

stronger together



Management's discussion and analysis

Caution regarding forward-looking statements

This document contains forward-looking statements about expected events and the financial and operating performance of TELUS Corporation. The terms *TELUS*, *the Company*, *we*, *us* and *our* refer to TELUS Corporation and, where the context of the narrative permits or requires, its subsidiaries.

Forward-looking statements include any statements that do not refer to historical facts. They include, but are not limited to, statements relating to our objectives and our strategies to achieve those objectives, our targets, outlook, updates, and our multi-year dividend growth program. Forward-looking statements are typically identified by the words *assumption*, *goal*, *guidance*, *objective*, *outlook*, *strategy*, *target* and other similar expressions, or future or conditional verbs such as *aim*, *anticipate*, *believe*, *could*, *expect*, *intend*, *may*, *plan*, *predict*, *seek*, *should*, *strive* and *will*.

By their nature, forward-looking statements are subject to inherent risks and uncertainties and are based on assumptions, including assumptions about future economic conditions and courses of action. These assumptions may ultimately prove to have been inaccurate and, as a result, our actual results or events may differ materially from expectations expressed in or implied by the forward-looking statements. Our general outlook and assumptions for 2018 are presented in *Section 9 General trends, outlook and assumptions* in this Management's discussion and analysis (MD&A).

Risks and uncertainties that could cause actual performance or events to differ materially from the forward-looking statements made herein and in other TELUS filings include, but are not limited to, the following:

- **Competition** including: our ability to continue to retain customers through an enhanced customer service experience, including through the deployment and operation of evolving wireless and wireline networks; the ability of industry competitors to successfully launch their respective platforms and to combine a mix of residential local voice over Internet protocol (VoIP), long distance, high-speed Internet access (HSIA) and, in some cases, wireless services under one bundled and/or discounted monthly rate, along with their existing broadcast or satellite-based TV services; the success of new products, new services and supporting systems, such as Internet of Things (IoT) services for Internet-connected devices; continued intense rivalry across all services among wireless and wireline telecommunications companies, cable-TV providers, other communications companies and over-the-top (OTT) services, which, among other things, places pressures on current and future average revenue per subscriber unit per month (ARPU), cost of acquisition, cost of retention and churn rate for all services, as do customer usage patterns, flat-rate pricing trends for voice and data, inclusive rate plans for voice and data and availability of Wi-Fi networks for data; mergers and acquisitions of industry competitors; pressures on high-speed Internet and TV ARPU and churn rate resulting from market conditions, government actions and customer usage patterns; residential and business network access line (NAL) losses; subscriber additions and retention volumes, and associated costs for wireless, TV and high-speed Internet services; and our ability to obtain and offer content on a timely basis across multiple devices on wireless and TV platforms at a reasonable cost.
- **Technological substitution** including: reduced utilization and increased commoditization of traditional wireline voice local and long distance services from impacts of OTT applications and wireless substitution, a declining overall market for paid TV services, including as a result of content piracy and signal theft and as a result of a rise in OTT direct to consumer video offerings and virtual multichannel video programming distribution platforms; the increasing number of households that have only wireless and/or Internet-based telephone services; potential wireless ARPU declines as a result of, among other factors, substitution to messaging and OTT applications; substitution to increasingly available Wi-Fi services; and disruptive technologies such as OTT IP services, including Network as a Service in the business market, that may displace or re-rate our existing data services.
- **Technology** including: subscriber demand for data that may challenge wireless networks and spectrum capacity levels in the future and may be accompanied by increases in delivery cost; our reliance on information technology and our need to streamline our legacy systems; technology options, evolution paths and roll-out plans for video distribution platforms and telecommunications networks (including broadband initiatives, such as fibre to the premises (FTTP), wireless small-cell deployment, 5G wireless and availability of resources and ability to build out adequate broadband capacity); our reliance on wireless network access agreements, which have facilitated our deployment of wireless technologies; choice of suppliers and those suppliers' ability to maintain and service their product lines, which could affect the success of upgrades to, and evolution of, technology that we offer; supplier concentration and market power for network equipment, TELUS TV and wireless handsets; the performance of wireless technology; our expected long-term need to acquire additional spectrum capacity through future spectrum auctions and from third parties to address increasing demand for data; deployment and operation of new wireline broadband networks at a reasonable cost and availability and success of new products and services to be rolled out on such networks; network reliability and change management; self-learning tools and automation that may change the way we interact with customers; and uncertainties around our strategy to replace certain legacy wireline networks, systems and services to reduce operating costs.
- **Capital expenditure levels and potential outlays for spectrum licences in spectrum auctions or from third parties**, due to: our broadband initiatives, including connecting more homes and businesses directly to fibre; our ongoing deployment of newer wireless technologies, including wireless small cells to improve coverage and capacity and prepare for a more efficient and timely evolution to 5G wireless services; utilizing acquired spectrum; investments in network resiliency and reliability; subscriber demand for data; evolving systems and business processes; implementing efficiency initiatives; supporting large complex deals; and future wireless spectrum auctions held by Innovation, Science and Economic Development Canada (ISED). Our capital expenditure levels could be impacted if we do not achieve our targeted operational and financial results.
- **Regulatory decisions and developments** including: the potential of government intervention to further increase wireless competition; the CRTC wireless wholesale services review, in which it was determined that the CRTC will regulate wholesale GSM-based domestic roaming rates and the setting of such rates charged to wireless service providers (WSPs); the Governor in Council's order to the CRTC to reconsider whether Wi-Fi networks should be considered a home network for WSPs seeking mandated roaming; future spectrum auctions and spectrum policy determinations, including the recently announced repurposing of 600 MHz spectrum (and including limitations on established wireless providers, proposed spectrum set-aside that favours certain carriers and other advantages provided to new and foreign participants, and the amount and cost of spectrum acquired); restrictions on the purchase, sale and transfer of spectrum licences; the impact of the CRTC's wireline wholesale services review, with a formal review of rates for wholesale FTTP access still to be commenced for TELUS; disputes with certain municipalities regarding rights-of-way

