate.[1]

Schedule 2 –Nonoperating Real Estate Adjustment

Summarizes the fair value estimate of the nonoperating real estate and identifies the net rental income and depreciation removed from PFI to adjust the IRR in Schedule 3.

Schedule 3 – IRR of Optimistic Case Operating PFI

The transaction BEV is adjusted to remove the fair value of the nonoperating real estate and the PFI is adjusted to remove the related nonoperating net rental income and depreciation. The revised IRR analysis indicates an IRR of 20.7%.

Schedule 4 – Entity-Specific Synergy Adjustments

Isolates the incremental sales and gross profit unique to the acquirer to be removed from the PFI. Management indicated that while they considered the enhancement to the PFI, the transaction BEV did not consider these synergies.

Schedule 5 – IRR of Optimistic Case Operating PFI (After Entity-Specific Synergy Adjustments)

The PFI is adjusted to remove the entity-specific synergies resulting in an adjusted IRR of 19.2%.

Schedule 6 – Expected Cash Flow Assessment

Entity-specific synergies were removed in Schedule 5; however, the PFI is based on optimistic case assumptions. Schedule 6 provides one example of how optimistic case PFI may be converted to expected cash flows. This example incorporates a weighting of five different revenue growth scenarios to estimate the weighted average annual expected revenue growth rate. It then goes on to summarize the results of a line-by-line assessment

[1] *Hurdle rate* is the minimum rate of return on a project or investment required by a manager or investor. Hurdle rates allow companies to make important decisions on whether to pursue a specific project.

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of three PFI elements (gross margin, selling & marketing expense percentage, and fixed asset turnover) that were adjusted or evaluated due to the reduction in growth rate expectations from the optimistic case to the expected case. These are then incorporated in Schedule 7. The discussion in the "Expected Cash Flow Adjustment Process" section of this appendix provides additional detail for the rationale behind these adjustments.

Schedule 7 – IRR of Expected Cash Flows (Market Participant Operating Assumptions)

The PFI is adjusted to reflect expected cash flow assumptions. The IRR analysis is reapplied affirming the resulting 15% is within a weighted average cost of capital (WACC) range of 14.5% to 15.5%.

General Assumptions

Industry Agnostic

A.05 This example is intended to be generic in nature and is not specific to any industry. The focus of this example is limited to the process of performing an IRR analysis rather than the nature of the inputs.

No Indications of a Bargain Purchase

A.06 During the process of performing an IRR analysis, the IRR may present itself as being measurably greater than the WACC range. This may be an indication of a bargain purchase or may be the result of other circumstances, such as an optimistic case PFI. In this example, to streamline the IRR analysis, the potential for a bargain purchase was discussed with management at the onset and there were no indicators that one had occurred.

Entity-Specific Synergies are Not Reflected in the Transaction BEV

A.07 One of the more challenging situations that may be encountered in an IRR analysis is identifying whether any elements of entity-specific synergies were included in the purchase price and transaction BEV. The synergies themselves, generally in the form of unique cash flow enhancements or risk reduction, are often explicitly considered and identified in the transaction analyses making their removal somewhat straight-forward. Quantifying the total potential value of the entity-specific synergies may also be relatively simple. However, the analysis becomes complex when there are indications that only a portion of the entity-specific synergies is included in the transaction BEV. This may occur in a highly competitive bidding process where the acquirer was willing to forego a portion of its unique returns to succeed with the acquisition. Paragraph 10.66 provides one potential process for estimating the portion of the entity-specific synergies included in the transaction BEV.

A.08 In this example, discussions with management indicated that while they did consider the potential returns related to the entity-specific synergies in their ROI analysis, they asserted that there was no increase to the transaction BEV as the transaction was not driven by a competitive bidding process and there were no other interested parties. Management's evaluation of the transaction BEV, which centered around guideline company and transaction multiples and the ROI analysis, inclusive of the entity-specific synergies, was used to demonstrate that the transaction

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rate of return exceeded their hurdle rate. Therefore, the entity-specific synergy adjustments were limited to the PFI.

Expected Cash Flow Adjustment Process

A.09 FASB *Accounting Standards Codification* (ASC) 820-10-55-13 describes expected cash flows in the context of the discussion of expected present value techniques:

> The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (that is, the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).

A.10 The PFI used in valuation should reflect market participant assumptions. The Business Combinations Task Force (task force) believes that in the context of a business combination, where there are numerous interactions and relationships between the BEV and the asset valuation models, the development of expected cash flows need not be based on the discrete weighting of scenarios (although it does not discourage valuation specialists from doing so). Rather, a line-by-line assessment of the PFI considering, where practical, the magnitude and timing of the revenue or expense in the context of market participant assumptions and other benchmarking is often sufficient for the purposes of a valuation prepared in the context of a business combination.

A.11 The task force believes that when evaluating expected cash flows, valuation specialists should follow the guidance in Frequently Asked Question (FAQ) #26 on the Mandatory Performance Framework (MPF) and Application of the MPF (AMPF) for the Certified in Entity and Intangible Valuations (CEIV) Credential,[2] which is reproduced below.

> **26. A1.4 refers to 'expected cash flows'. What is the meaning of 'expected cash flows' in the context of the MPF guidance?**
>
> It was the intent of the Performance Workstream for the phrase 'expected cash flows' to be interpreted *practically* as PFI that represents a neutral and unbiased projection (not a conservative or aggressive / optimistic case estimate) of the company's or intangible asset's future cash flows. While this is *not* meant to require the valuation professional to evaluate, review or analyze multiple scenarios when analyzing PFI when using an EPV technique, the objective remains for the cash flow projections to reflect an expected case from a market participant perspective.

[2] Additional information about the CEIV credential and MPF documents is available at https://www.aicpa.org/interestareas/fairvaluemeasurement/membership.html. Frequently Asked Questions are available at https://www.aicpa.org/content/dam/aicpa/interestareas/fairvaluemeasurement/downloadabledocuments/ceiv-mpf-faq.pdf

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FASB ASC Master Glossary defines expected cash flow as "[t]he probability-weighted average (that is, mean of the distribution) of possible future cash flows." Therefore, in concept, expected cash flows are probability-weighted scenarios. However, in practice, multiple scenarios are often not available. FASB ASC 820-10-55-18 provides the following guidance on the expected present value technique and expected cash flows:

> "… to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, a reporting entity might use realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (for example, changes in external factors, including economic or market conditions, industry trends, and competition as well as changes in internal factors affecting the reporting entity more specifically), taking into account the assumptions of market participants."

Thus, an unbiased and neutral set of PFI would not have to be based on a probability-weighted approach or a scenario analysis (although it can be), but instead it could also be derived based on discrete and well documented adjustments starting from management's single scenario by understanding the factors such as those listed in MPF FAQ #27, with the goal of reflecting an expected case from the perspective of market participants.

Separately, it is not the intent of the AMPF to prescribe a scenario based or a probability based expected cash flow model. Rather, the use of the term 'expected cash flows' is intended to highlight the need for the PFI to be free from bias (neither overly conservative nor optimistic) and thereby provide a reliable basis for the valuation analysis.

Furthermore, FASB ASC 820 does not prescribe the use of the expected cash flows and the expected present value technique. Specifically, FASB ASC 820-10-55-4 states that:

> Paragraphs 820-10-55-5 through 55-20 describe the use of present value techniques to measure fair value. Those paragraphs focus on a discount rate adjustment technique and an expected cash flow (expected present value) technique. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure fair value to the techniques discussed. The present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (for example, whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data.

Generally, if applied properly, both the discount rate adjustment technique (DRAT) and the expected present value techniques (EPVTs) would be expected to produce consistent results.

In summary, the intent of AMPF section A1.4 was not to prescribe the use of expected cash flows and expected cash flow techniques in the valuation analysis but to provide discipline for evaluating PFI to ensure that it is suitable for use in the valuation analysis. Furthermore, regardless of the ultimate approach chosen by the valuation professional, section A1.4

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highlights the need to document the valuation professional's understanding of the PFI and how they address any identified shortcomings.

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Management Optimistic Case ROI Analysis **Schedule 1**

Management relied primarily on market indications of value and prepared a discounted cash flow analysis based on an optimistic case scenario to evaluate the hurdle rate of the transaction. The acquiree has recently undergone a restructuring and scaled back their corporate facilities and is currently leasing a portion of them. The acquirer also expects synergies because of complimentary products and the expectation of moving the acquiree products through its distribution system and customer relationships.

Management based their ROI analysis on a 5-year optimistic case scenario that included entity-specific synergies and nonoperating real estate net rental income. The ROI of 20.51%, calculated below, exceeded the acquirer's 15% hurdle rate and the non-taxable transaction was completed with a transaction BEV of $2,500.

	Year 1	Year 2	Year 3	Year 4	Year 5	Residual
Revenue	1,167	1,330	1,578	1,846	2,110	2,173
% growth	*23%*	*14%*	*19%*	*17%*	*14%*	*3%*
Gross Profit	695	801	959	1,133	1,309	1,360
% revenue	*59.6%*	*60.2%*	*60.8%*	*61.4%*	*62.0%*	*62.6%*
Total Operating Expenses	255	290	341	397	448	452
Other Income[1]	7	7	7	7	7	8
EBITDA	447	518	625	743	868	916
% of revenue	*38.3%*	*38.9%*	*39.6%*	*40.2%*	*41.1%*	*42.2%*
Depreciation/Amortization[2]	96	99	102	104	107	110
EBIT	351	419	523	639	761	806
% of revenue	*30.1%*	*31.5%*	*33.1%*	*34.6%*	*36.1%*	*37.1%*
Taxes[2]	88	105	131	160	190	202
Debt Free Net Income	263	314	392	479	571	604
less: Incremental Working Capital[2]	43	33	50	54	53	13
add: Depreciation/Amortization	96	99	102	104	107	110
less: Capital Expenditures[2]	100	103	106	109	112	115
Debt Free Cash Flow ("DFCF")	216	277	338	420	513	586
Residual Value[3]						3,344
Present Value Factor[4]	0.9109	0.7559	0.6273	0.5205	0.4319	0.4319
PV DFCF	197	209	212	219	222	1,444
Transaction BEV (rounded)	2,500					
Indicated IRR[5]	20.51%					

[1] Nonoperating net rental income (see Schedule 2).

[2] See corresponding footnotes in Schedule 7. Includes $2 of annual depeciation related to the leased office space (see Schedule 2).

[3] Based on the Gordon Growth model ($586 / (20.51% - 3%)).

[4] Based on the indicated 20.51% IRR and a mid-period discounting convention.

[5] Indicated by the transaction BEV and projections above prior to the modifications applied in the following schedules.

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Nonoperating Real Estate Adjustment **Schedule 2**

In prior years the acquiree had centralized its operations and invested in a 1 million square foot office complex. Divisional operations were centralized along with corporate. Recent restructuring and strategic changes as well as some prior business unit sales have converted 325,000 square feet of excess office space from operating to nonoperating assets. The space is currently fully leased under triple net leases and the net rent (after a facility management fee and depreciation) is currently at $20 per square foot with 3% annual increases. The complex is located in a desirable location and the facility management company expects the leases to continue to renew in the future. The fair value of the real estate was estimated to be $61 and the annual depreciation is $2.

	Year 1	Year 2	Year 3	Year 4	Year 5	Residual
Leased office space (000 ft^2)	325	325	325	325	325	325
Annual net rent per square foot	20.00	20.60	21.22	21.86	22.52	23.20
Nonoperating net rental income	7	7	7	7	7	8
Fair value of nonoperating real estate	61					
Depreciation of leased office space	2	2	2	2	2	2

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IRR of Optimistic Case Operating PFI[1] **Schedule 3**

This PFI reflects the optimistic case scenario adjusted to remove the nonoperating assets (detailed in Schedule 2) from the transaction BEV and income. At this stage of the analysis the indicated IRR is calculated to be 20.69%. This exceeds a WACC analysis (range of 14.5% to 15.5%) highlighting the need to further assess the underlying assumptions and nature of the PFI.

	Year 1	Year 2	Year 3	Year 4	Year 5	Residual
Revenue	1,167	1,330	1,578	1,846	2,110	2,173
% growth	*23%*	*14%*	*19%*	*17%*	*14%*	*3%*
Gross Profit	695	801	959	1,133	1,309	1,360
% revenue	*59.6%*	*60.2%*	*60.8%*	*61.4%*	*62.0%*	*62.6%*
Total Operating Expenses	255	290	341	397	448	452
Other Income[1]	-	-	-	-	-	-
EBITDA	440	511	618	736	861	908
% of revenue	*37.7%*	*38.4%*	*39.2%*	*39.9%*	*40.8%*	*41.8%*
Depreciation/Amortization[2]	94	97	100	102	105	108
EBIT	346	414	518	634	756	800
% of revenue	*29.6%*	*31.1%*	*32.8%*	*34.3%*	*35.8%*	*36.8%*
Taxes[2]	87	104	130	159	189	200
Debt Free Net Income	259	310	388	475	567	600
less: Incremental Working Capital[2]	43	33	50	54	53	13
add: Depreciation/Amortization	94	97	100	102	105	108
less: Capital Expenditures[2]	100	103	106	109	112	115
Debt Free Cash Flow	210	271	332	414	507	580
Residual Value[3]						3,276
Present Value Factor[4]	0.9103	0.7542	0.6249	0.5178	0.4290	0.4290
PV DFCF	191	204	207	214	218	1,405
Operating Value[1]	2,439					
Indicated IRR[5]	20.69%					

[1] Schedule 1 PFI adjusted to remove the nonoperating assets and income identified in Schedule 2.

[2] See corresponding footnotes in Schedule 7. Excludes the depreciation of the leased office space.

[3] Based on the Gordon Growth model ($580 / (20.69% - 3%)).

[4] Based on the indicated 20.69% IRR and a mid-period discounting convention.

[5] The IRR increased from 20.51% in Schedule 1 to 20.69% because the risk inherent in the nonoperating leased office space is less than the IRR.

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Entity-Specific Synergy Adjustments **Schedule 4**

The acquirer's distribution network and customer relationships are uniquely complimentary to the acquiree and its products. The incremental sales and gross profit exceeded that of market participant expectations. Management's PFI did not reflect incremental operating expenses and depreciation related to the entity-specific sales, therefore the related gross profit resulted in a direct increase to EBIT.

	Year 1	Year 2	Year 3	Year 4	Year 5	Residual
Entity-Specific Revenue[1]	100	103	106	109	112	115
% growth	*3%*	*3%*	*3%*	*3%*	*3%*	*3%*
Gross Profit[2]	55	57	58	60	62	63
% revenue	*55%*	*55%*	*55%*	*55%*	*55%*	*55%*

[1] Based on an analysis of individual product overlap and incremental sales unique to the acquirer.

[2] The uniquely complimentary products have a lower gross margin than the total company.

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IRR of Optimistic Case Operating PFI (After Entity-Specific Synergy Adjustments)[1] **Schedule 5**

This PFI reflects the optimistic case scenario adjusted to remove the entity-specific synergies detailed in Schedule 4. This schedule also breaks down the operating expenses to isolate certain inputs required for the intangible asset valuations. At this stage of the analysis the indicated IRR is calculated to be 19.215%. This continues to exceed a WACC analysis (range of 14.5% to 15.5%) highlighting the need to ensure that the PFI is consistent with market participant assumptions while also considering a further assessment of the underlying assumptions in the WACC calculation. Management indicated that this PFI is still considered optimistic even after the removal of the entity-specific synergies. In this example, further assessment of the WACC assumptions resulted in no change to the indicated WACC range. Further assessment is provided in Schedule 6.

	Year 1	Year 2	Year 3	Year 4	Year 5	Residual
Revenue	1,067	1,227	1,472	1,737	1,998	2,058
% growth	*12%*	*15%*	*20%*	*18%*	*15%*	*3%*
Gross Profit	640	744	901	1,073	1,247	1,297
% revenue	*60.0%*	*60.6%*	*61.2%*	*61.8%*	*62.4%*	*63.0%*
Operating Expenses:						
General & Administrative	85	93	106	118	128	123
% revenue	*8.0%*	*7.6%*	*7.2%*	*6.8%*	*6.4%*	*6.0%*
Routine IP Development[2]	21	25	29	35	40	41
Marketing IP A&P[2]	53	61	74	87	100	103
Existing Relationship S&M[2]	21	25	29	35	40	41
Future Relationship S&M[2]	75	86	103	122	140	144
Total Operating Expenses	255	290	341	397	448	452
Other Income	-	-	-	-	-	-
EBITDA	385	454	560	676	799	845
% of revenue	*36.1%*	*37.0%*	*38.0%*	*38.9%*	*40.0%*	*41.1%*
Depreciation/Amortization[2]	94	97	100	102	105	108
EBIT	291	357	460	574	694	737
% of revenue	*27.3%*	*29.1%*	*31.3%*	*33.0%*	*34.7%*	*35.8%*
Taxes[2]	73	89	115	144	174	184
Debt Free Net Income	218	268	345	430	520	553
less: Incremental Working Capital[2]	23	32	49	53	52	12
add: Depreciation/Amortization	94	97	100	102	105	108
less: Capital Expenditures[2]	100	103	106	109	112	115
Debt Free Cash Flow	189	230	290	370	461	534
Residual Value[3]						3,293
Present Value Factor[4]	0.9159	0.7683	0.6444	0.5406	0.4534	0.4534
PV DFCF	173	177	187	200	209	1,493
Operating Value	2,439					
Indicated IRR	19.215%					

[1] Schedule 3 PFI adjusted to remove entity-specific synergies identified in Schedule 4. For the purposes of this example a number of expenses were assumed to be variable, this does not infer that the fixed and variable elements of the respective expenses should not be considered.

[2] See corresponding footnotes in Schedule 7.

[3] Based on the Gordon Growth model ($534 / (19.215% - 3%)).

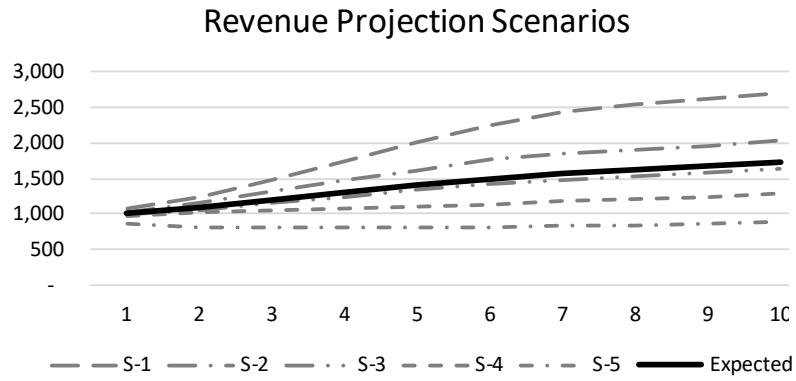
[4] Based on the indicated 19.215% IRR and a mid-period discounting convention.

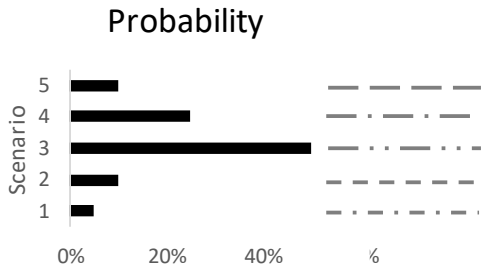
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Expected Cash Flow Assessment **Schedule 6**

The indicated 19.215% IRR in Schedule 5 calls for additional analysis of the PFI. Each element of the PFI was evaluated and four adjustments were considered appropriate to arrive at expected operating cash flows. These adjustments were the result of discussions with management and a benchmarking analysis to guideline companies and industry studies. The remaining projection assumptions are considered reasonable and have been carried forward over an extended projection period to transition to a normalized residual year. Note these are for demonstration purposes only and do not preclude the consideration of other adjustments or methods of deriving the adjustments. These adjustments result in PFI that reflects market participant assumptions of expected operating cash flows.

Expected Growth[1]	Probability	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Scenario 1	10%	12%	15%	20%	18%	15%	13%	8%	4%	3%	3%
Scenario 2	25%	8%	12%	14%	12%	10%	9%	5%	3%	3%	3%
Scenario 3	50%	4%	7%	9%	8%	7%	6%	5%	3%	3%	3%
Scenario 4	10%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Scenario 5	5%	-10%	-5%	-2%	0%	1%	1%	2%	2%	3%	3%
Expected Growth Rate (weighted)		5%	8%	10%	9%	8%	7%	5%	3%	3%	3%





	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Gross Profit Percent of Revenue[2]										
Optimistic Case	*60.0%*	*60.6%*	*61.2%*	*61.8%*	*62.4%*	*63.0%*				
Expected Case	*60.0%*	*60.2%*	*60.4%*	*60.6%*	*60.8%*	*61.0%*	*61.0%*	*61.0%*	*61.0%*	*61.0%*
Future Relationship S&M Percent of Revenue[3]										
Optimistic Case	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*				
Expected Case	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*
Fixed Asset Turnover[4]										
Average Fixed Asset Balance	191	197	203	209	215	222	229	235	242	250
Optimist Revenue	1,067	1,227	1,472	1,737	1,998	2,058				
Fixed Asset Turnover	5.59 x	6.23 x	7.25 x	8.31 x	9.29 x	9.27 x				
Expected Revenue (Weighted Growth)	1,000	1,080	1,188	1,295	1,399	1,497	1,572	1,619	1,668	1,718
Fixed Asset Turnover	5.24 x	5.48 x	5.85 x	6.20 x	6.51 x	6.74 x	6.86 x	6.89 x	6.89 x	6.87 x

[1] Five annual growth rate projection scenarios were developed and weighted based on an analysis of the acquiree's respective product line projections. Scenario 1 reflects the optimistic case described in Schedule 5 through year 5.

