



FitchRatings

# The 2022 Annual Manual

A Primer of the U.S. Leveraged Finance Market

# The 2022 Annual Manual

## A Primer of the U.S. Leveraged Finance Market

### Executive Summary

This is the 11th edition of our U.S. leveraged finance primer. It reflects Fitch Ratings' coordinated effort across several U.S. rating groups and regions. It incorporates data and opinions from the Corporates, Financial Institutions, Structured Credit, and Fund and Asset Managers rating groups.

The *Annual Manual* seeks to quantify and summarize the major factors driving risk and opportunity for the various participants in the market, including corporate bond and loan underwriters and investors, collateralized loan obligation (CLO) investors, corporate debt issuers, private equity sponsors and regulators.

This report describes the continuous evolution of the market. New players are entering and transaction characteristics are changing as the landscape adapts to the needs of different capital providers and regulatory requirements. For context, we provide a historical perspective on structures, volume and performance for different industries and instruments.

If you have suggestions for further content enhancements, please do not hesitate to contact us.



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## Introduction

The U.S. leveraged finance market broke new records in 2021, with high volumes across institutional syndicated leveraged loans (LL), direct lending and the high-yield (HY) bond market. The U.S. institutional LL market grew 13% yoy to \$1.65 trillion, with HY issuance volume also reaching a new record high of \$1.48 trillion, reflecting 27% yoy growth at YE 2021. A relatively low interest rate environment throughout the year, the last portion of the stimulus and relief capital packages that helped preserve liquidity in the market, and a solid but uneven economic recovery across sectors drove the continued appetite for LLs. This resulted in a strong pipeline of M&A transactions and buyouts, including deals delayed the prior year due to the economic uncertainty from the coronavirus pandemic, and transactions pulled forward from the 2022 pipeline anticipating potential changes in the corporate tax rate framework, as announced by the Biden administration.

Refinancings and repricings contributed the most to LL volume during 1H21, as some issuers continued to proactively manage capital structures while preserving liquidity. Issuers pursued both full and partial refinancings of indebtedness at more attractive levels than in 2020, and pushed debt maturities further out. New money issuance for M&A and LBO transactions led volume during 2H21, as investors positioned themselves for the possibility of higher interest rates. Robust CLO issuance supported the record loan issuance throughout the year, with global CLO assets up 22% in 2021 to over \$1 trillion.

Other notable high-water marks in 2021 included record annual LBO volume issuance, which increased 132% yoy, amounting to \$196 billion in value by the end of the year. This was supported by strong deal activity in the middle market (MM) coupled with a steady amount of mega-deals, with a record number of transactions valued above \$1 billion. LBO activity benefited from a strong but uneven economic recovery, with pandemic-affected sectors showing signs of improvement at a slower pace, access to debt capital markets still at a relatively low cost, relaxed financing terms in a borrower-friendly market, and a resilient appetite for M&A and LBO transactions across the board.

Private credit markets continued the positive growth trend in 2021, reflecting strong competition in the lending space. Private credit fundraising increased 12.1% yoy. Direct lending and unitranche facilities have grown in popularity as an alternative financing option, particularly among MM borrowers. MM direct lending volumes increased 37.6% yoy to \$5.4 billion, while the unitranche loan market increased 259.3% yoy, reaching \$38.2 billion by the end of the year. Fitch Ratings anticipates both segments will continue gaining additional market share in years to come. MM borrowers turned to private lenders for an independent source of credit financing and the flexibility the private credit firms offer for deploying credit funding, which is open to any size or type of transaction.

Fitch's neutral outlook for leveraged finance at the onset of 2022 considered the change to a more hawkish central bank position regarding interest rate policy. Fitch anticipated a number of interest rate hikes throughout the year to counter increasing inflation, the risk of new coronavirus variants and prevailing supply chain challenges that could disrupt the recovery trajectory of some issuers. Since the start of the year, the Russian-Ukraine war and

stringent lockdowns in China added further uncertainty and severity to the global economic outlook. Markets, including the LL and HY bond markets, responded to this with large YTD declines in 2022.

Direct exposure to Russia and Ukraine is low for U.S. corporates. However, the indirect economic impact of the conflict already affected the U.S. economy through worsened inflationary pressures – particularly for energy and food products – and supply chain challenges stemming from sanctions on Russia and economic paralysis in Ukraine. Fitch expects the risk of inflation to be manageable for most U.S. corporates. Larger risk lies in the possibility that prolonged volatility could dampen M&A activity and further lower valuations.

The credit default environment in 2021 was benign, with U.S. institutional LLs and HY bonds defaulting at 0.6% and 0.5%, respectively. Fitch expects some of the largest sectors to finish 2022 at or below 1% in each market segment, most notably technology and healthcare/pharmaceuticals, which dominated issuance tallies and deal activity in recent years. Fitch expects most other sectors to end the year with rates at or below the nonrecessionary averages of 1.7% and 2.2%, for LLs and HY bonds, respectively. Outliers are concentrated in sectors that have relatively low amounts of outstanding debt. Fitch estimates another year of low default rates in 2022, with forecasts of 1.5% for U.S. institutional LLs and 1.0% for HY bonds. Fitch also anticipates the credit default environment in 2023 will continue with similar benign market conditions, reflecting a default rate of 1.25%–1.75% for LLs and 1.00%–1.50% for HY bonds. The low forecasts largely reflect the shored-up liquidity positions and optimized capital structures issuers achieved during the pandemic.

Meanwhile, recovery expectations were largely stable in 2021, with the percentage of first-lien debt instruments for Fitch-covered broadly syndicated loan and MM issuers receiving an 'RR1' rating, essentially unchanged from 2021. First-lien recovery estimates in Fitch's portfolio had been trending lower in recent years prior to the pandemic, partly due to an increase in the MM portfolio Fitch rates, which is concentrated in lower-rated, sponsored issuers that tend to have higher first-lien leverage, and partly driven by more first-lien debt in capital structures in general.

The transition to a new benchmark base rate from LIBOR to a new benchmark base rate is an important operational development to watch closely in 2022. According to regulatory guidance, U.S. banks and regulated financial institutions should cease to issue new LIBOR loans starting in 2022. The recommended replacement rate was the Secured Overnight Financing Rate (SOFR), although other alternate rates exist. The institutional LL market was slow to implement the change, with negligible SOFR issuance through most of 2021. SOFR-linked issuance edged up in 4Q21, composing 9% and 24% of November and December volume, respectively. The pace of new issue SOFR loans ramped up in the institutional loan market, and is expected to continue ramping up throughout the year. While LIBOR issuance is still possible until 2023 for nonregulated entities, most of the leveraged loans issued so far in 2022 reference SOFR.

## Leveraged Loan Basics

### The U.S. Leveraged Loan Market

#### Defining the Market

A leveraged loan is a high-coupon loan to a company with a speculative-grade credit rating, either provided by a group of lenders and organized by traditional banks – a process referred to as syndication— or increasingly by a single or small group of nonbank direct lenders. There is no universally accepted definition of what counts as a leveraged loan, but all definitions consider loans from issuers rated ‘BB+’ or lower, or that are priced at issue equal to or above a certain threshold – often 175bps over the benchmark rate. As a practical matter, funds that invest in leveraged loans generally have strict rating-based requirements for the loans in their portfolios. Leveraged loans are often used to finance LBOs or other subsequent transactions by companies that have private equity sponsors, such as dividend recapitalizations and subsequent acquisition activity. They are also used to refinance existing debt or simply to fund general corporate expenditures.

The process of issuing a leveraged loan was historically arranged and administered by investment banks. However, the leveraged loan market has evolved and expanded significantly in the years since the Great Financial Crisis, and in particular since 2016. This was brought about by increased regulatory oversight for systemically important financial institutions, which led to an increase in the share of leveraged loans arranged by nontraditional lenders – such as Antares Capital LP, KKR Capital & Co. Inc. and Golub Capital BDC, Inc. – unencumbered by conservative underwriting requirements. The syndicated and direct lending markets traditionally targeted different segments of corporate issuers, but with banks arranging deals for larger corporate borrowers and direct lenders focusing on smaller issuers with fewer financing options, increased competition and significant fundraising in recent years resulted in a blurring of the lines between these two categories that is likely to continue.

For syndicated transactions, a borrower can negotiate to obtain financing on a committed or best-efforts basis. In a committed transaction, the lead bank lender will commit to underwrite an agreed-upon amount of financing, thus taking on the entire risk. It will subsequently spread the risk to other institutions via syndication. Regardless of appetite for credit in the market, the borrower is guaranteed to receive its target amount of financing, because the underwriter agreed to use its balance sheet to provide it. By contrast, in a best-efforts arrangement, the final amount of the loan is not guaranteed and is subject to the market’s appetite for credit. Direct lending deals sidestep this dynamic as the original lender, or a small group of lenders, generally holds the entire loan to maturity. In such deals, each lender generally provides an equal amount of financing and receives a more or less equal share of the associated fees.

Within the capital structure of a company, a leveraged loan usually ranks at the top of the capital structure, right below trade claims. It is generally senior secured and guaranteed, but there can be exceptions. Pricing is floating, or set as a spread over a variable base rate, such as LIBOR. However, the benchmark was discouraged for new issuances at the end of 2021, with the primary replacement rate emerging being the Secured Overnight Financing Rate (SOFR), although other alternative rates exist. Often the loan will be structured with a pricing floor (0.50%–1.00% is typical) such that the base rate is the greater of the benchmark and the predetermined floor. Demand for loans plays a large role in determining the specific terms of each transaction, which are often heavily negotiated and customized to fit each issuer’s needs and prevailing market conditions. It is generally true, with some exceptions, that issuers have held the upper hand in recent years due to strong investor interest, and pushed for lower pricing with no floors and more flexibility in other areas of the credit agreement.

### Defining the Loan Markets

		Leveraged Loans		
	Investment Grade	Broadly Syndicated/ Large Corporate	Middle Market	Direct Lending
Sales Size	\$7 billion +	> \$500 million	< \$500 million	Varies widely
EBITDA Size	\$2 billion +	\$100 million–\$2 billion	< \$100 million	Varies widely
Ratings	> BB+	< BBB–	< BB–	< B+, unrated
Typical Deal Size	> \$1 billion	\$500 million–\$1 billion	Traditional: < \$100 million; Large: > \$100 million–\$500 million	Generally < \$500 million
Structure	RCFs, Tls	RCFs, Tls	RCFs, Tls, unitranche	Tls, unitranche
Security	Unsecured	Secured	Secured	Secured
Average Tenor	1–5 years	5–7 years	4–7 years	3–7 years
Secondary Liquidity	Yes	Yes	Limited, but improving	Limited
Syndication Method	Broad	Broad	Club, syndication or single investor	Club, no syndication
Lenders	Banks	Banks	Banks, specialty finance	Specialty finance
Main Investors	Retails funds, insurance companies, pension funds	Banks, retail funds, CLOs	Specialty finance, CLOs, private debt	Specialty finance, private debt funds

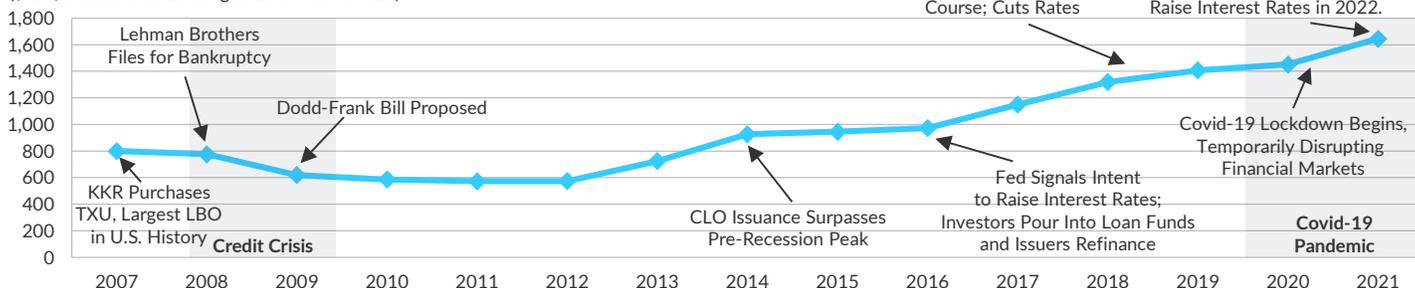
RCF – Revolving credit facility. TL – Term loan. CLO – Collateralized loan obligation. Note: Figures based on Fitch estimates. Source: Fitch Ratings.

While there are overlapping definitions when talking about the loan market, Fitch divides the segment of institutional leveraged loans – those that are mostly held by investors, such as CLOs, leveraged loan mutual and exchange-traded funds (ETFs), asset managers and separately managed accounts – into broadly syndicated loans (BSLs) and large middle market loans (LMM). BSLs represent the largest segment of the loan market. These are loans made to large corporations and syndicated by banks to investors. Definitions vary, but Fitch defines BSL loans as those where the total deal size is greater than or equal to \$500 million, or the issuer has annual sales exceeding \$500 million. BSLs represented 90% of the visible institutional loan market as of YE 2021, remaining the same as the prior year. The MM comprises loans where the total deal size is less than \$500 million or the issuer has sales not exceeding \$500 million. Some data providers define the MM as companies with EBITDA under \$100 million, and the market is often subdivided into lower, middle and large MMs. The terminology has a legacy component – technically BSL describes who the lenders are, while MM refers to the profile of the borrowers. This distinction was immaterial historically, but is noteworthy in today’s overlapping market.

The BSL market can be further split into two distinct categories: pro rata loans (revolving credit facilities and Term Loan As) and institutional loans (Term Loan B/C/D and some second-lien loans). Relationship banks invest in pro rata loans, which are typically lower priced and have meaningful amortization throughout the tenor of the loan. Banks are incentivized to participate in the lower yielding pro rata portion by the need to maintain business relationships with clients and the potential for profitable banking business in other areas (e.g. IPO, advisory, Treasury services, etc.). In contrast, institutional investors are motivated by the incremental yield on the institutional tranches, generally referred to as Term Loan Bs (or higher, in the event the issuer carries multiple tranches). These loans typically bear a higher spread and amortize minimally during the tenor of the loan. The majority of the principal is due at maturity, but will often be refinanced ahead of time. Institutional loans in particular experienced record growth in the years following the financial crisis, with the total amount outstanding increasing over 75% since 2007.

### Leveraged Loan Market History

(\$ Bil., Institutional Leveraged Loan Market Size)



KKR – Kohlberg Kravis Roberts. TXU – TXU Corporation. Note: Gray section represents a recessionary period as defined by the National Bureau of Economic Research. Source: Fitch Ratings, Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

### Market History

The syndicated loan market has existed since the 1970s, originally serving as a way for banks to diversify their lending operations and offload risk to a broader investor group. However, it really gained traction along with high-yield bonds during the LBO boom in the late 1980s.

There are several factors that contributed to the growth in the U.S. leveraged loan market in recent years. As interest rates reached historic lows in the years following the financial crisis, the search for yield attracted new investors into the high-yield bond and leveraged loan markets. Rising interest rates beginning in 2016 further increased demand for floating-rate debt. Despite the record volatility in 1Q20, and a long rebound affected by the pandemic, social unrest and uncertain U.S. election outcome, the leveraged loan market ended in positive territory with a 3.1% yoy increase in its market size.

The leveraged loan market saw a strong rebound during 2021, with a 13.4% yoy increase, marking an all-time high. This was driven by a widespread recovery from the pandemic, coupled by ample government stimulus capital, and an accessible debt capital market with a low interest rate environment throughout the year. Looking

ahead, the leveraged loan market expects various interest rate hikes to counter existing inflationary and geopolitical pressures. CLOs are the largest and most consistent buyers of institutional leveraged loans, which make up the assets of the structured vehicles. CLO investors are attracted to the asset class due to the higher yield on the senior tranches compared with Treasuries, paired with a track record of relatively good performance during the financial crisis and subsequent periods of stress.

CLOs issuance activity in the U.S. reached lofty issuance levels in 2021, and those under surveillance improved credit quality mix during 2021. Some U.S. volume was likely motivated by managers pricing ahead of LIBOR being retired for new deals. Since the start of 2022, CLO transactions are issuing notes referring to three-month term SOFR, while portfolios remain primarily legacy LIBOR loans. Of the more than 1,500 issuers with loans in BSL CLOs as of the end of March 2022, 8.5% had loans issued using a SOFR rate.

The U.S. institutional leveraged loan market totaled over \$1.64 trillion in amount outstanding and comprised just over 1,800 issuers at the end of 2021.

## Institutional Leveraged Loan Market Profile

(Institutional Leveraged Loan Industry Composition)

Industry	Amount Outstanding (\$ Bil.)	No. Issuers (%)	% of Total Loans by Category <sup>a</sup>							
			BSL	LMM	First Lien	Second Lien	Sponsored	Cov-Lite		
Automotive	46.6	3	52	3	92	8	96	4	78	88
Banking & Finance	74.4	5	86	5	89	11	96	4	78	76
Broadcasting & Media	63.9	4	68	4	91	9	97	3	54	88
Building & Materials	54.1	3	74	4	86	14	97	3	77	94
Cable	35.3	2	15	1	99	1	100	0	52	80
Chemicals	61.4	4	77	4	91	9	96	4	81	93
Consumer Products	50.7	3	61	3	89	11	95	5	81	91
Energy	49.5	3	72	4	87	13	98	2	78	32
Food, Beverage & Tobacco	40.8	2	61	3	85	15	98	2	78	89
Gaming, Lodging & Restaurants	67.1	4	61	3	91	9	98	2	50	88
Healthcare & Pharmaceutical	198.0	12	201	11	92	8	95	5	81	89
Industrial/Manufacturing	76.8	5	94	5	90	10	95	5	75	94
Insurance	59.3	4	30	2	98	2	96	4	94	88
Leisure & Entertainment	50.2	3	54	3	88	12	98	2	63	89
Metals & Mining	9.1	1	18	1	83	17	97	3	73	73
Paper & Containers	37.8	2	45	2	94	6	97	3	80	92
Real Estate	13.1	1	23	1	81	19	100	0	49	77
Retail	45.0	3	65	4	83	17	98	2	75	72
Services & Miscellaneous	185.2	11	253	14	86	14	93	7	88	86
Supermarkets & Drug Stores	3.5	0	9	0	52	48	100	0	72	65
Technology	246.1	15	230	13	93	7	93	7	87	92
Telecommunications	68.2	4	54	3	96	4	98	2	60	92
Transportation	72.6	4	65	4	91	9	97	3	66	63
Utilities, Power & Gas	36.0	2	48	3	87	13	100	0	65	60
<b>Total</b>	<b>1,644.9</b>	<b>100</b>	<b>1,816</b>	<b>100</b>	<b>90</b>	<b>10</b>	<b>96</b>	<b>4</b>	<b>77</b>	<b>85</b>

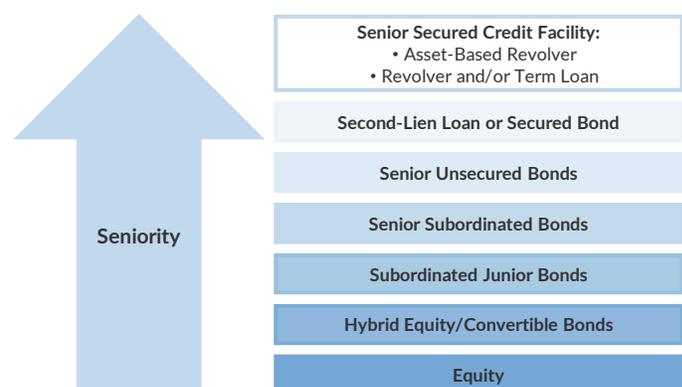
<sup>a</sup>Percentage of total loans calculations are based on actual dollar amount. BSL – Broadly syndicated loans. LMM – Large middle market. Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

### Key Characteristics of Leveraged Loans

#### Seniority

Leveraged loans are generally senior secured and sit at the top of the borrower’s capital structure. Senior secured and unsecured creditors would typically be first in line to receive payments from a debtor. Secured lenders will move to the front of the line in a bankruptcy situation, followed by senior unsecured creditors, senior subordinate bondholders, preferred noteholders and equityholders.