bylaws; and other potential threats to unitary federal regulatory authority over telecommunications, including provincial wireless legislation; the potential impacts of the CRTC's decision to require pro-rated refunds when customers terminate their services; the CRTC's proposed phase-out of the local service subsidy regime and corresponding establishment of a broadband funding regime to support the enhancement of high-speed Internet services focusing on underserved areas in Canada; the impact of the review of the Minister of Canadian Heritage's new Creative Canada policy framework announced on September 28, 2017; the CRTC's consultation and report on distribution models of the future; vertical integration in the broadcasting industry resulting in competitors owning broadcast content services, and timely and effective enforcement of related regulatory safeguards; the review of the *Copyright Act* scheduled to begin in early 2018; the federal government's stated intention to review the *Broadcasting Act* and *Telecommunications Act* as announced in the March 22, 2017 federal budget; TELUS' applications for renewal of its broadcasting distribution licences; the North American Free Trade Agreement renegotiation; and restrictions on non-Canadian ownership and control of TELUS Common Shares and the ongoing monitoring and compliance with such restrictions.

- **Human resource matters** including: recruitment, retention and appropriate training in a highly competitive industry, and the level of employee engagement.
- **Operational performance and business combination risks** including: our reliance on legacy systems and ability to implement and support new products and services and business operations in a timely manner; our ability to implement effective change management for system replacements and upgrades, process redesigns and business integrations (such as our ability to successfully integrate acquisitions, complete divestitures or establish partnerships in a timely manner, and realize expected strategic benefits, including those following compliance with any regulatory orders); the implementation of complex large enterprise deals that may be adversely impacted by available resources, system limitations and degree of co-operation from other service providers; our ability to successfully manage operations in foreign jurisdictions; information security and privacy breaches, including data loss or theft of data; intentional threats to our infrastructure and business operations; and real estate joint venture re-development risks.
- **Business continuity events** including: our ability to maintain customer service and operate our networks in the event of human error or human-caused threats, such as cyberattacks and equipment failures that could cause various degrees of network outages; supply chain disruptions; natural disaster threats; epidemics; pandemics; political instability in certain international locations; and the completeness and effectiveness of business continuity and disaster recovery plans and responses.
- **Ability to successfully implement cost reduction initiatives and realize planned savings, net of restructuring and other costs, without losing customer service focus or negatively affecting business operations.** Examples of these initiatives are: our operating efficiency and effectiveness program to drive improvements in financial results, including the future benefits of the immediately vesting transformative compensation initiative; business integrations; business product simplification; business process outsourcing; offshoring and reorganizations, including any full-time equivalent (FTE) employee reduction programs; procurement initiatives; and real estate rationalization. Additional revenue and cost efficiency and effectiveness initiatives will continue to be assessed and implemented.
- **Financing and debt requirements** including: our ability to carry out financing activities, and our ability to maintain investment grade credit ratings in the range of BBB+ or the equivalent.
- **Ability to sustain our dividend growth program through 2019.** This program may be affected by factors such as the competitive environment, economic performance in Canada, our earnings and free cash flow, our levels of capital expenditures and spectrum licence purchases,

acquisitions, the management of our capital structure, and regulatory decisions and developments. Quarterly dividend decisions are subject to assessment and determination by our Board of Directors (Board) based on the Company's financial position and outlook. Shares may be purchased under our normal course issuer bid (NCIB) when and if we consider it opportunistic, based on the Company's financial position and outlook, and the market price of TELUS shares. There can be no assurance that our dividend growth program or any NCIB will be maintained, not changed and/or completed through 2019.

- **Taxation matters** including: interpretation of complex domestic and foreign tax laws by the tax authorities that may differ from our interpretations; the timing of income and deductions, such as tax depreciation and operating expenses; changes in tax laws, including tax rates; tax expenses being materially different than anticipated, including the taxability of income and deductibility of tax attributes; elimination of income tax deferrals through the use of different tax year-ends for operating partnerships and corporate partners; and tax authorities adopting more aggressive auditing practices, for example, tax reassessments or adverse court decisions impacting the tax payable by us.
- **Litigation and legal matters** including: our ability to successfully respond to investigations and regulatory proceedings; our ability to defend against existing and potential claims and lawsuits, including intellectual property infringement claims and class actions based on consumer claims, data, privacy or security breaches and secondary market liability; and the complexity of legal compliance in domestic and foreign jurisdictions, including compliance with anti-bribery and foreign corrupt practices laws.
- **Health, safety and the environment** including: lost employee work time resulting from illness or injury, public concerns related to radio frequency emissions, environmental issues affecting our business including climate change, waste and waste recycling, risks relating to fuel systems on our properties, and changing government and public expectations regarding environmental matters and our responses.
- **Economic growth and fluctuations** including: the state of the economy in Canada, which may be influenced by economic and other developments outside of Canada, including potential outcomes of yet unknown policies and actions of foreign governments; future interest rates; inflation; unemployment levels; effects of fluctuating oil prices; effects of low business spending (such as reducing investments and cost structure); pension investment returns, funding and discount rates; and Canadian dollar: U.S. dollar exchange rates.

These risks are described in additional detail in *Section 9 General trends, outlook and assumptions* and *Section 10 Risks and risk management* in this MD&A. Those descriptions are incorporated by reference in this cautionary statement but are not intended to be a complete list of the risks that could affect the Company.