[2] The optimistic case reflected an increase from 60% to 63% due to the economies of scale related to a higher growth rate. The gross margin improvement was scaled back to 61% based on the expected revenue growth rate projection.

[3] Selling and marketing expenses related to new customers was reduced from 7% to 6% due to the lower expected revenue growth rate.

[4] Fixed asset turnover is a typical analysis used to assess the asset base and capital expenditure requirements to support growth. The fixed asset base was projected to increase approximately 3% annually reflecting a significant improvement in fixed asset turnover. This growth rate was retained and when combined with the expected revenue projection the improvement in fixed asset turnover aligned with market participant rates. The optimistic case scenario presented is based on the five year projections from Schedule 5 including a normalized 3% growth rate through the residual year.

IRR of Expected Cash Flows[1] (Market Participant Operating Assumptions) **Schedule 7**

This PFI reflects the adjustments to operating cash flows provided in Schedule 6. Revenue is projected based on the expected annual growth rates reflecting market participant expectations of continued growth in the market and sales synergies due to the complimentary nature of the products. The projected increase in profitability was evaluated and reflects reduced overhead, improved efficiencies, enhanced fixed asset utilization and a streamlined workforce. Consistent with the margin improvement the capital expenditures are expected to increase 3% annually (a rate lower than the revenue growth) improving fixed asset turnover and the workforce is projected to remain constant. After the assessment, the concluded IRR of 15% is consistent with a WACC analysis (range of 14.5% to 15.5%).

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Residual
Revenue	1,000	1,080	1,188	1,295	1,399	1,497	1,572	1,619	1,668	1,718	1,770
% growth	*5%*	*8%*	*10%*	*9%*	*8%*	*7%*	*5%*	*3%*	*3%*	*3%*	*3%*
Gross Profit	600	650	718	785	851	913	959	988	1,017	1,048	1,080
% revenue	*60.0%*	*60.2%*	*60.4%*	*60.6%*	*60.8%*	*61.0%*	*61.0%*	*61.0%*	*61.0%*	*61.0%*	*61.0%*
Operating Expenses:											
General & Administrative	80	82	86	88	90	90	94	97	100	103	106
% revenue	*8.0%*	*7.6%*	*7.2%*	*6.8%*	*6.4%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*	*6.0%*
Routine IP Development[2]	20	22	24	26	28	30	31	32	33	34	35
Marketing IP A&P[3]	50	54	59	65	70	75	79	81	83	86	89
Existing Relationship S&M[4]	20	22	24	26	28	30	31	32	33	34	35
Future Relationship S&M[5]	60	65	71	78	84	90	94	97	100	103	106
Total Operating Expenses	230	245	264	283	300	315	329	339	349	360	371
Other Income	-	-	-	-	-	-	-	-	-	-	-
EBITDA	370	405	454	502	551	598	630	649	668	688	709
% of revenue	*37.0%*	*37.5%*	*38.2%*	*38.8%*	*39.4%*	*39.9%*	*40.1%*	*40.1%*	*40.0%*	*40.0%*	*40.1%*
Depreciation/Amortization[6]	94	97	100	102	105	108	111	115	118	122	126
EBIT	276	308	354	400	446	490	519	534	550	566	583
% of revenue	*27.6%*	*28.5%*	*29.8%*	*30.9%*	*31.9%*	*32.7%*	*33.0%*	*33.0%*	*33.0%*	*32.9%*	*32.9%*
Taxes[7]	69	77	89	100	112	123	130	134	138	142	146
Debt Free Net Income	207	231	265	300	334	367	389	400	412	424	437
less: Incremental Working Capital[8]	10	16	22	21	21	20	15	9	10	10	10
add: Depreciation/Amortization	94	97	100	102	105	108	111	115	118	122	126
less: Capital Expenditures[6]	100	103	106	109	112	115	118	122	126	130	134
Debt Free Cash Flow	191	209	237	272	306	340	367	384	394	406	419
Residual Value[9]											3,492
Present Value Factor[10]	0.9325	0.8109	0.7051	0.6131	0.5332	0.4636	0.4031	0.3506	0.3048	0.2651	0.2651
PV DFCF	178	169	167	167	163	158	148	135	120	108	926
Operating Value	2,439										
Concluded IRR	15%										

[1] Based on market participant assumptions of growth and margin improvement and incorporating the adjustments detailed in Schedule 6.

[2] Ongoing R&D expense specific to the continued development and enhancement of the Routine IP (2% of revenue).

[3] Advertising and promotion required to maintain the market recognition of the Marketing IP (5% of revenue).

[4] Ongoing selling and marketing expenses to maintain the customer relationships (2% of revenue). This applies to both the existing and future relationships.

[5] Selling and marketing expenses to develop future relationships (6% of revenue).

[6] Capital expenditures are projected to grow 3% annually. A waterfall calculation based on a 5-year RUL results in depreciation of 94% of capital expenditures.

[7] 25% tax rate applied to EBIT.

[8] Incremental working capital equal to 20% of incremental revenue.

[9] Based on the Gordon Growth model ($419 / (15% - 3%)).

[10] Based on the concluded 15% IRR and a mid-period discounting convention.

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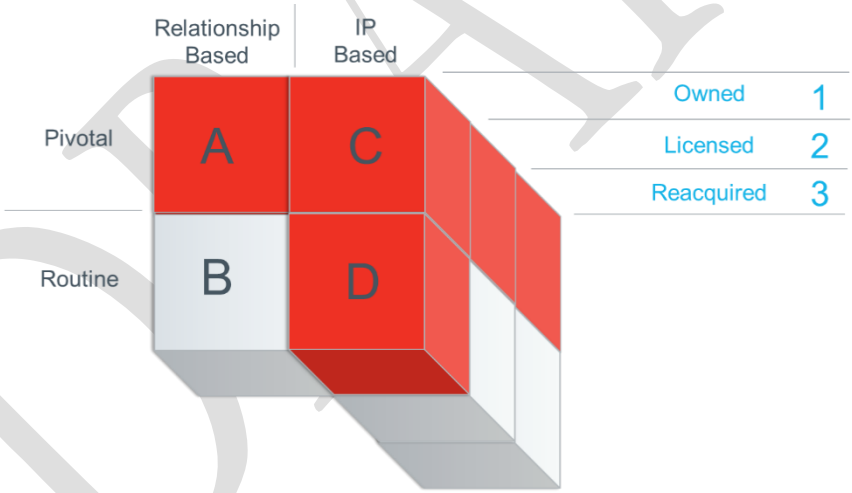
Appendix B

Valuation Method Selection Process Example

> ***Note:*** The example in this appendix is provided only to demonstrate concepts discussed in the preceding chapters and is not intended to establish requirements. Furthermore, the assumptions and inputs used in this example are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

Overview

B.01 Chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," discusses the valuation method selection process for acquired intangible assets (subsequently referred to as the *valuation method selection process*) and addresses why certain methods, particularly the inputs to those methods, are appropriate given the circumstances. Chapter 11 addresses a variety of asset types and how they are accessed. This appendix includes several scenarios, which cover five of the eight categories addressed in chapter 11:



Included in the Valuation Method Selection Process Example (additional discussion follows):	
A-1	Pivotal relationship-based intangible assets (owned): Multiperiod excess earnings method (MPEEM).
C-1	Pivotal IP-based intangible assets (owned): Simulated royalty, indefinite-lived and finite-lived.
D-1	Routine IP-based intangible assets (owned): Relief from royalty.
C-2	Pivotal IP-based intangible assets (licensed): Simulated royalty, indefinite-lived.
C-3	Pivotal IP-based intangible assets (reacquired): Simulated royalty, remaining term of agreement.

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Excluded from the Valuation Method Selection Process Example (because the value of these assets is generally *de minimis* relative to the value of the business unit as a whole):	
B-1	Routine relationship-based intangible assets (owned)
D-2	Routine IP-based intangible assets (licensed)
D-3	Routine IP-based intangible assets (reacquired)

B.02 This appendix consists of two parts. The first part includes a series of four similar scenarios highlighting various elements of the valuation method selection process. The second part, *Relationships & Technology Scenario*, provides an example of the application of the valuation method selection process to a different composition of assets where, most notably, the indefinite-lived pivotal Brand IP is replaced with finite-lived pivotal Technology and the finite-lived Routine IP is replaced with an indefinite-lived routine Trade Name.

Part 1

B.03 An important attribute of the valuation method selection process is the consistent application of valuation methods regardless of how access to the intangible asset is obtained. This example incorporates various scenarios of how pivotal Brand IP is accessed (owned, licensed and reacquired), all based on the same core business unit's assets and operations. All the assets, except for the indefinite-lived Brand IP, are owned in each of the scenarios. For purposes of this example, the acquiree is assumed to have one business unit.

Owned Scenario: The business unit owns the underlying Brand IP and the commercial value has been exploited and developed as of the acquisition date. The underlying Brand IP and commercial value are combined and reported as Brand IP.

Licensed Scenario: Same as the owned scenario except that the business unit gained access to the underlying Brand IP through a license agreement with a third party. The territory and investments made to commercialize the Brand IP are consistent with the owned scenario with the only difference being the royalty payment to the licensor for the use of the underlying Brand IP. The commercial value is referred to and reported as an intangible rights asset (rights to the underlying Brand IP).

Reacquired Scenario: Same as the licensed scenario except that the acquirer of the business unit is also the licensor of the underlying Brand IP. The acquirer has determined that the rights to the IP are being reacquired. The intangible rights asset is measured in the same way as the intangible rights asset in the licensed scenario, except that expected cash flows are projected over the remaining term of the agreement. While the fair value derived from cash flows generated during the renewal

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period are not considered in the intangible rights asset valuation (it is subsumed into goodwill), this fair value calculation has been shown in the example for illustrative purposes.

B.04 The structure of the analysis is the same across each of these scenarios; therefore, an entire set of schedules is not provided for each scenario. The schedules presented highlight differences between the scenarios. The primary variation in the inputs relates to the actual royalty payment in the licensed and reacquired scenarios.

B.05 This appendix also includes an inventory scenario, which is a variation of the owned scenario incorporating the finished goods inventory valuation and step-up presented in Schedule D-1 in appendix D, "Abbreviated Example of Valuing Finished Goods Inventory." The inventory scenario demonstrates the relationship between the inventory step-up and the related intangible assets.

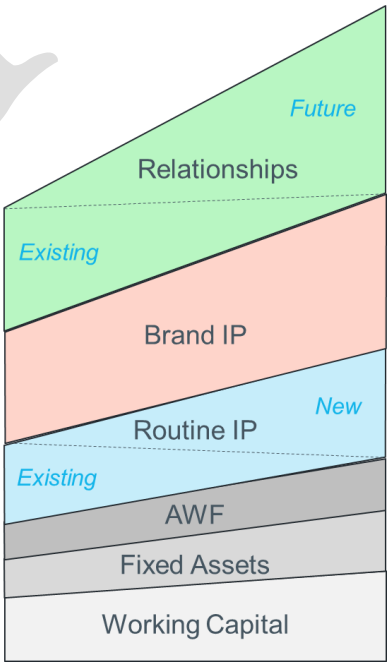
B.06 The underlying operations and assets (except for the access to the underlying Brand IP) of the business unit are consistent for all the scenarios. The assets, their characteristics, and prospective financial information (PFI) assumptions (which are determined to be consistent with market participant assumptions) are as follows (note that this example is intended to be generic in nature and not specific to any industry):

- *Working Capital*: The estimated working capital is assumed to be 20% of revenue.

- *Fixed Assets*: Capital expenditures have averaged 10% of revenue, which has grown 3% annually. The economic life and remaining useful life (RUL) are both 5 years and the fair value is equal to the book value of $189 (the result of a waterfall calculation). Assuming fair value equals book value simplifies the example by eliminating the need to adjust the operating value to include the tax benefit of the fixed asset step-up in fair value.

  - *Depreciation.* A waterfall calculation is applied based on a 5-year RUL. Since capital expenditures are projected to grow 3% annually, depreciation will remain at 94% of capital expenditures.

  - *Capital Expenditures*. Capital expenditures have averaged 10% of revenue. The acquirer expects to improve the fixed asset utilization; therefore, capital expenditures are projected to increase at 3% annually, which is less than the expected growth in revenue in Years 1–7. This effectively increases the fixed asset turnover from 5.2 to 6.9 by the terminal year (see Schedule 6 in appendix A, "Detailed Example of an Internal Rate of Return Analysis").



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- *Assembled Workforce (AWF)*: The AWF value is estimated using the cost approach (calculation not included). The acquirer also expects to enhance the efficiency of the workforce; therefore, the fair value is assumed to remain constant at $50. This also simplifies the example by eliminating any need to adjust for the AWF growth investment in the operating value. For added simplicity, the operating value has not been adjusted to reflect the amortization and related tax benefit.

- *Routine IP*: Routine technology-based IP is developed internally and while it does provide an economic benefit, the functionality is not unique and substitutes are available in the marketplace. Fair value is measured with the relief from royalty method over its remaining 5-year economic life. The royalty rate assessment considers comparable royalty rates; however, greater weight is given to return on invested capital (ROIC) indicators to align the historical and ongoing internal development costs with the concluded royalty rate (see appendix C, "Routine Royalties – Sample Investment Return Analysis," for further discussion of this perspective). In addition, as part of the financial overlay, future routine IP (an element of goodwill) is also measured with the same royalty rate but also deducts the ongoing development costs (upgrades and enhancements).

- *Brand IP*: Consists of a pivotal IP-based intangible asset making distinct contributions to the business unit's value chain and has features important to purchasing decisions of the business unit's customers. For the purposes of this example, the Brand IP is not specifically identified but might include a company/product branding, trade names, trademarks, etc., and it has an indefinite life. Relationships are also considered to be pivotal in this example; therefore, the commercial value is evaluated and apportioned between these two pivotal assets. The commercial value attributable to the Brand IP was created through investments and exploitation of the underlying Brand IP. Because of the IP foundation of the Brand IP, the relief from royalty method in conjunction with a simulated royalty rate was the selected method.

  - In the owned scenario, the underlying Brand IP and its commercial value are combined and referred to as *Brand IP*.

  - In the licensed scenario, the underlying Brand IP is licensed and the commercial rights are referred to as an *intangible rights asset*.

  - In the reacquired scenario, the reacquired rights subset of the intangible rights asset is extracted (based on the remaining term of the agreement) and the renewal portion becomes a component of the residual goodwill (note the agreement is assumed to be at market rates for the purposes of this example).

  Ongoing advertising expenses to support the Brand IP are included in all the scenarios.

- *Relationships*: The business unit's customers or clients place a significant weight on specific elements of intellectual capital in making their purchasing decisions. As with the other assets in this example, relationships are defined broadly. The MPEEM was selected because relationship-based assets do not lend themselves well to the relief from royalty method, and the MPEEM aligns with the use of a simulated royalty applied to the Brand

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IP, Intangible Rights Asset and Reacquired Rights, which also serves as a profit split contributory asset charge (CAC). Existing relationship revenue is assumed to decline in a straight-line manner and terminates in Year 10.[1] In addition, as part of the financial overlay, future relationships are also valued with the MPEEM but, unlike the existing relationships, selling and marketing (S&M) costs to develop the new relationships are also deducted.

- *Other PFI Assumptions*:

  - *Revenue Growth.* The growth rate in Years 1–7 reflects the continued growth in the market. It stabilizes at a 3% long-term growth rate in Year 8 and continues through the terminal year.

  - *Margin Improvement.* Gross profit margin is projected to increase from 60% to 61% and general and administrative (G&A) expenses will decrease from 8% to 6% during the first 6 years as the result of market participant synergies. This increase in profitability is expected from reduced overhead, improved efficiencies and a streamlined workforce. Other operating expenses are expected to continue as a constant percentage of revenue.

  - *Taxes*. The tax rate is 25%.

  - *Discount Rates*. The internal rate of return (IRR) is within the range of the weighted average cost of capital (WACC) indication of 14.5%–15.5%. The rates of return on working capital and fixed assets are 5% and 10%, respectively, for the purposes of the weighted average return on assets (WARA) analysis and CAC calculations.

Scenarios

B.07 The following is a list and summary of the schedules included in the four scenarios presented in Part 1. Each of these four scenarios has the same model structure. Certain schedules have the same content across scenarios. These "duplicate" schedules have not been repeated in the respective scenarios for brevity. This list is followed by a map that provides a snapshot of the schedules included for each scenario (the owned scenario having a complete set). Where "duplicate" schedules are excluded, the map indicates this with a lighter font and outline. For the actual schedules, please refer to the PDF file named "Schedules from Appendix B of the Business Combinations Guide."

Owned Scenario

B.08 The following schedules are presented in the owned scenario:

[1] This assumption is for demonstration purposes only to avoid having to extend the projections beyond the terminal year. Attrition analyses frequently result in an exponential decline based on an annual attrition rate. See the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #2, *The Valuation of Customer-Related Assets* (Valuation Advisory #2), for a detailed discussion of the derivation of attrition curves.

- *Schedule 1 (Owned)—Fair Value Summary and WARA.* This schedule summarizes the fair value estimates, WARA analysis and the financial overlay.

- *Schedule 2 (Owned)—Business Unit PFI & IRR.* This PFI reflects market participant assumptions of operating cash flows. The discount rate/present value factor of 15% is consistent with a WACC analysis (range of 14.5% to 15.5%) and IRR of the transaction.

- *Schedule 3 (Owned)—Contributory Asset Charges.* CACs are calculated and applied when using the MPEEM to value Relationships (Schedules 9 and 9.1 (Owned)) as well as in the assessment of the maximum implied royalty attributable to all intangibles (Schedule 4 (Owned)), and in the excess profit analysis related to pivotal assets (Schedule 6 (Owned)). The CAC calculations are applied to contributory assets valued with the cost or market approaches and are consistent with the Appraisal Foundation's Valuations in Financial Reporting (VFR) Valuation Advisory #1, *The Identification of Contributory Assets and Calculation of Economic Rents* (Valuation Advisory #1). A practical expedient was applied to working capital because it is projected to maintain a constant relationship to revenue. However, applying a practical expedient is not appropriate for fixed assets and the AWF because their relationship to revenue will decline over time as their utilization is expected to increase. Therefore, the average annual balance technique was applied to these assets.

- *Schedule 4 (Owned)—Maximum Implied Royalty.* Provides a reference point of the total hypothetical royalty available to attribute to all intangible assets. It is calculated as the average total royalty percentage that results in the present value of excess earnings being $0.

- *Schedule 5 (Owned)—Routine IP-based Intangible* [Fair Value]. The Routine IP is developed internally and provides an economic benefit; however, the functionality is not unique and substitutes are available in the marketplace. Fair value is measured with the relief from royalty method over its remaining economic life. The royalty rate assessment considers comparable market rates and a functional split/ROIC analysis (see appendix C for details of this analysis).

- *Schedule 6 (Owned)—Excess Profit* [Commercial Value]. Brand IP and Relationships have been assessed and are both considered pivotal to the operations. This analysis isolates the excess profit margin attributable to the total commercial value available to both assets.

- *Schedule 7 (Owned)—Pivotal Asset Profit Split Assessment.* This schedule summarizes the sample qualitative and quantitative factors considered to apportion the excess profit or total commercial value to the Brand IP and Relationships.

- *Schedule 7.1—"Capitalized" Expense Ratio.* This exhibit summarizes the steady state relationship between the average annual balance and the expense derived from "capitalizing" and "amortizing" the expense over an expected period of economic benefit of the expense.

- *Schedule 8 (Owned)—Brand IP (Pivotal; Indefinite Life)* [Fair Value]. Brand IP is a pivotal, indefinite-lived intangible asset valued with the relief from royalty method using

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a simulated royalty rate. In this example, the underlying Brand IP is owned and combined with the commercial value, or excess profit, of the Brand IP.

- *Schedule 9 (Owned)—Relationships (Existing)* [Fair Value]. Fair value of existing relationships based on the application of the MPEEM. The Relationships do not capture all the commercial value in that a portion of it has been assigned to the Brand IP through the simulated royalty.

- *Schedule 9.1 (Owned)—Relationships (Future)* [Fair Value]. Financial overlay using a fair value estimate of future relationships based on the application of the MPEEM. This analysis is the core of a financial overlay. Future relationships are not a recognizable asset and are, therefore, subsumed into goodwill (for further discussion, see the "Financial Overlay" section in chapter 12, "Valuation Approaches and Techniques"); however, a discrete analysis provides insight into the integrity of the revenue, expense and CAC calculations and allocations among assets.