### Leveraged Capital Structure – Seniority



Source: Fitch Ratings.

**Security**

Leveraged loans are usually secured by collateral. The quality of the security package can vary from one deal to another. Collateral composed of the physical assets of the borrower and its operating subsidiaries is generally preferable to a stock pledge. In today’s market, borrowers with fewer physical assets enjoy increased access to leveraged loan funding rather than alternate sources, such as high-yield bonds or equity. Software companies are a good example: deemed “asset-light,” the ability of these issuers to issue loans means a greater diversity of funding and lower cost of capital. However, it raises concerns that the value of the collateral may be less of a safeguard for investors than in previous cycles.

**Pricing**

Leveraged loan coupon payments are almost always floating rate and a function of the base rate and the spread. A transaction will launch with guidance on pricing (i.e. a range for the spread over the base rate, rather than a predefined level). Based on investor

response and market conditions, the spread will settle at the lower, middle or higher end of the guidance. In some cases, the arranging bank will need to alter the spread above the initial range to generate sufficient demand, or may lower it below the range in response to unanticipated interest.

The base rate is the floating component, and fluctuates with market conditions. LIBOR or other base rate floors, which are especially relevant in low interest rate environments that endured following the financial crisis, are routinely set lower than the traditional 1% and are removed completely in many deals. The slate of loans with low/no floors that came to market in 2016–2018, when interest rates were expected to be on the rise, saw larger declines in yields when the interest rate policy moved the other way in 2019 and 2020.

The last component of pricing is the original issue discount (OID), by which lenders can purchase issuer debt at a discount to further increase effective yields (e.g. 99 cents on the dollar).

**Loan Pricing Components**

Component/Fee	Detail
Reference Rate	Overall pricing on a loan is based on a spread over a reference rate. The reference rate is typically reset daily and is based on the bank’s prime lending rate. Common reference rates include the U.S. prime lending rate and SOFR, which is the financing rate replacement for LIBOR in the U.S. SOFR is a nearly risk-free reference rate, based on the U.S. Treasury repurchase agreement market. It represents the cost of borrowing cash overnight collateralized by U.S. Treasury securities, and is typically lower than LIBOR.
Spread	The rate added to the reference rate to determine the overall rate on the loan. The spread is based on the credit quality of the borrower and can change based on changes in the borrower’s performance. For example, the lower the credit quality of a borrower, the higher the probability of default. Due to this higher probability, investors will demand higher spreads to compensate for the higher probability of default. During the transitioning from LIBOR to SOFR, market participants may include a credit spread adjustment (CSA) to compensate for the difference between the two rates.
Reference Rate Floor	A reference rate floor sets a minimum reference rate on which the loan pricing is based. If for example the SOFR or given reference rate falls below the floor rate, pricing will be based upon the floor rate rather than the current market for the adopted reference rate.
Original Issue Discount (OID)	A discount to par (100). The OID is offered in the primary market during the syndication process to enhance investors’ yield on the loan.
Commitment Fee	Paid to lenders on the undrawn portion of the revolving credit facility. Also called a ticking fee.
Usage Fee	Paid to lenders on the drawn portion of the revolving credit facility if utilization falls below a certain minimum threshold.
Facility Fee	Fee paid on the entire commitment amount, regardless of usage.
Administrative Fee	Fee paid to the administrative agent for administrative tasks performed in conjunction with the loan, such as distribution of payments.

SOFR – Secured Overnight Financing Rate.  
Source: Fitch Ratings.

**Covenants**

Covenants represent a set of restrictions that detail what the borrower can and cannot do during the life of the loan. There are three main types of covenants:

- Affirmative covenants state what a borrower must do to comply during the life of the loan (e.g. provide financial statements and maintain insurance).
- Negative covenants limit what the borrower can do during the life of the loan (e.g. limits on additional incurrence of debt or limits on dividend amounts).
- Financial (maintenance) covenants require the borrower to maintain certain financial performance measures during the life of the loan. These are typically measured quarterly (e.g. leverage ratio tests and coverage ratio tests).

## Common Loan Covenants

Negative Covenants	Affirmative Covenants	Financial Covenants
Incur Additional Debt or Issue More Senior Debt	GAAP Compliance and Audited Financial Statements	Maximum Senior Debt-to-EBITDA Ratio
Grant Liens or Pledge Assets	Maintain Condition of Assets	Maximum Total Debt-to-EBITDA Ratio
Sell or Dispose of Assets	Payment of Taxes	Maximum Capex Limit
Make Investments or Loans	Maintain Insurance	Maximum Debt to Capitalization
Make Acquisitions	Access to Information	Minimum Interest Coverage Ratio
Merge or Consolidate with Another Entity	Additional Collateral	Minimum Fixed-Charge Coverage Ratio
Make Dividends, Distributions, Equity Redemptions or Repurchases from Equityholders		Minimum Tangible Net Worth Ratio Minimum Current Ratio

Source: Fitch Ratings.

## Callability

Call protection for institutional leveraged loans has become widespread in the U.S. It takes the form of soft call provisions and is intended to protect investors' income streams by including a prepayment premium. This was especially relevant in recent years, when strong investor demand for loans created opportunities for issuers to refinance existing loans at a lower rate. Typical soft call provisions are 101% for a length of time following the issuance – anywhere from six months to two years (i.e. an issuer would have to pay a 1% premium if the issuer decides to refinance within this period). However, some borrowers opt to pay the premium in exchange for the chance to get a better spread. In today's issuer-friendly market, borrowers are finding ways around callability by including stepdowns in the interest margin prior to the call date.

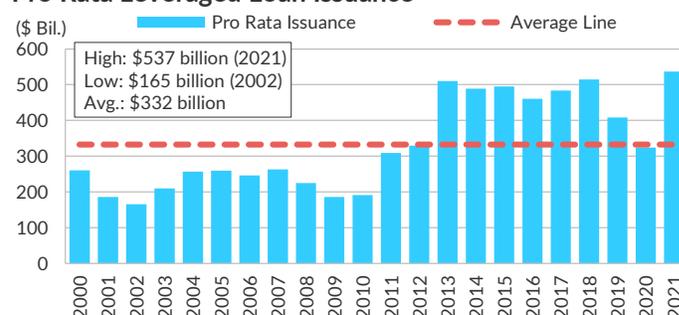
## The Different Types of Leveraged Loans

### Pro Rata Tranches

Pro rata tranches refer to the types of leveraged loans invested in by banks and other financing companies.

- A revolving credit facility is similar to a credit card, in that it allows a company to draw up to a pre-determined limit at any point during the agreement tenor, repay and then draw back down. The amount borrowed will carry a spread that is often lower than pricing on the institutional term loan, and the borrower also pays a small commitment fee on undrawn amounts. Furthermore, it is typical for revolving credit facilities to mature ahead of other corporate debt, including term loans. The facility may contain borrowing base restrictions or sublimits. The revolver can be multicurrency and allow for multiple borrowers.
- A Term Loan A (amortizing loan) is an installment loan that is typically fully drawn at close and has meaningful amortization throughout the tenor of the loan, with the remaining balance due at maturity. The required amortization percentage typically increases over time.
- The pro rata tranche is traditionally syndicated to and held by relationship banks.

## Pro Rata Leveraged Loan Issuance



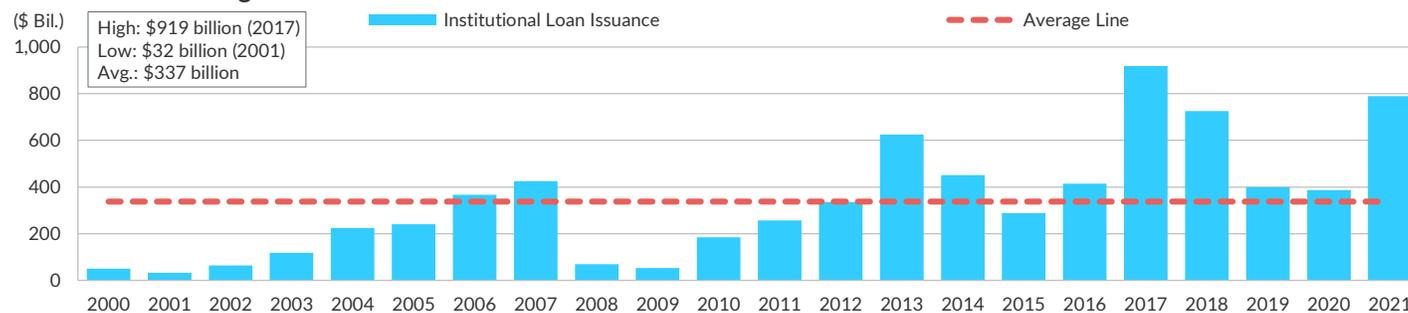
Source: Refinitiv LPC.

## Institutional Tranches

Institutional tranches refer to the types of leveraged loans invested in by institutional investors, such as CLO managers, loan mutual funds and ETFs, among others.

- A Term Loan B/C/D is similar to a Term Loan A in operational mechanics, but with minimal amortization through the life of the loan (e.g. 1% per annum), with the bulk of the balance due at maturity. The facility may contain a delayed-draw component or a separate delayed-draw term loan. Delayed-draw term loans are not drawn at close, and are used to fund an allowable event, such as an acquisition or large capital expenditure, only if the company meets certain conditions.
- A second-lien term loan is similar to a Term Loan B in structure and mechanics, except for priority, security and pricing. The priority in a bankruptcy is second to first-lien facilities, the security is generally a second lien on the company assets and the pricing is typically wider by 300bps-500bps. The maturity typically exceeds that of higher priority debt, most often extending one year later than the first-lien institutional tranche.

### Institutional Leveraged Loan Issuance



Source: Refinitiv LPC.

### Facility Types Comparison

Description	Revolving Credit Facility	Term Loan A	Term Loan B	Second Lien
Security	Senior secured – generally a first lien on all assets and pledge of stock.	Senior secured – generally a first lien on all assets and pledge of stock.	Senior secured – generally a first lien on all assets and pledge of stock.	Senior, second to first-lien facilities, secured – generally a second lien on the first-lien assets and a first lien on other certain assets.
<b>Structure<sup>a</sup></b>				
Typical Facility Size	\$100 million–\$500 million	\$100 million–\$750 million	\$250 million–\$1,500 million	\$100 million–\$350 million
Funded/Unfunded, Unfunded, Partially Funded or Fully Funded	Funded or unfunded	Funded	Funded	Funded
Tenor	Approximately 3–5 years	Approximately five years	Approximately 5–7 years	Approximately 6–8 years
Repayments	Amortizing	Amortizing (gradual)	Limited (bullet payment structure)	Limited (bullet payment structure)
<b>Pricing<sup>a</sup></b>				
Spread/Margin	Floating	Floating	Floating	Floating
Typical Spread/Margin (bps)	175–325	200–350	200–500	600–900
Commitment Fee (bps)	25–50	–	–	–
<b>Markets</b>				
Market	Private	Private	Private	Private
Investors	Retail banks	Retail banks	Institutional investors	Institutional investors

<sup>a</sup>Fitch estimates as of March 4, 2022.

Source: Fitch Ratings, Refinitiv LPC.

## Covenant-Lite Loans

### What Is a Covenant-Lite Loan?

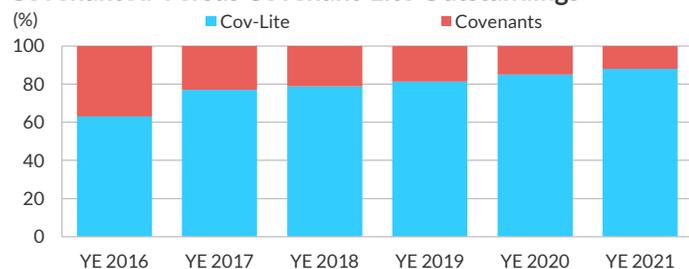
Covenant-lite generally refers to a loan with no financial maintenance covenants. Instead, covenant-lite loans only have high-yield bond-like incurrence covenants.

Variations of covenant-lite loans include covenant-loose and springing covenant-lite. A covenant-loose loan is a loan with one or more maintenance covenants, but where the covenant breach level is set so wide from closing leverage (or other financial metrics) it would permit deviations of up to 50% from the issuer’s projections, versus a normal covenant cushion of approximately 15%–20%. A springing covenant-lite loan is a loan that contains a maintenance covenant on the revolver, which generally matures before the term loan, but no maintenance covenants on the term loan. The covenant applies or springs into effect on the term loan once the revolver is drawn or when drawings exceed a certain threshold.

### What Is the Size of the Covenant-Lite Market?

The terms and conditions of leveraged loans are heavily negotiated and have generally been more favorable for issuers in today’s market. Covenant-lite loans make up the majority of the leveraged loan market and have become the norm in the institutional leveraged market since 2013. These loans accounted for 89% of U.S. institutional leveraged loan issuance volume in 2021, and make up 88% of the outstanding BSL loan universe, reflecting an increase from 85% in 2020. Financial maintenance covenants are just one of a number of terms in loan documents considered to be protection for lenders, although many of these have also loosened in this cycle.

**Institutional BSL Leveraged Loan Market –  
Covenanted Versus Covenant-Lite Outstandings**



BSL – Broadly syndicated loans. Note: Covenant-lite is defined as deals that do not have maintenance covenants.

Source: Fitch Ratings, Refinitiv LPC, Bloomberg.

The widespread adoption of covenant-lite loans reflects the market’s long-term structural evolution as the buyer base evolved from banks to institutional investors that can generally be incentivized to accept less conservative lending standards in exchange for a higher yield. The pace of the shift was accelerated by record low interest rates, stable corporate credit profiles, and meaningful growth in loan fund and CLO assets under management.

Maintenance covenants provide an early warning mechanism for lenders and means to intervene in a deteriorating credit situation, possibly preserving value. In most cases, a technical violation of a maintenance covenant provides mechanisms for a group of lenders to negotiate a higher spread and extract a fee from the issuer, which is limited by the presumably struggling company’s ability to pay the fee. These covenants also preserve certain rights that allow lenders to initiate changes they may want, or to call the loan for early payment in the most extreme cases.

The case for covenant-lite loans rests on the fact that covenants are often a time-consuming and expensive administrative hurdle for issuers. Most BSLs can frequently have dozens of different lenders in one single loan, making any type of amendment process cumbersome and time consuming. A covenant-lite loan affords the issuer greater financial flexibility and allows business managers to focus on running the business rather than managing around a financial covenant.

The transformation of the BSL market is supported by the growth of secondary loan trading through the standardization of transactions, documents and practices. These changes helped accelerate the convergence of terms between the leveraged loan and high-yield bond markets.

MM loans still usually have financial maintenance covenants, although the trend toward covenant-lite is also apparent here. The lower MM is less transparent, but lending in this space is much more heavily covenanted. This segment of the market more closely resembles the pre-2014 BSL market, and benefits from smaller lending groups that can more efficiently amend credit agreements if desired.

**What Considerations Does Fitch Give to Covenant-Lite Issuers?**

Fitch’s criteria allows for analytical discretion in reflecting the effect of certain events on a rating if there is conviction that they are likely to occur, and the analyst is able to make reasonable

assumptions for amounts and timing. This discretion applies equally to events that may be facilitated by weaker documentation, including the lack of financial maintenance covenants. Fitch’s analysts and committees employ their judgment regarding the reasonableness of such assumptions based on the track record of the management team and owner. In the rating analysis, Fitch focuses on two categories of credit risk arising from documentation: deterioration of collateral protection and risks to the leverage profile. Qualitatively, Fitch considers the financial policies and discipline of an issuer, and links the proclivity for aggressive, shareholder-friendly actions with the flexibility to engage in such actions, as permitted in their debt documentation. Quantitatively, our forecasts will explicitly take a view on actual rather than targeted deleveraging, and analysts can model actions allowed by the looser lending terms.

We believe covenant-lite loans are generally reserved for issuers of higher credit quality, but quantifying this view remains a challenge given a large percentage of the market is privately sponsored. Fitch emphasizes credit analysis involves thorough evaluation of a range of factors. For example, credit metrics alone do not provide a holistic view of a company’s credit quality. Leverage and coverage metrics remain relative measures and must be considered in context with other factors, such as business risk. Similarly, covenant-lite status alone does not equate to riskier lending practices. In a market where covenant-lite status has become the norm, Fitch notes in certain cases, fully covenanted issuers may actually represent the riskier borrowers. The presence of a financial maintenance covenant in this environment may be a red flag compensating for some other source of weakness in the credit profile.

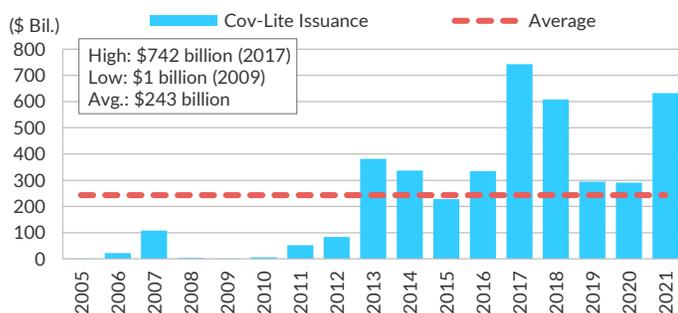
**Are Recovery Prospects Different for Covenant-Lite Loans?**

The averages, medians and ranges taken from these small, heterogeneous data sets can be misleading, as the circumstances around each company’s bankruptcy are unique and their credit stories often involve issues unrelated to covenant status. The exact driver of bankruptcy is typically a mix of factors, and it is challenging to pinpoint the exact cause to be used for analysis in a dataset. However, according to Fitch, corporate issuers are most often forced into bankruptcy due to immediate liquidity constraints affecting their abilities to operate their businesses, and the presence of overlevered capital structures coupled with market cyclicity and flawed business models.