Many of these factors are beyond our control or our current expectations or knowledge. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also have a material adverse effect on our financial position, financial performance, cash flows, business or reputation. Except as otherwise indicated in this document, the forward-looking statements made herein do not reflect the potential impact of any non-recurring or special items or any mergers, acquisitions, dispositions or other business combinations or transactions that may be announced or that may occur after the date of this document.

Readers are cautioned not to place undue reliance on forward-looking statements. Forward-looking statements in this document describe our expectations and are based on our assumptions as at the date of this document and are subject to change after this date. Except as required by law, we disclaim any intention or obligation to update or revise any forward-looking statements.

This cautionary statement qualifies all of the forward-looking statements in this MD&A.

7.10 Outstanding share information

	December 31, 2017	January 31, 2018
Outstanding shares (millions)		
Common Shares	595	595
Common Share options – all exercisable (one for one)	1	1

7.11 Transactions between related parties

Transactions with key management personnel

Our key management personnel have authority and responsibility for overseeing, planning, directing and controlling our activities. They consist of our Board of Directors and our Executive Leadership Team. Total compensation expense for key management personnel was \$50 million in 2017, as compared to \$54 million in 2016. See *Note 30(a)* of the Consolidated financial statements for additional details.

Transactions with defined benefit pension plans

We provided management and administrative services to our defined benefit pension plans. Charges for these services were on a cost recovery basis and were immaterial.

Transactions with real estate joint ventures

In 2017, we had transactions with real estate joint ventures, which are related parties to us, as set out in *Note 21* of our Consolidated financial statements.

As at December 31, 2017, the proportion of space leased in the TELUS Garden office tower was approximately 99%.

For the TELUS Sky real estate joint venture, commitments and contingent liabilities include construction-related contractual commitments through to 2019 (approximately \$82 million at December 31, 2017) and construction financing (\$342 million with three Canadian financial institutions as 66⅔% lender and TELUS as 33⅓% lender).

8 Accounting matters

8.1 Critical accounting estimates

Our significant accounting policies are described in *Note 1* of the Consolidated financial statements for the year ended December 31, 2017. The preparation of financial statements in conformity with generally accepted accounting principles (GAAP) requires management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Our critical accounting estimates and significant judgments are generally discussed with the Audit Committee each quarter.

Examples of our significant judgments, apart from those involving estimation, include the following:

- Assessments about whether line items are sufficiently material to warrant separate presentation in the primary financial statements and, if not, whether they are sufficiently material to warrant separate presentation in the notes to the financial statements. In the normal course, we make changes to our assessments regarding materiality for presentation so that they reflect current economic conditions. Due consideration is given to the view that it is reasonable to expect differing opinions of what is, and is not, material.
- In respect of revenue-generating transactions, we must make judgments that affect the timing of the recognition of revenue. See *Section 8.2 Accounting policy developments* below and *Note 2* of our Consolidated financial statements for significant changes to IFRS-IASB which are not yet effective and have not yet been applied, but which will significantly affect the timing of the recognition of revenue and the classification of revenues presented as either service or equipment revenues.
 - We must make judgments about when we have satisfied our performance obligations to our customers, either over a period of time or at a point in time. Service revenues are recognized based upon customers' access to, or usage of, our telecommunications infrastructure; we believe this method faithfully depicts the transfer of the services, and thus the revenues are recognized as the services are made available and/or rendered. We consider our performance obligations arising from the sale of equipment to have been satisfied when the equipment has been delivered to, and accepted by, the end-user customers.
 - Principally in the context of revenue-generating transactions involving wireless handsets, we must make judgments about whether third-party re-sellers that deliver equipment to our customers are acting in the transaction as principals or as our agents. Upon due consideration of the relevant indicators, we believe the decision to consider the re-sellers to be acting, solely for accounting purposes, as our agents is more representative of the economic substance of the transactions, as we are the primary obligor to the end-user customers. The effect of this judgment is that no equipment revenue is recognized upon the transfer of inventory to third-party re-sellers.
 - The decision to depreciate and amortize any property, plant, equipment and intangible assets that are subject to amortization, on a straight-line basis, as we believe that this method reflects the consumption of resources related to the economic lifespan of those assets better than an accelerated method and is more representative of the economic substance of the underlying use of those assets.
 - The preparation of financial statements in accordance with GAAP requires management to make judgments that affect the financial statement disclosure of information regularly reviewed by our chief operating decision-maker used to make resource allocation decisions and to assess performance (segment information, see *Note 5* of our Consolidated financial statements). A significant judgment we make is in respect of distinguishing between our wireless and wireline operations and cash flows, such distinction

having been significantly affected by the convergence and integration of our wireless and wireline telecommunications infrastructure technology and operations. Less than one-half of the operating expenses included in the segment performance measure currently reported to our chief operating decision-maker are direct costs; judgment, largely based upon historical experience, is applied in apportioning indirect costs which are not objectively distinguishable between our wireless and wireline operations.

Through December 31, 2015, our judgment was that our wireless and wireline telecommunications infrastructure technology and operations had not experienced sufficient convergence to objectively make their respective operations and cash flows practically indistinguishable. The continued build-out of our technology-agnostic fibre-optic infrastructure, in combination with converged edge network technology, has significantly affected this judgment, as has the commercialization of fixed-wireless solutions.

It has become increasingly impractical to objectively distinguish between our wireless and wireline operations and cash flows, and the assets from which those cash flows arise. Our judgment as to whether these operations can continue to be judged to be individual components of the business and discrete operating segments may change.