- *Schedule 9.2 (Owned)—Routine IP (Future)* [Fair Value]. Financial overlay using a fair value estimate of future routine IP based on the application of the relief from royalty method. Future routine IP is also subsumed into goodwill.

Licensed Scenario

B.09 The following schedules are presented in the licensed scenario. A summary description is included only if there is a variation from the same schedule in the owned scenario:

- *Schedule 1 (Licensed)—Fair Value Summary and WARA.* The intangible rights asset (commercial value related to the Brand IP) is accessed through a license agreement with a 4% royalty paid to the licensor of the underlying Brand IP (which makes this the only asset with a fair value different from those in the owned scenario).

- *Schedule 2 (Licensed)—Business Unit PFI & IRR.* This PFI reflects market participant assumptions of operating cash flows based on those utilized for Schedule 2 (Owned); however, the underlying Brand IP has been licensed and commercialized by the business unit. The royalty rate is assumed to be equal to the 4% rate derived in Schedule 6 (Owned). This reduces the operating value due to the 4% royalty.

- *Schedule 3 (Licensed)—Contributory Asset Charges*

- *Schedule 4 (Licensed)—Maximum Implied Royalty.* The maximum implied royalty declines from 27.65% in Schedule 4 (Owned) to 23.64% due to the 4% royalty included in operating expenses for licensing the underlying Brand IP.

- *Schedule 5 (Licensed)—Routine IP-based Intangible* [Fair Value]

- *Schedule 6 (Licensed)—Excess Profit* [Commercial Value]. This schedule is similar to the analysis in Schedule 6 (Owned) but includes the 4% royalty payment for the underlying

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Brand IP in the total operating expenses. The excess profit remains the same as in the owned scenario because the hypothetical 4% royalty rate is deducted.

- *Schedule 7 (Licensed)—Pivotal Asset Profit Split Assessment*

- *Schedule 8 (Licensed)—Brand IP - Intangible Rights Asset (Pivotal; Indefinite Life)* [Fair Value]. Underlying Brand IP is licensed; therefore, it is considered an intangible rights asset and the underlying IP is excluded from the asset's fair value. It is a pivotal, indefinite-lived intangible asset valued with the relief from royalty method using a simulated royalty rate.

- *Schedule 9 (Licensed)—Relationships (Existing)* [Fair Value]

- *Schedule 9.1 (Licensed)—Relationships (Future)* [Fair Value]

- *Schedule 9.2 (Licensed)—Routine IP (Future)* [Fair Value]

Reacquired Scenario

B.10 The following schedules are unique to the reacquired scenario (all other schedules are the same as in the licensed scenario):

- *Schedule 1 (Reacquired)—Fair Value Summary and WARA.* This scenario is the same in all respects as the licensed scenario except that the acquirer is also the licensor of the underlying Brand IP to the subject business unit. Therefore, the acquirer is reacquiring the rights to the Brand IP. The underlying Brand IP is accessed through a license agreement with a 4% royalty. The license agreement has a high expectation of renewal due to the continued economic benefits expected by both the licensor and licensee; however, for financial reporting purposes, the measurement of the reacquired right is limited to the remaining term of the license agreement. To simplify the example, the terms of the royalty payments are determined to be at-market.

- *Schedule 8 (Reacquired)—Brand IP - Reacquired Rights.* The reacquired rights are a subset of the intangible rights asset (Brand IP) as measured in Schedule 8 (Licensed). This schedule contains the same calculations as in Schedule 8 (Licensed) except that the calculation of value of the reacquired rights asset is limited to the first three years of the simulated royalty. The calculation of value derived from the cash flows the reacquired rights are expected to generate during the assumed renewal period has been shown for illustrative purposes only; in practice, this value is subsumed into goodwill.

Inventory Scenario

B.11 The inventory scenario is derived from Schedule D-1 in appendix D and demonstrates the relationship between the inventory step-up and the related intangible assets. The following schedules are based on the owned scenario and only those that differ from the owned scenario are included:

- *Schedule 1 (Inventory)—Fair Value Summary and WARA.* This schedule summarizes the fair value estimates, WARA analysis and the financial overlay.

- *Schedule 5 (Inventory)—Routine IP-based Intangible* [Fair Value]. Equivalent to Schedule 5 (Owned) but with an adjustment for the inventory step-up.

- *Schedule 8 (Inventory)—Brand IP (Pivotal; Indefinite Life)* [Fair Value]. Equivalent to Schedule 8 (Owned) but with an adjustment for the inventory step-up.

Note: please refer to the PDF file named "Schedules from Appendix B of the Business Combinations Guide" for the actual schedules.

Part 2

Relationships & Technology Scenario

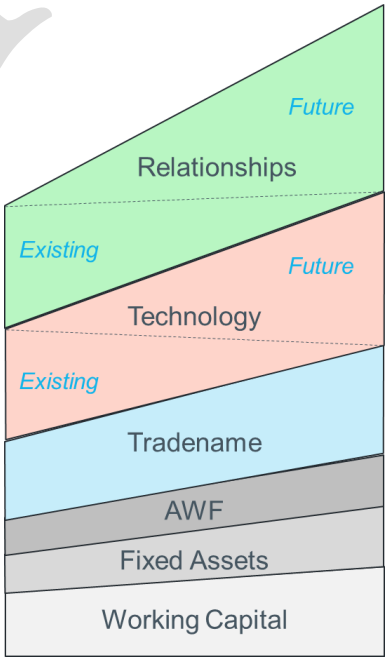
B.12 Technology and Relationships are considered pivotal in nature and the commercial value is evaluated and apportioned between these two pivotal assets. The assets, their characteristics, and PFI assumptions (which are determined to be consistent with market participant assumptions) are as follows (note that this example is intended to be generic in nature and not specific to any industry):

- *Working Capital*: The estimated working capital is assumed to be 20% of revenue.

- *Fixed Assets*: Capital expenditures have averaged 10% of revenue, which has grown 3% annually. The economic life and RUL are both 5 years and the fair value is equal to the book value of $189 (the result of a waterfall calculation). Assuming fair value equals book value simplifies the example by eliminating the need to adjust the operating value to include the tax benefit of the fixed asset step-up in fair value.

  - *Depreciation.* A waterfall calculation is applied based on a 5-year RUL. Since capital expenditures are projected to grow 3% annually, depreciation will remain at 94% of capital expenditures.

  - *Capital Expenditures*. Capital expenditures have averaged 10% of revenue. The acquirer expects to improve the fixed asset utilization; therefore, capital expenditures are projected to increase at 3% annually, which is less than the expected growth in revenue in Years 1–7. This effectively increases the fixed asset turnover from 5.2 to 6.9 by the terminal year.



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- *AWF*: The AWF value is estimated using the cost approach (calculation not included). The acquirer also expects to enhance the efficiency of the workforce; therefore, the fair value is assumed to remain constant at $50. This also simplifies the example by eliminating any need to adjust for the AWF growth investment in the operating value. For added simplicity, the operating value has not been adjusted to reflect the amortization and related tax benefit.

- *Trade Name*: This intangible asset was developed internally and it provides a routine function in the marketplace by providing credibility related to the sale of the acquiree's products and services. Since the business-to-business trade name is well-known and has been around for many years, the fair value is measured with the relief from royalty method over an indefinite life. The royalty rate assessment is limited to comparable royalty rates.

- *Technology*: Technology consists of a pivotal IP-based intangible asset making distinct contributions to the business unit's value chain and has features important to purchasing decisions of the business unit's customers. For the purposes of this example, the nature of the Technology is not specifically described, and it has a finite life. The commercial value attributable to the Technology was created through investments and exploitation of the underlying technology. Because of the IP foundation of the Technology, the relief from royalty method in conjunction with a simulated royalty rate was the selected method. The royalty rate is defined as a net royalty; therefore, ongoing maintenance R&D to support the Technology is excluded in the relief from royalty analysis. In addition, as part of the financial overlay, future technology is also measured with the relief from royalty method but, unlike the existing Technology, developmental R&D costs to develop the new technology are also deducted.

- *Relationships*: The business unit's customers or clients place significant weight on specific elements of intellectual capital in making their purchasing decisions. As with the other assets in this example, relationships are defined broadly. The MPEEM was selected because relationship-based assets do not lend themselves well to the relief from royalty method, and the MPEEM aligns with the use of a simulated royalty applied to the Technology, which also serves as a profit split CAC. The CAC is applied over a period longer than the economic life of the Technology; therefore, the cost of replacing or otherwise developing the future technology is not included as an expense in the PFI. Existing relationship revenue is assumed to decline in a straight-line manner and terminates in Year 10.[2] In addition, as part of the financial overlay, future relationships are also valued with the MPEEM but, unlike the existing relationships, S&M costs to develop the new relationships are also deducted.

[2] This assumption is for demonstration purposes only to avoid having to extend the projections beyond the terminal year. Attrition analyses frequently result in an exponential decline based on an annual attrition rate. See Valuation Advisory #2 for a detailed discussion of the derivation of attrition curves.

- *Other PFI Assumptions*:

  - *Revenue Growth.* The growth rate in Years 1–7 reflects the continued growth in the market. It stabilizes at a 3% long-term growth rate in Year 8 and continues through the terminal year.

  - *Margin Improvement.* Gross profit margin is projected to increase from 50% to 60%, G&A expenses will decrease from 8% to 6% during the first 6 years as the result of market participant synergies, and developmental R&D declines from 15% to 10% in Year 6 remaining constant at 10% thereafter. This increase in profitability is expected from reduced overhead and R&D, improved efficiencies, and a streamlined workforce. Other operating expenses are expected to continue as a constant percentage of revenue.

  - *Taxes*. The tax rate is 25%.

  - *Discount Rates*. The IRR is within the range of the WACC indication of 14.5%–15.5%. The rates of return on working capital and fixed assets are 5% and 10%, respectively, for the purposes of the WARA analysis and CAC calculations.

B.13 The following schedules are presented in the relationships & technology scenario. For the actual schedules, please refer to the PDF file named "Schedules from Appendix B of the Business Combinations Guide."

- *Schedule 1 (Relationships & Technology)—Fair Value Summary and WARA.* This schedule summarizes the fair value estimates, WARA analysis and the financial overlay.

- *Schedule 2 (Relationships & Technology)—Business Unit PFI & IRR.* This PFI reflects market participant assumptions of operating cash flows which are different than those used in the previous scenarios. The discount rate/present value factor of 15% is consistent with a WACC analysis (range of 14.5% to 15.5%) and IRR of the transaction.

- *Schedule 3 (Relationships & Technology)—Contributory Asset Charges.* CACs are calculated and applied when using the MPEEM to value Relationships (Schedules 10 and 11 (Relationships & Technology)) as well as in the assessment of the excess profit analysis related to pivotal assets (Schedules 5 and 5A (Relationships & Technology)). The CAC calculations are applied to contributory assets valued with the cost or market approaches and are consistent with Valuation Advisory #1. A practical expedient was applied to working capital because it is projected to maintain a constant relationship to revenue. However, applying a practical expedient is not appropriate for fixed assets and the AWF because their relationship to revenue will decline over time as their utilization is expected to increase. Therefore, the average annual balance technique was applied to these assets.

- *Schedule 4 (Relationships & Technology)—Trade Name.* The Routine Trade Name was developed internally and provides an economic benefit; however, the functionality is not unique and substitutes are available in the marketplace. Fair value is measured with the relief from royalty method over its indefinite life. The royalty rate assessment considers comparable market rates.

- *Schedule 5 (Relationships & Technology)— Excess Profit (Including Developmental R&D and Future Relationship S&M Expenses in PFI).* Technology and Relationships have been assessed and are both considered pivotal to the operations. This analysis isolates the excess profit margin attributable to the total commercial value and underlying technology available to both asset classes (combined existing and future value of the Technology and Relationships). However, including the developmental R&D and future relationship S&M expenses in the PFI (due to the finite lives of the Technology and Relationships) understates the excess profit attributable to the existing Technology and Relationships making it inappropriate for use in assessing the profit split and deriving the simulated royalty applied to the Technology.

- *Schedule 5A (Relationships & Technology)—Excess Profit (Excluding Developmental R&D and Future Relationship S&M Expenses in PFI).* This analysis is similar to Schedule 5 (Relationships & Technology); however, it excludes (adds back) the developmental R&D and future relationship S&M expenses in the PFI (due to the finite lives of the Technology and Relationships) to measure the excess profit attributable to existing Technology and Relationships. In this scenario, the Technology Developmental R&D decreases during the projection period; therefore, a full analysis was performed. To the extent that the Technology Developmental R&D and Relationship Future S&M percentages are projected to be a constant percent of revenue, this schedule would not be required, and the excess profit percentage could be derived directly by adding these percentages to the conclusion in Schedule 5 (Relationships & Technology).

- *Schedule 6 (Relationships & Technology)—Pivotal Asset Profit Split Assessment.* This schedule summarizes the sample qualitative and quantitative factors considered to apportion the excess profit or total commercial value and underlying technology to the Technology and Relationships.

- *Schedule 7 (Relationships & Technology)—Revenue Attribution.* This schedule summarizes revenue attrition of Technology and Relationships.

- *Schedule 8 (Relationships & Technology)—Technology (Existing)* [Fair Value]. Technology is a pivotal, finite-lived intangible asset valued with the relief from royalty method using a simulated royalty rate. The underlying IP is owned and combined with the commercial value, or excess profit, of the Technology.

- *Schedule 9 (Relationships & Technology)—Technology (Future)* [Fair Value]. Financial overlay using a fair value estimate of future technology based on the application of the relief from royalty method using a simulated royalty rate. This analysis is the core of a financial overlay. Future technology is not a recognizable asset and is, therefore, subsumed into goodwill (for further discussion, see the "Financial Overlay" section in chapter 12); however, a discrete analysis provides insight into the integrity of the revenue, expense and CAC calculations and allocations among assets.

- *Schedule 10 (Relationships & Technology)—Relationships (Existing)* [Fair Value]. Fair value of existing relationships based on the application of the MPEEM. The Relationships

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do not capture all the commercial value in that a portion of it has been assigned to the Technology through the simulated royalty.

- *Schedule 11 (Relationships & Technology)—Relationships (Future)* [Fair Value]. Financial overlay using a fair value estimate of future relationships based on the application of the MPEEM. This analysis is the core of a financial overlay. Future relationships are not a recognizable asset and are, therefore, subsumed into goodwill (for further discussion, see the "Financial Overlay" section in chapter 12); however, a discrete analysis provides insight into the integrity of the revenue, expense and CAC calculations and allocations among assets.

Note: please refer to the PDF file named "Schedules from Appendix B of the Business Combinations Guide" for the actual schedules.

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Appendix C

Routine Royalties – Sample Investment Return Analysis

> ***Note:*** The example in this appendix is provided only to demonstrate concepts discussed in the preceding chapters and is not intended to establish requirements. Furthermore, the assumptions and inputs used in this example are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

Introduction

C.01 Routine IP-based intangible assets are secondary elements of a business' operations and, in some respects, may also be viewed as creating value as an input into the operations, contributing value through increased efficiency or a reduction in expenses. They can be licensed and are less critical in nature, providing an economic benefit that may be accessible by either recreating them internally or by licensing a functional equivalent from a third party (for a detailed discussion, see the "Routine IP-Based Intangible Assets" section in chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets").

C.02 Routine IP and its corresponding royalty rate are commonly derived through benchmarking analyses relative to the terms of agreements available from public sources and databases. The published terms are generally not expansive and comparable agreements are often selected based on the nature of the subject IP. While this does provide a royalty rate indication, it does not specifically consider the relationship between the royalty and the efforts, functions and investments required to develop the intangible asset. This relationship is fundamental to routine IP assets in that they, by nature, do not typically generate significant returns on invested capital (ROIC) in excess of the cost of capital. Furthermore, there may not be any direct market-based indications of royalty rates. In this case, an alternative analysis that considers the subject company's actual development expenses over time may provide a useful point of reference when assessing whether routine market-based royalty rates are an appropriate indication of fair value.

C.03 Considerations for gauging the relationship between the concluded market-based royalty and development costs include:

- Excess Returns: The per unit price on which the royalty is calculated impacts the magnitude of the royalty and corresponding fair value of the routine IP. If the per unit revenue base underlying the market royalty rate differs from that of the subject intangible asset the use of the market royalty rate may not result in an appropriate measure of the routine IP relative to the development expenses. For example, a guideline agreement had a stated royalty rate of 2% of revenue for products with an average unit price of $100 while the subject IP, which has the same features as the guideline agreement, is used in products with an average price of $200. In this case applying the 2% royalty rate to sales of the $200 product may lead to a value indication with excess returns, which are not generally associated with routine IP.

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- Multiperiod Excess Earnings Method (MPEEM) Adjustments: The relationship between development expenses and royalty rates is also a consideration when the MPEEM is applied to value another asset and the royalty serves as the contributory asset charge (CAC) for both the current and future versions of routine IP (assuming continued development and use). When applying CACs for future routine IP, the ongoing development expenses are added back in the MPEEM to avoid double counting the expense and the royalty rate for the routine IP is used as the CAC. In this context, royalty rates should have a reasonable correlation with the development expenses.

ROIC Analysis

C.04 IP-based intangible assets are generally created internally through research and development (R&D), marketing, promotion and other similar expenditures. These expenditures or "investments" provide future economic benefits; however, they are generally expensed in the period incurred for accounting purposes.

C.05 This appendix provides a sample analysis based on the notion that these expenses have a future benefit and are essentially "investments". By “capitalizing” and “amortizing” them over their period of economic benefit, a measure of invested capital is created and an ROIC construct is applied to estimate routine royalty rates. Taking this approach has some additional benefits:

- Provides a linkage between historical expenditures and royalty revenue and quantifies a sufficient return on and of the development efforts;
- Allows for the consistent application of assumptions used in a routine IP-based intangibles valuation analysis;
- Considers the future expected benefits in relation to the "investment";
- Highlights the importance of the revenue base to derive a royalty rate and differentiates between ongoing support expenses (which are considered in deriving a net royalty) versus those for the development of future IP; and

This appendix also provides a sensitivity based on the period of economic benefit of the routine IP and ROIC (where development efforts may earn a rate of return slightly greater than the cost of capital).

C.06 Applying this approach may not be appropriate for an independent analysis of a pivotal asset when there is no clear relationship with ROIC and historical amounts invested in the intangible asset. However, it may be applicable to the underlying IP of a pivotal IP-based intangible (a factor considered when isolating commercial value or an intangible rights asset) as well as the measure of relative contributions of pivotal assets (for further discussion, see the “Asset Class Split” discussion in the “Revenue, Cash Flow, or Profit Split Methods” section of chapter 12, “Valuation Approaches and Techniques.”

C.07 This analysis is not deemed to be a required procedure when determining the fair value of a routine IP-based intangible asset; however, the Business Combinations Task Force believes

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that it provides a useful perspective when developing routine royalty rates. It has been structured as a generic analysis so that valuation professionals opting to use a similar analysis can develop their own input parameters and perform sensitivity analyses to create similar reference tables for general use in business combination analyses.

Overview of the Analysis

C.08 This sample analysis assumes that the routine IP development function is isolated as an independent business unit (or is outsourced to an independent third party) to focus on selected critical variables and facilitate sensitivity analyses. An independent business unit perspective also allows for an assessment of ongoing IP development expenses required to apply CACs in the MPEEM, as discussed above.

C.09 A discounted cash flow analysis applied to the business unit does not provide a direct means to assess routine royalty rates. This sample analysis expands on a discounted cash flow analysis by including an ROIC measure to assess the relationship between development expenses and royalty rates. This is done by recognizing that IP development expenses create an economic benefit beyond the year incurred and treating them as a form of invested capital.

C.10 The analysis begins with a simplified discounted cash flow structure to calculate the IP development function's operating value (Schedule 1). This provides the context for the ROIC analysis and calculates the projected operating tax expense by deducting the IP development expense in the year incurred.

C.11 In this ROIC variation, the IP development expense is "capitalized" to convert it to invested capital and then "amortized" on a straight-line basis over its selected period of economic benefit (Schedule 6). The derived amortization and invested capital inputs are then used in the ROIC analysis in Schedule 2. This analysis essentially solves for the revenue required to achieve the desired level of ROIC (that is, a level that is commensurate with the risks involved in developing the IP). The ROIC calculation is the ratio of adjusted NOPLAT (Net Operating Profit Less Adjusted Taxes, where the IP development expense has been converted to amortization) to invested capital.

C.12 The calculation of debt free cash flows is also provided to demonstrate that they remain the same as that in the operating value DCF and that the operating value remains the same. The cash flows do not change because the IP development expense is simply converted from an expense to an investment, while operating taxes remain the same.

C.13 This example also includes a sensitivity analysis that examines the relationship between royalty rates and IP development expense when applying different periods of economic benefit and solving for different ROIC outcomes. The following assumptions are common to each scenario:

- IP Development Expense: $100 is selected as the Year 1 amount in Schedule 1 and simply provides the baseline for the derivation of the relative royalty amounts.