We do not perceive the presence or absence of financial maintenance covenants to be a key driver of recovery values because refinancing risk can arise for companies that are still within their covenant parameters, covenants are often waived in the event of distress, and companies and their bankers can set wide covenant thresholds at the outset. The events of 2020 provide some context here. As the coronavirus pandemic spread and issuers’ credit and liquidity profiles dropped sharply, many lenders waived covenant breaches or amended credit agreements to allow for additional flexibility for issuers.

## Covenant-Lite Data

### Covenant-Lite Loan Issuance



Source: Refinitiv LPC.

## Second-Lien Loans

### What Is Second-Lien Debt?

Second-lien debt generally places debtholders second in line for recovery, compared with first-lien creditors in the case of bankruptcy.

There is no consistent market definition of what constitutes a second-lien facility and nomenclature can be misleading. Sometimes the second lien is in a position that is not actually the second most-senior position, and sometimes the debt that has the second most-senior position is not called the second lien.

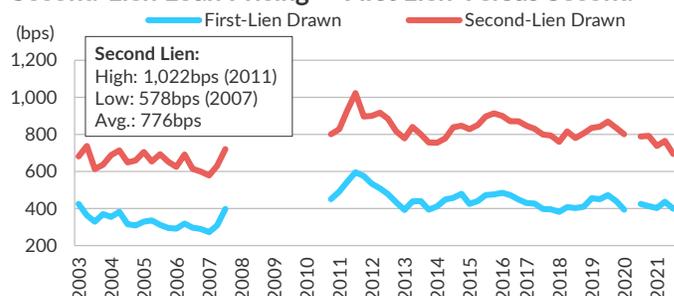
Some issuers can have a first-lien asset-based loan (ABL) facility — priority to working capital assets — and several other first-lien facilities ahead of second-lien debt. Similarly, term loans with a second lien on working capital and a first lien on real estate, equipment and intangible assets are sometimes referred to as second-lien debt, particularly among retailers and in the MM, even though the term loan lenders have a first lien on hard assets and intangibles. Distressed issuers have issued 1.5-lien debt in exchanges that gets sandwiched between the first and second liens. The 1.5 lien pushes the second-lien issue down to a third-lien position. This sandwiching strategy was used by a number of energy and commodity sector issuers to extend maturities during recent market price troughs. For this reason, it is important to understand exactly what collateral backs the loan rather than relying solely on the second-lien label.

However, in the simplest of constructions, a second-lien loan or bond complements a larger first-lien financing. The second-lien tranche is often held by funds that specialize in riskier debt investments or is held by an affiliate of a private equity sponsor.

### Why Issue Second-Lien Debt?

Second-lien issuers tend to be highly leveraged and often have weaker credit profiles, although there are examples of issuers with high speculative-grade credit quality. Investors are attracted to second lien for the spread premium, which consistently averages in the 300bps–400bps range relative to first-lien debt, while still maintaining a claim on the collateral.

## Second-Lien Loan Pricing — First Lien Versus Second



Note: No data for 1Q08–4Q10 and 2Q20.

Source: Refinitiv LPC.

Second-lien debt can be attractive to both lenders and issuers. Issuers benefit from the additional source of financing that comes at a lower price compared with mezzanine and other subordinated debt, due to its secured nature. Lenders are similarly drawn to second-lien debt by its lucrative yields and protection provided by the collateral.

Second-lien loans are also often used to fund M&A and LBO transactions. These are often placed privately to single lenders to take advantage of growing size of direct lending platforms and the greater flexibility these lenders often exhibit in search of the higher yields second-lien debt offers. While CLOs own the majority of the institutional first-lien market, they only hold minimal amounts of second-lien debt — generally around 2% of their portfolio value.

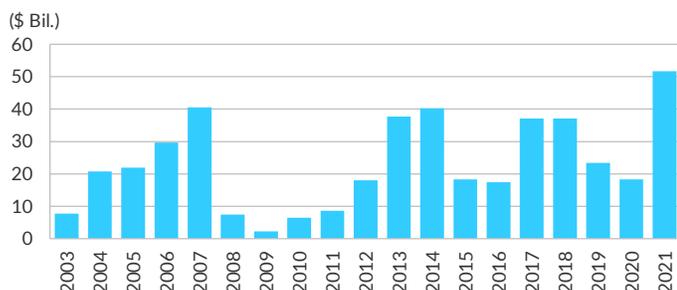
Funding of opportunistic debt exchanges and distressed debt exchanges (DDEs) of unsecured debt for second-lien debt is another common use. Companies can often push out the near-term maturities of unsecured debt by offering to swap the maturing unsecured note for new second-lien debt. Unsecured holders are incentivized to accept the exchange offer to avoid becoming subordinated to the new second-lien debt that will be slotted above them.

While second-lien issuance is a relatively common financing tool among distressed issuers and in highly leveraged LBO transactions, the presence or absence of second lien is itself not predictive of default.

### Second-Lien Institutional Loan Volumes

Second-lien term loan issuance volume set a new record high in 2021 at \$51.6 billion, after dropping to \$18.3 billion in 2020 during the coronavirus pandemic. The bounceback of an almost three-fold increase in volumes compared with last year was consistent with the continued demand for leveraged transactions. This was supported by a relatively low interest rate environment, assuring accessibility to debt capital markets; and a strong pipeline of private equity (PE) deals consisting of delayed deals from the prior year, when many issuers put debt issuances on hold due to economic uncertainty derived from the coronavirus pandemic. Other transactions were accelerated in light of a potential corporate tax reform announced by the Biden administration, and positive momentum from economic performance that benefited deal conditions after the coronavirus market disruption.

### U.S. Second-Lien Institutional Term Loan Issuance Volume



Note: Includes privately placed volume beginning in 2014.  
Source: Refinitiv LPC.

Second-lien loans are typically used to fund opportunistic and rescue financing deals, or to boost the issuer’s liquidity position. However, this asset class has also become popular among investors, as financial sponsors use second-lien tranches to maximize total leverage and value in an LBO transaction. As first-lien debt tranche becomes increasingly stretched for traditional investors, second-lien loans become relevant as a subordinated form of financing to pull forward returns via dividend recapitalizations.

First-lien leverage is expected to continue rising due to strong demand from CLOs and other investors. However, the reach-for-yield dynamics that underpin the relatively high demand for second-lien debt are unlikely to dissipate as long as market conditions for investors continue to favor subordinated collateral quality over higher yields, relative to other loan tranches.

Bankruptcy exit financing and DDEs sometimes include a second-lien component, which can produce some issuance in periods of high default activity. However, the drop in total issuance during these periods is generally large, and would be expected to outweigh any incremental second-lien activity that may result.

For a more detailed information on the second-lien market and recent trends, please see *Leveraged Finance Structure Series: Second-Lien Debt Analysis (Rising Leverage; Healthy U.S. Second-Lien Bond Volume)*.

## Middle Market

### Defining the Middle Market

There is no widely accepted definition of the MM, but conceptually it consists of the segment of smaller borrowers in the leveraged loan market, whether measured by total debt, revenue or EBITDA. Many of these companies are private, and are often private equity portfolio companies. Fitch considers the MM to consist of companies for which the amount borrowed on its credit facilities or its total revenue do not exceed \$500 million. This would correspond to EBITDA of around \$100 million, assuming 5.0x closing leverage. However, other data providers can have slightly different definitions. Due to the opaque and private nature of the MM, true market size is difficult to gauge, with market participants relying on anecdotal information. Fitch estimates the traditional MM totals at least \$350 billion, and has grown significantly in recent years due to strong demand.

MM lending can be broken down into categories: syndicated lending, which is similar to the larger deals; club lending, where a

transaction is not widely distributed, in which a few nonbank lenders join together; and direct lending, where a single nonbank lender underwrites the full loan. At the end of 2021, club deals constituted about 52% of total MM issuance, syndicated issuance represented approximately 23% and direct lending accounting for 25% of total MM issuance in 2021, according to data from LevFin Insights, a Fitch Group company. Direct lending is a relatively new segment of the credit markets, and this type of credit facility has grown in popularity across the MM spectrum over the last three years, increasing its share to 25% in 2021 from 19% in 2019.

The top sectors in Fitch’s MM rated portfolio mirror the larger institutional market – with Business Services, Healthcare and Pharmaceuticals, and Industrials being the three largest sectors – although to a more concentrated degree.

### Middle-Market Loan Issuance



Note: Large Middle Market defined as deal sizes \$100 million–\$500 million.  
Traditional Middle Market defined as deal sizes less than \$100 million.  
Source: Refinitiv LPC.

### Middle Market Lenders

There are numerous lenders in the MM. The number grew over the past few years due to attractive deal structures (financial covenants) and higher yields compared with those that can be attained in broadly syndicated deals. Lenders include but are not limited to CLO managers, business development companies (BDCs), alternative asset managers, credit opportunity funds and regional banks.

A small sample of the most active lenders in the MM is in the table below.

### Players in the Middle Market

Antares	GSO
Bain	Ivy Hill (Ares)
BMO	KeyBank
Carlyle	Madison Capital
Churchill Asset Management	Maranon
CIT	Midcap
Deerpath	Monroe Capital
Fifth Street	Natixis
FifthThird	NXT
First Eagle	PNC
Golub	

Source: Fitch Ratings.

## Sponsored Versus Nonsponsored Deals

Sponsored MM transactions refer to deals that have a private equity sponsor backing the equity of the company. Transactions with a sponsor often have more seasoned management teams compared with nonsponsored deals due to the private equity company's ability to leverage personnel from their portfolio companies. Sponsors will typically work with lenders more quickly to resolve any potential issues a credit may have, more so than in nonsponsored deals. Furthermore, sponsored borrowers can have additional access to equity capital that nonsponsored borrowers do not.

According to Refinitiv LPC, approximately 81% of institutional MM loans were issued to fund a sponsored transaction in 2021, down from 88% in 2020. In terms of dollar value, the annual sponsored MM issuance increased 78.2% yoy, with the majority of the volume issued during the second half of the year.

## Middle Market Characteristics

MM issuers typically have certain characteristics other than their smaller sizes that differentiate them from their BSL counterparts.

- MM companies typically have more robust reporting packages and protective covenants due to deal terms being customized between the lender and the borrower. While loan documentation in the MM has loosened along with the rest of the market, terms still generally remain stronger than BSL counterparts.
- Due to the buy-and-hold nature of MM investors, there are not usually different groups of institutions holding the loans at different prices with different agendas when a restructuring happens. This can lead to better outcomes as all lenders' interests are aligned.
- Private company loans in the MM are usually less easily bought and sold than comparable BSL deals, which is ultimately reflected in the higher yield.
- Deals are primarily financed by nonbank institutions - BDCs and fund/asset managers – as opposed to banks. An estimated 72% of MM leveraged loans are now made by nonbank institutions, up from 28% in 1994.

## Convergence with BSL

As MM strategies have grown and investors have become more comfortable with the risk/return profile, there has been an increasing tendency for traditional BSL investors to participate in the same deals as those that focus on the MM. For example, some BSL CLO managers have been investing in what would be classified as MM loans either to increase portfolio spread or to get better allocations during times of low loan issuance, although they typically have a limit on the amount of MM loans they can hold.

Loose EBITDA addbacks in credit agreements, common in BSLs, have also become more common in the MM. Loose addbacks help inflate the EBITDA used to test compliance with covenants, which makes a company's leverage lower, reducing the effectiveness of financial maintenance covenants, and essentially increasing the capacity for the company to issue additional debt or remove collateral from existing lenders. Some of the more brazen addbacks commonly seen include addbacks for cost-cutting projections that

have not yet materialized and other expected synergies. While these are generally capped at a certain percentage of EBITDA, the caps are often quite high, and in some cases non-existent.

For more information refer to [What Investors Want to Know: Middle Market Supply and Demand Forces \(Views on U.S. Middle Market Loans, CLOs and BDCs\)](#).

## Unitranche Facilities

Unitranche deal structures – hybrid loan structures that incorporate both senior and junior debt into a single loan tranche that can be bifurcated pursuant to an agreement among lenders (AAL) into separate first-out and last-out components – are being used by MM participants with greater frequency. Unitranche structures provide increased simplicity, greater certainty over the all-in cost of the loan and lower administrative costs in servicing the loan. Furthermore, unitranche lenders fully underwrite the loan as a general matter, which eliminates syndication risk. As there is no need to syndicate to lenders prior to closing, execution of the loan may be quicker. Fitch expects unitranche issuance to continue to increase for these reasons.

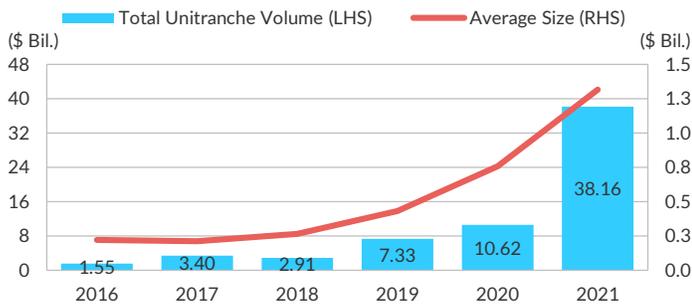
The bifurcated structure is what Fitch considers true unitranche. However, there is an alternate definition used by many market providers in which a unitranche loan is essentially a senior stretch loan – a first-lien leveraged loan typically provided by a single lender that would have traditionally been split into separate first-lien and second-lien loans from different lenders. These loans carry an interest rate that falls between a more standard first-lien and second-lien structure, but does not necessarily require an AAL.

There is limited precedent demonstrating how unitranche structures would perform in a distressed credit market. There is uncertainty surrounding the classification of unitranche lender claims against a debtor, post-petition interest and whether bankruptcy courts will exercise jurisdiction over the AAL when the borrower is not a party to the document. For the handful of bifurcated pieces of unitranche loans Fitch has rated, first-out pieces have been assigned an 'RR1', reflective of the first-out piece's priority position over the last-out portion, as provided for in the AAL's waterfall. Last-out pieces have so far been assigned an 'RR5', indicating limited residual value available to last-out lenders after first-out claims are satisfied.

Last year, institutional demand for unitranche facilities experienced a strong surge in popularity – almost four-fold compared with 2020 – adding up to \$38.2 billion by the end of 2021. Large unitranche facilities constituted a major driver for demand, significantly accelerating the growth trend in recent years. There were over 15 unitranche transactions exceeding the \$1 billion threshold in 2021, with the majority of them utilized in LBOs and M&A transactions. The facilities are seen as an effective alternative to first- and second-lien structures, with sponsors prizing potential cost savings from the relative ease of execution.

The average unitranche facility size in 2021 was \$1.3 billion – the largest issuance was a \$3.4 billion facility used for an LBO. A recent Refinitiv LPC poll concluded that the majority of lenders expect to see an average unitranche facility size of \$3 billion-\$5 billion in 2022.

Annual Unitranche Issuance



Source: LevFin Insights.

For more information, refer to *Leveraged Finance Structure Series: Unitranche Versus Syndicated Loans (Unitranche Borrowers Eye Simple Execution Despite Variety of Risks)* and *Leveraged Finance Structure Series: Bifurcated Unitranche Loan Recoveries (Strong Recovery Prospects for First-Out Lenders)*.

Direct Lending

What Is Direct Lending?

Direct lending is a strategy where nonbank entities lend their capital directly to companies. Direct lenders typically earn higher interest rates on their portfolios than bank lenders and investor syndicates, given their riskier portfolio profiles. Direct lenders also earn an illiquidity premium due to lack of a tradeable market for the loan. Companies that issue private debt vary in size, but tend to be smaller – often \$25 million or lower in EBITDA generated annually.

The prominence of direct lending increased in light of heightened regulations placed on banks in the aftermath of the financial crisis. Several major regulations were introduced that have affected banks’ ability and willingness to lend, including Basel III, Dodd Frank Act and Leveraged Lending Guidance regulatory frameworks. This constricted banks’ lending activity by requiring banks to allocate higher capital to the loans and avoid lending to highly leveraged

entities and created a supply gap in the leveraged loan markets. This in turn created opportunities for unregulated institutions to expand and lend in the banks’ stead. Despite the rollback in Leveraged Lending Guidance and the Dodd Frank Act in 2018, there has not been a material shift in underwriting volumes back to regulated banks from other less-regulated entities, and this lending segment has continued to grow.

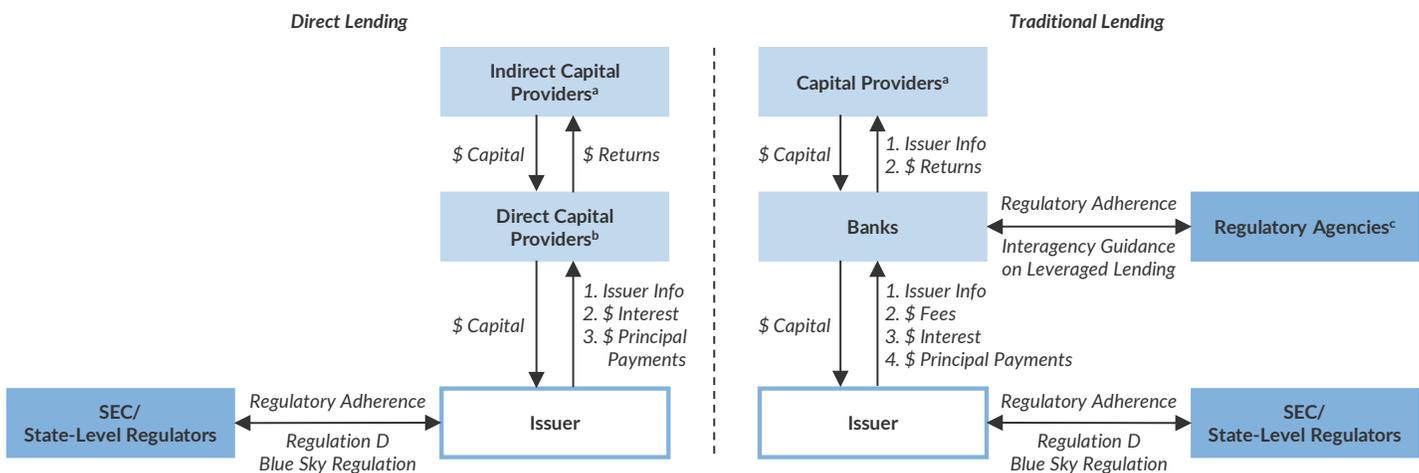
A Growing Asset Class

On the demand side, the premium offered on private debt further fueled the interest in direct-lending platforms as investors continue to pursue higher yields in a relatively low interest rate environment. Global private debt fundraising rebounded to approximately \$191 billion in 2021, representing a 12.1% increase compared with the prior year, according to data compiled by Pitchbook. According to the data provider, global private debt assets under management (AUM) continued growing during 2021, despite pandemic challenges, inflationary pressures and a highly competitive market for quality deals. The growth in AUM was mainly attributed to growing opportunities for LBOs, particularly in the MM segment, increasingly relying on private financings rather than the traditional high-yield bonds or bank-syndicated loans. Pitchbook estimates this segment is now the third-largest asset class in private capital, behind only private equity and venture capital.