The increasing impracticality of objectively distinguishing between our wireless and wireline cash flows, and the assets from which those cash flows arise, is evidence of their increasing interdependence; this may result in the unification of the wireless cash-generating unit and the wireline cash-generating unit as a single cash-generating unit for impairment testing purposes in the future. As our business continues to evolve, new cash-generating units may develop.

- The view that our spectrum licences granted by Innovation, Science and Economic Development Canada (ISED) will likely be renewed by ISED, that we intend to renew them, that we believe we have the financial and operational ability to renew them and, thus, that they have an indefinite life, as discussed further in *Note 18(d)* of the Consolidated financial statements.
- In connection with the annual impairment testing of Intangible assets with indefinite lives and Goodwill, there are instances in which we must exercise judgment in allocating our net assets, including shared corporate and administrative assets, to our cash-generating units when determining their carrying amounts.

These judgments are necessary because of the convergence that our wireless and wireline telecommunications infrastructure technology and operations have experienced to date, and because of our continuous development. There are instances in which similar judgments must also be made in respect of future capital expenditures in support of both wireless and wireline operations, which are a component of the determination of recoverable amounts used in the annual impairment testing, as discussed further in *Note 18(e)* of the Consolidated financial statements.

- In respect of claims and lawsuits, as discussed further in *Note 29(a)* of the Consolidated financial statements, the determination of whether an item is a contingent liability or whether an outflow of resources is probable and thus needs to be accounted for as a provision.

Examples of the significant estimates and judgments that we make, and their relative significance and degree of difficulty, are as set out in the graphic in *Note 1* of the Consolidated financial statements.

Our critical accounting estimates and assumptions are described below.

General

- In determining our critical accounting estimates, we consider trends, commitments, events or uncertainties that we reasonably expect to materially affect the methodology or assumptions. Our statements in this MD&A regarding such consideration are made subject to the *Caution regarding forward-looking statements*.
- In the normal course, we make changes to assumptions underlying all critical accounting estimates so that they reflect current economic conditions, updated historical information used to develop the assumptions, and changes in our credit ratings, where applicable. Unless indicated otherwise in the discussion below, we expect that no material changes in overall financial performance and financial statement line items would arise either from reasonably likely changes in material assumptions underlying the estimate or from selection of a different estimate from within a range of valid estimates.
- Our critical accounting estimates affect line items on the Consolidated statements of income and other comprehensive income, and line items on the Consolidated statements of financial position, as follows:

Consolidated statements of income and other comprehensive income

Consolidated statements of financial position	Operating expenses					Financing costs	Employee defined benefit plans re-measurements ²
	Operating revenues	Goods and services purchased	Employee benefits expense	Depreciation	Amortization of intangible assets		
Intangible assets, net, and Goodwill, net					X ¹		
Employee defined benefit pension plans			X	X ³	X ³	X	X
Property, plant and equipment, net				X			
Provisions for asset retirement obligations		X		X		X	
Provisions related to business combinations	X					X	
Investments	X						
Accounts receivable		X					
Inventories		X					

¹ Accounting estimate, as applicable to Intangible assets with indefinite lives and Goodwill, primarily relates to spectrum holdings and accordingly affects our wireless cash-generating unit.

² Other comprehensive income – Item never subsequently reclassified to income.

³ Accounting estimate impact due to internal labour capitalization rates.

- All critical accounting estimates are uncertain at the time an estimate is made and affect the following Consolidated statements of income and other comprehensive income line items: Income taxes (except for estimates about Goodwill) and Net income. Similarly, all critical accounting estimates affect the following Consolidated statements of financial position line items: Current assets (Income and other taxes receivable), Current liabilities (Income and other taxes payable), Deferred income tax liabilities and Common equity (retained earnings) and Non-controlling interest. The discussion of each critical accounting estimate does not differ between our two segments, wireless and wireline, unless explicitly noted.

Intangible assets, net; Goodwill, net; and Property, plant and equipment, net

General

- The Intangible assets, net, line item represents approximately 36% of Total assets as at December 31, 2017 (37% as at December 31, 2016). Included in Intangible assets are spectrum licences, which represent approximately 29% of Total assets as at December 31, 2017 (31% as at December 31, 2016).
- The Goodwill, net, line item represents approximately 14% of Total assets as at December 31, 2017 and 2016.
- The Property, plant and equipment, net, line item on our Consolidated statements of financial position represents approximately 38% of Total assets as at December 31, 2017 and 2016.
- If our estimated useful lives of assets were incorrect, we could experience increased or decreased charges for amortization or depreciation in the future. If the future were to differ adversely from our best estimate of key economic assumptions and associated cash flows were to materially decrease, we could potentially experience future material impairment charges in respect of our Property, plant and equipment assets, our Intangible assets or our Goodwill. If Intangible assets with indefinite lives were determined to have finite lives at some point in the future, we could experience increased charges for amortization of Intangible assets. Such charges in and of themselves do not result in a cash outflow and would not immediately affect our liquidity.

The recoverability of Intangible assets with indefinite lives; the recoverability of Goodwill

- The carrying values of Intangible assets with indefinite lives and Goodwill are periodically tested for impairment and this test represents a significant estimate for us.
- The recoverable amounts of the cash-generating units' assets have been determined based on a fair value less costs of disposal calculation. There is a material degree of uncertainty with respect to the estimates of the recoverable amounts of the cash-generating units' assets, given the necessity of making key economic assumptions about the future. The fair value less costs of disposal and value-in-use calculations both use future cash flows and growth projections (including judgments about the allocation of future capital expenditures supporting both wireless and wireline operations); associated economic risk assumptions and estimates of the likelihood of achieving key operating metrics and drivers; estimates of future generational infrastructure capital expenditures; and the future weighted average cost of capital.
- See *Note 18(e)* of the Consolidated financial statements for further discussion of methodology and sensitivity testing.