- Growth Rate: This is the rate at which the IP development expense is assumed to grow year over year. A constant 3% growth rate is applied for all scenarios in the sensitivity

analysis. For simplicity, the historical growth rate used in the analysis is assumed to be the same as the future growth rate.

- IP Support: This sample analysis assumes that ongoing IP support is required. Such expenses are assumed to remain constant at 10% of annual revenue in each scenario and include any requisite SG&A expenses to operate a hypothetical independent development business unit.

- Margins remain constant and incremental working capital, depreciation and capital expenditures are excluded.

- Tax Rate: A 25% rate is applied throughout.

- Weighted Average Cost of Capital (WACC): This provides the baseline for value creation wherein value is created when the scenario ROIC exceeds this cost of capital. 15% is assumed for all scenarios.

C.14 Schedules 1−4 detail the calculation for an assumed 8-year period of economic benefit of the routine IP and a selected 15% ROIC. Schedule 5 summarizes the results of a sensitivity analysis that varies the period of economic benefit of the routine IP (3 to 20 years) and the desired ROIC (15% to 20%). These are derived as follows:

- The period of economic benefit of the IP development expense impacts the annual amortization and invested capital balances. Schedule 6 is adjusted for each scenario's period of economic benefit.

- The projected IP development expense remains the same for all scenarios ($100 increased 3% annually); however, the amortization varies based on the period of economic benefit applied in each scenario. Adjusted NOPLAT is calculated for each scenario's period of economic benefit assumption in Schedule 2.

- The average invested capital balance also varies depending on the period of economic benefit that is applied (Schedule 6). This carries into Schedule 2 and provides the denominator for the ROIC calculation.

- Having updated the amortization and invested capital calculations, Year 1 revenue is modified to arrive at the desired ROIC. This implied revenue amount is the absolute measure of the royalty, relative to the assumed IP development expense, that would have to be charged to earn the desired ROIC.

- Each scenario results in a multiple of the Year 1 IP development expense (gross royalty indication) and a multiple of the IP development expense less IP support expense (net royalty indication). These multiples can then be applied to the subject company development expense to estimate the required absolute royalty amount. This result would then be converted to a percentage of revenue to provide a royalty rate indication, specific to the subject routine IP.

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C.15 This example also applies the derived royalty to both the current and future routine IP to demonstrate how they reconcile to the operating value. The value indication of the current IP can also be compared to the beginning balance of the "capitalized" IP development expense to assess the amount of incremental value being created in excess of the invested capital. This value is created when revenue levels (or royalties) result in a sufficient level of profitability (or NOPLAT) to provide an ROIC in excess of the WACC (the return on the invested capital exceeds its cost thereby creating value).

C.16 This example also includes a simplified cost approach alternative. The intent of this series of schedules is to provide a linkage between the IP development costs and a routine IP royalty. However, a similar linkage can be made with an alternative simplified approach that begins with the cost approach. The value of the routine IP would be estimated with the cost approach (inclusive of developer's profit and opportunity costs as appropriate) and a royalty rate projection would then be derived such that the present value of the avoided after-tax net royalty equated to the cost approach value indication. The present value analysis could take the form of Schedule 3 where (1) the pattern of economic benefit of the IP is evaluated (in this case, a linear decline over 8 years), (2) appropriate support or maintenance costs, taxes and discount rate are then identified, and (3) the Year 1 royalty is solved for such that the present value equates to the cost approach value indication.

C.17 The following summarizes each of the schedules included in this appendix. For the actual schedules, please refer to the PDF file named "Schedules from Appendix C of the Business Combinations Guide."

- *Schedule 1—Development Function Operating Value.* Isolates the routine IP development function and treats it as an independent business unit providing the baseline for the ROIC analysis. It incorporates the general assumptions above and calculates the operating value based on the required revenue level to provide a 15% ROIC in conjunction with an 8-year period of economic benefit of the IP development expense.

- *Schedule 2—ROIC Analysis.* This analysis is based on an ROIC construct; therefore, the projections are adjusted such that the IP development expense is "capitalized" and then "amortized" over an assumed period of economic benefit. By doing so, the "capitalized" development expenses are transformed from a period expense to a measure of invested capital which serves as the basis for the ROIC analysis.

- *Schedule 3—Current IP - Relief from Royalty Analysis.* This schedule calculates the present value of the royalties, net of the IP support expenses, attributable to the current routine IP as of the measurement date. The technology migration is consistent with the period of economic benefit of the IP development expense. Note that the present value of the current IP of $364 approximates the beginning of year balance of $362, which is consistent with an ROIC equal to the WACC of 15%.

- *Schedule 4—Future IP - Relief from Royalty Analysis.* This schedule is essentially a financial overlay to reconcile the individual value of the current and future IP to the development function's operating value. Note that the present value of the future IP of

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($5) is approximately zero, which is consistent with the expectation that no value is created when the ROIC is equal to the WACC of 15%.

- *Schedule 5—Sensitivity Analysis (Royalty Multipliers).* The purpose of this type of analysis is to derive royalty multipliers that can be applied to the acquiree's IP development expense to estimate the absolute royalty attributable to routine IP. Assessing the royalty amount on an absolute basis, rather than solely as a royalty rate, provides a direct relationship between the acquiree's development expenses and expected return on the investment before considering the acquiree's revenue. The absolute royalty would then be converted to a royalty rate based on the acquiree's revenue for use in a relief from royalty analysis and for comparisons to market royalty rate indicators, if available. Royalties can be stated at a gross level (including IP support) as well as a net level (excluding IP support), both of which are presented in the sensitivity analysis.

  The results of a sensitivity analysis, prepared using the process described previously, is provided. It includes gross and net royalty multipliers based on periods of economic benefit of the routine IP ranging from 3 to 20 years and ROICs from 15% to 20%. The sensitivity table is used in the royalty rate assessment in Schedule 5 (Owned) in appendix B, "Valuation Method Selection Process Example," as follows:

  - The period of economic benefit of the routine IP is estimated to be 8 years and a net royalty measure is selected to be consistent with the comparable market indicators;

  - The routine IP is expected to provide an ROIC slightly greater than the 15% WACC. If the ROIC was assumed to equal the cost of capital, the operating value would be limited to the accumulated invested capital amount (accumulated IP development expense, net of depreciation). Returns in excess of the cost of capital create value above the IP development expense which is similar in concept to including developer's profit and opportunity costs in the application of the cost approach;

  - Net royalty multipliers range from 1.54x (ROIC of 15%) to 1.77x (ROIC of 20%) of IP development expense and are applied to the $20 of routine IP development expense (Schedule 2 (Owned) in appendix B) resulting in an indicated net royalty amount of $31 to $35;

  - Routine IP contributes to all sales. Therefore, the range of indicated routine IP royalty rates is 3.1% to 3.5% of total revenue;

  - The ROIC indicated royalty rate is considered in the context of the 3% to 4% range of four comparable market royalty rate indicators (average of 3.6%) and results in a 3.5% routine IP royalty rate that is applied in Schedule 5 (Owned) in appendix B.

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- *Schedule 6—"Capitalized" IP Development Expense "Investment" and "Amortization."* This schedule "capitalizes" IP development expense and converts it to amortization expense based on the assumed 8-year period of economic benefit. Annual invested capital amounts are then derived from the annual IP development expense (treated as investments) and the amortization of those investments. The outcome will vary with the selection of the period of economic benefit and growth rate. These variations are incorporated into the sensitivity analysis in Schedule 5.

Note: please refer to the PDF file named "Schedules from Appendix C of the Business Combinations Guide" for the actual example.

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Appendix D

Abbreviated Example of Valuing Finished Goods Inventory

> ***Note:*** The example in this appendix is provided only to demonstrate concepts discussed in the "Inventory" section in chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed," and is not intended to establish requirements. Furthermore, the assumptions and inputs used in this example are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.

D.01 This abbreviated example (which is extracted from appendix B, "Valuation Method Selection Process Example") demonstrates certain concepts and the application of the five-step process described previously to finished goods inventory. It includes detailed footnotes describing the underlying assumptions, calculations and allocations.

D.02 Inventory and its related selling price, expenses, and profit are assumed to be a subset of the first year of the PFI following the transaction. Annual margins are applied to the inventory to provide a measure of the expected income during the year when the inventory will be sold. The factors are applied to the inventory balances present on the measurement date.

D.03 Schedule D-1 contains the five steps as follows:

Step 1: *Identify the baseline PFI*. Column "Year 1" in the first section of the schedule summarizes the selected baseline PFI (the first year of expected operating cash flows) which reflects market participant assumptions.

Step 2: *Adjust the baseline PFI to remove expenses benefiting future periods*. The expenses identified as having a future benefit are shown in the second column labelled "Future Benefit". The "Current Benefit Year 1" column presents the adjusted PFI and is representative of the period in which the inventory will be sold.

Step 3: *Bifurcate expenses already incurred from those remaining to be incurred for finished goods*. Those expenses considered manufacturing in nature are isolated in the "Incurred: Inventory Attributes" column and the disposal expenses are shown in "Remaining: Disposal Attributes". Note the sum of these two columns equal the Current Benefit Year 1 column.

Step 4: *Bifurcate expenses already incurred from those remaining to be incurred to complete the WIP* [work in process]. This step is not required because this example is limited to finished goods.

Step 5: *Evaluate the resulting inventory profit*. The second section of Schedule D-1 provides the functional apportionment of the profit as an independent step. The first portion of this section identifies the profit contributed by the respective intangible assets followed by an assessment of the remaining routine profit contributed by other assets of the business. The profit is in turn categorized as inventory attributes or disposal attributes for use in the respective methods.

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D.04 The third section of Schedule D-1 demonstrates both the top-down and bottom-up methods to an assumed $75 adjusted book value of the inventory. Both methods conclude to the same fair value measurement of the inventory (prior to any holding costs). The final portion of the schedule summarizes the total step-up and the portion of that step-up that would be deducted from the respective intangible asset fair values to avoid double counting the profit.

D.05 Schedule D-2 demonstrates the alternative of apportioning profit in proportion to costs addressed in the "Other Profit Allocation Considerations Under Step 5" discussion in the "Inventory" section in chapter 13. Note that the three cost allocation alternatives result in significant differences from the allocation of profit based on the contribution of assets (see Schedule D-1) indicating that an allocation solely in proportion to costs would not be appropriate in this example.

D.06 The functional apportionment in Schedule D-1 identifies the portion of the inventory profit attributable to the respective intangible assets which are then classified as having contributed to the inventory step-up (Incurred) or will be used in the selling and disposal of the inventory (Remaining). The Routine IP and Brand IP (underlying and commercial) are valued with the relief from royalty method therefore the Relationships, which are valued with the multiperiod excess earnings method (MPEEM), are converted to an implied royalty so that they may be consistently applied to the derivation of the inventory valuation factors (Schedule D-1). Schedule D-3 provides three approaches to estimate this implied Relationship Royalty.

D.07 The example in appendix E, “Detailed Example of Valuing Finished Goods and Work-In-Process Inventory,” integrates the functional apportionment of the intangible asset profit (Step 5) into Steps 2-4, while demonstrating the valuation of both finished goods and WIP in greater detail. In addition, the example in this appendix is based on the “Valuation Method Selection Process Example” in appendix B that demonstrates the relationship between the intangible assets and the inventory step-up. Therefore, the amounts and assumptions used in this appendix differ from those in appendix E.

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Fair Value - Finished Goods Inventory **Schedule D-1**

	Year 1 (a)	Future Benefit	Current Benefit Year 1 (d)	Incurred: Inventory Attributes	Remaining: Disposal Attributes
Revenue	$1,000		$ 1,000	$ -	$ 1,000 (h)
Cost of Goods Sold (COGS)	400		400	400 (e)	-
Gross Profit	600		600		
Operating Expenses:					
General & Administrative (G&A)	80	10 (b)	70	49 (f)	21 (f)
Routine Intellectual Property (IP) Development	20	20 (c)	-	-	-
Brand IP Advertising	50	-	50	50 (g)	- (g)
Existing Relationship Selling & Marketing	20	-	20	-	20 (i)
Future Relationship Selling & Marketing	60	60 (c)	-	-	-
Depreciation	94	5 (b)	89	71 (f)	18 (f)
Total Operating Expenses	324	95	229	170	59
Earnings Before Interest and Tax (EBIT)	276		371		
Components of EBIT (Functional Apportionment):					
Intangible Asset profit Contributions:	% of Rev.				
Routine IP Royalty	3.5% (j)		35	35	-
Brand IP (Underlying IP) Royalty	4.0% (k)		40	40	-
Brand IP (Commercial Value) Royalty	5.5% (l)		55	55	-
Implied Relationship Royalty (Year 1)	19.7% (m)		197	-	197
Intangible Asset Profit Contribution			327	130	197
Routine Profit Contributions:					
COGS			12 (n)	12	-
G&A			9 (n)	6 (o)	3 (o)
Depreciation			23 (n)	18 (p)	5 (p)
Total Routine Profit			44 (n)	36	8
Total EBIT			371	166	205

	Bottom-up	Top-down
Revenue		1,000
COGS	400	
Total Operating Expenses	170	(59)
EBIT (functional apportionment)	166	(205)
Annual cost and profit attributable to inventory	736	736
Inventory Valuation Factors (q):		
Bottom-up factor ((Total Operating Expenses + EBIT) / COGS)	84.0%	
Top-down factor (Annual cost and profit attributable to inventory / Revenue)		73.6%
Adjusted book value of inventory (bottom-up) (r)	75.0	
Selling price of inventory (top-down) (s)		187.5
Fair value of finished goods inventory before holding costs (t)	$ 138.0	$ 138.0

Total Net Step-up (pre-tax) = fair value before holding costs (138) - adjusted book value (75)	63.0
Consisting of:	
Routine IP royalty: Selling price (187.5) x Routine IP royalty rate (3.5%) (u)	6.6
Brand IP royalty: Selling price (187.5) x Total Brand IP royalty (9.5%) (v)	17.8
Total Operating Expenses (170 x (187.5 / 1,000)) (w)	31.9
Routine profit (36 x (187.5 / 1,000)) (x)	6.8

Notes to Schedule D-1

(a) The PFI used in this analysis is sourced from appendix B, "Valuation Method Selection Process Example".

(b) Facts & circumstances will dictate the proportion of G&A and depreciation expenses providing a future benefit. Based on discussions with management, $10 of the $80 G&A relates to future activities and 5% of the asset/depreciation base is related to future activities.

(c) Assumes that 100% of this expense results in future benefits.

(d) Year 1 PFI less expenses providing a future benefit. The adjusted EBIT is the subject of the functional apportionment below.

(e) COGS for Year 1 is equivalent to the total book value of inventory to be sold during the period. The costs have been incurred and serve as the basis for the bottom-up method. COGS consists of $300 of raw materials and $100 of value added costs for example, labor.

(f) Facts and circumstances will dictate the proportion of G&A and depreciation costs incurred versus those remaining. 30% of the G&A expense was determined to be related to the disposal effort based on a functional assessment and discussions with management. 20% of the depreciation was apportioned to the disposal effort based on an estimate of the assets used in each function.

(g) Brand IP advertising is considered an attribute of this inventory consistent with the Brand IP profit contributions.

(h) Revenue is shown as a disposal item because it is the origin of the top-down method demonstrated in this column.

(i) Customer related expenses determined to be a disposal expense.

(j) The Routine IP Royalty of 3.5% is assumed to be for technology that is used in the manufacturing process. Therefore, this portion of the profit has been assigned to the inventory because the Routine IP was used in the manufacturing process.

(k) Appendix B includes an analysis that concludes to a 4% royalty applicable to the underlying Brand IP which is considered to be an attribute of the inventory (for the purposes of this inventory example, it is assumed to be a trademark and related branding that have become an attribute of the inventory during the manufacturing process). Therefore, this portion of the profit has been assigned to the inventory.

(l) Appendix B includes a simulated royalty analysis for the Brand IP. A 5.5% royalty was deemed appropriate to measure the commercial value of the Brand IP. This commercial value is derived from the excess profits that were created by exploiting, investing in and commercializing the underlying IP. In that this element of value relates to the commercialization of the underlying IP, the 5.5% profit element is also considered an attribute of the inventory and the profit has been assigned to it because the product design and logo elements are the most important to this brand value and are attributes of the physical goods.

(m) In appendix B relationships are valued with the multiperiod excess earnings method (MPEEM). For the purposes of this functional apportionment of the profit, the results of the MPEEM were converted to an implied royalty rate of 19.7% (see Schedule D-3). The implied royalty should be assessed to determine whether it should be treated as an attribute of the inventory or as a disposal intangible (or both) based on how and when value is added to the inventory. The relationship intangible asset is considered a disposal intangible in this example.

(n) The total annual routine profit of $44 (that was not attributed to an intangible asset) has been apportioned as follows:

	Current Benefit Expense Year 1	Allocated Profit Year 1
Earnings Before Interest and Tax (EBIT)		371
less: Intangible Asset Profit Contribution		327
Total annual routine profit		44
Depreciation allocation (see note to right)	89	23
Remaining routine profit (allocated as follows)		21
COGS (value added costs, see note e)	100	12
G&A	70	9

Profit allocation related to depreciation (footnote b) is based on the pre-tax Return On the fair value of fixed assets derived from contributory asset charges (Schedule D-3, footnote 8).

$21 of remaining routine profit allocated in proportion to the COGS and G&A current benefit expenses. Note that the routine profit is equivalent to the working capital and assembled workforce (AWF) pre-tax contributory asset charges (Schedule D-3, footnote 8).

(o) Routine profit is allocated in proportion to G&A expense (70% incurred, 30% remaining, see note f).

(p) Routine profit is allocated in proportion to depreciation expense (80% incurred, 20% remaining, see note f).

(q) The inventory valuation factors represent the ratios of added expenses and profit to COGS (book value) in the bottom-up method and the ratio of costs to dispose and profit to revenue in the top-down method. The factors will vary with the facts and circumstances.

(r) The adjusted book value of the inventory is an input into this analysis and reflects adjustments discussed in the "Inventory" section of chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed."

(s) The selling price of the inventory is based on the gross margin percentage applied to the adjusted book value of the inventory.

(t) Note both methods result in the same fair value measurement. Bottom-up = $75 x (1 + 84.0%); Top-down = $187.5 x 73.6%.

(u) The step-up attributable to the Routine IP is deducted when estimating the fair value of the Routine IP (appendix B, Schedule 5 (Inventory)).

(v) The step-up attributable to the Brand IP is deducted when estimating the fair value of the Brand IP (appendix B, Schedule 8 (Inventory)).

(w) A portion of the inventory step-up is attributable to certain operating expenses incurred prior to the transaction that were expensed but added value to the finished goods inventory.

(x) The total annual routine profit of $44 is derived and allocated to the routine functions (depreciation, COGS and G&A) in footnote (n). This routine profit is equivalent to CACs for the Returns On the working capital, fixed assets (see the "Multiperiod Excess Earnings Method" section of chapter 12, "Valuation Approaches and Techniques," for a discussion of the relationship between the profit and fixed asset CACs) and assembled workforce, adjusted to a pre-tax amount (see Schedule D-3, footnote 8). The routine profit related to COGS of $12 is entirely attributed to the inventory and the remaining routine profit related to depreciation and G&A have been apportioned based on footnotes (o) and (p) for a total routine profit of $36 being attributed to the inventory for the entire year. The acquired inventory has a selling price of $187.5 and the total routine profit of $36 is allocated to the inventory in proportion to sales ($187.5/$1,000) to arrive at the $6.8 of routine profit reflected in the inventory step-up.

The remaining operating expenses and routine profit, having been incurred prior to the transaction, are not deducted from a specific asset and the related step-up reduces the residual goodwill. This occurs regardless of the classification of the intangible assets in the functional apportionment.

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Fair Value - Finished Goods Inventory **Schedule D-2**

The purpose of this schedule is to demonstrate the alternative of apportioning profit in proportion to costs addressed in the "Other Profit Allocation Considerations Under Step 5" discussion in the "Inventory" section in chapter 13. Note that the three cost allocation alternatives result in significant differences from the allocation of profit based on the contribution of assets (see Schedule D-1) indicating that an allocation solely in proportion to costs would not be appropriate in this example.