This supply of capital led to intensely competitive conditions in the lending market, which fueled spread compression, more covenant-lite lending, EBITDA adjustments, and weaker terms and conditions in general. Direct-lending funds continue to expand the scope of their lending opportunities as their size and presence increased significantly over the years. A form of financing once only tapped by smaller, sponsor-backed companies evolved into a market that can meet the financing needs of much larger companies. The scale at which direct lenders are now able to underwrite debt makes it a much more competitive option for borrowers, especially for European companies, as some European investment banks are shrinking balance sheets and curbing lending.

Direct Lending as an Alternative to Traditional Bank Lending

(Speed and Flexibility in Deploying Committed Capital Furthers Appeal of Direct Lending)



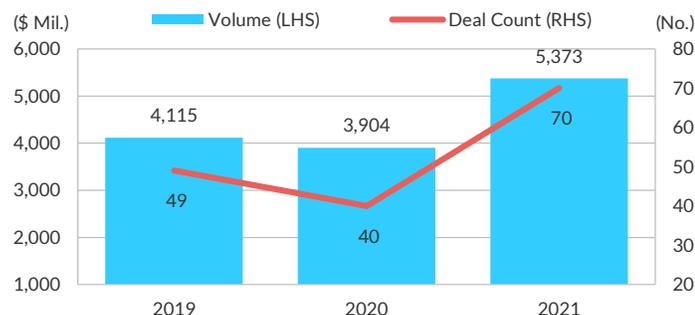
<sup>a</sup>Those providing capital through the banks (i.e. lending participants). <sup>b</sup>Those providing capital to issuers (e.g. general partners, such as private equity firms, hedge funds, banks, etc.). <sup>c</sup>The Office of the Comptroller of the Currency, Board of Governors of the Federal Reserve System and Federal Deposit Insurance Corp.  
Source: Fitch Ratings.

### Why Is Direct Lending Attractive to Companies and Investors?

Companies targeted by direct lenders tend to be smaller, and usually have loans that are not publicly rated and have limited access to the public markets. However, the range of companies issuing private debt broadened in recent years as bank regulation shrunk the availability of traditional forms of financing for many borrowers. Direct lenders are often prepared to fund riskier deals and on more flexible terms than banks will accept. As such, these borrowers are willing to pay the higher yields that make direct lending attractive to investors.

An additional advantage, highlighted during the global coronavirus pandemic, is the ability for these lenders to quickly renegotiate terms or extend additional liquidity to borrowers in periods of market stress. In syndicated lending deals, amendments to the credit agreement usually require at least a majority consent; an issue that is side-stepped when only one lender is involved. Direct-lending funds have grown into viable lending alternatives, even for larger borrowers with access to public financing, because in volatile markets, borrowers can benefit from the greater speed, flexibility and execution certainty provided by direct-lending platforms. Some companies may even prefer paying the premiums for private debt in return for keeping their financial information confidential.

### Annual Middle Market Direct Lending Issuance



Source: CapitalStructure, a Fitch Solutions Service.

According to CapitalStructure, a Fitch Solutions Service, the annual direct lending issuance for the MM segment increased by 37.6% compared with the prior year. The Healthcare, Business Services and Technology sectors led the deal count volume in 2021.

### Business Development Companies

BDCs are an important source of funding within the private debt market. They are permanent capital vehicles that provide debt financing to the MM. They generally extend credit to smaller companies, with annual EBITDA typically less than \$75 million, and

offer managerial assistance to issuers. The structure was created by Congress in 1980 with the intention of providing a way for small private companies to access public funding.

BDCs are regulated under the Investment Company Act of 1940, and many elect to be treated as regulated investment companies for tax purposes under Subchapter M of the Internal Revenue Code, which requires the annual distribution of 90% of investment company taxable income to shareholders to avoid corporate taxes. Many of these are publicly traded funds that invest primarily in private company debt, and the popularity of these vehicles expanded along with the increased prominence of private equity funds.

Notable BDCs include Ares Capital Corporation; BlackRock Capital Investment Corporation; FS KKR Capital Corp.; Goldman Sachs BDC, Inc.; and Owl Rock Capital Corporation.

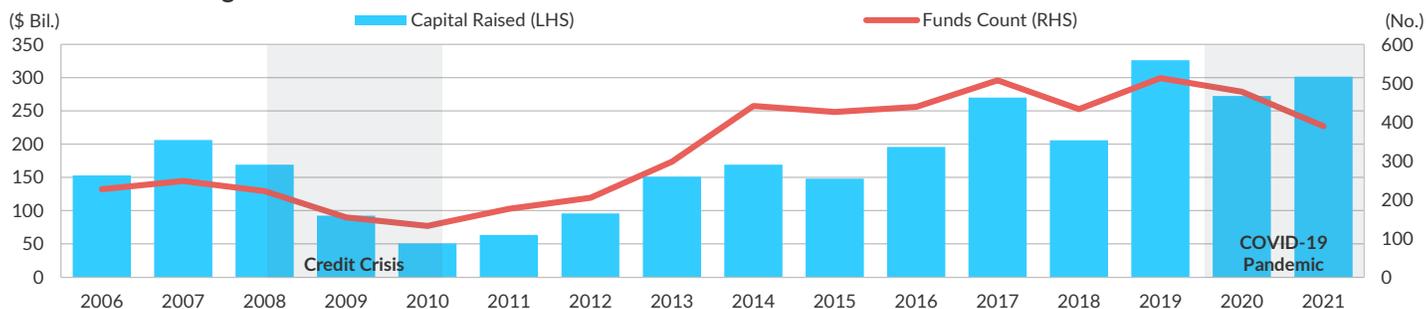
### The U.S Private Equity Market

In contrast to private debt, private equity (PE) refers to funds that make equity investments to private companies, or in some cases, purchase public equity with private capital. These transactions are generally negotiated away from public markets, and will usually involve raising additional debt financing at the target companies, a strategy referred to as an LBO. In addition, the financial performance of portfolio companies is not required to be disclosed publicly. PE managers take an active role in providing managerial experience and deal flow to portfolio companies in the hopes of generating superior financial performance that will improve valuations over the lifespan of the investment.

The U.S. PE market is driven by private capital provided by funds, fund-of-funds, insurance companies and high-net-worth individuals. Pension funds, family offices, endowments and sovereign wealth funds are some of the largest groups of investors in PE because they can commit large sums of money for long holding periods. PE funds are formed as limited partnerships. The historical intent behind choosing this structure was to avoid duplicate taxation, such as individual investor taxation and taxation on a vehicle before investors are paid out (e.g. corporate tax). Investors therefore participate in this structure as limited partners whose liability is limited to the amount of their individual investment. The fund manager is the general partner.

Fundraising volumes declined in 2020 as overall economic activity contracted due to the coronavirus pandemic and market disruptions. Annual fundraising volumes increased 10.7% yoy in 2021, with an aggregate amount of \$301.3 billion of capital raised. The number of active private funds decreased by 18.6% compared with the prior year.

### Annual Fundraising Volumes



Source: Fitch Ratings, Pitchbook Data, Inc., 2021 Annual US PE Breakdown.

### Common Private Equity Fund Investors

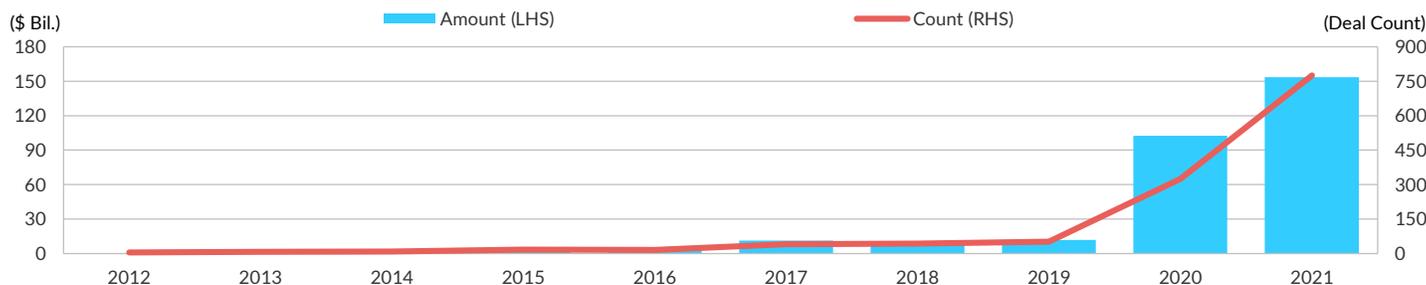
- Endowments/Foundations
- High Net-Worth Individuals
- Pension Funds
- Family Offices
- Insurance Companies
- Sovereign Wealth Funds

Source: Fitch Ratings.

Investment strategies can vary over time, but PE funds generally earn a return on their investments through some combination of operational changes, structural changes, EBITDA growth, leverage and multiple expansion. Exit options from the investment include selling to another PE firm, selling interest to another corporate entity operating in the same or a similar industry (trade sale) or taking the company public through an IPO or a special-purpose acquisition company (SPAC), sometimes referred to as blank-check companies.

These publicly listed shell corporations have the sole purpose of acquiring a privately held business, based on a specific mandate or investment criteria. Over the last two years, SPACs significantly increased their market participation, primarily driven by constant demand and popularity across private investors, as an alternative exit strategy without going through the traditional IPO process. The dollar value of the total volume issued increased 49.8% yoy at the end of 2021, reflecting a slower growth pace than the prior year. However, this is still remarkable for this asset class.

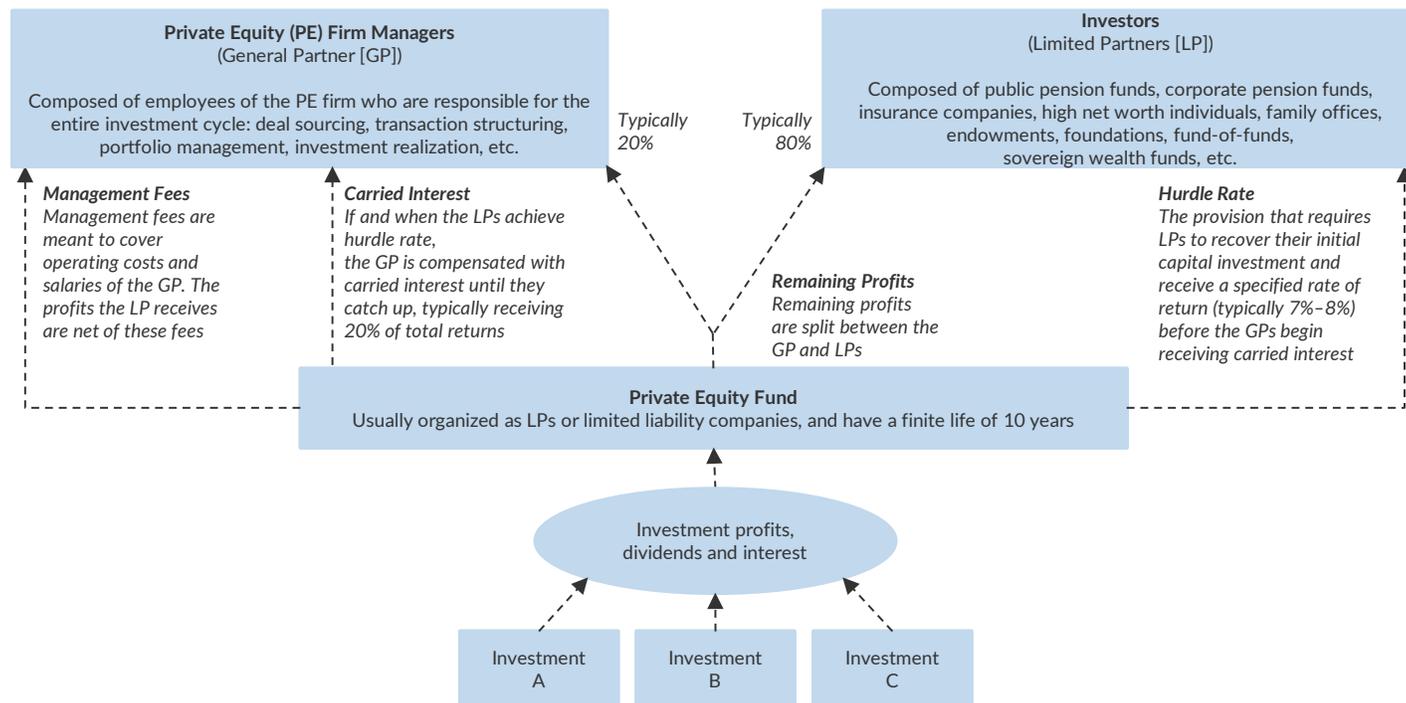
### SPAC Volume Issuance by Amount and Deal Count



SPAC – Special-purpose acquisition company.

Source: FactSet – April 2022.

Private Equity Fund Structure



Source: Fitch Ratings.

PE investments span the spectrum of companies needing equity capital to fund various stages of development, and many firms specialize either by sector, target size or other cross segments.

Example Strategies of Private Equity Funds

Categories	Definition	Purpose	Targets	Method of Financing
LBO Fund	Funds that invest in more mature companies with positive cash flows. Typically employed when a sponsor wants to acquire a company.	Three main reasons: take a public company private; spin off a portion of an existing business by selling it; transfer private property.	Profitable, established companies. Small: \$0 million-\$250 million; Medium: \$250 million-\$500 million; Large: \$500 million-\$1,000 million; Mega: > \$1,000 million.	Combination of debt and equity, where debt has traditionally exceeded 50% of the total financing. The bonds issued are typically speculative grade.
Venture Capital Funds	Funds that provide equity capital to businesses in early stages of development. A typical company has limited or no access to public financial or bank loans.	Gives entrepreneurs the substantial capital needed for new products and ideas that typically cannot be financed through debt.	New businesses with large up-front capital requirements: electronics, software, computers, telecom, biotech and medical devices.	Equity; hybrid securities that include a contractual return; preferred equity.
Distressed-for-Control Funds	Funds that invest in financially or operationally distressed companies.	Investors hope to have control of company's equity following emergence from restructuring.	Companies experience financial or operational distress, default or are under bankruptcy.	Distressed debt securities that tend to trade at substantial discounts to their par value; equity.

Source: Fitch Ratings.

How Does Fitch Analyze PE Companies?

Fitch’s Private Equity Firm Credit Rating Considerations

Component	Comment
<b>Legal Structure</b>	
<b>Key Factors</b>	
Firm Structure	General partner interests should be subordinated to that of limited partners and debtholders.
<b>Fund Document Terms</b>	
Key Man Events	Viewed negatively if allow for liquidation of fund versus end of investment period. Less risk if tied to group of individuals.
Fee Base	Management fees based on committed or invested capital are more predictable. Fees based on net asset value are subject to greater volatility.
Lock-Ups	Inability to redeem capital allows for stable fee stream.
Fee and Hurdle Rates	The need for fee discounts or higher than peer hurdle rates would be viewed negatively.
Ancillary Fees	A share of monitoring and transaction fees provides a revenue boost, but tends to be more volatile than management fees.
<b>Fund Raising</b>	
Fund Maturities	Presence of follow-on funds allows for laddering of fund maturities and more fee stability. Permanent or perpetual capital vehicles are viewed favorably, as they enhance fee stability.
Limited Partners	Loyal investor base can ease fund raising. Limited partner diversity by type and geography viewed positively.
<b>Quality of Underlying Funds</b>	
<b>Key Factors</b>	
Industry	Review industry concentrations and understand potential cyclicality of investments.
Overall Fund Strategy	Broad mandate versus sector fund.
Geographic Distribution	Consider outsized exposure to underperforming economies.
Product Concentration	Diversity of fund mandates can reduce performance correlations.
Cash	Consider sufficiency of fund cash for follow-on investments, as necessary.
Liquid Investments	Liquidity of holdings should improve as fund nears maturity.
Fund Performance	Analyze fund returns versus internal benchmarks and hurdle rates. Strong track record supports raise of follow-on funds and generation of stable fees.
<b>Leverage</b>	
<b>Key Leverage Ratios</b>	
Fund Leverage	Subscription facilities are used to manage capital calls from LPs. Facilities used to inflate returns, which could be indicative of borrowings that remain outstanding for more than 90 days, are viewed more negatively.
Debt/Fee-Related EBITDA	Leverage measured based on fee-related cash flows. For firms with high balance sheet usage, leverage is also assessed based on debt to tangible equity.
FEBITDA/Interest Expense	Debt service measured based on fee-related cash flows.
Incentive Income	Ability to generate incentive income not factored into operating cash flow, but provides cushion for debt service.
Balance Sheet Investments/Debt	Balance sheet co-investments in funds are illiquid, but can be viewed as collateral for outstanding debt.
Funding Flexibility	Unsecured funding profile viewed favorably.
<b>Liquidity and Risk Management</b>	
<b>Key Liquidity Factors</b>	
Contingent Liquidity	Should be sufficient to fund operations, debt maturities, clawbacks and co-investments. Consider willingness/ability to provide liquidity to funds, if necessary.
Clawback Risk	Firm should reserve for employee portion of potential clawbacks if accrued incentive compensation paid.
Redemption Risk	If redemption allowed, fund investments should be sufficiently liquid.
Cash and Cash Equivalents/Debt	Cash and liquid investments on the GP's balance sheet that are sufficient to repay all outstanding debt is viewed favorably.
<b>Risk Management</b>	
Fund Valuation	Valuation of investments needs to incorporate market data, and back-testing should occur. Involvement of independent valuation firms viewed positively.

Fitch’s Private Equity Firm Credit Rating Considerations

Component	Comment
Alignment of Interests	GPs and employees should co-invest in fund vehicles.
Conflicts of Interest	Policies should be in place to manage potential investment conflicts between funds.

LP – Limited partner. GP – General partner. FEBITDA – Fee-related earnings before interest, taxes, depreciation and amortization.

Source: Fitch Ratings.

Structure of an LBO

In an LBO, a sponsor — a PE firm — buys a controlling interest in a company, funding the purchase with a combination of debt and equity. The debt portion is often more than 50% of the funding package, making companies with predictive, steady cash flows the

best-suited targets for an LBO. Sponsors earn their returns through value creation driven by operational, structural and strategic changes to the company.