The estimated useful lives of assets; the recoverability of tangible assets

- The estimated useful lives of assets are determined by a continuing program of asset life studies. The recoverability of assets with finite lives is significantly impacted by the estimated useful lives of assets.
- Assumptions underlying the estimated useful lives of assets include the timing of technological obsolescence, competitive pressures and future infrastructure utilization plans.

Employee defined benefit pension plans

Certain actuarial and economic assumptions used in determining defined benefit pension costs, accrued pension benefit obligations and pension plan assets

- We review industry practices, trends, economic conditions and data provided by actuaries when developing assumptions used in the determination of defined benefit pension costs and accrued pension benefit obligations. Pension plan assets are generally valued using market prices; however, some assets are valued using market estimates when market prices are not readily available. Actuarial support is obtained for interpolations of experience gains and losses that affect the employee defined benefit plan actuarial gains and losses and accrued pension benefit obligations. The discount rate, which is used to determine the accrued benefit obligation, is based upon the yield on long-term, high-quality fixed-term investments. The discount rate is set annually at the end of each calendar year, based upon yields on long-term corporate bond indices in consultation with actuaries, and is reviewed quarterly for significant changes. Future increases in compensation are based upon the current benefits policies and economic forecasts. We have examined our respective pension obligation and current service cost durations and observed a 10-year difference in duration. As individual discount rates more accurately reflect the obligation and current service cost, commencing in 2017, we applied a dual discount rate methodology.
- On an annual basis, at a minimum, the defined benefit pension plan assumptions are assessed and revised as appropriate. When the defined benefit pension plan key assumptions fluctuate significantly relative to their immediately preceding year-end values, actuarial gains (losses) arising from such significant fluctuations are recognized on an interim basis. Assumptions used in determining defined benefit pension costs, accrued pension benefit obligations and pension plan assets include life expectancy, discount rates, market estimates and rates of future compensation increases. Material changes in overall financial performance and financial statement line items would arise from reasonably likely changes, because of assumptions that have been revised to reflect updated historical information and updated economic conditions, in the material assumptions underlying this estimate. See *Note 15* of the Consolidated financial statements for further analysis.
- This accounting estimate related to employee defined benefit pension plans is in respect of components of the Operating expenses line item, Financing costs line item and Other comprehensive income line item on our Consolidated statements of income and other comprehensive income. If the future were to adversely differ from our best estimate of assumptions used in determining defined benefit pension costs, accrued benefit obligations and pension plan assets, we could experience future increased (or decreased) defined benefit pension expense, financing costs and charges to Other comprehensive income.

Income tax assets and liabilities

The amount and composition of income tax assets and income tax liabilities, including the amount of unrecognized tax benefits

- Assumptions underlying the composition of income tax assets and liabilities are based upon an assessment of the technical merits of tax positions. Income tax benefits on uncertain tax positions are recognized only when it is more likely than not that the ultimate determination of the tax treatment of a position will result in the related benefit being realizable. Income tax assets and liabilities are measured at the amount that is expected to be realized or incurred upon ultimate settlement with taxation authorities. Such assessments are based upon the applicable income tax legislation, regulations, interpretations and jurisprudence, all of which in turn are subject to change and interpretation.
- Current income tax assets and liabilities are estimated based upon the amount of income tax that is calculated as being owed to taxation authorities, net of periodic instalment payments. Deferred income tax liabilities are composed of the tax effect of temporary differences between the carrying amount and tax basis of assets and liabilities, as well as the income tax effect of undeducted income tax losses. The timing of the reversal of temporary differences is estimated and the income tax rate substantively enacted for the periods of reversal is applied to the temporary differences. The carrying amounts of assets and liabilities are based upon the amounts recorded in the financial statements and are, therefore, subject to accounting estimates that are inherent in those balances. The tax basis of assets and liabilities, as well as the amount of undeducted income tax losses, are based upon the assessment and measurement of tax positions, as noted above. Assumptions as to the timing of reversal of temporary differences include expectations about the future results of operations and future cash flows. The composition of income tax liabilities is reasonably likely to change from period to period because of changes in the estimation of these significant uncertainties.
- This accounting estimate is in respect of material asset and liability line items on our Consolidated statements of financial position comprising less than 1% of Total assets as at December 31, 2017 and 2016, and approximately 9% of Total liabilities and owners' equity as at December 31, 2017 (8% as at December 31, 2016). If the future were to adversely differ from our best estimate of the likelihood of tax positions being sustained, the amount of tax expected to be incurred, the future results of operations, the timing of reversal of deductible temporary differences and taxable temporary differences, and the tax rates applicable to future years, we could experience material current income tax adjustments and deferred income tax adjustments. Such current and deferred income tax adjustments could result in an increase or acceleration of cash outflows at an earlier time than might otherwise be expected.

Provisions for asset retirement obligations

Certain economic assumptions used in provisioning for asset retirement obligations

- Asset retirement obligation provisions are recognized for statutory, contractual or legal obligations, normally when incurred, associated with the retirement of Property, plant and equipment (primarily certain items of outside plant and wireless site equipment) when those

obligations result from the acquisition, construction, development and/or normal operation of the assets. The obligations are measured initially at fair value, determined using present value methodology, and the resulting costs are capitalized as a part of the carrying value of the related asset.