	Year 1	Future Benefit	Current Benefit Year 1	Incurred: Inventory Attributes	Remaining: Disposal Attributes
Revenue	$1,000		$ 1,000	$ -	$ 1,000
Cost of Goods Sold (COGS)	400		400	400	-
Gross Profit	600		600		
Operating Expenses:					
General & Administrative (G&A)	80	10	70	49	21
Routine Intellectual Property (IP) Development	20	20	-	-	-
Brand IP Advertising	50	-	50	50	-
Existing Relationship Selling & Marketing	20	-	20	-	20
Future Relationship Selling & Marketing	60	60	-	-	-
Depreciation	94	5	89	71	18
Total Operating Expenses	324	95	229	170	59
Earnings Before Interest and Tax (EBIT)	276		371		
Alternative A: Allocation of profit in proportion to total operating expenses					
Total Operating Expenses			229	170	59
Allocation percentage			100%	**74%**	**26%**
Implied Earnings Before Interest and Tax (EBIT)			371	275	96
Alternative B: Allocation of profit in proportion to total operating expenses and value added portion of COGS					
Value added costs included in COGS (for example, labor)			100	100	-
Total Operating Expenses			229	170	59
Total Value Added Expenses			329	270	59
Allocation percentage			100%	**82%**	**18%**
Implied Earnings Before Interest and Tax (EBIT)			371	304	67
Alternative C: Allocation of profit in proportion to total operating expenses and COGS					
COGS			400	400	-
Total Operating Expenses			229	170	59
Total Expenses			629	570	59
Allocation percentage			100%	**91%**	**9%**
Implied Earnings Before Interest and Tax (EBIT)			371	336	35
Allocation of profit based on the contribution of assets (Schedule D-1)					
Actual Earnings Before Interest and Tax (EBIT)			371	166	205
Allocated percentage			100%	**45%**	**55%**

Fair Value - Finished Goods Inventory **Schedule D-3**

Implied Relationship Royalty in Year 1

The functional apportionment on Schedule D-1 identifies the portion of the inventory profit attributable to the respective intangible assets which are then classified as having contributed to the inventory step-up (Incurred) or will be used in the selling and disposal of the inventory (Remaining). The Routine IP and Brand IP (underlying and commercial) are valued with the relief from royalty method therefore the Relationships, which are valued with the MPEEM, are converted to an implied royalty so that they may be consistently applied to the derivation of the inventory valuation factors (Schedule D-1). Three approaches are provided to estimate this implied Relationship Royalty.

Approach A: This detailed analysis is presented as the baseline derivation having consistent assumptions with appendix B. It provides a basis for comparison for Approaches B and C.

Approach B: Estimates the implied Relationship Royalty as a residual amount by deducting the other intangible asset royalties and the Return On CACs (converted to pre-tax amounts). This provides an equivalent outcome to the detailed MPEEM.

Approach C: The Relationship excess earnings is converted to an equivalent pre-tax amount and adjusted to remove the future benefit expenses. This approach is generally sufficient to provide a reasonable approximation of the implied Relationship Royalty.

Approach A

	Year 1[1]	Future Benefit[2]	Current Benefit Year 1[3]
Revenue	$ 1,000		$ 1,000
Gross Profit	600		600
% revenue	*60.0%*		*60.0%*
Operating Expenses:			
General & Administrative	80	10	70
% revenue	*8.0%*		*7.0%*
Routine IP Development	-		-
Marketing IP Advertising	50		50
Existing Relationship S&M	20		20
Future Relationship S&M	-		-
Total Operating Expenses	150	10	140
EBITDA	450	(10)	460
% revenue	*45.0%*		*46.0%*
Depreciation	94	5	89
EBIT	356	(15)	371
less: Routine IP Royalty @ 3.5%	35		35
Total Brand IP Royalty @ 9.5%	95		95
Implied Relationship Royalty[4] @ 19.7%			**197**
Adjusted EBIT	226		44
% of revenue	*22.6%*		*4.4%*
Taxes	57		11
Debt Free Net Income	169		33
Contributory Asset Charge[5]	34	1	33
Excess Earnings	$ 135		$ -

Approach B

	Current Benefit Year 1
Earnings Before Interest and Taxes (EBIT)[6]	$ 371
less Intangible Asset Royalties[7]:	
Routine IP @ 3.5%	35
Brand IP (Underlying IP) Royalty @ 4%	40
Brand IP (Commercial Value) Royalty @ 5.5%	55
less CACs (adjusted to pre-tax amounts[8]):	
Working Capital	12
Fixed Assets	23
Assembled Workforce	9
Implied Relationship Royalty	**197**

Approach C (Approximation)[9]

	Year 1
Relationship (Existing) Excess Earnings	$ 135
Converted to Pre-tax @ 25%	180
Add Future Benefit expenses:	
General & Administrative	10
Depreciation	5
Implied Relationship Royalty	**195**

[1] Year 1 excess earnings calculation for Relationships (Existing), see appendix B, Schedule 9 (Owned), provides the baseline before adjustments.

[2] These expenses have been identified as having a future benefit and have not contributed to the inventory step-up prior to the transaction. Therefore, to put the estimation of the relationship royalty on a consistent basis with the inventory assumptions the expenses and CAC with a future benefit are removed from the baseline Relationship excess earnings.

[3] The current year benefit excludes the expenses with a future benefit and serves as the basis to estimate the portion of the profit (through a royalty construct) that is attributable to the Relationships and is considered a portion of the profit on the disposal effort in the functional analysis that is deducted from the selling price in the top-down method.

[4] The excess earnings attributable to the Relationships is converted to a royalty to make it consistent with the other intangible assets in the functional apportionment. The top-down factor, which is applied to the selling price of the inventory, is therefore derived on a consistent basis.

[5] The $18 Return On portion of the CAC attributable to the fixed assets is allocated in proportion to depreciation. $1 of the fixed asset CAC was removed as a future benefit.

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[6] The current benefit amount derived in Schedule D-1. It excludes expenses with a future benefit; therefore, no additional adjustment is required to remove the future benefit in this approach.

[7] See Schedule D-1 for the royalties.

[8] The Year 1 CACs as derived in appendix B are converted to pre-tax amounts based on a 25% tax rate:

	CAC	Pre-Tax
Working Capital	9.1	12
Fixed Assets (see footnote 5)	17	23
Assembled Workforce	7	9

[9] See Approach A for data.

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Appendix E

Detailed Example of Valuing Finished Goods and Work-In-Process Inventory

> ***Note:*** The example in this appendix is provided only to demonstrate concepts discussed in the "Inventory" section in chapter 13, "Measuring Fair Value of Identifiable Assets Acquired and Liabilities Assumed," and is not intended to establish requirements. Furthermore, the assumptions and inputs used in this example are illustrative only. Facts and circumstances of each individual situation should be considered when performing an actual valuation.
>
> The Business Combinations Task Force recognizes that this example is very detailed. The purpose of providing such a level of detail is to illustrate the thought process and underlying calculations involved in estimating fair value of inventory and is not intended to reflect documentation requirements. The following example demonstrates one way of performing and documenting the inventory valuation. Other approaches may be acceptable.

Overview

E.01 The "Inventory" section in chapter 13 provides considerations for estimating the fair value of inventory. This appendix discusses and illustrates how to value finished goods and work in process (WIP) inventory. This example considers a manufacturing business and is carried throughout this appendix.

E.02 The functional apportionment of procuring and manufacturing expenses and disposal expenses are covered in five steps.

Step 1: Identify the baseline PFI.

Step 2: Adjust the baseline PFI to remove expenses benefiting future periods.

Step 3: Bifurcate expenses already incurred from those remaining to be incurred for finished goods.

Step 4: Bifurcate expenses already incurred from those remaining to be incurred to complete the WIP.

Step 5: Evaluate the resulting inventory profit.

E.03 In this example, the relevant identified costs are converted into margins within Steps 2-4. However, if the analysis is performed based on absolute costs (i.e. using dollar amounts as opposed to margins), then the costs would be converted to margins during Step 5, prior to being applied in the inventory valuation.

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Step 1: Identify the baseline PFI

E.04 When valuing inventory, the first step is to identify the baseline PFI. As discussed in the "Inventory" section in chapter 13, the PFI should represent market participant financials for the initial projected period when the inventory is expected to be sold. Column A in Table 1 below, presents the selected baseline PFI used in this illustrative example.

E.05 For the purpose of this example, assume that the acquiree owns intangible assets that contribute to an increase in the level of profitability. Consistent with the guidance in FASB *Accounting Standards Codification* (ASC) 820-10-35-10E (a)(1), it is assumed that comparable intangible assets would also be available to a market participant. In this step, the profit contribution of the intangible asset (earned when the intangible is owned) has been treated as a cost (as if the intangible were licensed). Thus, the hypothetical implied royalty to value the intangible assets is treated as an expense which ensures that the royalty implied from the intangible valuation is consistent with the profit attributed to those assets in the inventory valuation. Additionally, presenting the benefit from these intangible assets as a cost (rather than part of the profit contribution) provides the ability to make explicit assumptions within the functional apportionment analysis in the subsequent steps. Whether it is defined as a cost or profit, the contribution of the intangible asset to inventory value is the same if consistent assumptions about the functional apportionment of the intangible asset are made. If the intangible was not yet utilized with respect to the inventory, then the cost of disposal would be increased, and this would also result in a lower profit margin allocable between the market participant buyer and market participant seller. The lower profit margin would reflect remaining return on routine assets[1] such as working capital, fixed assets, assembled workforce, etc.

E.06 In this example, assume that there are three identifiable intangible assets that contribute value with respect to the inventory: manufacturing IP,[2] trade name, and customer relationships. For purposes of this example, the manufacturing IP is contributed during the production process of the inventory, whereas both the trade name and the customer relationship are contributed during the disposal process. Column A' in Table 1 incorporates the benefit of the contributing intangible assets into the selected baseline PFI. See Questions 4–6 in the "Questions and Answers to Illustrate Inventory Valuation" section of chapter 13 for further discussion of the factors to consider when evaluating whether intangible assets have been contributed to inventory.

E.07 There may be certain costs that are not value-added and do not drive profits. For example, the raw materials portion of cost of goods sold (COGS) may be a pass-through cost. Column C in Table 1 makes an assumption about the proportion of each cost that is profit generating. In this

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[1] Chapter 11, "Selecting Valuation Approaches and Techniques for Acquired Intangible Assets," describes different types of intangible assets and provides a thought process for selecting the appropriate valuation methods to value them. That guidance distinguishes between pivotal and routine intangible assets. *Pivotal assets* provide an owner or licensee with the ability to create a significant amount of the excess profit in the business unit or value chain. Their functions are not available from alternative sources because they are unique or scarce assets. An iconic brand name is an example of a pivotal asset. *Routine assets*, on the other hand, are not unique or scarce; they provide functionality that can be accessed from a third party in an arm's length transaction (IP-based) or the functions and activities that provide a routine profit (relationship-based). Internally used software is an example of a routine asset.

[2] Manufacturing IP includes all types of IP used or contributed during the production process. In this example, it encompasses everything other than the brand. In appendix B, *Valuation Method Selection Process Example*, it is referred to as *routine IP*. For further discussion of manufacturing IP, see Question 4 in paragraph 13.73.

example, it is assumed that 65% of COGS is raw materials and, therefore, only the 35% burden is value-added. Furthermore, in this example, it is assumed that there is no additional profit incremental to the royalty rate earned by the overall company that is attributed to the intangibles. As such, this is modeled as a cost which does not earn profit, or a zero value added cost. These assumptions are used in the subsequent steps.

Table 1: Baseline PFI

		A	B	A'	B'	C
	Financial Statement Data [1]	Baseline PFI	% of Revenue	Baseline PFI Including IP	% of Revenue	% of FG Costs That Earn Profit [4]
	Revenue	600.0		600.0		
	COGS	350.0	*58.3%*	350.0	*58.3%*	*35.0%*
	Operating Expenses					
	Selling	13.0	*2.2%*	13.0	*2.2%*	*100.0%*
	Marketing	15.0	*2.5%*	15.0	*2.5%*	*100.0%*
	Warehousing	9.0	*1.5%*	9.0	*1.5%*	*100.0%*
	R&D	18.0	*3.0%*	18.0	*3.0%*	*100.0%*
	Royalty for Manufacturing IP			42.0	*7.0%*	*0.0%*
	Royalty for Tradename			18.0	*3.0%*	*0.0%*
	Royalty for Customer Relationships			30.0	*5.0%*	*0.0%*
	General and Administrative	21.0	*3.5%*	21.0	*3.5%*	*100.0%*
[2]	Corporate Allocation	11.0	*1.8%*	11.0	*1.8%*	*100.0%*
[3]	Depreciation	13.0	*2.2%*	13.0	*2.2%*	*100.0%*
	EBITA	**150.0**		**60.0**		
	EBITA Margin (EBITA / Revenue)	*25.0%*		*10.0%*		
	Cost-Based Margin (EBITA / Total Costs)	*33.3%*		*11.1%*		

Notes:

[1] Blue text represent assumptions while black text represents calculations.

[2] In this example, corporate allocation represents normalized corporate allocation of the market participant buyer's costs post-

[3] In this example, COGS includes manufacturing-related depreciation. All other deprecation is included within operating expenses.

[4] The raw materials portion of COGS is assumed to be a pass-through cost and therefore does not earn a profit (i.e. the profit-earning portion is based on the burden only).

Step 2: Adjust the baseline PFI to remove expenses benefiting future periods

E.08 After identifying the baseline PFI, the next step is to identify and exclude expenses that only have future economic benefit. Table 2 provides an illustrative example of allocating costs between current and future benefit. In this example, a specific assumption is made for the proportion of direct operating expenses that have current economic benefit. The indirect overhead expenses are then allocated between current and future benefit in proportion to the direct operating expenses.

E.09 In Table 2, the remaining current benefit EBITA margin reflects residual return above the costs of the business and the royalties associated with intangible assets. This return is associated with items such as fixed assets, working capital, and assembled workforce. This residual return should be assessed based on the assets that drive this return.

Table 2: Current versus Future Benefit Costs

	A'	B'	D	E = A'*D	F = 1-D	G = A'*F	
	Baseline PFI Including IP	% of Revenue	Current Benefit		Future Benefit		
Financial Statement Data			%	$	%	$	Direct or Overhead
Revenue	600.0		100%	600.0	0%	-	
COGS	350.0	*58.3%*	100%	350.0	0%	-	*Direct Operating Costs*
Operating Expenses							
Selling	13.0	*2.2%*	100%	13.0	0%	-	*Direct Operating Costs*
Marketing	15.0	*2.5%*	75%	11.3	25%	3.8	*Direct Operating Costs*
Warehousing	9.0	*1.5%*	100%	9.0	0%	-	*Direct Operating Costs*
R&D	18.0	*3.0%*	50%	9.0	50%	9.0	*Direct Operating Costs*
Royalty for Manufacturing IP	42.0	*7.0%*	100%	42.0	0%	-	*Direct Intangible Value*
Royalty for Tradename	18.0	*3.0%*	100%	18.0	0%	-	*Direct Intangible Value*
Royalty for Customer Relationships	30.0	*5.0%*	100%	30.0	0%	-	*Direct Intangible Value*
General and Administrative	21.0	*3.5%*	93%	19.5	7%	1.5	*Overhead Operating Costs*
Corporate Allocation	11.0	*1.8%*	93%	10.2	7%	0.8	*Overhead Operating Costs*
Depreciation	13.0	*2.2%*	93%	12.1	7%	0.9	*Overhead Operating Costs*
Total Operating Expense	**190.0**			**174.0**		**16.0**	
EBITA	**60.0**			**76.0**		**(16.0)**	
EBITA Margin (EBITA / Revenue)	*10.0%*			*12.7%*			
Cost-Based Margin (EBITA / Total Costs)	*11.1%*			*14.5%*			

Notes:

[1] The COGS as a percentage of revenue is used in Table 7 to calcualte selling price.

[2] In this example, corporate allocation represents normalized corporate allocation of the market participant buyer's costs post-acquisition.

[3] In this example, overhead costs are allocated between current and future benefit in proportion to the following value-added direct costs that earn a profit. The proportion of overhead costs that provide current benefit (93%) is calculated as the total direct current benefit costs that earn profit ($164.8), divided by the total direct costs that earn a profit ($177.5), as detailed below.

	A'	E	C (Table 1)	H= E*C	I=A'*C
Direct Operating Costs	Baseline PFI Including IP	Current Benefit	% of FG Costs That Earn Profit	Current Benefit Costs That Earn Profit	Costs That Earn a Profit
COGS	350.0	350.0	35%	122.5	122.5
Selling	13.0	13.0	100%	13.0	13.0
Marketing	15.0	11.3	100%	11.3	15.0
Warehousing	9.0	9.0	100%	9.0	9.0
R&D	18.0	9.0	100%	9.0	18.0
Total Direct Costs	**405.0**	**392.3**		**164.8**	**177.5**
				Current Benefit Overhead Costs	93%

[4] After the costs and profit associated with intangibles is modeled as an expense, the remaining current benefit EBITA margin should reflect remaining return on routine assets such as fixed assets, working capital, assembled workforce, etc.

Step 3: Bifurcate expenses already incurred from those remaining to be incurred for finished goods

E.10 The analysis in Step 3 is performed on the subset of costs with a current benefit that is calculated in Step 2. Table 3 provides an illustrative example of bifurcating current-benefit expenses into those that are incurred pre-measurement date to procure and manufacture the inventory versus those that are to be incurred post-measurement date to dispose of the finished goods inventory. When bifurcating current-benefit expenses into manufacturing and disposal expenses, the valuation specialist considers two types of expenses: direct operating expenses and overhead expenses.

E.11 In this example, a specific assumption is made for the proportion of direct operating expenses that have already been incurred for finished goods inventory versus remaining to be

incurred during the disposal process. The indirect overhead expenses are then allocated between incurred and remaining in proportion to the direct operating expenses.

E.12 With respect to the intangible assets, in this example for a manufacturing business, it is assumed that:

- Manufacturing IP is used in the manufacturing process of WIP and therefore all incurred for finished goods.
- Trade name is not considered an attribute of the inventory and is used as a disposal asset at the time the inventory is sold to the customer.
- Customer relationships is considered as a disposal asset, used at the time the inventory is sold to the customer.

See Questions 4–6 in the "Questions and Answers to Illustrate Inventory Valuation" section of chapter 13 for further discussion of the factors to consider when evaluating whether intangible assets have been contributed to inventory.

E.13 In this example, the total operating expenses as a percentage of revenue represents the disposal expenses in the top-down method (i.e. 14.9% below) and the production and manufacturing cost in the bottom-up method (i.e. 14.1% below). These percentages are applied to the selling price in Table 7 for the top-down and in Table 8 for the bottom-up method (boxed in dashed line below) as a means of allocating the operating expenses. However, if the bottom-up method is performed by applying the disposal expense to the adjusted book value, then the operating expense as a percentage of COGS represents the disposal expense (i.e. 24.1%, boxed in dashed line below) applied in Table 9.

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Table 3: Finished Goods ("FG") Costs Incurred vs Remaining

		E (Table 2)	Bottom-up Method J	Bottom-up Method K = E*J	Top-down Method L = 1-J	Top-down Method M = E*L	
	Financial Statement Data	Current Benefit	FG Costs Incurred %	FG Costs Incurred $	FG Costs Remaining %	FG Costs Remaining $	Direct or Overhead
	Total Revenue	600.0					
	COGS	350.0	100%	350.0	0%	-	*Direct Operating Costs*
	Operating Expenses						
	Selling	13.0	0%	-	100%	13.0	*Direct Operating Costs*
	Marketing	11.3	0%	-	100%	11.3	*Direct Operating Costs*
	Warehousing	9.0	0%	-	100%	9.0	*Direct Operating Costs*
	R&D	9.0	100%	9.0	0%	-	*Direct Operating Costs*
	Royalty for Manufacturing IP	42.0	100%	42.0	0%	-	*Direct Intangible Value*
	Royalty for Tradename	18.0	0%	-	100%	18.0	*Direct Intangible Value*
	Royalty for Customer Relationships	30.0	0%	-	100%	30.0	*Direct Intangible Value*
[1]	General and Administrative	19.5	80%	15.6	20%	3.9	*Overhead Operating Costs*
[1]	Corporate Allocation	10.2	80%	8.1	20%	2.1	*Overhead Operating Costs*
[1]	Depreciation	12.1	80%	9.6	20%	2.4	*Overhead Operating Costs*
	Total Operating Expense	**174.0**		**84.3**		**89.7**	
	EBITA	**76.0**					
[2]	*Operating Expenses as % of Total Revenue*	*29.0%*		*14.1%*		*14.9%*	
[3]	*Operating Expenses as % of Total COGS*			*24.1%*			

Notes:

[1] In this example, the proportion of finished good costs already incurred for overhead operating costs (80%) is calculated as the total finished good cost already incurred for direct costs ($131.5) divided by the total direct current benefit costs ($164.8). Note that this differs from the analysis in Table 1 as this analysis is performed on the portion of costs that are current benefit.

	E (Table 2)	K	C (Table 1)	N= K*C	H=E*C
Direct Operating Costs	Current Benefit	FG Costs Incurred	% of FG Costs That Earn Profit	FG Cost Incurred That Earn Profit	Current Benefit Costs That Earn Profit
COGS	350.0	350.0	35%	122.5	122.5
Selling	13.0	-	100%	-	13.0
Marketing	11.3	-	100%	-	11.3
Warehousing	9.0	-	100%	-	9.0
R&D	9.0	9.0	100%	9.0	9.0
Royalty for Manufacturing IP	42.0	42.0	0%	-	-
Royalty for Tradename	18.0	-	0%	-	-
Royalty for Customer	30.0	-	0%	-	-
Total Direct Costs	**482.3**	**401.0**		**131.5**	**164.8**
			FG Overhead Cost Already Incurred		80%

[2] Finished good cost already incurred % of revenue (14.1%) represents costs already completed for finished goods assumption in bottom-up method, applied to selling price in Table 8. Finished good cost remaining % of revenue (14.9%) represents cost of disposal assumption in top-down method, applied in Table 7.