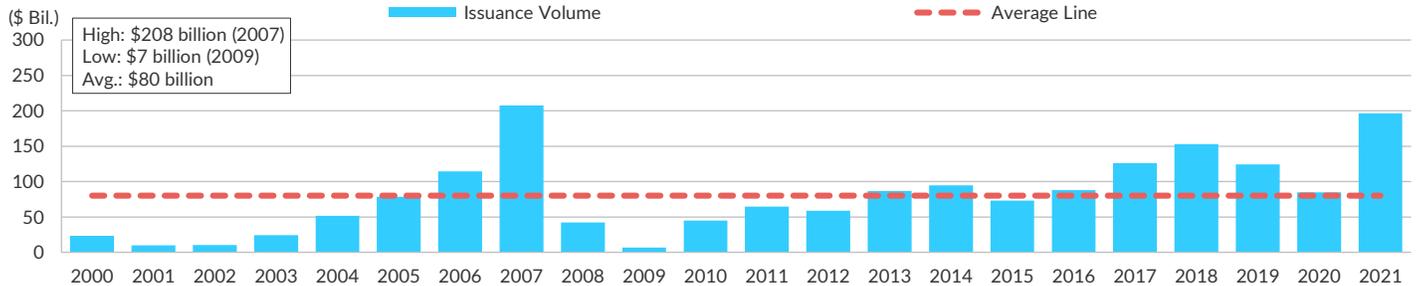
Example of a LBO Structure: Buyout of Refinitiv by The Blackstone Group L.P., Canada Pension Plan Investment Board and GIC Private Ltd.

Source of Funds	Amount (\$ Mil.)	Tenor	Pricing	Seniority	EBITDA (x) <sup>a</sup>	% of Capital Structure	Fitch Rating <sup>b</sup>
Revolving Credit Facility	750 <sup>c</sup>	Five years	L + 300bps	Sr. Secured	—	—	BB+/RR2
Term Loan B (EUR and USD tranches)	6,500	Seven years	L + 375bps	Sr. Secured	5.1	32	BB+/RR2
	EUR2,351.55		E + 400bps			14	
Senior Secured Notes (EUR and USD tranches)	1,250	Eight years	6.250%	Sr. Secured	1.3	6	BB+/RR2
	EUR860		4.500%			5	
Senior Unsecured Notes (EUR and USD tranches)	1,580	Eight years	8.250%	Sr. Unsecured	1.1	8	B+/RR6
	EUR365		6.875%			2	
Equity <sup>d</sup>	6,500	—	—	—	3.6	32	—
Total Secured Debt Multiple (x)		6.4					
Total Debt Multiple (x)		7.5					
Total Transaction Multiple (x)		11.1					

<sup>a</sup>LTM June 30, 2018 EBITDA of \$1.8 billion. <sup>b</sup>Initial ratings. <sup>c</sup>Undrawn at close of the transaction. <sup>d</sup>Equity includes \$1.0 billion in perpetual preferred PIK equity, \$3.025 billion in sponsor equity and \$2.475 billion in rolled equity. Fitch assigned 100% equity credit to the \$1.0 billion PIK preferred stock as it is outside the rated entity (held at the King Cayman Holdings Ltd. HoldCo) and is structurally subordinated to the rated debt and there are no security or cash interest payment requirements. L – LIBOR. E – EURIBOR. RR – Recovery Rating. PIK – Payment in kind. Source: Fitch Ratings, Company filings.

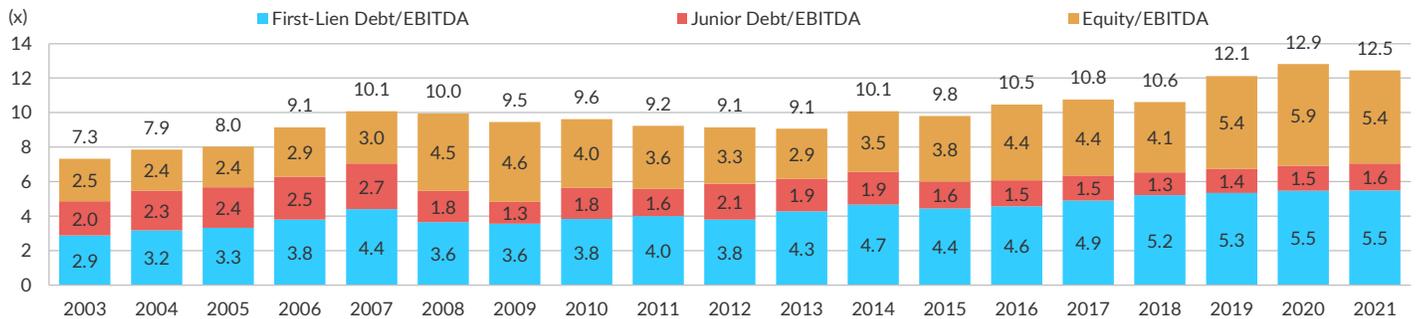
Additional PE Data

Annual LBO Loan Issuance



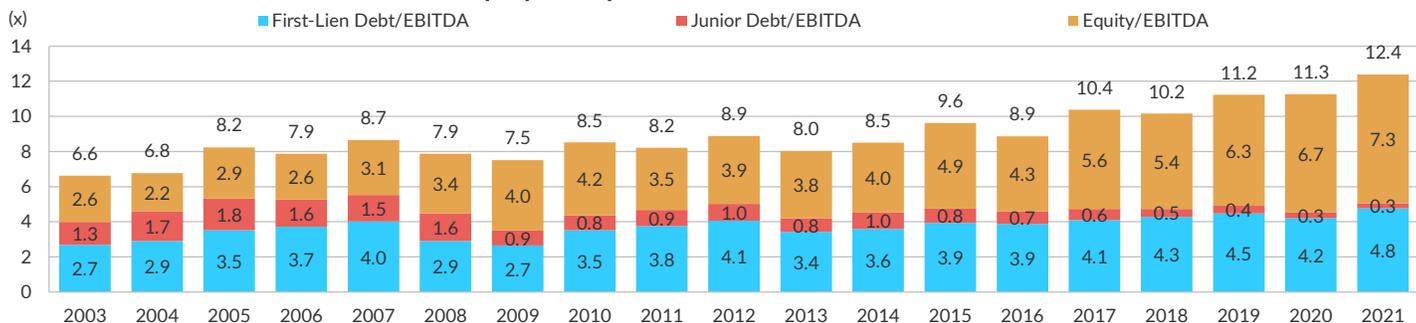
Source: Refinitiv LPC.

Median Broadly Syndicated LBO Debt and Equity Multiples



Source: Refinitiv LPC.

Median Middle-Market LBO Debt and Equity Multiples



Source: Refinitiv LPC.

Defaults

What Happens in an Event of Default?

Default Types

A default represents a failure to fulfill an obligation set forth by a credit agreement, bond indenture or other legal contract. Fitch considers three sources of default in its rating methodology:

- Bankruptcy filings, administration, receivership, liquidation or other winding-up or cessation of the business of an issuer/obligor;
- A failure to make payment of principal and/or interest under the contractual terms of the rated obligation;
- A distressed exchange (DDE) of an obligation, where creditors were offered securities with diminished structural or economic terms compared with the existing obligation to avoid a probable payment default.

Default Remedies

A default does not automatically force an issuer into a bankruptcy filing. Bankruptcy is an option, but in many instances, a default is accompanied by a grace period that typically affords an issuer anywhere from five to 30 days – depending on the type of default and covenant structure – to remedy the situation before the debtholder can force the issuer into bankruptcy. Alternatives to bankruptcy can include an out-of-court restructuring or an amendment to the debt agreement.

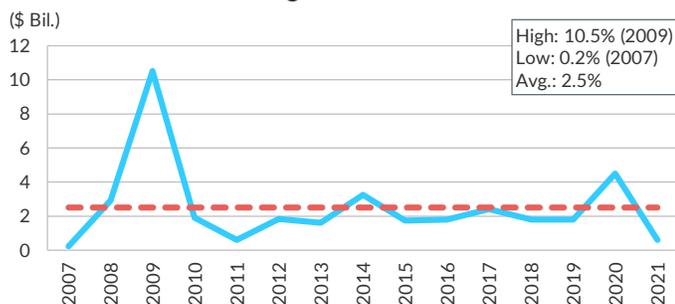
Out-of-court debt restructuring is more prevalent for high-yield bond issuers whose lenders may be willing to exchange junior notes at a discount to par for a more senior class that offers a higher recovery in the case the company ends up filing for bankruptcy. However, leveraged loans typically sit at the top of the capital structure, so there is little incentive to exchange debt. Lenders may instead be willing to agree to an amendment granting additional fees, wider pricing or tighter covenants.

## What Are the Historical Default Rates for Leveraged Loans?

### 2007–2021

The U.S. institutional leveraged loan default rate par-weighted average stands at 2.5% for 2007–2021, with a nonrecessionary rate of 1.7%. Leveraged loan defaults have generally been low in the years since the financial crisis, but increased notably in 2020 due to the coronavirus pandemic. The majority of leveraged loan default activity is concentrated in 2009, when the rate peaked at 10.5%.

### U.S. Institutional Leveraged Loan Default Rate



Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Default volume tends to be heavily concentrated by sector in any given year, and is often driven by a small number of large issuers. While Utilities, Power & Gas and Chemicals represent a large portion of the total historical defaulted volume, the majority came from the single bankruptcy filings of Energy Future Holdings Corp. in 2014 (\$19 billion) and Lyondell Chemical Co. in 2009 (\$16 billion). Defaults from the Energy and Metals & Mining sectors accounted for over 30% of total volume between 2015 and 2017, stemming from a steep decline in commodity prices in 2H14.

The Retail default rate spiked at 16.7% at the end of 2020, peaking at 17.5% in September 2020, as a number of issuers — including Neiman Marcus Group, Inc.; JC Penney Corp. Inc.; J.Crew Group, Inc.; and Ascena Retail Group, Inc. — filed for bankruptcy. The Leisure and Entertainment sector default rate ended the year at 9.9% due to the sharp decline in travel and in-person entertainment spending. However, the 2021 default rate ended at just 0.6%, the lowest since 2011 and down from a 4.5% market rate in 2020. Defaults in 2021 mostly involved loan-only, sponsored issuers, while there was nearly equal volume of bankruptcy filings as out-of-court restructurings.

Most defaults came from companies in cyclical sectors that experienced severe downturns in their cash flows during the 2008–2009 financial crisis, the more recent commodities downturn and the pandemic-led recession of 2020. An overleveraged capital

structure, often issued in the credit boom of 2006–2007 to fund a buyout or acquisition, compounded the challenges caused by a weak operating environment in many cases. Many of these companies were then unable to reach consensus with creditors on amend-and-extend transactions or below-par debt exchanges due to deteriorated EBITDA and the credit crunch that followed the financial crisis.

More permanent secular declines can also lead to bankruptcy filings. This was the case for companies in the broadcasting and media industries, including yellow pages, newspapers and commercial printers. Other defaults were made by highly leveraged companies confronted with individual liquidity or business challenges that could not be dealt with out of court. Drivers included flawed business models, production problems, accounting issues, higher raw material costs, lack of funding market access, and steep declines in demand for key products due to cyclical downturns or competition.

## What Options Are Available to Issuers Under U.S. Bankruptcy Law?

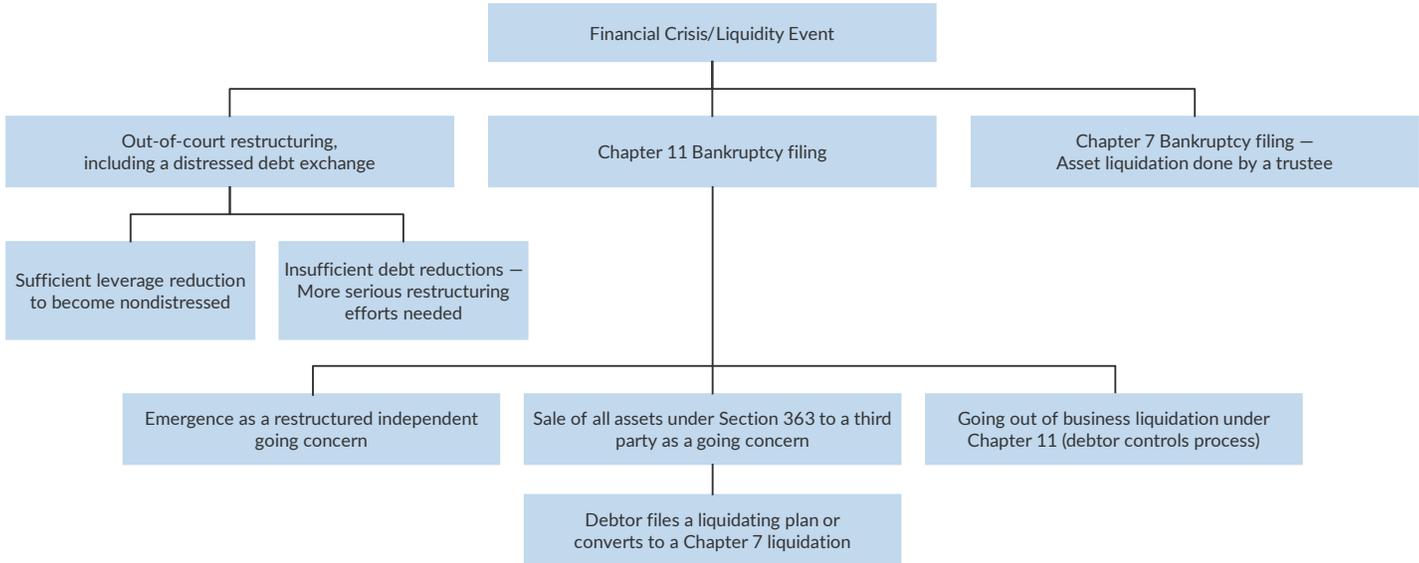
### Bankruptcy Types

As a distressed company approaches default, and attempts at restructuring existing debt and other forms of out-of-court workouts fail, bankruptcy emerges as an option. U.S. corporations can seek bankruptcy protection under Chapter 7 or Chapter 11 of the U.S. Bankruptcy Code.

- Chapter 7 applies when the company is seeking a winding up or dissolution of its business. As soon as a Chapter 7 petition is filed, the legal title of the estate is automatically transferred to a Chapter 7 trustee appointed on day one of the filing.
- Under a Chapter 11 filing, the company continues to make decisions on behalf of the estate as a debtor-in-possession (DIP). Chapter 11 bankruptcies can be confirmed either via a plan of reorganization or a plan of liquidation if the latter maximizes recoveries for all creditors.

A significant majority of U.S. bankruptcies result in the reorganization and emergence of an issuer as a going concern (GC) — either as an independent GC that shed some or all of its prepetition debt, or as a new entity created to buy the assets and business of a debtor under a bankruptcy sale. Chapter 7 liquidations are filed by issuers, but Fitch’s U.S. corporate case study database indicates petitioning for Chapter 7 liquidation is rare outside the Retail sector.

United States Flow Chart

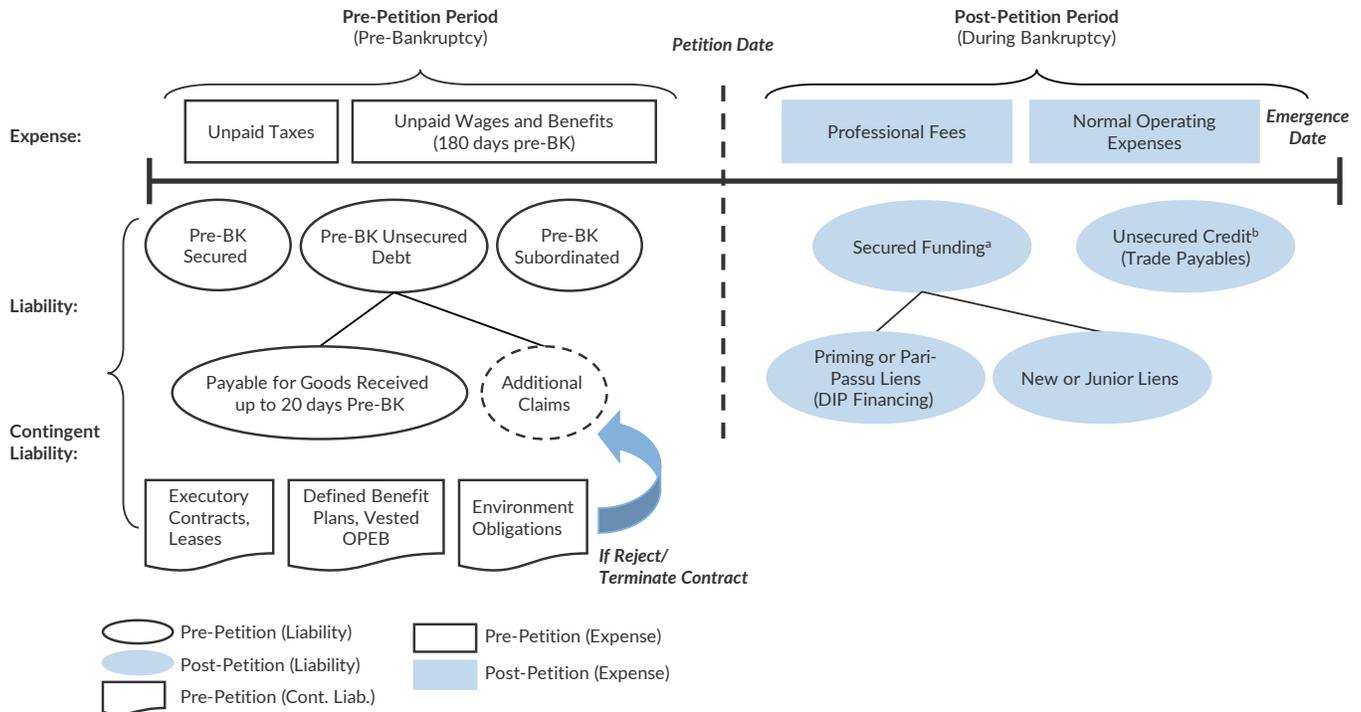


Source: Fitch Ratings.

Claim Types

A summary overview of the different types of claims that generally arise during a bankruptcy process is presented in the chart below.

U.S. Bankruptcy Code – Pre- and Post-Petition Claims



<sup>a</sup>Refers to secured funding provided to the company as DIP by lenders subject to court approval. This debt may be secured by unencumbered assets or by a junior lien on already encumbered assets under section 364(c). If the company is still unable to obtain credit, only then will the court permit "DIP Financings" that are secured by a senior (priming) or equal (pari passu) lien on already encumbered assets under section 364(d). Such DIP financings that supersede existing liens require that existing/pre-petition secured creditor be adequately protected. <sup>b</sup>Refers to post-filing unsecured funding (trade payables) provided to the company by vendors and is entitled to treatment as an administrative expense (§ 364[a] and § 364[b]). If the company is unable to obtain funding based on administrative claim status, the court may approve it as a superpriority unsecured claim with priority over other administrative expense claims (§ 364[c]). BK - Bankruptcy, OPEB - Other post-employment benefits, DIP - Debtor-in-possession.

Source: Fitch Ratings.

## Distressed Debt Exchanges

A DDE is a type of default that is tantamount to an out-of-court restructuring, in which an issuer exchanges some of its existing debt for new debt, generally with a longer dated maturity. Fitch considers a debt exchange to be a DDE if there is a material reduction in terms compared with the original contractual terms, and the exchange is conducted to avoid bankruptcy, similar insolvency or intervention proceedings, or a traditional payment default.