- On an annual basis, at a minimum, assumptions underlying the provisions for asset retirement obligations include expectations, which may span numerous decades, about inflation, discount rates and any changes in the amount or timing of the underlying future cash flows. Material changes in financial position would arise from reasonably likely changes, because of assumptions that have been revised to reflect updated historical information and updated economic conditions, in the material assumptions underlying this estimate. The capitalized asset retirement cost is depreciated on the same basis as the related asset, and the discount accretion is included in the Consolidated statements of income and other comprehensive income as a component of Financing costs.
- This accounting estimate is in respect of the asset retirement obligations component of the Provisions line item on our Consolidated statements of financial position, and this component comprises approximately 1% of Total liabilities and owners' equity as at December 31, 2017 and 2016. If the provisions for asset retirement obligations were to be inadequate, we could experience a charge to Goods and services purchased in the future. A charge for an inadequate asset retirement obligation provision would result in a cash outflow proximate to the time that the asset retirement obligation is satisfied.

Provisions related to business combinations

Provisions for written put options

- In connection with certain business acquisitions, we have established provisions for written put options in respect of non-controlling interests. We provide written put options to the remaining selling shareholders whereby they could put the remaining non-controlling interests at, or after, a specified date. The acquisition-date fair values of the puttable shares held by the non-controlling shareholders are recorded as provisions.
- On an annual basis, at a minimum, the provisions for written put options are assessed and revised as appropriate. The provisions for written put options have been determined based on the net present values of estimated future earnings results; there is a material degree of uncertainty with respect to the estimates of future earnings results given the necessity of making key economic assumptions about the future. The amount of provisions for written put options are reasonably likely to change from period to period because of changes in the estimation of future earnings.
- This accounting estimate is in respect of the provisions for written put options in respect of non-controlling interests component of the Provisions line item on our Consolidated statements of financial position, and this component comprises less than 1% of Total liabilities and owners' equity as at December 31, 2017, and NIL as at December 31, 2016. If the provisions for written put options were to be inadequate, we could experience a charge to Operating Revenues in the future. A charge for an inadequate written put option provision would result in a cash outflow proximate to the time that the written put option is exercised.

Investments

The recoverability of long-term investments

- We assess the recoverability of our long-term investments on a regular, recurring basis. The recoverability of investments is assessed on a specific-identification basis, taking into consideration expectations about future performance of the investments and comparison of historical results to past expectations.
- The most significant assumptions underlying the recoverability of long-term investments are related to the achievement of future cash flow and operating expectations. Our estimate of the recoverability of long-term investments could change from period to period due to the recurring nature of the recoverability assessment and due to the nature of long-term investments (we do not control the investees).
- Investments are included in the Other long-term assets line item on our Consolidated statements of financial position, which itself comprises approximately 1% of Total assets as at December 31, 2017 (2% as at December 31, 2016). If the allowance for recoverability of long-term investments were to be inadequate, we could experience an increased charge to Other operating income in the future. Such a provision for recoverability of long-term investments does not result in a cash outflow. When there is clear and objective evidence of an increase in the fair value of an investment, which may be indicated by either a recent sale of shares by another current investor or the injection of new cash into the entity from a new or existing investor, we recognize the after-tax increase in value in Other comprehensive income (change in unrealized fair value of available-for-sale financial assets).

Accounts receivable

General

- When determining our allowance for doubtful accounts, we consider the business area that gave rise to the Accounts receivable, conduct a statistical analysis of portfolio delinquency trends and perform specific account identification.
- These accounting estimates are in respect of the Accounts receivable line item on our Consolidated statements of financial position, which comprises approximately 5% of Total assets as at December 31, 2017 and 2016. If the future were to differ adversely from our best estimates of the fair value of the residual cash flows and the allowance for doubtful accounts, we could experience an increase in the doubtful accounts expense in the future. Such doubtful accounts expense in and of itself does not result in a cash outflow.

The allowance for doubtful accounts

- The estimate of our allowance for doubtful accounts could materially change from period to period due to the allowance being a function of the balance and composition of Accounts receivable, which can vary on a month-to-month basis. The variability of the balance of Accounts receivable arises from the variability of the amount and composition of Operating revenues and from the variability of Accounts receivable collection performance.

Inventories

The allowance for inventory obsolescence

- We determine our allowance for inventory obsolescence based upon expected inventory turnover, inventory aging, and current and future expectations with respect to product offerings.

- Assumptions underlying the allowance for inventory obsolescence include future sales trends and offerings and the expected inventory requirements and inventory composition necessary to support these future offerings. Our estimate of the allowance for inventory obsolescence could materially change from period to period due to changes in product offerings and the level of consumer acceptance of those products.
- This accounting estimate is in respect of the Inventories line item on our Consolidated statements of financial position, which comprises approximately 1% of Total assets as at December 31, 2017 and 2016. If the allowance for inventory obsolescence were to be inadequate, we could experience a charge to Goods and services purchased in the future. Such an inventory obsolescence charge does not result in a cash outflow.

8.2 Accounting policy developments

IFRS 9, Financial Instruments

IFRS 9, *Financial Instruments*, is required to be applied for years beginning on or after January 1, 2018, with retrospective application. The new standard includes a model for the classification and measurement of financial instruments, a single forward-looking “expected loss” impairment model and a reformed approach to hedge accounting. We will make an accounting policy choice relative to impairment, and will be using the lifetime expected credit loss approach. Based upon current facts and circumstances, we do not expect our financial performance or disclosure to be materially affected by the application of the standard.

IFRS 15, Revenue from Contracts with Customers

IFRS 15, *Revenue from Contracts with Customers*, is required to be applied for years beginning on or after January 1, 2018, such date reflecting the one-year deferral approved by the International Accounting Standards Board (IASB) on July 22, 2015; we are retrospectively applying the new standard effective January 1, 2018. The IASB and the Financial Accounting Standards Board of the United States worked on this joint project to clarify the principles for the recognition of revenue. The new standard was released in May 2014 and supersedes existing standards and interpretations, including IAS 18, *Revenue*. In April 2016, the IASB issued *Clarifications to IFRS 15, Revenue from Contracts with Customers*, clarifying application of some of the more complex aspects of the standard.