[3] Finished good cost already incurred % of COGS (24.1%) represents costs already completed for finished goods assumption in bottom-up method. This expense can be applied to the adjusted book value in Table 9.

Step 4: Bifurcate expenses already incurred from those remaining to be incurred to complete the WIP

E.14 The analysis in Step 4 is performed on the subset of costs that are assumed to have been incurred with respect to finished goods in Step 3. For the WIP analysis, it is necessary to bifurcate current-benefit costs assumed to be incurred pre-measurement date to procure and manufacture the finished goods inventory. These costs can be further bifurcated into the completed portion that relates to the effort of procuring raw materials and manufacturing for the WIP already incurred pre-measurement date versus those costs that relate to the remaining incremental effort to be incurred for the WIP post-measurement date to bring it to the finished state. These costs should include all of the expenditures directly or indirectly remaining to be incurred post-measurement date in bringing the WIP inventory to its finished condition.

E.15 In practice, the percentage complete may be analyzed individually for each expense line item: COGS, direct and indirect operating costs.

- COGS: The efforts remaining to complete are often applicable to the portion which is not related to materials, generally referred to as *burden*. Burden represents total direct labor and overhead used in assembly. If raw materials are added at the beginning of the manufacturing process, WIP would include the full amount of material cost related to the final product and no additional purchases of materials would be required to complete the WIP. However, if there are any costs associated with additional purchases or components, they should be added to the cost to complete as needed. WIP typically includes only a portion of the burden costs. More burden will be added as part of the remaining manufacturing process, and therefore the remaining burden portion of WIP generally represents the costs to complete COGS.
  - The following formula is an example to estimate the percentage complete of COGS.

$$\%\ Complete\ COGS = \%\ Materials + (\%\ Complete * \%\ Burden)$$

Where:

% Complete: proportion of Burden in WIP that is complete
% Materials: proportion of COGS that represents materials (not Burden)
% Burden: (1-Materials)/COGS

- Direct Operating Costs: There may be direct operating expenses not captured in COGS associated with completing the WIP, such as quality control or some maintenance research and development (R&D). In this example, a specific assumption is made for the proportion of direct operating expenses that have been incurred for the WIP inventory versus those remaining to be incurred during the completion process.
- Indirect Operating Costs: A portion of the overhead operating costs of a business should also be allocated to completing the WIP inventory. In this example, the indirect overhead expenses are then allocated between incurred and remaining in proportion to the direct operating expenses.

E.16 The percentage complete is often difficult to identify in practice due to the complexities in the production process, the tendency of the process to be fast-moving, and the different costs associated with various stages of completion. Given that portions of a manufacturing entity's WIP may be at various stages of completion at a given time, professional judgment should be applied to develop an appropriate percentage. This example assumes that WIP is 50% complete. This assumption is applied to the *burden* portion of COGS.

E.17 Table 4 provides an illustrative example of bifurcating the expenses associated with procuring raw materials and manufacturing which have already been incurred for finished goods. These costs are bifurcated into the costs that have already been incurred with respect to WIP versus the manufacturing costs that remain to be completed.

- The resulting total remaining COGS and operating expenses as a percentage of revenue represents the cost to complete WIP that needs to be subtracted from the selling price in the top-down method (i.e. 17.2% below).

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- Since the bottom-up method would add the costs already incurred to the adjusted book value of inventory,[3] the proportion of completed COGS is already accounted for in the adjusted book value. Thus, the completed portion of operating expense represents the cost of procuring raw materials and manufacturing which have already been completed for WIP, and need to be added to the adjusted book value in the bottom-up method (i.e. 7.0% below). This percentage would be applied to the selling price. However, if the bottom-up method is performed by applying the WIP costs incurred to the adjusted book value, then the operating expense as a percentage of COGS represents the WIP costs incurred (i.e. 14.6%).

Table 4: WIP Costs Incurred vs Remaining

			Bottom-up Method		Top-down Method		
		K (Table 3)	O	P = K*O	Q = 1-O	R = Q*K	
			WIP Costs Already Incurred		WIP Costs Remaining		
	Financial Statement Data	FG Costs Incurred	%	$	%	$	Direct or Overhead
	Total Revenue	600.0					
[1]	COGS	350.0	83%	288.8	18%	61.3	*Direct Operating Costs*
	Operating Expenses						
	Selling	-	50%	-	50%	-	*Direct Operating Costs*
	Marketing	-	50%	-	50%	-	*Direct Operating Costs*
	Warehousing	-	50%	-	50%	-	*Direct Operating Costs*
	R&D	9.0	50%	4.5	50%	4.5	*Direct Operating Costs*
	Royalty for Manufacturing IP	42.0	50%	21.0	50%	21.0	*Direct Intangible Value*
	Royalty for Tradename	-	50%	-	50%	-	*Direct Intangible Value*
	Royalty for Customer Relationships	-	50%	-	50%	-	*Direct Intangible Value*
[2]	General and Administrative	15.6	50%	7.8	50%	7.8	*Overhead Operating Costs*
[2]	Corporate Allocation	8.1	50%	4.1	50%	4.1	*Overhead Operating Costs*
[2]	Depreciation	9.6	50%	4.8	50%	4.8	*Overhead Operating Costs*
	Total Operating Expense	**84.3**		**42.2**		**42.2**	
[3]	*COGS as a % of Revenue*			*n/a*		*10.2%*	
	Operating Expenses as % of Total Revenue			*7.0%*		*7.0%*	
[4]	*Sum*			*7.0%*		*17.2%*	
[5]	*Operating Expenses as % of COGS Incurred*			*14.6%*			

Notes:

[1] The assumption that 83% of COGS are already incurred with respect to WIP is based on assuming all of the materials portion is complete and half of the burden portion is complete (i.e. 82.5% = 65% materials + (50% *35% burden)).

[2] In this example, the WIP Cost Already Incurred portion for overhead operating costs (50%) is calculated as the WIP cost alrelady incurred for direct costs that earn a profit ($65.8) divided by the total direct finished goods costs incurred that earn profit ($131.5).

	K (Table 3)	P	C (Table 1)	S	T= P*S	N= K*C (Table 3)
Direct Operating Costs	FG Costs Incurred	WIP Costs Already Incurred	% of FG Costs That Earn Profit	% of WIP Incurred that Earn Additional Profit	WIP Costs Incurred that Earn Profit	FG Costs Incurred that Earn Profit
[6] COGS	350.0	288.8	35%	21%	61.3	122.5
Selling	-	-	100%	100%	-	-
Marketing	-	-	100%	100%	-	-
Warehousing	-	-	100%	100%	-	-
R&D	9.0	4.5	100%	100%	4.5	9.0
Royalty for Manufacturing IP	42	21	0%	0%	-	-
Royalty for Tradename	-	-	0%	0%	-	-
Royalty for Customer Relationships	-	-	0%	0%	-	-
Total Direct Costs	**401.0**	**314.3**			**65.8**	**131.5**
				WIP Overhead Cost Already Incurred		50%

[3] The 10.2% represents the COGS left to incur to finish WIP. This will be used to calcualte the selling price for WIP in Table 7.

[4] The 7.0% represents costs already completed for WIP assumption in the bottom-up method, applied in Table 8. The 17.2% represents costs to complete WIP assumption in the top-down method, applied in Table 7.

[5] WIP good cost already incurred % of COGS (14.6%) represents costs already completed for WIP assumption in bottom-up method. This expense can be applied to the adjusted book value in Table 9.

[6] The percentage of WIP Costs that earn profit (i.e. 21%) considers only the burden portion of WIP that has been complete, as a percentage of total WIP cost already incurred (i.e. calculated as: 35% burden * 50% complete / 83% of WIP cost already incurred).

[3] Costs added to the adjusted book value should only include those incremental costs incurred that have not been capitalized into the book value of inventory.

Step 5: Evaluate the resulting inventory profit

E.18 As discussed in the "Inventory" section in chapter 13, the valuation of inventory involves an allocation of total profit between that which was earned pre-measurement date and profit to be earned post-measurement date. In any case, the total company profit is consistent with the sum of the profit assumed to be earned post-measurement date in the top-down method and the profit assumed to have been earned pre-measurement date in the bottom-up method.

E.19 In Step 1 of this example, the profit attributable to owned intangible assets is considered. Specific assumptions within the functional apportionment analysis were made regarding the intangible assets that have been utilized with respect to the inventory pre- and post-measurement date. The proportion of each cost that is value-added or profit-generating[4] was also considered. In Step 2, expenses benefiting future periods were removed. As a result, the adjusted profit margin increased. Based on the assumptions in the preceding steps, a profit margin earned pre- and post-measurement date that reflects the relative efforts exerted, risks assumed, value added, costs incurred and assets utilized with respect to the inventory was estimated.

E.20 Table 5 provides an illustrative example of quantifying the profit margin on each component of costs.

- For the top-down method:
  - the cost-based profit allowance *on selling costs* is calculated as the adjusted EBITA on the profit generating portion of disposal costs divided by the total disposal costs (i.e. 36.8% in Table 5 below) and
  - the cost-based profit allowance *on WIP costs to complete* is calculated as the EBITA on the profit generating portion of completion costs remaining to be incurred divided by the total completion costs remaining to be incurred (i.e. 36.8% in Table 6 below).

- For the bottom-up method:
  - the cost-based profit allowance *on the costs associated with procuring raw materials and manufacturing* is calculated as the EBITA on the profit generating portion of procuring and manufacturing costs divided by total procuring and manufacturing costs (i.e. 14.0% in Table 5 below), and
  - the cost-based profit allowance *on WIP costs already incurred* is calculated as the EBITA on the profit generating portion of WIP costs already incurred divided by total WIP costs already incurred (i.e. 9.2% in Table 6 below).

[4] Since the royalty rate considered in the intangible asset value would typically include both a return of and return on the asset, there is no incremental layer of profit attributable to the intangible, above such a royalty rate. Similarly, the raw materials portion of COGS is assumed to be a pass-through cost and, therefore, does not earn a profit (i.e. the profit-earning portion is based on the burden only).

Table 5: Profit Allowance on Profit Generating Finished Goods Costs

					Profit on Finished Goods		
					Bottom-up	Top Down	
		C (Table 1)	E (Table 2)	U= C*E	K (Table 3)	V = C*K	M (Table 3)	W = C*M
	Financial Statement Data	% of FG Costs That Earn Profit	Total Current Benefit	Current Costs That Earn a Profit	FG Costs Incurred	FG Costs Incurred That Earn a Profit	FG Costs Remaining	FG Costs Remaining That Earn a Profit
	Revenue		600.0					
[1]	COGS	35%	350.0	122.5	350.0	122.5	-	-
	Operating Expenses							
	Selling	100%	13.0	13.0	-	-	13.0	13.0
	Marketing	100%	11.3	11.3	-	-	11.3	11.3
	Warehousing	100%	9.0	9.0	-	-	9.0	9.0
	R&D	100%	9.0	9.0	9.0	9.0	-	-
	Royalty for Manufacturing IP	0%	42.0	-	42.0	-	-	-
	Royalty for Tradename	0%	18.0	-	-	-	18.0	-
	Royalty for Customer	0%	30.0	-	-	-	30.0	-
	General and Administrative	100%	19.5	19.5	15.6	15.6	3.9	3.9
	Corporate Allocation	100%	10.2	10.2	8.1	8.1	2.1	2.1
	Depreciation	100%	12.1	12.1	9.6	9.6	2.4	2.4
	Total Operating Expenses and COGS		**524.0**	**206.5**	**434.3**	**164.8**	**89.7**	**41.7**
[2]	**EBITA**		**76.0**			**60.6**		**15.3**
[3]	*Cost-Based Margin (EBITA / Total Costs)*		*14.5%*	*36.8%*		*36.8%*		*36.8%*
[4]	*EBITA on Costs That Earn a Profit / Sum of Costs*					*14.0%*		*17.1%*

Notes:

[1] The raw materials portion of COGS is assumed to be a pass-through cost and therefore not a value-added expense. Therefore, the value-added portion of finished goods is calculated as total finished goods costs incurred 350.0 multiplied by the percentage of costs that represents burden 35%.

[2] For columns V, and W, EBITA is calculated as cost-based margin, multiplied by the total costs.

[3] For columns U, V, and W, Cost-based Margin of 36.8% (in column U) is based on the total current benefit EBITA ($76.0, per column E), divided by the sum of current benefit costs that earn a profit ($206.5, per column U).

[4] Profit allowance on finished good costs already completed (14.0%, per column V) is calculated as the EBITA for finished good cost that earn a profit which are already incurred ($60.6, per column V), divided by the total FG cost already incurred ($434.3, per column K), and is applied in Table 8 and Table 9. Profit allowance on costs to dispose finished goods (17.1%, per column W) is calculated as the EBITA for finished good cost that earn a profit which are remaining ($15.3, per column W), divided by the total FG cost remaining ($89.7, per column M), and is applied in Table 7.

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Table 6: Profit Allowance on Profit Generating WIP Costs

				Profit on WIP			
				Bottom-up		Top Down	
		S (Table 4)	X	P (Table 4)	Y = S*P	R (Table 4)	Z=X*R
	Financial Statement Data	% of Incurred WIP Costs That Earn Profit	% of Remaining WIP Costs That Earn Profit	WIP Costs Already Incurred	WIP Costs Already Incurred That Earn Profit	WIP Costs Remaining	WIP Costs Remaining That Earn Profit
[1]	COGS	21%	100%	288.8	61.3	61.3	61.3
	Operating Expenses						
	Selling	100%	100%	-	-	-	-
	Marketing	100%	100%	-	-	-	-
	Warehousing	100%	100%	-	-	-	-
	R&D	100%	100%	4.5	4.5	4.5	4.5
	Royalty for Manufacturing IP	0%	0%	21.0	-	21.0	-
	Royalty for Tradename	0%	0%	-	-	-	-
	Royalty for Customer Relationship	0%	0%	-	-	-	-
	General and Administrative	100%	100%	7.8	7.8	7.8	7.8
	Corporate Allocation	100%	100%	4.1	4.1	4.1	4.1
	Depreciation	100%	100%	4.8	4.8	4.8	4.8
	Total Operating Expenses and COGS			**330.9**	**82.4**	**103.4**	**82.4**
[2]	EBITA				**30.3**		**30.3**
[3]	*Cost-Based Margin (EBITA / Total Costs) per Table 5*				*36.8%*		*36.8%*
[4]	*EBITA on Costs That Earn a Profit / Sum of Costs*				*9.2%*		*29.3%*

Notes:

[1] The percentage of WIP Costs that earn profit (i.e. 21%) considers only the burden portion of WIP that has been complete, as a percentage of total WIP cost already incurred (i.e. calculated as: 35% burden * 50% complete / 83% of WIP cost already incurred).

[2] For columns Y and Z, EBITA is calculated as cost-based margin, multiplied by the total costs.

[3] For columns Y and Z, Cost-based Margin is the same as the assumptions in Table 5 (i.e. the total current benefit EBITA ($76.0, per column E of Table 5) divided by the sum of current benefit costs that earn a profit ($206.5, per column U of Table 5).

[4] Profit allowance on WIP costs already completed (9.2%, per column Y) is calculated as the EBITA for finished good cost that earn a profit which are already incurred ($30.3, per column Y), divided by the total FG cost already incurred ($330.9, per column P), and is applied in Table 8 and Table 9. Profit allowance on costs to dispose (29.3%, per column Z) is calculated as the EBITA for finished good cost that earn a profit which are remaining ($30.3, per column Z), divided by the total FG cost remaining ($103.4, per column R), and is applied in Table 7.

Holding (Opportunity) Costs

E.21 Steps 1-5 above quantify the inputs to estimate net realizable value (NRV) of inventory, which represents fair value before holding costs. When quantifying holding costs, the key assumptions are the holding period and the cost of funding.

- The holding period may be estimated based on an analysis of historical days inventory outstanding (DIO) for the company and adjusted if it would reasonably be expected to be different for a market participant. The DIO, as indicated in paragraph E.22, would account for mid-period convention, as the inventory is typically sold throughout the holding period not necessarily at the end.
  - $DIO = \frac{Inventory}{Cost\ of\ Sales} * 365$
- The cost of funding (rate of return) applicable to the inventory is generally lower than the overall rate of return for the business (e.g. weighted average cost of capital) and may approximate a market participant's rate of return on working capital. This rate of return would typically reflect shorter-term financing, largely financed by debt.

E.22 One method (method A) to account for holding costs is to apply a present value factor to the estimated NRV of inventory. The NRV would be based on the selling price, less costs of

disposal, costs to complete, less profit allowance.[5] Then the fair value of inventory would be based on the following formula:

$$Fair\ Value\ of\ Inventory\ = \frac{NRV}{(1 + K_I)\text{^}(\frac{DIOs}{365})}$$

Where:

NRV ($): Net realizable value of Inventory
K_I (%): borrowing cost for inventory
DIOs: ½ * 365* Adjusted BV_{FG} / Annual COGS
Adjusted BV_{FG} ($): Adjusted book value of finished goods

E.23 Another method (method B) is to quantify holding costs based on the following formula. This amount would then be subtracted from the selling price. The fair value would be based on the selling price, less costs of disposal, costs to complete, less holding costs, less profit allowance.

$$Holding\ Costs = \frac{Adjusted\ BV_{FG} * K_I}{Turn}$$

Where:

K_I (%): borrowing cost for inventory
Turn: ½ * Annual COGS / Adjusted BV_{FG}

E.24 Methods A and B would result in slightly different values of holding costs which, in turn, would create slight differences in fair value.

Finished Goods and WIP Valuation

E.25 Based on the components outlined above, Table 7 and Table 8 provide an illustrative example of the calculation of NRV of inventory, reconciling the top-down and the bottom-up methods. In Table 8, the costs already completed are calculated as a percentage of revenue (presented in boxes in tables above) and applied to the selling price. Table 9 shows an alternative calculation where costs already completed are calculated as a percentage of COGS (boxed in tables above) and applied to the adjusted book value. Either calculation may be used as they result in the same NRV.

[5] This example uses the valuation definition of *net realizable value* (NRV). The FASB *Accounting Standards Codification* (ASC) Master Glossary defines NRV as "[e]stimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation." The FASB ASC definition is consistent with the valuation definition except for the treatment of profit allowance, which is not factored in NRV under the FASB ASC definition. For purposes of this example, the valuation definition of NRV is used because NRV is discussed in the valuation context and this definition is well understood in the valuation profession.

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Table 7: Top-down Method to Value Finished Goods and WIP[6]

	Top Down			
Inputs / Assumptions	**Finished Goods**	**WIP**		**Source**
Adjusted Net Book Value	$110.0	$55.0	*(a)*	
COGS as a % of Revenue	58.3%	58.3%	*(b)*	*Per Table 2*
COGS Left to Incur (COGS to Finish WIP)		10.2%	*(c)*	*Per Table 4*
Costs of Disposal %	14.9%	14.9%	*(d)*	*Per Table 3*
Costs to Complete %		17.2%	*(e)*	*Per Table 4*
Profit Allowance on Costs to Dispose %	17.1%	17.1%	*(f)*	*Per Table 5*
Profit Allowance on Costs to Complete %		29.3%	*(g)*	*Per Table 6*
Valuation				
Selling Price	$188.6	$114.3	*(h)*	*=a / (b-c)*
Less: Costs of Disposal	$28.2	$17.1	*(i)*	*=h * d*
Less: Costs to Complete		$19.7	*(j)*	*=h * e*
Less: Profit Allowance on Costs to Dispose	$4.8	$2.9	*(k)*	*= f * i*
Less: Profit Allowance on Costs to Complete		$5.8	*(l)*	*= g * j*
Net Realizable Value	**$155.6**	**$68.8**		*= h-i-j-k-l*

Table 8: Bottom-up Method to Value Finished Goods and WIP (Applied to Selling Price)

	Bottom Up			
Inputs / Assumptions	**Finished Goods**	**WIP**		**Source**
Selling Price	$188.6	$114.3	*(a)*	*Per Table 7*
Costs Already Completed	14.1%	7.0%	*(b)*	*Per Table 3 and 4*
Profit Allowance on Costs Already Completed %	14.0%	9.2%	*(c)*	*Per Table 5 and 6*
Valuation				
Adjusted Net Book Value	$110.0	$55.0	*(d)*	
Plus: Costs Already Completed	$26.5	$8.0	*(e)*	*= a * b*
Plus: Profit on Costs Already Completed	$19.1	$5.8	*(f)*	*= c * (d + e)*
Net Realizable Value	**$155.6**	**$68.8**		*= d + e + f*

Table 9: Bottom-up Method to Value Finished Goods and WIP – Alternative Calculation (Applied to Adjusted Book Value)

	Bottom Up			
Inputs / Assumptions	**Finished Goods**	**WIP**		**Source**
Selling Price	$188.6	$114.3	*(a)*	*Per Table 7*
Costs Already Completed	24.1%	14.6%	*(b)*	*Per Table 3 and 4*
Profit Allowance on Costs Already Completed %	14.0%	9.2%	*(c)*	*Per Table 5 and 6*
Valuation				
Adjusted Net Book Value	$110.0	$55.0	*(d)*	
Plus: Costs Already Completed	$26.5	$8.0	*(e)*	*= b * d*
Plus: Profit on Costs Already Completed	$19.1	$5.8	*(f)*	*= c * (d + e)*
Net Realizable Value	**$155.6**	**$68.8**		*= d + e + f*

E.26 Fair value would be estimated after applying holding cost to NRV. Table 10 provides an illustrative example of applying holding costs based on methods A and B described previously.