A material reduction in terms could involve a reduction in principal or interest, an extension of maturity or a change from coupons paid in cash to pay-in-kind (PIK). Fitch also considers whether investors face a genuine choice between the new terms and the original contractual terms, or if failure of a large part of the creditor group to accept the tender offer would call into doubt the issuer's ability to fulfil the original contractual terms.

DDEs result in a material reduction in terms for the affected creditors, but often creditors are willing to accept the terms of a DDE. A DDE can sidestep the need for bankruptcy, which can be a lengthy and value-stripping process. Many creditors will accept a DDE as they may fare worse in a bankruptcy. DDE negotiations are also typically limited to a specific set of creditors, which can make a transaction easier to execute.

DDEs are more common with high-yield bonds, as loan amendments are common and thus typically not presumed to be DDEs. The introduction of PIK interest, as opposed to the exercise of an existing option to PIK, represents a material reduction in terms and is emblematic of a loan DDE.

## Recovery

### What Is Recovery?

When it comes to corporate credit analysis, recovery refers to the amount of value a creditor can expect to recover from an investment in an event of default. Value can be in the form of cash, new debt or stock in an entity that emerges from bankruptcy.

### *Debtor-in-Possession*

The U.S. Chapter 11 framework is DIP, which essentially means the debtor's management can stay in place and operate its business in an ordinary manner while it operates under bankruptcy protection from creditors and takes steps to reorganize under the supervision of bankruptcy courts.

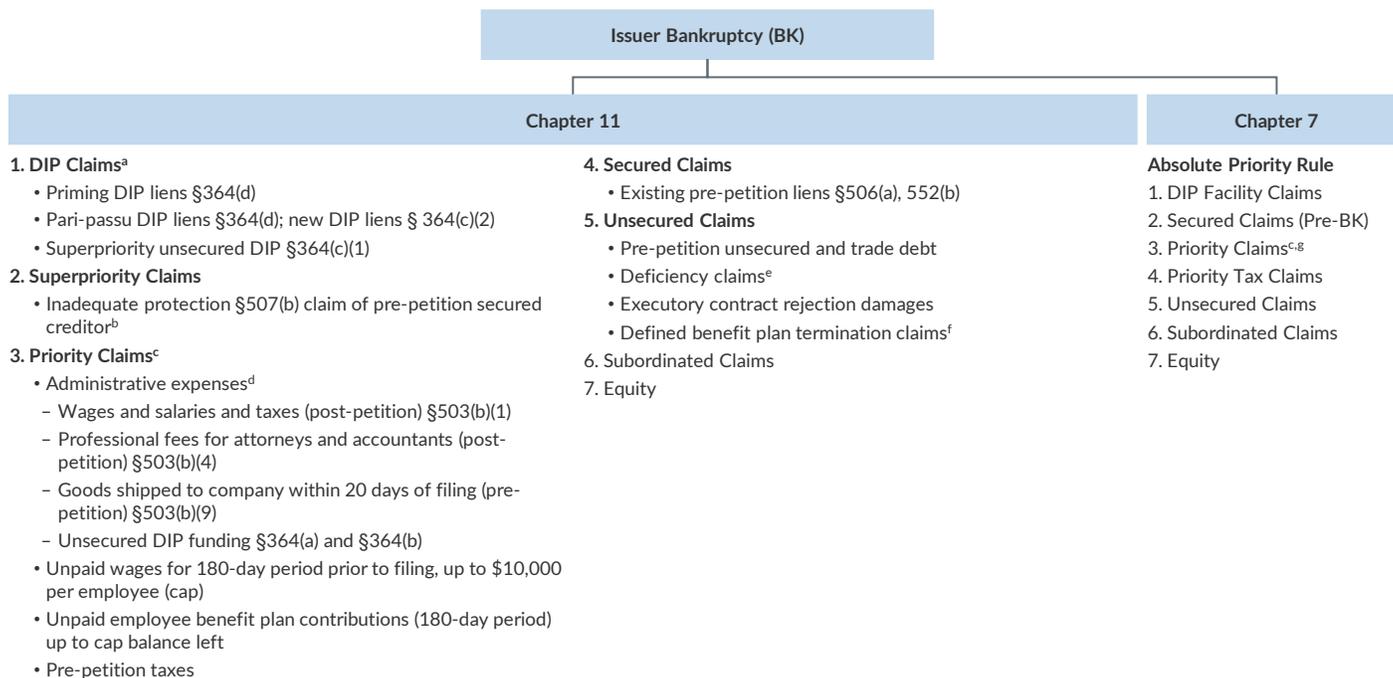
These protections include the application of an automatic stay immediately upon filing, which restricts creditors from beginning or continuing actions to collect on most claims, and allows access to new funding, typically in the form of superpriority DIP financing. Chapter 11 therefore gives a company breathing room to operate its business with the same management – or a chief restructuring officer to be appointed if management has departed or been released by the ownership – while it negotiates a restructuring that generates the highest possible recoveries for all stakeholders via rehabilitation.

Chapter 11 allows a debtor to propose a plan of reorganization, which may resolve the case as a GC plan or a liquidation, before it can emerge from bankruptcy. The plan is voted on by eligible creditors and is subject to court approval. If the plan proposed by the debtor is rejected and/or the debtor's exclusive time period for proposing a plan has lapsed, creditors and/or other interested parties may propose an alternative or competing plan. In the event of competing plans, creditors will again be entitled to vote on the competing plans, with the court approving the plan if it is considered to be fair and equitable, and representative of the best and highest recovery for creditors.

### *Absolute Priority*

Under Chapter 11 bankruptcy code, the absolute priority rule establishes the order in which creditors get paid. Enterprise valuation (EV) is key for recovery performance, and more senior debtholders get paid before junior debtholders and equityholders. The exceptions are unsecured administrative and priority claims, which must be paid in full before secured claims for a Chapter 11 plan of reorganization (or plan of liquidation) to be confirmed. The graphic on the following page outlines the priority schedule for different types of claims.

U.S. Bankruptcy Code – Priority Rules



<sup>a</sup>The fact that a DIP lender holds a post-petition superpriority or secured claim under section 364(c) or 365(d) does not automatically entitle it to be deemed an administrative expense for purposes of section 1129(a)(9), which stipulates that administrative expense claims be paid in full in cash by the effective date for the plan to be confirmed. Therefore, the chart assumes that the court provides relief in the order, approving the DIP financing for the administrative expense priority even for secured DIP financings. <sup>b</sup>If a pre-petition secured creditor’s collateral is not adequately protected following a priming/pari DIP etc., then the difference is to be treated as a superpriority unsecured claim under section 507(b). This is not the same as a deficiency claim. <sup>c</sup>As per priorities laid out in section 507 of the code. Since priority claims are nonetheless unsecured in nature, under the absolute priority rule that applies strictly under a Chapter 7 liquidation, unsecured priority claims rank lower than secured claims. However, for Chapter 11 scenarios, administrative expense/priority claims must be satisfied in full in cash by the effective date for the plan to be confirmed as per section 1129(a)(9) of the Bankruptcy code. The plan refers to either a plan of reorganization or a Chapter 11 liquidating plan. <sup>d</sup>Administrative expenses refer to the actual, necessary costs and expenses of preserving the estate, which are allowed under Code Section 507(a)(2) and specified in 503(b). The code requires that all administrative claims be paid on the effective date of the plan, unless a particular claimant agrees to a different treatment. Holders of superpriority administrative expenses under § 507(b) are paid before other administrative expenses. <sup>e</sup>Secured claims that are undercollateralized result in deficiency claims §506 (representing that portion of the claim for which there is insufficient collateral). Deficiency claims are treated pari passu with unsecured claims. <sup>f</sup>If defined benefit pension plans are terminated during bankruptcy, the resulting unfunded pension liability claim is treated as a unsecured claim but is structurally senior relative to the general unsecured creditor claims. <sup>g</sup>If a Chapter 11 is converted to a Chapter 7, the administrative expenses of a Chapter 7 (including trustee fees) take priority over the Chapter 11 administrative expenses. DIP – Debtor-in-possession.  
Source: Fitch Ratings.

Enterprise Valuation

The fundamental estimate of reorganization EV is critical to the bankruptcy reorganization process and determines recovery rates. The fundamental EV, or negotiated settlement value, determines the amount of value, if any, to be distributed to each class of creditors. Fundamental EV estimates are typically completed by third-party advisors on both a GC reorganization basis and a liquidation-alternative basis for the disclosure statements used in the bankruptcy plans. The most common GC valuation methods applied by third-party financial advisors are discounted cash flow approaches, comparable company peer analyses and precedent transaction analyses.

Valuations are more often based on higher EBITDA projections for the company post emergence than historical EBITDA levels prior to the bankruptcy filing. Higher cash flows post emergence can be due to expectations of cyclical recoveries or cash flow benefits from shedding legacy liabilities – including union liabilities, lawsuits, rejection of unprofitable leases or achieving other improvements in cost structure – during the reorganization process.

However, lower EBITDA after emergence can also be projected by companies that expect to remain mired in deep cyclical downturns or face the secular decline of their products or services, even after reorganization. Lower EBITDA forecasts can also be a function of shrinking the company during the bankruptcy process through asset sales or company split-ups. Courts deal with valuation on a case-by-case basis, and it is often a negotiated value determined through a settlement among the various classes of claimants.

Creditor Negotiations

Senior and junior creditors often have opposing views on valuation. Impaired senior creditors – whose claims are not fully repaid in cash or through reinstatement (including principal and interest), and who wish to get most of a reorganizing company’s new equity instead – have an incentive to support a lower EV. This enables the senior creditors to prevent junior creditors or old common shareholders from getting any or a greater share of the new equity. Conversely, junior creditors and old common shareholders have a motive to value the reorganizing company at a higher EV to assume

a controlling or material ownership interest in the newly reorganized company.

Even within the same class or seniority, creditors can have different motivations regarding valuation and case resolution. For example, a distressed investor that purchased an unsecured debt issue at a deep discount and wants to make a quick profit may not act like a regular trade creditor that wants to retain the customer for future business.

Because Chapter 11 entitles junior investors to insist on an appraisal of the debtor, the outcome of which is uncertain and can rapidly change, impaired senior lenders often agree to make distributions to junior creditors to lock in a “yes” vote on acceptance of a reorganization plan. Fitch refers to these types of negotiated payments as concession payments. Concession payments highlight the complexity of the bankruptcy valuation negotiation process, where disparate creditor motivations may result in deviations from the rule of absolute priority.

### What Is DIP Financing?

A DIP facility is a form of financing arranged by a company while under the Chapter 11 bankruptcy process. DIP financing provides a bankrupt company with the funds necessary to operate its business while it is developing and implementing its reorganization plan. DIP

financing has superpriority and is expected to recover before pre-petition creditors on the liability waterfall.

In some cases, a pre-petition facility can convert all or a portion of outstanding loans into a DIP facility. This is referred to as a roll-up DIP. This gives the debtor new liquidity during bankruptcy and enables the pre-petition creditor to elevate its prepetition claim to administrative priority status or be repaid in cash by the new lender that provides the DIP.

Fitch assigns ratings on these loans only during the bankruptcy period and they are not linked to the bankrupt company’s Issuer Default Rating (IDR) of ‘D’, nor to any future rating for the reorganized company that may be issued on or after the bankruptcy exit date. The rating is driven by several key factors: the collateral value behind the DIP loan; structural attributes; post-petition liquidity, cash flow and GC prospects; and scope of the restructuring. Given the inherent uncertainty of bankruptcy reorganization processes, Fitch does not expect to rate DIP instruments higher than ‘BBB+’.

For more information on how Fitch rates DIP instruments, please refer to [DIP \(Debtor-in-Possession\) Rating Criteria](#).

### DIP Loan Summary

Characteristic	Description
Description	Financing arranged by a company while under the Chapter 11 bankruptcy process.
Purpose	Provides a bankrupt company with funds necessary to operate its business while it is developing and implementing its plan of reorganization.
Priority	Typical superpriority, above other pre-petition creditors on the liability waterfall.
Security	Unencumbered assets and/or a priming lien on encumbered assets by providing adequate protection of the interest of the existing lender holding a lien on such assets.
Facility Types	Revolvers and term loans.
Funding Status	Can be drawn and undrawn.
Tenor	Less than one year to multiyear.
Arrangers	Commercial banks and specialized finance companies.
Investors	Pre-petition lenders. Nontraditional DIP lenders including institutional lenders, CLOs/CDOs and hedge funds.
Liquidity	Limited to none.

DIP – Debtor in possession. CLO – Collateralized loan obligation. CDO – Collateralized debt obligation.

Source: Fitch Ratings.

### How Does Fitch Estimate Recovery?

#### Recovery Ratings

For issuers with IDRs at ‘B+’ and below, Fitch performs a bespoke recovery analysis. Fitch completes a company valuation in a hypothetical distressed scenario under both a GC and liquidation approach. The GC scenario means the company emerges from bankruptcy and continues to stay in business under independent or new ownership, and the liquidation approach means ceasing all operations, such as a retailer going out of business and having an inventory liquidation sale. The higher of the two resulting values is then allocated to creditors according to their relative seniority. This is consistent with the best interest test applied in Chapter 11 plans.

Fitch’s valuation assumes resolution as a GC approximately 98% of the time for BSL issuers and 100% for MM issuers in the U.S. corporate ratings and Credit Opinion portfolio as of 2021, a number that varies each year but remains consistently above 90%. The median valuation multiple assumption was 6.0x for BSL issuers with GC outcomes and 5.5x for MM issuers, unchanged from the prior year. These averages are broadly consistent with the cross-sector median exit multiples from Fitch’s bankruptcy case study dataset. Among Fitch’s Recovery Rating (RR) multiple assumptions for BSL issuers with GC outcomes, 88% were in a narrow band between 5.0x and 7.0x, in line with the prior year. In the MM sample, 92% of

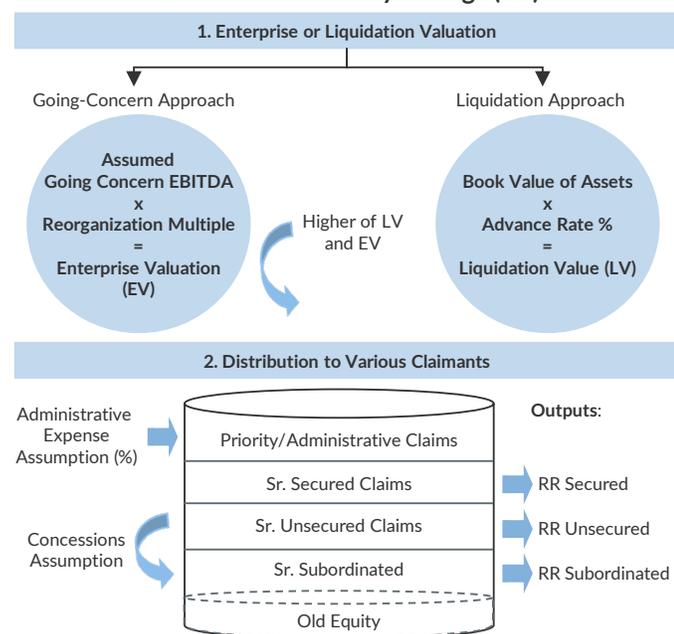
the issuers were in the 5.0x-7.0x range, also unchanged. Just 38% of Fitch’s bankruptcy case studies had observed multiples of 5.0x-7.0x, covering a group of filings made from 2002 to 2021, as court outcomes were widely dispersed. However, the median was still within this range.

For more information, please refer to Fitch’s *U.S. Leveraged Finance: Corporate Recovery Rating Trends (First-Lien BSL and MM Recovery Prospects Remain Solid)* special report.

Fitch also makes assumptions that a portion of the total value will be allocated to administrative expenses and claims, such as lawyer and consultant fees, and DIP loan claims – this is usually 10% of value. Fitch will also sometimes make an assumption that a certain percentage – usually 5% – of the remaining value will be allocated from a more senior creditor to a more junior creditor. This is a result of consensual settlements assumed to happen during the bankruptcy process to incent the junior creditors to vote to accept the proposed plan of reorganization and allow the company to emerge from bankruptcy more quickly.

A schematic of the process is shown below.

### Fundamental Drivers of Recovery Ratings (RR)



Source: Fitch Ratings.

Each debt issue in the capital structure is assigned a RR based on its expected recovery rate range – distributions as a percentage of the claim amount. Fitch’s six-category RR scale is shown in the table below.

### Recovery Ratings (RR) Scale

RR	Description	WGRC (%)	Notching from the IDR
RR1	Outstanding	91-100	+3 (First-lien debt only)
RR2	Superior	71-90	+2 (Second-lien and unsecured are capped at 'RR2') <sup>a</sup>
RR3	Good	51-70	+1
RR4	Average	31-50	+0

### Recovery Ratings (RR) Scale

RR	Description	WGRC (%)	Notching from the IDR
RR5	Below Average	11-30	-1
RR6	Poor	0-10	-2 to -3 <sup>b</sup>

<sup>a</sup>Unless the issuer is a structurally senior subsidiary issuer in a multilevel corporate group structure. <sup>b</sup>As many junior debt instruments may be rated 'RR6', varied notching enables differentiation in subordination of the debt within this category. WGRC – Waterfall-generated recovery computation. IDR – Issuer Default Rating. Source: Fitch Ratings.

For more information on Fitch’s RR methodology, please refer to the *Appendix* section.

### Bankruptcy Case Studies

Fitch’s RRs provide an unbiased and somewhat conservative recovery estimate. Fitch’s RRs are categorized based on estimates of ultimate recovery rates. Fitch gathers real world data on bankruptcy cases and analyzes outcomes to guide the inputs we incorporate into our recovery analyses. We have published a series of bankruptcy case study reports since 2012 and continue to expand on this effort. The median corporate reorganization multiple across sectors was 6.1x for over 300 companies for which bankruptcy exit multiples could be estimated, as of early 2022.

For the bankruptcy case resolutions Fitch analyzed in its U.S. case study series, only 11% were resolved as a liquidation in the court process, either under Chapter 11 or Chapter 7. The moderately higher share of GC scenarios forecast in Fitch’s RR analyses is partially attributable to the industry mix of the sample compared with the bankruptcy case study dataset. Assets often change ownership in bankruptcy court, but most businesses continue to produce revenues and cash flows under the new owners in reorganization. The Retail sector is an exception, with full chain liquidations a frequent outcome due to noncompetitive business models or undifferentiated lines.

It is consequently appropriate to estimate a company’s value on both a GC and liquidation basis, and use the higher value to estimate recoveries for the different creditor classes.

### How Do Leveraged Loans Perform in Fitch’s Recovery Analyses?

#### Recovery Distributions

Fitch assigns RRs based on ultimate recovery expectations. In the recurring Corporate Recovery Rating Trends report series, Fitch deconstructs its recovery analyses and explores the effects of different capital structures and leverage on RRs for the first-lien debt instruments on its portfolio of U.S. speculative-grade issuers. The chart on the following page shows the trend since 2017 for BSL issuers.