The effects of the new standard and the materiality of those effects will vary by industry and entity. Like many other telecommunications companies, we are materially affected by its application, as set out in *Note 2(c)* of the Consolidated financial statements, primarily in respect of the timing of revenue recognition, the classification of revenues, and the capitalization of costs of obtaining a contract with a customer (as defined by the new standard).

Revenue – timing of recognition; classification

The timing of revenue recognition and the classification of revenues as either service revenues or equipment revenues will be affected, since the allocation of consideration in multiple element arrangements (solutions for our customers that may involve deliveries of multiple services and products that occur at different points in time and/or over different periods of time) will no longer be affected by the current limitation cap methodology.

The effects of the timing of revenue recognition and the classification of revenue are expected to be most pronounced in our wireless results. Although the measurement of the total revenue recognized over the life of a contract will be largely unaffected by the new standard, the prohibition of the use of the limitation cap methodology will accelerate the recognition of total contract revenue, relative to both the associated cash inflows from customers and our current practice (using the limitation cap methodology). The acceleration of the recognition of contract revenue relative to the associated cash inflows will also result in the recognition of an amount reflecting the resulting difference as a contract asset. Although the underlying transaction economics would not differ, during periods of sustained growth in the number of wireless subscriber connection additions, assuming comparable contract-lifetime per unit cash inflows, revenues would appear to be greater than under the current practice (using the limitation cap methodology). Wireline results arising from transactions that include the initial provision of subsidized equipment or promotional pricing plans will be similarly affected.

Costs of contract acquisition; costs of contract fulfilment – timing of recognition

Similarly, the measurement of the total costs of contract acquisition and contract fulfilment over the life of a contract will be unaffected by the new standard, but the timing of recognition will be. The new standard will result in our wireless and wireline costs of contract acquisition and contract fulfilment, to the extent that they are material, being capitalized and subsequently recognized as an expense over the life of a contract on a rational, systematic basis consistent with the pattern of the transfer of goods or services to which the asset relates. Although the underlying transaction economics would not differ, during periods of sustained growth in the number of customer connection additions, assuming comparable per unit costs of contract acquisition and contract fulfilment, absolute profitability measures would appear to be greater than under the current practice (immediately expensing such costs).

Implementation

With a view to enhancing the clarity, comparability and utility of our financial information post-implementation of the standard, we will apply the standard retrospectively, subject to permitted and elected practical expedients. We are using the following practical expedients provided for in, and transitioning to, the new standard:

- No restatement for contracts that were completed as at January 1, 2017, or earlier.
- No restatement for contracts that were modified prior to January 1, 2017. The aggregate effect of all such modifications will be reflected when identifying satisfied and unsatisfied performance obligations and the transaction prices to be allocated thereto and when determining the transaction prices.
- No disclosure of the aggregate transaction prices allocated to the remaining unfulfilled, or partially unfulfilled, performance obligations for periods ending prior to January 1, 2018.

For purposes of applying the new standard on an ongoing basis, we are using the following practical expedients provided for in the new standard:

- No adjustment of the contracted amount of consideration for the effects of financing components when, at the inception of the contract, we expect that the effect of the financing component is not significant at the individual contract level.
- No deferral of contract acquisition costs when the amortization period for such costs would be one year or less.

- When estimating minimum transaction prices allocated to the remaining unfulfilled, or partially unfulfilled, performance obligations, exclusion of amounts arising from contracts originally expected to have a duration of one year or less, as well as amounts arising from contracts in which we may recognize and bill revenue in an amount that corresponds directly with our completed performance obligations.

For purposes of applying the new standard on an ongoing basis, we must also make incremental judgments in respect of the new standard:

- In respect of revenue-generating transactions, we must make judgments about how to determine the transaction prices and how to allocate those amounts among the associated performance obligations. It is our judgment that, where applicable, it is most appropriate to use a contract's minimum transaction price (the "minimum spend" amount required in a contract with a customer) as the contract's transaction price as it best reflects the enforceable rights and obligations of the contract. The contract's transaction price is allocated based upon the stand-alone selling prices of the contracted equipment and services included in the minimum transaction price.
- We compensate third-party re-sellers and our employees for generating revenues, and we must exercise judgment as to whether such sales-based compensation amounts are costs incurred to obtain contracts with customers that should be capitalized. We believe that compensation amounts tangentially attributable to obtaining a contract with a customer, because the amount of such compensation could be affected in ways other than simply obtaining that contract, should be expensed as incurred; compensation amounts directly attributable to obtaining contracts with customers should be capitalized and subsequently amortized on a systematic basis, consistent with the satisfaction of our associated performance obligations.

Judgment must also be exercised in the capitalization of costs incurred to fulfill revenue-generating contracts with customers. Such fulfilment costs are those incurred to set up, activate or otherwise implement access to, or usage of, our telecommunications infrastructure that would not otherwise be capitalized as property, plant and equipment and intangible assets.

IFRS 16, Leases

In January 2016, the IASB released IFRS 16, *Leases*, which is required to be applied for years beginning on or after January 1, 2019, and which supersedes IAS 17, *Leases*. We are currently assessing the impacts and transition provisions of the new standard; however, we are currently considering applying the new standard retrospectively, effective January 1, 2019. The IASB and the Financial Accounting Standards Board of the United States worked together to modify the accounting for leases, generally by eliminating lessees' classification of leases as either operating leases or finance leases and, for IFRS-IASB, introducing a single lessee accounting model.