[6] Adjusted book value considers adjustments for LIFO Reserve (if LIFO method used), obsolete and defective goods, and shrinkage.

Table 10: Estimation of Fair Value (After Holding Costs)

	Inputs / Assumptions	Finished Goods	WIP		Source
[1]	Holding Period (days)	57.4	86.0	*(a)*	
	Cost of Funding	3.0%	3.0%	*(b)*	
	Adjusted Net Book Value	$110.0	$55.0	*(c)*	*Per Table 7*
	Valuation (Method A)				
	Net Realizable Value	$155.6	$68.8	*(d)*	*Per Table 7 and 8*
	Present Value Factor	0.995	0.993	*(e)*	*=1/(1+b)^(a/365)*
	Fair Value	**$154.8**	**$68.3**		*= d * e*
	Valuation (Method B)				
	Net Realizable Value	$155.6	$68.8	*(d)*	*Per Table 7 and 8*
	Less: Holding Costs	0.5	0.4	*(f)*	*= c * b / (365/a)*
	Fair Value	**$155.1**	**$68.4**		*= d - f*

Notes:

[1] Holding period accounts for mid period convention. For Finished goods, it is calculated as $110.0 adjusted net book value of finished goods/ $350.0 COGS * 365 /2. Since WIP is assumed to be sold after finished goods, it includes the full finished goods holding period plus $55.0 adjusted net book value of WIP / $350.0 COGS * 365 /2.

Other Issues in Practice Regarding Benefit from Intangible Assets

E.27 The following discussion elaborates on issues that arise in practice and summarizes how the valuation specialist might consider them in the valuation.

E.28 There has been debate regarding whether the fair value of the inventory that would be sold to a market participant that also owns the intangible asset should be consistent with the fair value of the same inventory that would be sold to a market participant that licenses the intangible asset from another party (e.g. a distributor or a contract manufacturer). Specifically, there is diversity in practice whether the benefit of intangible assets used to bring the inventory to its current state of completion should lead to a higher inventory fair value or whether this benefit should be captured in the fair value of the intangible asset.

E.29 The sections below consider adjustments to the illustrative example described above based on two different scenarios, which consider intangible asset benefit:

- Scenario 1 considers the implication if no specific profit allocation (e.g. through an implied royalty payment) is made regarding intangible assets, and demonstrates that this implicitly assumes that the intangible assets are utilized *throughout* the manufacturing and selling process (i.e. in proportion to all other costs).
- Scenario 2 considers a business where all intangible assets are utilized *at the end* (during the disposition process), demonstrating that the value of the inventory would be the same regardless of whether the market participant owned the intangible asset, licensed it from a third party, or sold non-branded inventory.

Benefit from Intangible Assets: Scenario 1

E.30 This scenario first considers the resulting NRV of the finished goods inventory if no specific profit allocation is made to intangible assets. It then demonstrates that this implicitly assumes that the intangible assets are utilized throughout the manufacturing and selling process. Thus, the equivalent functional apportionment assumption would imply that the intangible asset

makes contributions in proportion to all other assets of the business (i.e. as assumed for overhead expenses in the main example).

E.31 Table 11 through Table 13 below present the functional apportionment analysis with no consideration given to intangible assets (i.e. no royalties for intangible assets).

Table 11: Current vs Future and FG Cost Incurred vs Remaining (without Royalty)

			Current vs Future Benefit Costs				Finished Goods ("FG") Costs Incurred vs Remaining			
							Bottom-up Method		Top-down Method	
	A	B	C	D = A*C	E = 1-C	F = A*E	G	H = D*G	I = 1-G	J = D*I
Financial Statement Data	Baseline PFI	% of Revenue	Current Benefit %	Current Benefit $	Future Benefit %	Future Benefit $	FG Costs Already Incurred %	FG Costs Already Incurred $	FG Costs Remaining %	FG Costs Remaining $
Revenue	600.0		100%	600.0	0%	-				
COGS	350.0	*58.3%*	100%	350.0	0%	-	100%	350.0	0%	-
Operating Expenses										
Selling	13.0	*2.2%*	100%	13.0	0%	-	0%	-	100%	13.0
Marketing	15.0	*2.5%*	75%	11.3	25%	3.8	0%	-	100%	11.3
Warehousing	9.0	*1.5%*	100%	9.0	0%	-	0%	-	100%	9.0
R&D	18.0	*3.0%*	50%	9.0	50%	9.0	100%	9.0	0%	-
Royalty for Intangible	-	*0.0%*	100%	-	0%	-	100%	-	0%	-
General and Administrative	21.0	*3.5%*	93%	19.5	7%	1.5	80%	15.6	20%	3.9
Corporate Allocation	11.0	*1.8%*	93%	10.2	7%	0.8	80%	8.1	20%	2.1
Depreciation	13.0	*2.2%*	93%	12.1	7%	0.9	80%	9.6	20%	2.4
Total Operating Expense								**42.3**		**41.7**
[1] *Operating Expenses as % of Total Revenue*								*7.1%*		*6.9%*

Notes:

[1] Finished good cost already incurred percentage of revenue (7.1%) represents costs already completed for finished goods assumption in the bottom-up method, and is applied in Table 13. Finished good cost remaining percentage of revenue (6.9%) represents cost of disposal assumption in the top-down method, and is applied in Table 13.

Table 12: Profit Allowance on Profit-Generating Finished Good Costs (without Royalty)

				Profit on Finished Goods			
				Bottom-up		Top Down	
	K	D (Table 11)	L= K*D	H (Table 11)	M = K*H	J (Table 11)	N = K*J
Financial Statement Data	% of FG Costs That Earn Profit	Total Current Benefit	Current Benefit Value Added	FG Costs Already Incurred	FG Costs Incurred That Earn a Profit	FG Costs Remaining	FG Costs Remaining That Earn a Profit
Revenue		600.0					
COGS	35%	350.0	122.5	350.0	122.5	-	-
Operating Expenses							
Selling	100%	13.0	13.0	-	-	13.0	13.0
Marketing	100%	11.3	11.3	-	-	11.3	11.3
Warehousing	100%	9.0	9.0	-	-	9.0	9.0
R&D	100%	9.0	9.0	9.0	9.0	-	-
Royalty for Intangible	0.0%	-	-	-	-	-	-
General and Administrative	100%	19.5	19.5	15.6	15.6	3.9	3.9
Corporate Allocation	100%	10.2	10.2	8.1	8.1	2.1	2.1
Depreciation	100%	12.1	12.1	9.6	9.6	2.4	2.4
Total Operating Expenses and COGS		**434.0**	**206.5**	**392.3**	**164.8**	**41.7**	**41.7**
[1] **EBITA**		**166.0**			**132.5**		**33.5**
[2] *Cost-Based Margin (EBITA / Total Costs)*		*38.2%*	*80.4%*		*80.4%*		*80.4%*
[3] *EBITA on Costs That Earn a Profit / Sum of Costs*					*33.8%*		*80.4%*

Notes:

[1] For columns L, M, and N, EBITA is calculated as cost-based margin, multiplied by the total costs.

[2] For columns L, M, and N, Cost-based Margin is based on the total current benefit EBITA ($166.0, per column D), divided by the sum of current benefit costs that earn a profit ($206.5, per column L).

[3] Profit allowance on finished good costs already completed (33.8%, per column M) is calculated as the EBITA for finished good cost that earn a profit which are already incurred ($132.5, per column M), divided by the sum of FG cost already incurred ($392.3, per column H). Profit allowance on costs to dispose (80.4%), per column N) is calculated as the EBITA for finished good cost that earn a profit which are remaining ($33.5, per column N), divided by the sum of FG cost remaining ($41.7, per column J).

Table 13: Top-down and Bottom-up Methods for Valuing Finished Goods (without Royalty)

Inputs / Assumptions	Top Down Finished Goods			Bottom Up Finished Goods		
Adjusted Book Value	$110.0	*(a)*		$188.6	*(e)*	*=a / b*
COGS as a % of Revenue	58.3%	*(b)*	*Per Table 11*	7.1%	*(h)*	*Per Table 11*
Costs of Disposal %	6.9%	*(c)*	*Per Table 11*	33.8%	*(i)*	*Per Table 12*
Profit Allowance on Costs to Dispose %	80.4%	*(d)*	*Per Table 12*			

Valuation				Valuation			
Selling Price	$188.6	*(e)*	*=a / b*	Adjusted Book Value	$110.0	*(j)*	
Less: Costs of Disposal	$13.1	*(f)*	*= e* c*	Plus: Costs Already Completed	$13.3	*(k)*	*= e * h*
Less: Profit Allowance on Costs to Dispose	$10.5	*(g)*	*= d * f*	Plus: Profit on Costs Already Completed	$41.6	*(l)*	*= i * (j + k)*
Net Realizable Value	**$164.9**		*= e-f-g*	**Net Realizable Value**	**$164.9**		*= j + k + l*

E.32 Table 14 through Table 16 below incorporate a hypothetical royalty payment, assuming the intangible is utilized throughout the inventory lifecycle and the proportion of the royalty incurred as of the measurement date is the same as the weighted average proportion of all other costs incurred (i.e. the same as the assumption for the overhead operating costs or 80%).

E.33 Under this assumption, the costs of disposal are higher (because they include the royalty) but this is offset by the lower profit margin. The remaining profit margin reflects return on routine assets. Thus, the resulting NRV is consistent with the illustrative example above, where no royalty rate was incorporated. However, it may not always be appropriate to assume that the proportion of the royalty already incurred is the same as other expenses. The main illustrative example in paragraphs E.01–.26 of this appendix, presents more specific assumptions about when different intangible assets are utilized.

Table 14: Current vs Future and FG Cost Incurred vs Remaining (Pro-rata Royalty)

			Current vs Future Benefit Costs				Finished Goods ("FG") Costs Incurred vs Remaining			
							Bottom-up Method		Top-down Method	
	A	B	C	D = A*C	E = 1-C	F = A*E	G	H = D*G	I = 1-G	J = D*I
Financial Statement Data	Baseline PFI	% of Revenue	Current Benefit %	Current Benefit $	Future Benefit %	Future Benefit $	FG Costs Already Incurred %	FG Costs Already Incurred $	FG Costs Remaining %	FG Costs Remaining $
Revenue	600.0		100%	600.0	0%	-				
COGS	350.0	*58.3%*	100%	350.0	0%	-	100%	350.0	0%	-
Operating Expenses										
Selling	13.0	*2.2%*	100%	13.0	0%	-	0%	-	100%	13.0
Marketing	15.0	*2.5%*	75%	11.3	25%	3.8	0%	-	100%	11.3
Warehousing	9.0	*1.5%*	100%	9.0	0%	-	0%	-	100%	9.0
R&D	18.0	*3.0%*	50%	9.0	50%	9.0	100%	9.0	0%	-
Royalty for Intangible	30.0	*5.0%*	100%	30.0	0%	-	80%	23.9	20%	6.1
General and Administrative	21.0	*3.5%*	93%	19.5	7%	1.5	80%	15.6	20%	3.9
Corporate Allocation	11.0	*1.8%*	93%	10.2	7%	0.8	80%	8.1	20%	2.1
Depreciation	13.0	*2.2%*	93%	12.1	7%	0.9	80%	9.6	20%	2.4
Total Operating Expense								**66.3**		**47.7**
[1] *Operating Expenses as % of Total Revenue*								*11.0%*		*8.0%*

Notes:

[1] Finished good cost already incurred percentage of revenue (11.0%) represents costs already completed for finished goods assumption in the bottom-up method, and is applied in Table 16. Finished good cost remaining percentage of revenue (8.0%) represents cost of disposal assumption in the top-down method, and is applied in Table 16.

Table 15: Profit Allowance on Profit Generating Finished Good Costs (Pro-rata Royalty)

				Profit on Finished Goods			
				Bottom-up		Top Down	
	N	D (Table 14)	O=N*D	H (Table 14)	P=N*H	J (Table 14)	Q=N*J
Financial Statement Data	**% of FG Costs That Earn Profit**	**Total Current Benefit**	**Current Benefit Value Added**	**FG Costs Already Incurred**	**FG Costs Incurred That Earn a Profit**	**FG Costs Remaining**	**FG Costs Remaining That Earn a Profit**
Revenue		600.0					
COGS	35%	350.0	122.5	350.0	122.5	-	-
Operating Expenses							
Selling	100%	13.0	13.0	-	-	13.0	13.0
Marketing	100%	11.3	11.3	-	-	11.3	11.3
Warehousing	100%	9.0	9.0	-	-	9.0	9.0
R&D	100%	9.0	9.0	9.0	9.0	-	-
Royalty for Intangible	0.0%	30.0	-	23.9	-	6.1	-
General and Administrative	100%	19.5	19.5	15.6	15.6	3.9	3.9
Corporate Allocation	100%	10.2	10.2	8.1	8.1	2.1	2.1
Depreciation	100%	12.1	12.1	9.6	9.6	2.4	2.4
Total Operating Expenses and COGS		**464.0**	**206.5**	**416.3**	**164.8**	**47.7**	**41.7**
[1] **EBITA**		**136.0**			**108.5**		**27.4**
[2] *Cost-Based Margin (EBITA / Total Costs)*		*29.3%*	*65.8%*	→	*65.8%*	→	*65.8%*
[3] *EBITA on Costs That Earn a Profit / Sum of Costs*					*26.1%*		*57.5%*

Notes:

[1] For columns O, P, and Q, EBITA is calculated as cost-based margin, multiplied by the total costs.

[2] For columns O, P, and Q, Cost-based Margin is based on the total current benefit EBITA ($136.0, per column D), divided by the sum of current benefit costs that earn a profit ($206.5, per column L).

[3] Profit allowance on finished good costs already completed (26.1%, per column P) is calculated as the EBITA for finished good cost that earn a profit which are already incurred ($108.5, per column P), divided by the sum of FG cost already incurred ($416.3, per column H). Profit allowance on costs to dispose (57.5%), per column Q) is calculated as the EBITA for finished good cost that earn a profit which are remaining ($27.4, per column Q), divided by the sum of FG cost remaining ($47.7, per column J).

Table 16: Top-down and Bottom-up Methods for Valuing Finished Goods (Pro-rata Royalty)

	Top Down			Bottom Up		
Inputs / Assumptions	**Finished Goods**			**Finished Goods**		
Adjusted Book Value	$110.0	*(a)*		$188.6	*(e)*	*=a / b*
COGS as a % of Revenue	58.3%	*(b)*	*Per Table 14*	11.0%	*(h)*	*Per Table 14*
Costs of Disposal %	8.0%	*(c)*	*Per Table 14*	26.1%	*(i)*	*Per Table 15*
Profit Allowance on Costs to Dispose %	57.5%	*(d)*	*Per Table 15*			

Valuation				**Valuation**			
Selling Price	$188.6	*(e)*	*=a / b*	Adjusted Book Value	$110.0	*(j)*	
Less: Costs of Disposal	$15.0	*(f)*	*= e* c*	Plus: Costs Already Completed	$20.8	*(k)*	*= e * h*
Less: Profit Allowance on Costs to Dispose	$8.6	*(g)*	*= d * f*	Plus: Profit on Costs Already Completed	$34.1	*(l)*	*= i * (j + k)*
Net Realizable Value	**$164.9**		*= e-f-g*	**Net Realizable Value**	**$164.9**		*= j + k + l*

E.34 As illustrated above in Table 13 and Table 16, the resulting NRV is the same if no explicit adjustment regarding the intangible asset is made, assuming that the intangible asset is utilized throughout the manufacturing and selling process. The royalty payment incorporated in this scenario represents the profit contribution of the intangible asset. In this example, the same value manifests itself in the inventory valuation either as a cost (through the royalty paid) or in the inventory profit (when the intangible asset is owned). From a bottom-up perspective, a portion of the profit that would be accumulated in the inventory if the intangible asset were owned is simply treated as a cost if it is licensed with no impact on the NRV. The same holds true from a top-down perspective, where a disposal profit (recognized when the intangible asset is owned) is treated as a disposal cost when licensed. This balance exists because NRV is measured on a pretax basis and the contribution of the intangible asset to the inventory value is the same whether it is defined as

a cost or profit. Note also that when the intangible asset is licensed, there is no allocation of profit related to the royalty payment as the profit is already included therein.

E.35 This scenario considers the inventory valuation model without explicitly accounting for intangible assets. The equivalent assumptions of utilizing all intangibles in proportion to all other costs is likely to be different from the functional apportionment of the intangibles, if they were each analyzed explicitly. As illustrated in Table 17, the concluded NRV in Scenario 1 differs from the base illustrative example used in this appendix. In Scenario 1, $9.30 of intangible value that should have been contributed at disposal effectively becomes subsumed in the inventory step-up. The difference may be even more material, depending on the company's cost structure and the relative size of the intangible assets contributing to manufacturing versus the disposal effort.

Table 17: Comparison of Base Illustrative Example and Scenario 1

Concluded Value	Finished Goods
Base Illustrative Example (functional apportionment)	$155.6 *Per Table 7, Table 8, Table 9*
Scenario 1 (intangibles used throughout)	$164.9 *Per Table 13, Table 16*
Difference	**-$9.30**

Benefit from Intangible Assets: Scenario 2

E.36 The purpose of this scenario is to explicitly demonstrate that the value of the inventory would be the same regardless of whether the market participant buyer owned the intangible asset, licensed it from a third party, or sold non-branded inventory. In order to demonstrate this, it is assumed that all intangible assets are utilized *at the end,* during the disposition process. Note that this is a simplifying assumption, but in practice intangible assets are not necessarily used in their entirety during the disposition process.

E.37 Consider an example where three companies have the same adjusted book value of finished goods inventory and operate in the same business except that:

- Company A has its own brand,
- Company B licenses the brand from a third party at a royalty rate of 5%, and
- Company C sells non-branded inventory.

E.38 For both Company A and B, the brand is utilized during the disposal effort (i.e. the finished goods do not incorporate any attributes of the brand). In the example, Company A and B earn the same revenue, which is a "gross price" that includes the benefit of the brand. The brand is considered a pivotal asset[7] in that it creates excess profit. Company B pays a royalty to a third party to license the brand, reducing its profit margin. In contrast, Company A does not have to pay this royalty and therefore the additional profit falls to the bottom line.

E.39 Table 18 and Table 19 show the analysis for Company A and B, assuming a 5% royalty is paid at the time of disposal. For Company A, the royalty rate modeled in Table 18 and Table 19 is a hypothetical amount while for Company B, the royalty is an actual payment. To simplify this example, the tables below assume that all costs, other than royalty for intangible, are profit generating.

[7] See footnote 1 in paragraph E.05 for a description of a pivotal asset.

Table 18: Scenario 2 Company A and B Analysis (with intangible assets)

				Current vs Future Benefit Costs				Finished Goods ("FG") Costs Incurred vs Remaining			
								Bottom-up Method		Top-down Method	
	A	B	C	D = A*C	E = 1-C	F = A*E	G	H = D*G	I = 1-G	J = D*I
				Current Benefit		Future Benefit		FG Costs Already Incurred		FG Costs Remaining	
Financial Statement Data	Baseline PFI	% of Revenue	%	$	%	$	%	$	%	$
Revenue	600.0		100%	600.0	0%	-				
COGS	350.0	*58.3%*	100%	350.0	0%	-	100%	350.0	0%	-
Operating Expenses										
Selling	13.0	*2.2%*	100%	13.0	0%	-	0%	-	100%	13.0
Marketing	15.0	*2.5%*	75%	11.3	25%	3.8	0%	-	100%	11.3
Warehousing	9.0	*1.5%*	100%	9.0	0%	-	0%	-	100%	9.0
R&D	18.0	*3.0%*	50%	9.0	50%	9.0	100%	9.0	0%	-
Royalty for Intangible	30.0	*5.0%*	100%	30.0	0%	-	0%	-	100%	30.0
[1] General and Administrative	21.0	*3.5%*	97%	20.3	3%	0.7	92%	18.6	8%	1.7
[1] Corporate Allocation	11.0	*1.8%*	97%	10.7	3%	0.3	92%	9.8	8%	0.9
[1] Depreciation	13.0	*2.2%*	97%	12.6	3%	0.4	92%	11.5	8%	1.1
Total Direct Operating Costs (excluding Royalty)	**405.0**			**392.3**				**359.0**		
Total Operating Expense (including Royalty)								**48.9**		**66.9**
Total Operating Expense (excluding Royalty)										**36.9**
[2] *Operating Expenses as % of Total Revenue*								*8.1%*		*11.2%*

Notes:

[1] In this example, the current benefit proportion for overhead operating costs (97%) is calculated as the total direct current benefit costs ($392.3), divided by the total direct costs ($405.0). The proportion of finished good costs already incurred for overhead operating costs (92%) is calculated as the total finished good cost already incurred for direct costs ($359.0) divided by the total direct current benefit costs ($392.3).