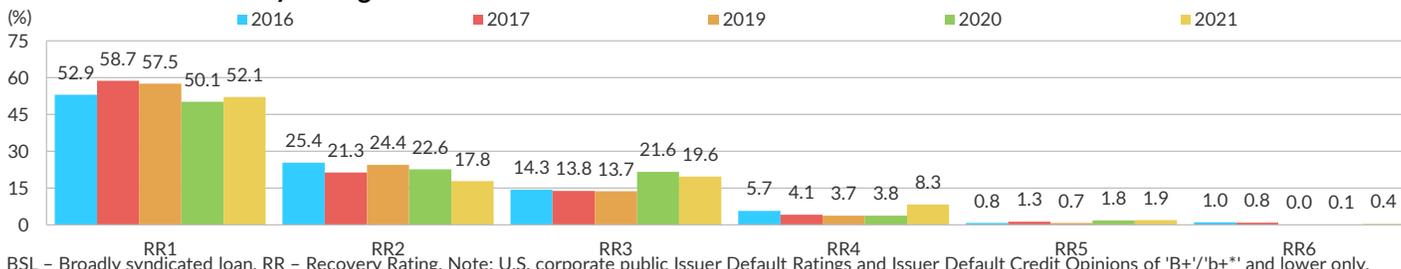
The RRs on first-lien secured debt issues are concentrated at the 'RR1' end of the recovery scale, corresponding to 91%-100% ultimate recovery rate expectations, although the percentage of instruments rated at 'RR3' has risen in recent years as companies have increasingly relied on first-lien heavy structures. While the sample is not exclusive to leveraged loans, the vast majority of our sample is composed of first-lien secured leveraged loans.

**Capital Structure Influences**

In Fitch studies, first-lien RR expectations trended lower as the proportion of first-lien debt to total debt increased. The drop has more recently been accelerated due to a large increase in the number of private ratings in our portfolio, which tend to be smaller sponsored transactions that naturally have higher leverage at closing. Most first-lien issues with low leverage through the first lien achieve the highest RR, but expected recoveries drop into the “good” and “average” categories as leverage increases.

First-lien debt issue recoveries are somewhat more insulated from decreases in EV due to the protection of having a more senior position in the distribution waterfall. Exceptions include cases when all debt in the capital structure is equally secured with a first lien, there is more than one type of first-lien issue (each with a different collateral package) or the issuer is grossly overleveraged, so recoveries are sensitive to declines in EV.

**BSL First-Lien Recovery Rating Distribution**



BSL – Broadly syndicated loan. RR – Recovery Rating. Note: U.S. corporate public Issuer Default Ratings and Issuer Default Credit Opinions of 'B+'/'b+\*' and lower only. Year references report publication. Source: Fitch Ratings.

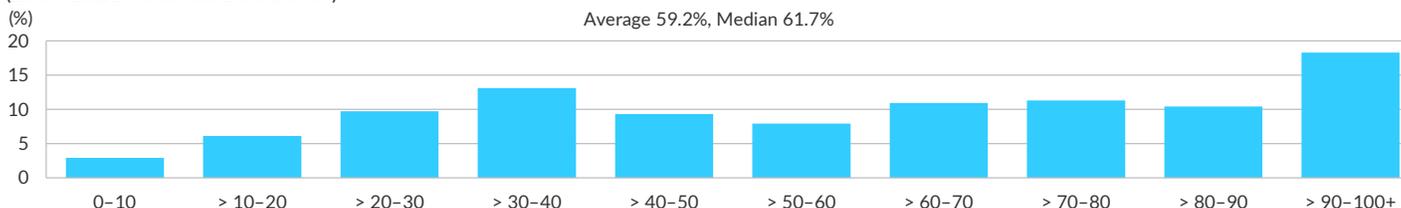
**Market-Based Recovery Estimates**

The topic of recovery has substantial nuance, and there are multiple ways to measure recovery on defaulted corporate debt. Each approach has pros and cons, but in the end, all are linked and reflect some assessment of firm value. The 30-day post-default price is a

widely available and often-used proxy for recovery rates of holders that prefer to sell a defaulted asset early in a bankruptcy rather than hold it through the entire process.

**First-Lien Institutional Leveraged Loan 30-Day Post-Default Prices**

(2007-2021 Historical Distribution)



Note: Data as of December 2021. Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Another widely available and often-used proxy for recovery rates is the emergence price. We define emergence as the time shortly after a plan of reorganization has been confirmed by a bankruptcy court – and approved by requisite creditors – but before pre-petition

debt is canceled and replaced with new debt and equity. Fitch research shows post-default loan prices can be less predictive of ultimate recovery, making emergence prices another useful reference point.

**First-Lien Institutional Leveraged Loan Emergence Prices**

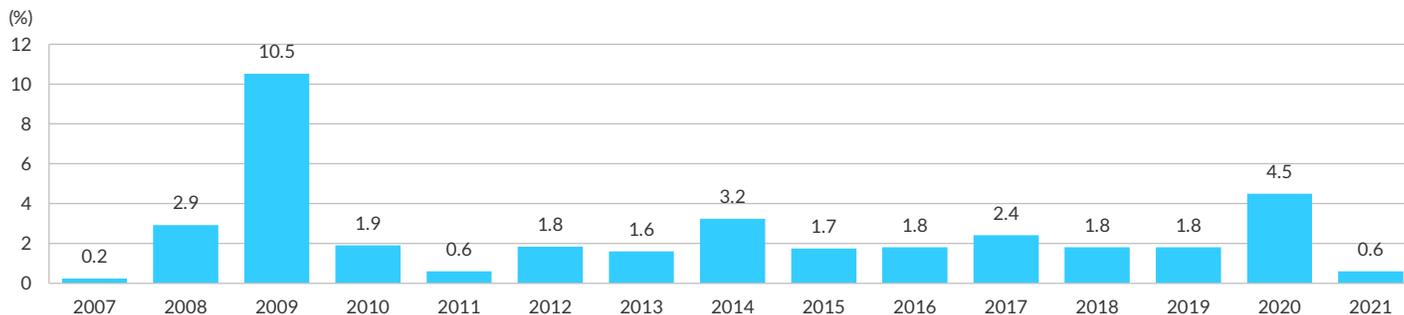
(2007-2021 Historical Distribution)



Note: Data as of December 2021. Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Recovery and Default Data

U.S. Institutional Leveraged Loan Default Rate



Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

CLOs

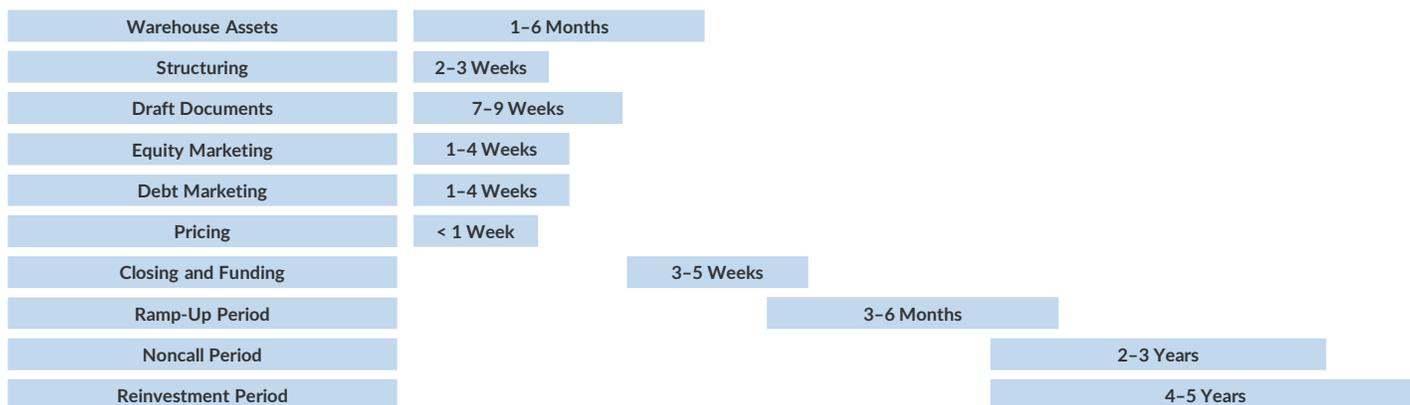
What Is a CLO?

Collateralized loan obligations (CLOs) are term financing vehicles set up to manage, usually actively, portfolios of senior, secured leveraged loans.

- The CLO issuer sells notes, which are used to acquire an initial portfolio and pay transaction costs.
- Interest proceeds are passed on to CLO note investors after paying senior CLO management fees and administrative expenses, such as trustee fees.

- A collateral management agreement defines the terms and services to be provided by the CLO manager.
- A CLO indenture defines the concentration limitations and collateral quality tests that govern the CLO portfolio trading activities.
- Senior CLO notes are protected by overcollateralization (OC) and interest coverage (IC) performance tests. When CLOs fail these tests, interest and principal payments are generally diverted to pay down the senior most outstanding tranches until test levels return to compliance.

CLO Life Stages



CLO - Collateralized loan obligation.  
Source: Fitch Ratings.

CLO Types

There are two main types of CLOs:

- Arbitrage CLOs are created in an attempt to capture the excess spread between the higher yielding corporate loans and lower yielding structured product liabilities. The equity tranche receives all of the residual cash flows. Arbitrage CLOs are the vast majority of structures outstanding.
- Balance sheet CLOs are used by issuers as a financing vehicle to obtain additional capital, which is secured by the assets on its balance sheet. Typically, the issuer retains the equity in the transaction and the special purpose vehicle is consolidated onto the balance sheet. This is common for MM CLOs.

## CLO Types and Characteristics

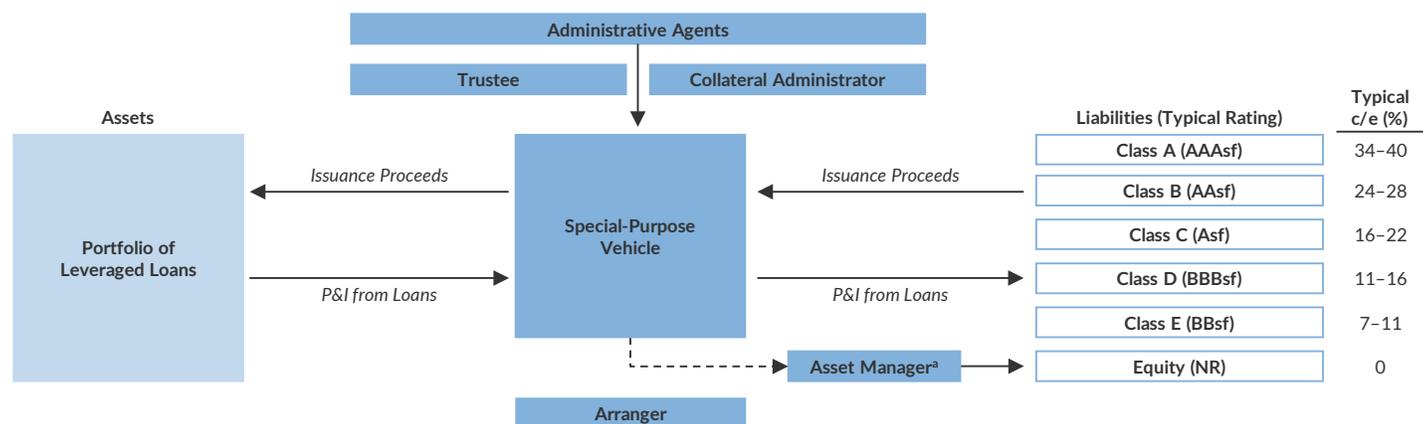
	Arbitrage CLO	Balance Sheet CLO
Market Share	90%-95%	5%-10%
Portfolio Selector	Portfolio manager	<ul style="list-style-type: none"> <li>Banks</li> <li>Specialty finance companies</li> </ul>
Debt Issuer	Bankruptcy-remote SPV	Bankruptcy-remote SPV
Purpose	<ul style="list-style-type: none"> <li>Structured exposure to leveraged loan market</li> <li>Management fees</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of regulatory capital</li> <li>Reduces credit risk</li> <li>Cheaper financing</li> </ul>
Collateral Type	Primarily broadly syndicated leveraged loans	Middle-market or broadly syndicated loans
Collateral Security	Primarily senior secured loans	Primarily senior secured loans
Collateral Origination/ Sourcing	<ul style="list-style-type: none"> <li>Loans purchased into SPV from primary and secondary market</li> <li>Issuer not involved in asset origination</li> </ul>	<ul style="list-style-type: none"> <li>Loans on balance sheet are transferred into SPV</li> <li>Issuer involved in asset origination</li> </ul>
Issuer Capital Structure	Primarily floating-rate notes with varying levels of priority and a (typically) unrated equity tranche	Primarily floating-rate notes with varying levels of priority and a (typically) unrated equity tranche
Forms of Credit Enhancement	<ul style="list-style-type: none"> <li>Generally 33%-38% subordination below senior class</li> <li>OC of rated notes</li> <li>Spread arbitrage</li> <li>OC and IC tests that, if failing, divert proceeds to redeem senior notes</li> </ul>	<ul style="list-style-type: none"> <li>Generally, 35%-50% subordination below senior class</li> <li>OC of rated notes</li> <li>Spread arbitrage</li> <li>OC and IC tests that, if failing, divert proceeds to redeem senior notes</li> </ul>
Average Life of Liabilities	5-10 years for senior notes, 7-10 years for subordinated notes and equity	5-10 years for senior notes, 7-10 years for subordinated notes and equity
Portfolio Management Style	<ul style="list-style-type: none"> <li>Usually managed; three- to four-year reinvestment periods</li> <li>Reinvestment subject to satisfaction or maintenance/improvement of portfolio covenants</li> </ul>	<ul style="list-style-type: none"> <li>Static or managed. If managed, one- to three-year reinvestment period</li> <li>Reinvestment subject to satisfaction or maintenance/improvement of portfolio covenants</li> </ul>
Use of Leverage	Yes, 7.0x-12.0x (debt/equity)	Yes, 1.0x-5.0x (debt/equity)

CLO - Collateralized loan obligation. SPV - Special-purpose vehicle. OC - Overcollateralization. IC - Interest coverage.  
Source: Fitch Ratings.

## Mechanics of an Arbitrage CLO

An arbitrage CLO is created in an attempt to capture the excess spread between higher yielding assets (i.e. a portfolio of leveraged loans) and lower yielding liabilities (i.e. multiple tranches with various ratings).

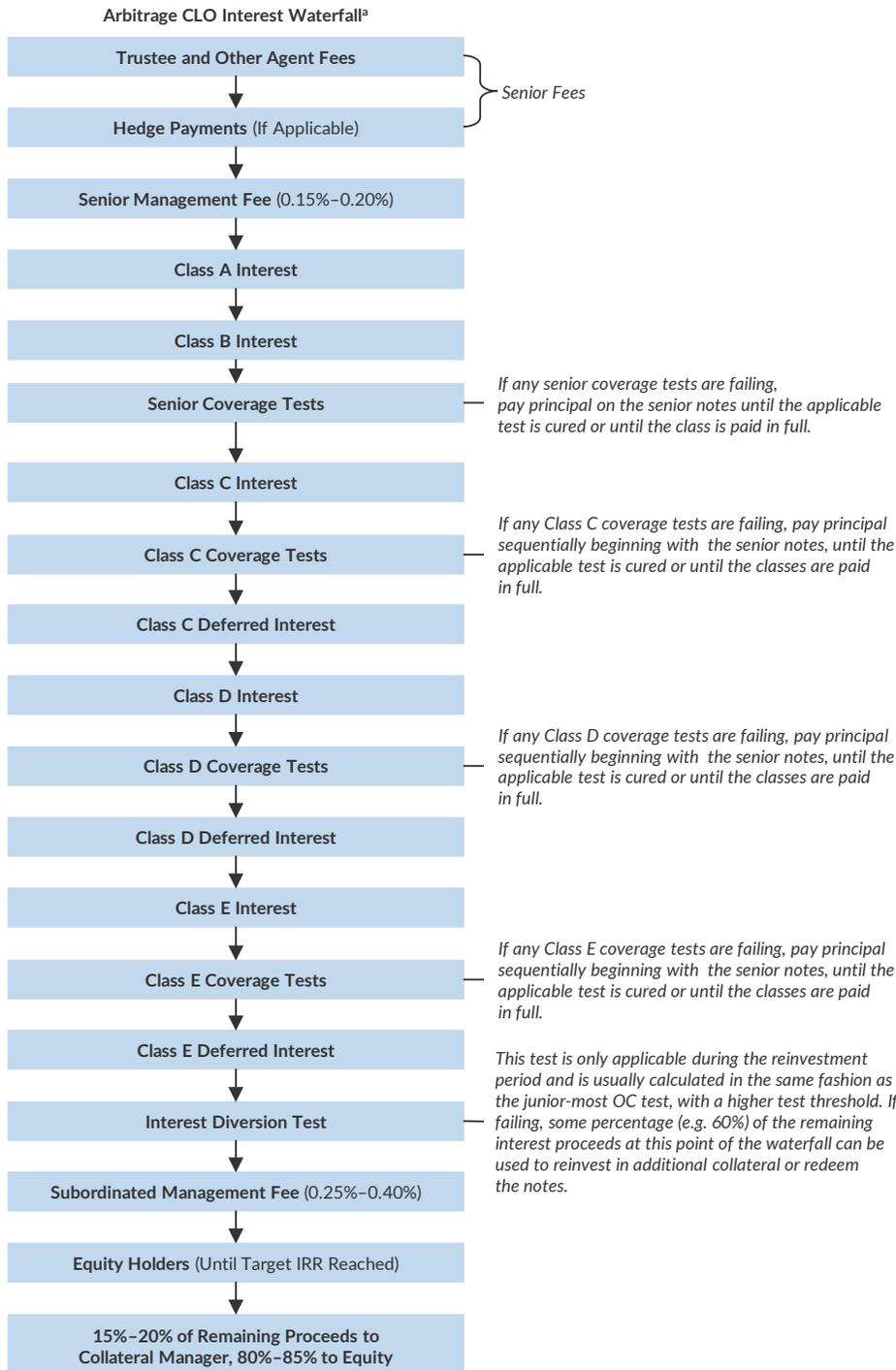
### Arbitrage CLO Transaction



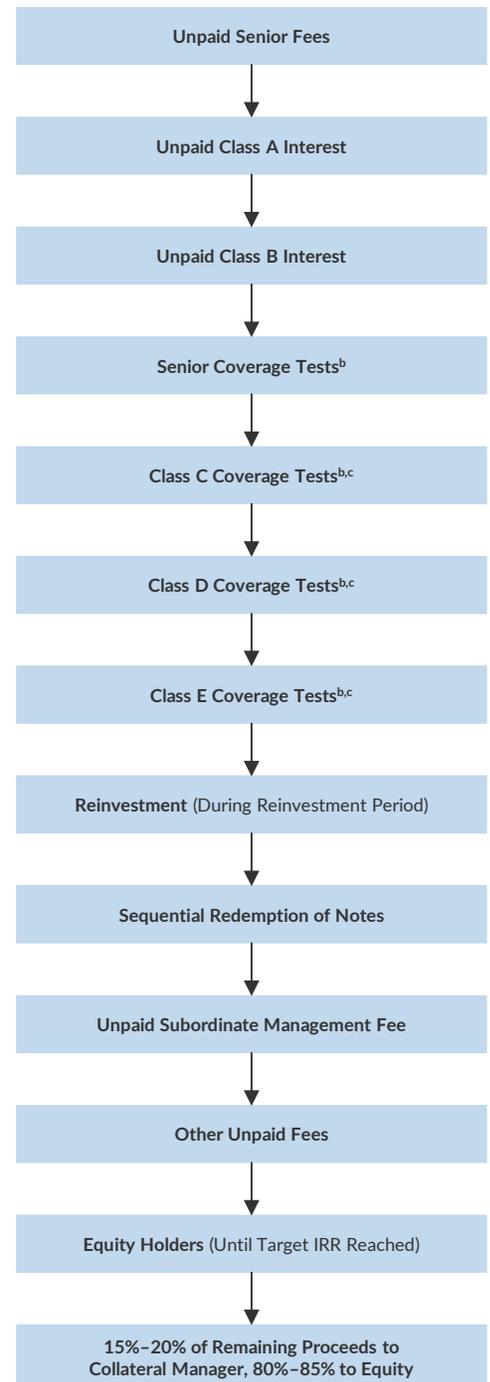
<sup>a</sup>Asset manager typically contributes a portion of equity. CLO - Collateralized loan obligation. P&I - Principal and interest. C/e - Credit enhancement (based on subordination). NR - Not rated.  
Source: Fitch Ratings.