The most significant effect of the new standard will be the lessee's recognition of the initial present value of unavoidable future lease payments as lease assets and lease liabilities on the statement of financial position, including those for most leases that would be currently accounted for as operating leases. Both leases with durations of 12 months or less and leases for low-value assets may be exempted.

The measurement of the total lease expense over the term of a lease will be unaffected by the new standard. However, the new standard will result in the timing of lease expense recognition being accelerated for leases which would currently be accounted for as operating leases; the IASB expects that this effect may be muted by a lessee having a portfolio of leases with varying maturities and lengths of term, and we expect that

we will be similarly affected. The presentation on the statement of income and other comprehensive income required by the new standard will result in most non-executory lease expenses being presented as amortization of lease assets and financing costs arising from lease liabilities, rather than as a part of goods and services purchased; reported operating income would thus be higher under the new standard.

Relative to the results of applying the current standard, although the actual cash flows will be unaffected, the lessee's statement of cash flows will reflect increases in cash flows from operating activities offset equally by decreases in cash flows from financing activities. This is the result of the payments of the "principal" component of leases that would currently be accounted for as operating leases being presented as a cash flow use within financing activities under the new standard.

Implementation

As a transitional practical expedient permitted by the new standard, we do not expect to reassess whether contracts are, or contain, leases as at January 1, 2019, using the criteria of the new standard; as at January 1, 2019, only contracts that were previously identified as leases applying IAS 17, *Leases* and IFRIC 4, *Determining whether an Arrangement contains a Lease*, will be a part of the transition to the new standard. Only contracts entered into (or changed) after January 1, 2019, will be assessed for being, or containing, leases using the criteria of the new standard.

Other issued standards

Other issued standards required to be applied for periods beginning on or after January 1, 2018, are expected to have no significant effect on our financial performance or disclosure.

9 General trends, outlook and assumptions

This section contains forward-looking statements, which should be read together with the *Caution regarding forward-looking statements* at the beginning of this MD&A.

9.1 Telecommunications industry in 2017

We estimate that Canadian telecommunications industry revenues (including TV and excluding media) grew by approximately 3% to approximately \$62 billion in 2017. Wireless and data services continue to drive ongoing industry growth. Consumer communication and entertainment consumption behaviours continue to demonstrate a strong preference for data-rich applications and data-intensive smartphones and tablets.

TELUS' revenues of \$13.3 billion represented approximately 21% of industry revenues, with wireless products and services representing 57% of our total revenues. In our wireline business, growth in high-speed Internet access, enhanced data, TV and business process outsourcing services has more than offset the decline in demand for legacy services.

Wireless

Based on publicly reported results and estimates, in 2017, the Canadian wireless industry experienced network revenue growth of approximately 7% and EBITDA growth of approximately 7%. TELUS wireless network revenue growth was 6.5%, and TELUS wireless Adjusted EBITDA grew by 5.2%.

We estimate that the Canadian wireless industry added approximately 1.3 million new subscriber units in 2017, compared to approximately one million in 2016. This was supported by immigration and population growth; the trend toward multiple devices, including tablets; the expanding functionality of data and related applications; and mobile adoption by both younger and older generations. The wireless penetration rate increased to approximately 86% in Canada, with further increases in penetration expected to continue in 2018. By comparison, the wireless penetration rate in the U.S. is well over 100%, while in Europe and Asia it is even higher, suggesting an opportunity for continued growth in Canada.

In 2017, the wireless market was characterized by heightened retention and acquisition activity and the associated high costs of device subsidies on two-year contracts, a heightened level of competitive intensity,

and the continued adoption of higher-value, data-centric smartphones. While higher handset costs, increased subsidies and the frequency of customer device upgrades put pressure on industry margins, adoption of the latest smartphones generally has a positive impact on average revenue per subscriber unit per month (ARPU) and churn rates. Blended ARPU also continues to increase as data consumption on 4G LTE and LTE advanced (LTE-A) devices and networks rises, and as consumers continue to adopt higher bucket and shared family data plans, as well as Premium Plus rate plans, which offer higher device subsidies upfront for a higher recurring monthly fee.

The Canadian wireless industry continues to be highly competitive and capital-intensive. In March, BCE acquired Manitoba Telecom Services (MTS). At the same time, TELUS acquired a portion of MTS' postpaid wireless subscribers and dealer locations in Manitoba. Both companies committed to incremental investments in the province of Manitoba. TELUS has invested more than \$70 million in Manitoba over the past two years.

In June, Shaw Communications announced the divestiture of its U.S. call centre subsidiary, and used a portion of the proceeds to fund the acquisition of the 700MHz and 2500 MHz spectrum licences from Quebecor Media Inc. Shaw's Freedom Mobile has since focused on the build-out of an urban LTE network in major cities in Alberta, B.C. and Ontario. Shaw reached an agreement with Apple Inc. enabling it to offer iPhone products beginning in December 2017. Shaw's re-farming of AWS-1 spectrum and deployment of 2,500 MHz spectrum is expected to be completed in 2018, and will make older smartphone versions (iPhones and Galaxy) compatible with Freedom's LTE network.

Wireline

Canada's four major cable-TV companies had an estimated base of approximately 4 million telephony subscribers at the end of 2017. This represents a national consumer market share of approximately 42%, up from approximately 40% in 2016. Other non-facilities-based competitors also offer local and long distance voice over IP (VoIP) services and resell high-speed Internet solutions. This competition, along with technological substitution to wireless services, continues to erode the number of residential network access lines and associated local and long distance revenues, as expected.