[2] Finished good cost already incurred percentage of revenue (8.1%) represents costs already completed for finished goods assumption in the bottom-up method. Finished good cost remaining percentage of revenue (11.2%) represents cost of disposal assumption in the top-down method.

Table 19: Scenario 2 Profit Allowance on Profit Generating Finished Goods Costs

				Profit on Finished Goods			
				Bottom-up		Top Down	
	K	D (Table 18)	L= K*D	H (Table 18)	M = K*H	J (Table 18)	N = K*J
Financial Statement Data	% of FG Costs That Earn Profit	Total Current Benefit	Current Benefit Value Added	FG Costs Already Incurred	FG Costs Incurred That Earn a Profit	FG Costs Remaining	FG Costs Remaining That Earn a Profit
Revenue		600.0					
COGS	100%	350.0	350.0	350.0	350.0	-	-
Operating Expenses							
Selling	100%	13.0	13.0	-	-	13.0	13.0
Marketing	100%	11.3	11.3	-	-	11.3	11.3
Warehousing	100%	9.0	9.0	-	-	9.0	9.0
R&D	100%	9.0	9.0	9.0	9.0	-	-
Royalty for Intangible	0.0%	30.0	-	-	-	30.0	-
General and Administrative	100%	20.3	20.3	18.6	18.6	1.7	1.7
Corporate Allocation	100%	10.7	10.7	9.8	9.8	0.9	0.9
Depreciation	100%	12.6	12.6	11.5	11.5	1.1	1.1
Total Operating Expenses and COGS		**465.8**	**435.8**	**398.9**	**398.9**	**66.9**	**36.9**
[1] **EBITA**		**134.2**			**122.8**		**11.4**
[2] *Cost-Based Margin (EBITA / Total Costs)*		*28.8%*	*30.8%*	----------→	*30.8%*	----------→	*30.8%*
[3] *EBITA on Costs That Earn a Profit / Sum of Costs*					*30.8%*		*17.0%*

Notes:

[1] For columns L, M, and N, EBITA is calculated as cost-based margin, multiplied by the total costs.

[2] For columns L, M, and N, Cost-based Margin is based on the total current benefit EBITA ($134.2, per column D), divided by the sum of current benefit costs that earn a profit ($435.8, per column L).

[3] Profit allowance on finished good costs already completed (30.8%, per column M) is calculated as the EBITA for finished good cost that earn a profit which are already incurred ($122.8, per column M), divided by the sum of FG cost already incurred ($398.9, per column H). Profit allowance on costs to dispose (17.0%), per column N) is calculated as the EBITA for finished good cost that earn a profit which are remaining ($11.4, per column N), divided by the sum of FG cost remaining ($66.9, per column J).

E.40 In this example, Company C earns a smaller amount of revenue on their non-branded product, but their cost of disposal is also smaller than Companies A and B. Since the brand is

considered a pivotal asset, it creates excess profit. Thus, the revenue earned by Company C is smaller than A and B by the royalty payment (i.e. both return on and return of the intangible asset).

Table 20: Scenario 2 Company C Analysis (Non-Branded)

Inputs / Assumptions		Source	
Royalty	30.0	*(a)*	*Per Table 18*
EBITA on Costs That Earn a Profit / Sum of Costs	17.0%	*(b)*	*Per Table 19*
Profit Contribution	35.1	*(c)*	*= a * (1+b)*
Revenue Company A (Brand Owner)	600.0	*(d)*	*Per Table 18*
Revenue Company C (Non-Branded)	564.9	*(e)*	*= d - c*
Total Operating Expense (excluding Royalty)	36.9	*(f)*	*Per Table 18*
Company C Cost of Disposal (Non-Branded)	6.5%	*(g)*	*= f / e*

E.41 As summarized in Table 21, this example illustrates that, if all intangible assets are used at the time of disposal, the NRV for inventory is the same for all three companies. In other words, the same value has been created through the manufacturing process for all three companies regardless of whether the company owned the intangible asset, licensed it from a third party, or sold non-branded inventory. However, it may not always be appropriate to assume that intangible assets are used entirely at the time of disposal. If the intangible asset (brand) has created excess profits during the manufacturing process, the value of inventory would still be the same regardless of the fact that it is owned or licensed but would be different from the value of non-branded inventory. The main illustrative example in paragraphs E.01–.26 of this appendix, presents more specific assumptions about when different intangible assets are used which allows the valuation specialist to make more detailed assumptions.

Table 21: Scenario 2 Summary

	Inputs / Assumptions	Company A (Brand Owner)	Company B (Brand Licensor)	Company C (Non-Branded)		
	Revenue	$600.0	$600.0	$564.9	*(a)*	*Per Table 18 & 20*
	COGS	$350.0	$350.0	$350.0	*(b)*	*Per Table 18*
	Finished Goods Adjusted Book Value	$110	$110	$110	*(c)*	
	COGS as a % of Revenue	58.3%	58.3%	62.0%	*(d)*	*= b / a*
[1]	Costs of Disposal % (Excluding Royalty)	11.2%	6.2%	6.5%	*(e)*	*Per Table 18 & 20*
	Costs of Disposal % (Royalty)		5.0%		*(f)*	*Per Table 18*
	Profit Allowance on Costs to Dispose %	17.0%	17.0%	17.0%	*(g)*	*Per Table 19*

Valuation	Company A (Brand Owner)	Company B (Brand Licensor)	Company C (Non-Branded)		
Selling Price	$188.6	$188.6	$177.5	*(h)*	*= c / d*
Costs of Disposal	$21.04	$11.61	$11.61	*(i)*	*= h * e*
Actual Royalty		$9.43		*(j)*	*= h * f*
Reasonable Profit Allowance	$3.6	$3.6	$2.0	*(k)*	*= g*(i+j)*
Net Realizable Value of Finished Goods	**$164.0**	**$164.0**	**$164.0**		***=h - i - j- k***

Notes:
[1] Costs of disposal % (excluding royalty) for Company B (6.2%) are calculated as the total costs of disposal (11.2%) less royalty for the intangible 5.0%.

Glossary

This glossary contains terms from the following sources, when indicated:

- *International Glossary of Business Valuation Terms* (IGBVT), which has been adopted by a number of professional societies and organizations, including the AICPA
- FASB *Accounting Standards Codification* (ASC)
- VS section 100, *Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset*[1]

active market. A market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. (FASB ASC Master Glossary)

acquiree. The business or businesses that the **acquirer** obtains control of in a **business combination**. (FASB ASC Master Glossary)

acquirer. The entity that obtains control of the **acquiree**. However, in a **business combination** in which a variable interest entity (VIE) is acquired, the primary beneficiary of that entity always is the acquirer. (FASB ASC Master Glossary)

acquisition date. The date on which the **acquirer** obtains control of the **acquiree** (FASB ASC Master Glossary). Also sometimes referred to as the *measurement date*.

bargain purchase. A business combination in which the acquisition-date amounts of the identifiable net assets acquired exceed the sum of (i) the consideration transferred, which is generally measured at its acquisition-date fair value, (ii) the fair value of any noncontrolling interest in the acquiree, and (iii) the acquisition-date fair value of any previously held equity interest in the acquiree.

business combination. A transaction or other event in which an **acquirer** obtains control of one or more businesses. Transactions sometimes referred to as *true mergers* or *mergers of equals* also are business combinations. (FASB ASC Master Glossary)

business enterprise value (BEV). Equals the **operating value** plus the **fair value** of nonoperating assets (e.g., excess cash, marketable securities, prepaid pension assets, investments in unconsolidated subsidiaries and other long-term investments). It is also referred to as *total funds invested*, which may consist of

[1] VS section 100 can be found in AICPA Professional Standards.

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interest-bearing debt, non-equity claims, hybrid securities, and equity. It also may be referred to as *enterprise value*.

business unit. For purposes of this guide, business unit is the lowest level or group of operating assets for which **prospective financial information (PFI)** is available and is consistent with their respective units of account. Business unit is also referred to in this guide as *collection of assets*.

capital or contributory asset charges (CACs). A fair return on an entity's contributory assets, which are tangible and **intangible assets** used in the production of income or cash flow associated with an intangible asset being valued. In this context, income or cash flow refers to an applicable measure of income or cash flow, such as net income, or operating cash flow before taxes and capital expenditures. A capital charge may be expressed as a percentage return on an economic rent associated with, or a profit split related to, the contributory assets. (Appendix C, "Glossary of Additional Terms," of VS section 100)

conditional cash flows. Cash flows that are conditional upon the occurrence of specified events. (FASB ASC 820-10-55-10) For example, for IPR&D assets, the condition generally relates to the commercial success of the IPR&D project being valued.

contingent consideration. Usually an obligation of the **acquirer** to transfer additional assets or equity interests to the former owners of an **acquiree** as part of the exchange for control of the acquiree if specified future events occur or conditions are met [also referred to as an **earnout**]. However, contingent consideration also may give the acquirer the right to the return of previously transferred consideration if specified conditions are met [also referred to as a *clawback*]. (FASB ASC Master Glossary)

cost approach. A valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset (often referred to as *current replacement cost*). (FASB ASC Master Glossary)

A general way of determining a value indication of an individual asset by quantifying the amount of money required to replace the future service capability of that asset. (IGBVT)

cost of capital. The expected rate of return that the market requires in order to attract funds to a particular investment. (IGBVT)

cost savings method. The premise of the cost savings method is that an asset may afford its owner cost savings (that is, a reduced or eliminated cash outflow) over the best alternative to the asset. These cost savings represent the value of owning the asset. The **present value** of the future net after-tax cost savings represents the **fair value** of the asset.

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defensive intangible asset. An acquired intangible asset in a situation in which an entity does not intend to actively use the asset but intends to hold (lock up) the asset to prevent others from obtaining access to the asset. (FASB ASC Master Glossary)

discount rate. A rate of return used to convert a future monetary sum into **present value**. (IGBVT)

discount rate adjustment technique (DRAT). A present value technique that uses a risk-adjusted **discount rate** and contractual, promised, or most likely cash flows. (FASB ASC Master Glossary)

discounted cash flow (DCF) method. A method within the **income approach** whereby the **present value** of future expected net cash flows is calculated using a **discount rate**. (IGBVT)

EBIT. Earnings before interest and taxes.

EBITDA. Earnings before interest, taxes, depreciation, and amortization.

earnout. See **contingent consideration**.

economic goodwill. For purposes of this guide, economic goodwill is the residual amount that results from subtracting the **fair value** of the **identifiable** assets, including **working capital**, from the **operating value** of the entity adjusted to reflect a taxable transaction (that is, inclusion of the **tax amortization benefit (TAB)**). Simply stated, it represents future cash flows of the entity not associated with separately identified assets. It excludes the effect of accounting adjustments such as deferred taxes.

economic life. Either the period over which an asset is expected to be economically usable by one or more users or the number of production or similar units expected to be obtained from an asset by one or more users. (FASB ASC Master Glossary)

excess profits. For purposes of this guide, excess profits are defined as returns, or profit, in excess of returns on **routine assets** utilized (e.g., **working capital**, fixed assets and other routine assets) and routine functions.

expected cash flow. The probability-weighted average (that is, mean of the distribution) of possible future cash flows. (FASB ASC Master Glossary)

expected present value technique (EPVT). The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (that is, the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting **expected cash flow** is not conditional upon the

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occurrence of any specified event (unlike the cash flows used in the **discount rate adjustment technique**). (FASB ASC 820-10-55-13)

fair value. The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between **market participants** at the measurement date. (FASB ASC 820, *Fair Value Measurement*)

FASB. Financial Accounting Standards Board.

greenfield method. A valuation method which assumes that a business commences operations with only the subject asset in place. The business must incur start-up costs and invest in other assets (e.g., various tangible assets, a workforce, customers) to assemble a business. The cash flows of the start-up business are discounted to **present value** to estimate the **fair value** of the subject asset.

goodwill. An asset representing the future economic benefits arising from other assets acquired in a **business combination** or an acquisition by a not-for-profit entity that are not individually identified and separately recognized. (FASB ASC Master Glossary)

highest and best use. The use of a nonfinancial asset by **market participants** that would maximize the value of the asset or the group of assets and liabilities (for example, a business) within which the asset would be used. (FASB ASC Master Glossary)

identifiable. An asset is identifiable if it meets either of the following criteria:

a. It is separable, that is, capable of being separated or divided from the entity and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract, identifiable asset, or liability, regardless of whether the entity intends to do so.

b. It arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

(FASB ASC Master Glossary)

income approach. Valuation techniques that convert future amounts (for example, cash flows or income and expenses) to a single current (that is, discounted) amount. The **fair value** measurement is determined on the basis of the value indicated by current market expectations about those future amounts. (FASB ASC Master Glossary)

A general way of determining a value indication of a business, business ownership interest, security, or intangible asset using one or more methods that convert anticipated economic benefits into a present single amount. (IGBVT)

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Also known as *income-based approach*.

intangible assets. Assets (not including financial assets) that lack physical substance. (The term intangible assets is used to refer to intangible assets other than **goodwill**.) (FASB ASC Master Glossary)

intellectual property (IP)-based intangible asset. Asset that is characterized by the nature of the IP that derives value directly from attributes creating **excess profits** and may also benefit from legal protection (e.g., patent or FCC license) or trade secrets (e.g., proprietary formula).

internal rate of return (IRR). A **discount rate** at which the **present value** of the future cash flows of the investment equals the cost of the investment. (IGBVT)

For the purposes of this guide, the IRR is the discount rate applied to operating cash flows, based on market participant assumptions, such that the present value equates to the **transaction operating value**. It is used to assess whether the **prospective financial information** reflects expected cash flows through comparison to **weighted average cost of capital** estimates.

market approach. A valuation technique that uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities, such as a business. (FASB ASC Master Glossary)

A general way of determining a value indication of a business, business ownership interest, security, or intangible asset by using one or more methods that compare the subject to similar businesses, business ownership interests, securities, or **intangible assets** that have been sold. (IGBVT)

Also known as *market-based approach*.

market participants. Buyers and sellers in the principal (or most advantageous) market for the asset or liability that have all of the following characteristics:

a. They are independent of each other, that is, they are not related parties, although the price in a related-party transaction may be used as an input to a **fair value** measurement if the reporting entity has evidence that the transaction was entered into at market terms

b. They are knowledgeable, having a reasonable understanding about the asset or liability and the transaction using all available information, including information that might be obtained through due diligence efforts that are usual and customary

c. They are able to enter into a transaction for the asset or liability

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d. They are willing to enter into a transaction for the asset or liability, that is, they are motivated but not forced or otherwise compelled to do so.

(FASB ASC Master Glossary)

multiperiod excess earnings method (MPEEM). A specific application of the **discounted cash flow method**, which is more broadly a form of the **income approach**. The most common method used to estimate the **fair value** of an intangible asset.

noncontrolling interest. The portion of equity (net assets) in a subsidiary not attributable, directly or indirectly, to a parent. A noncontrolling interest is sometimes called a *minority interest*. (FASB ASC Master Glossary)

observable inputs. Inputs that are developed using market data, such as publicly available information about actual events or transactions, and that reflect the assumptions that **market participants** would use when pricing the asset or liability. (FASB ASC Master Glossary)

operating value. For purposes of this guide, operating value is defined as the **fair value** of the ongoing operations of a company (or **business unit**) consisting of operating assets less operating liabilities.

pivotal asset. An asset that provides an owner or licensee with the ability to create a significant amount of the excess profit in the **business unit** or value chain. Pivotal assets' functions are not available from alternative sources because they are unique or scarce assets. An iconic brand name is an example of a pivotal asset.

present value. A tool used to link future amounts (cash flows or values) to a present amount using a **discount rate** (an application of the **income approach**). Present value techniques differ in how they adjust for risk and in the type of cash flows they use. See **discount rate adjustment technique**. (FASB ASC Master Glossary)

prospective financial information (PFI). Any financial information about the future. The information may be presented as complete financial statements or limited to one or more elements, items, or accounts. Prospective financial information can be either a forecast or a projection (AICPA Guide, *Prospective Financial Information*). PFI may be presented on GAAP or non-GAAP basis.

relationship-based intangible asset. An asset that derives its value indirectly through the contributions of intellectual capital and other assets, and it may be formed through relationships between specific individuals (e.g., customer relationships).

relief from royalty method. A valuation method used to value certain **intangible assets** (for example, trademarks and trade names) based on the premise that the only value that a purchaser of the assets receives is the exemption from paying a

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royalty for its use. Application of this method usually involves estimating the fair market value of an intangible asset by quantifying the **present value** of the stream of market-derived royalty payments that the owner of the intangible asset is exempted from or "relieved" from paying. (Appendix C, "Glossary of Additional Terms," of VS section 100)

replacement cost new. The current cost of a similar new property having the nearest equivalent utility to the property being valued. (IGBVT) Also known as *current replacement cost* or *replacement cost.*

required rate of return. The minimum rate of return acceptable by investors before they will commit money to an investment at a given level of risk. (IGBVT)

return on invested capital (ROIC). The amount, expressed as a percentage, earned on a company's total capital for a given period. (IGBVT)

reverse acquisition. An acquisition in which the entity that issues securities (the legal **acquirer**) is identified as the **acquiree** for accounting purposes based on the guidance in paragraphs 805-10-55-11 through 55-15. The entity whose equity interests are acquired (the legal acquiree) must be the acquirer for accounting purposes for the transaction to be considered a reverse acquisition. (FASB ASC Master Glossary)

risk premium. Compensation sought by risk-averse **market participants** for bearing the uncertainty inherent in the cash flows of an asset or a liability. Also referred to as a *risk adjustment*. (FASB ASC Master Glossary)

routine asset. An asset that is not unique or scarce. Such assets provide functionality that can be accessed from a third party in an arm's length transaction or the functions and activities that provide a **routine profit**. Internally used software is an example of a routine asset.

routine profit. For purposes of this guide, routine profit is defined as returns on **routine assets** utilized (e.g., **working capital**, fixed assets and other routine assets) and routine functions. Routine profit is commensurate with the routine nature of the assets from which it is derived.

SSVS. Statement on Standards for Valuation Services, issued by the AICPA and available in VS section 100.

synergy. Used mostly in the context of mergers and acquisitions, the concept that the value and performance of two entities combined will be greater than the sum of the separate individual parts. In the context of developing **prospective financial information**, synergies may account for some of the difference between the assumptions used to estimate cash flows that are unique to an entity and the assumptions that would be used by **market participants**. (AICPA Accounting and Valuation Guide, *Assets Acquired to Be Used in Research and Development Activities*)

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tax amortization benefit (TAB). Refers to the **present value** of income tax savings resulting from the tax deduction generated by the amortization of an intangible asset over its tax life for the applicable tax jurisdiction.

terminal value. The value as of the end of the discrete projection period in a discounted future earnings model. (IGBVT)

In the context of this guide, this represents the business' value as of the end of the discrete cash flow period in a discounted cash flow model, when earnings are expected to stabilize. Also known as *residual value*.

transaction operating value. Equals the **business enterprise value** derived from the purchase price and the **fair value** of other elements of invested capital minus the fair value of nonoperating assets (e.g., excess cash, marketable securities, prepaid pension assets, investments in unconsolidated subsidiaries and other long-term investments).

unobservable inputs. Inputs for which market data are not available and that are developed using the best information available about the assumptions that **market participants** would use when pricing the asset or liability. (FASB ASC Master Glossary)

useful life. The period over which an asset is expected to contribute directly or indirectly to future cash flows. (FASB ASC Master Glossary)

valuation specialist. An individual recognized as possessing the abilities, skills, and experience to perform valuations. A valuation specialist may be external or internal. When referring to the valuation specialist in this guide, it is commonly presumed that it is an external party but, if individuals within the entity possess the abilities, skills, and experience to perform valuations, they can also serve in the capacity of a valuation specialist.

with-and-without method. A valuation method under which the **fair value** of the asset is determined as the difference between the fair value of the entity (or a collection of assets) computed under a "with" scenario (i.e., the set of assets includes the subject asset) and under a "without" scenario (i.e., the set of assets excludes the subject asset). It can also be computed as the difference between cash flows in the "with" and "without" scenarios.

weighted average cost of capital (WACC). The **cost of capital** (**discount rate**) determined by the weighted average, at market value, of the cost of all financing sources in the business enterprise's capital structure. (IGBVT)

working capital. Working capital is represented by the excess of current assets over current liabilities and identifies the relatively liquid portion of total entity capital that constitutes a margin or buffer for meeting obligations within the ordinary operating cycle of the entity. (FASB ASC Master Glossary)

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