Cash flows received from the underlying CLO collateral must follow a defined sequence of use known as a waterfall. We present a typical arbitrage CLO waterfall for interest and principal payments on the next page.

Arbitrage CLO Interest/Principal Waterfall



Arbitrage CLO Principal Waterfall<sup>b</sup>



<sup>a</sup>Transaction waterfalls can and do vary from deal to deal. These waterfalls are displayed for indicative purposes only. <sup>b</sup>Certain coverage tests may only be applicable in the principal waterfall during the reinvestment period or may not be included in the principal waterfall at all. <sup>c</sup>Nonsenior coverage tests will usually include provisions for the payment of unpaid mezzanine/subordinate tranche interest amounts, in addition to payment of principal. CLO - Collateralized loan obligation. Note: Coverage tests – overcollateralization (OC) and interest coverage (IC) tests. Source: Fitch Ratings.

Market Participants

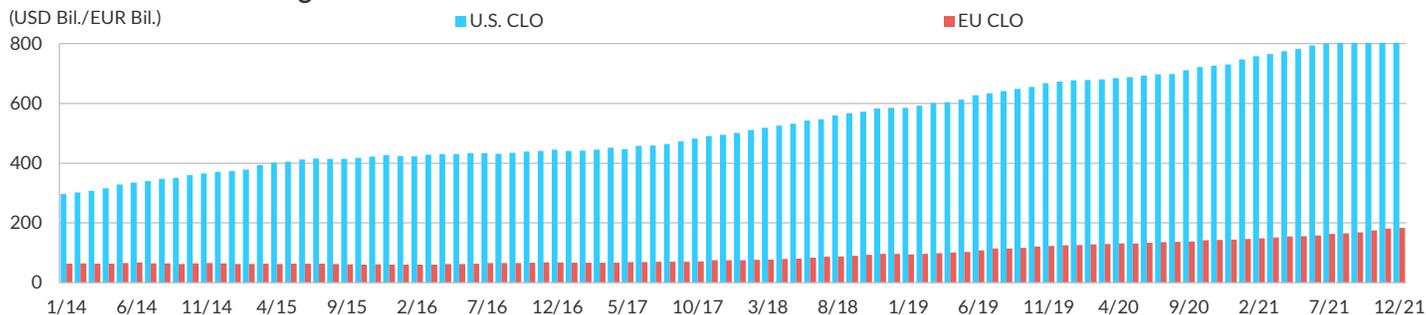
CLO Managers

U.S. CLOs reported \$883 billion of assets under management (and an additional EUR183 billion for European CLOs) according to Refinitiv LPC. Globally, CLO assets grew 22% in 2021 to over \$1 trillion, compared with less than \$300 billion at YE 2013. The majority of these are CLOs that hold primarily BSL loans. CLO

issuance in the U.S. remains concentrated in the largest managers. U.S. issuance from the 30 largest managers represents around 60% of all outstanding issuance. Two-thirds of these top managers also have CLOs outstanding in Europe.

CLO Assets Under Management

(USD Bil./EUR Bil.)



Source: Refinitiv LPC.

A large proportion of CLO issuers manage loans outside CLOs, as shown in Fitch’s annual CLO Manager Handbook, highlighting that many issuers are not solely dependent on CLO management fees. Managers reported a breakdown of loan assets under management in the following categories: CLOs, managed accounts, managed funds or other products.

For more details, see the latest *CLO Asset Manager Handbook* and *CLO Asset Manager Handbook Data Sheet* on [www.fitchratings.com](http://www.fitchratings.com).

Just under half of managers in the Handbook (43%) are considered to have CLOs as their primary product based on leveraged loan contribution being more than 75% of their total assets under management (AUM). At the end of 2021, about 27% of U.S. managers profiled had five or fewer outstanding CLOs, while 55% of them were managing 10 or more.

Investors

Investors in the most senior CLO notes, rated ‘AAAsf’, include banks, insurance companies and other participants with a need for low-risk assets to carry on the balance sheet. Investors in the lower-rated and equity tranches consist more heavily of traditional asset managers, hedge funds and alternative investors. CLO portfolios are diversified to reduce risk, with no single issuer typically allowed to contribute more than 2.5% of the portfolio or any industry more than 15% overall.

CLO Investor Base

AAA Notes	Mezzanine Notes	Equity
<ul style="list-style-type: none"> <li>Insurance Companies</li> <li>Foreign Banks (European and Asian)</li> <li>Pension Funds</li> <li>U.S. Regional Banks</li> <li>U.S. Investment Banks</li> </ul>	<ul style="list-style-type: none"> <li>Hedge Funds</li> <li>Asset Managers</li> <li>Insurance Companies</li> </ul>	<ul style="list-style-type: none"> <li>Private Equity</li> <li>Credit Opportunity Funds</li> <li>Asset Managers</li> </ul>

CLO – Collateralized loan obligation.

Source: Fitch Ratings.

CLO Holdings

CLO portfolios are diversified to reduce risk, with no single issuer generally making up more than 1% of the average Fitch-rated reinvesting CLO. CLOs hold loans from issuers across many industries, with the greatest concentration in Business Services General, Technology Software, Banking & Finance, and Healthcare Providers – mirroring the relative weights of these industries within the broader U.S. leveraged loan market.

The average exposure to issuers rated ‘CCC+’ and below is typically relatively low in CLO portfolios, varying between 4% and 6% during most periods, although there can be sharp increases in this exposure in periods of market stress, such as in 2020. OC cushions and other structural protections protect the senior tranches in the event there is an increase in defaults and the ‘AAAsf’ rated tranches.

## Arbitrage CLO Structural Protections

Coverage Tests	Purpose		
Overcollateralization (OC) Tests	The OC tests protect noteholders in the event of credit quality deterioration and/or par value erosion in the portfolio. OC refers to the excess of the par amount of collateral available to secure one or more note classes over the par amount of those note classes. If the deal fails an OC test, cash flows are diverted from equity or more junior classes of notes to pay down the liabilities in order of seniority until the senior notes are paid in full, or until the test is back in compliance.		
Interest Coverage (IC) Tests	The IC tests protect noteholders in the event of a reduction in the cash flows produced by the portfolio collateral. The IC test is the ratio of the interest income received (or anticipated) on the assets between payment dates to interest payments due on the liabilities. If the deal fails an IC test, cash flows are diverted from equity or more junior classes of notes to pay down the liabilities in order of seniority until the senior notes are paid in full, or until the test is back in compliance.		
<b>Collateral Quality Tests</b>			
Weighted-Average Life (WAL)	The weighted average time until all the loans in the portfolio mature. Designed to prevent the total risk horizon of the portfolio from exceeding a covenanted level. The WAL is necessary in determining base default rates since default rates increase over time.		
Weighted-Average Spread (WAS)	The WAS of the loan portfolio over the CLO note reference rate. This test ensures a minimum level of cash flow from the underlying portfolio that should be sufficient to pay interest on the liabilities..		
Weighted-Average Recovery Rate	The weighted-average recovery rate of the loan portfolio. This test measures what the expected recoveries may be upon default of the entire portfolio.		
Weighted-Average Rating Factor (WARF)	The WARF is a measure of the average credit rating of the portfolio. It is an indicator of the portfolio's average credit risk.		
<b>Typical Investment Criteria (Minimum/Maximum Allowances)<sup>a</sup></b>			
% First Lien/Sr. Secured	% Synthetic Securities	% Bonds	% Zero-Coupon Securities
% Rated CCC+ or Below	% Fixed-Rate Securities	% Debtor in Possession Loans	% Same Industry Category
% Non U.S. Issuer/Non-USD	% Structured Finance	% Revolving Credit Facilities	% Covenant-Lite Loans
% Single Issuer/Obligor	% Long-Dated Assets	% Delayed-Draw Term Loans	
% PIK-able Securities	% Second Lien/Unsecured	% Current Pay Obligations	

<sup>a</sup>Not an exhaustive list. CLO – Collateralized loan obligation. PIK – Payment in kind. Source: Fitch Ratings.

## Fitch CLO Rating Process

Fitch considers qualitative and quantitative factors when rating CLO tranches, with key drivers in order of importance consisting of:

- **Asset Credit Quality:** Asset quality is based on corporate IDR and term.
- **Asset Security:** Asset security is determined by the seniority of the corporate obligation and includes the jurisdiction of the issuer.
- **Portfolio Composition:** Portfolio performance in terms of portfolio default rates depends on the level of diversity by industry and obligor, and geographic concentrations, which determine the expected volatility in portfolio default rates.
- **Portfolio Management:** Portfolio management and trading may result in an evolving portfolio credit profile, extension risk and other portfolio changes not represented by the closing portfolio.
- **Cash Flow Analysis:** CLO structural features and hedging strategies, and the timing of defaults and recoveries, are important considerations in cash flow modeling and have a meaningful impact on performance.

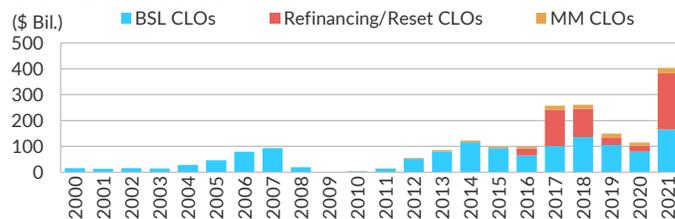
For more details, see [CLOs and Corporate CDOs Rating Criteria](#).

## CLO Trends

CLOs have grown significantly as an asset class since the Great Recession, which has grown alongside the U.S. speculative-grade corporate loan market. CLOs historically own at least 50% of the U.S. leveraged loan market, which climbed to approximately 65% at YE 2021 with greater demand for CLO debt and supported by a diversification of the investor base. The top-rated tranches of CLO structures have held up well to periods of stress, including the global financial crisis in 2008 and the pandemic in 2020 and 2021.

New CLO issuance in 2021, including reissue, surged to record levels in 2021, mirroring a similar surge in overall capital markets activity. This follows a dip in 2020 as a result of disruption caused by the coronavirus pandemic.

## U.S. CLO Issuance



CLO – Collateralized loan obligation. BSL – Broadly syndicated loans. MM – Middle market. Note: BSL CLOs include new and reissue transactions. BSL, MM and Reset CLOs are counted at pricing date, while Refinancings are by closing date. The few refinancings/resets prior to 2016 are not captured. Source: Fitch Ratings, The Royal Bank of Scotland, public information.

Topical areas that developed in recent years include an ability to invest in bonds following changes in 2020 to the Volcker rule, and the prevalence of rescue financing language, making clear CLOs can defensively make new-money investments to distressed issuers to protect recovery prospects in existing outstanding loans. More recently, the CLO market is shifting to SOFR-linked leveraged loans and CLO note financing. As of early 2022, exposure in Fitch-monitored CLOs to issuers with loans linked to SOFR is increasing but remains low, which is the same for the number of outstanding CLOs with notes referring to SOFR as a reference interest rate.

## High-Yield Bond Basics

### What Is the U.S. High-Yield Bond Market?

#### Defining the Markets

The high-yield bond market generally consists of bonds made to companies with IDRs of 'BB+' or lower. High-yield bonds can be secured or unsecured, and typically rank lower in terms of priority than loans. Bonds are issued to corporations and syndicated by banks to investors. Bonds are originated in several different forms, with cash pay and zero coupon being the most common types of bonds.

### High-Yield Bond Types

Type	Description
Cash Pay	Pays a fixed-coupon rate of interest, usually paid in cash, until maturity or an earlier stated redemption date.
Step Coupon	Offers one interest (coupon) rate in the early years of the bond's life, followed by a second, higher interest rate at a specified date (the step-up date).
Payment in Kind (PIK)	Allows the issuer the option of paying the bondholder interest in cash now or accumulate interest and add it to the principal balance of the bond. At maturity, the issuer must pay both the principal and accumulated interest amounts to the holder of the bond.
Zero Coupon	Sold at a deep discount from its face value and pays no current interest to the bondholders. Instead, the interest is compounded and paid with the principal at maturity.
Convertible	May be converted into shares of another security or cash under stated terms. The security is often the issuing company's common stock.

Source: Fitch Ratings.

The characteristics of high-yield bonds are often dictated by the issuing company's credit profile. High-yield companies typically have weaker operating profiles or higher leverage, resulting in a weaker credit profile. Due to these inherent risks, coupled with a

lower priority in the capital structure, investors typically demand higher yields than those demanded for loans. Additionally, bonds have less early repayment flexibility compared with loans due to higher call premiums and no-call provisions for a longer period.

### High-Yield Bond Characteristics

Type	Description
Coupon	The interest rate stated on a bond when issued. There are generally three types of coupon structures. <ul style="list-style-type: none"> <li><b>Cash Pay:</b> The coupon is paid in cash, typically semiannually, and can be fixed or floating.</li> <li><b>Floating Rate:</b> Floating-rate notes (FRNs) typically pay quarterly interest that varies according to the movement of the underlying benchmark (i.e. three-, six- or nine-month T-bill rate or SOFR).</li> <li><b>Payment-in-Kind (PIK):</b> Allows the issuer the option of paying the bondholder interest in cash now or accumulate interest and add it to the principal balance of the bond.</li> </ul>
Maturity	The date on which the principal amount of a bond becomes due, is repaid to the investor and interest payments stop.
Call Protection	A protective provision for investors that prohibits the issuer from repaying the security in full for a stated number of years. Call protection exists to protect bondholders from the risk that interest rates will fall before the call date. Investors' yields can be negatively affected when a bond is called prior to maturity.
Call Premiums	The premium paid by the issuer over par for the right to redeem the bond before the bond's maturity date.
Structure	A high-yield bond can be unsecured or secured on a first- or second-lien basis. Further, it can be senior, senior subordinated, subordinated or junior subordinated in rank.
Make-Whole	A lump-sum payment to the holder of the bond that is equal to the net present value of coupons they would have received had the bond not been called.
Put Provisions	Allows a bondholder to sell a bond back to the issuer at a price, generally par, on certain stipulated dates prior to maturity. Helps mitigate the risk of increasing interest during the stated put period.
Equity Clawbacks	A clawback provision in a bond gives the issuer an option to redeem a preset fraction of the bond within a preset period at a predetermined price, as long as the funds used for the debt redemption come from an equity offering.
Warrants	A provision that allows the holder of the bond the option to buy a defined number of warrants to purchase equity in the company at a later date.

SOFR – Secured Overnight Financing Rate.

Source: Fitch Ratings.

## High-Yield Bond Versus Leveraged Loan Comparison

Characteristics	High-Yield Bonds	Leveraged Loans
Priority	Senior or Subordinated	Senior
Security	Unsecured/Secured	Secured
Rating	≤ BB+	≤ BB+
Average Deal Size (Average Range)	Approximately \$600 million (\$100 million–\$5.0 billion)	Approximately \$400 million (\$100 million–\$5.0 billion)
Coupon	Fixed	Floating
Average Yield	Approximately 5%–7%	Approximately 3%–6%
Call Protection	Yes	Some soft calls
Covenants	Yes – Incurrence	Yes – Generally maintenance
Tenor	Often 10+ years	Generally 7–10 years
Amortization	No	Yes
Secondary Liquidity	Yes	Improving, but weaker than high-yield bonds
Investors	Institutional Investors	Banks/Institutional Investors
2021 Default Rate (%)	0.5	0.6
Average Non-Recessionary Default Rate <sup>a</sup>	2.2	1.7

<sup>a</sup>From 2001 to 2021.  
Source: Fitch Ratings.

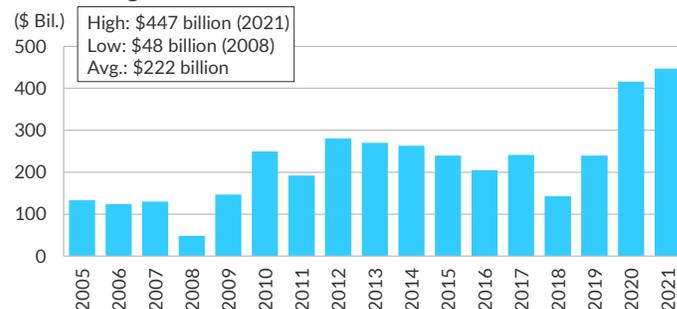
### Market History

Several factors contributed to growth in the U.S. high-yield bond market over the past decade. Investor demand in particular played a major role. As interest rates reached historic lows in the years following the financial crisis, the search for yield attracted new investors into the high-yield bond and leveraged loan markets. Insurance companies, mutual funds and pension funds were among the most active investors of high-yield bonds.

The U.S. high-yield bond market has grown significantly since the credit crisis in 2008 and 2009, reaching over \$1.4 trillion at YE 2021, or roughly double the size prior to the global financial crisis. The market declined slightly in 2017–2019 as issuers took advantage of investor demand for floating-rate exposure with the prospect of rising interest rates to shift their capital structures toward lower cost secured-loan financing, but has surged since as issuers took advantage of strong capital market access to build liquidity and pursue growth M&A in 2020 and 2021. The strong growth was also aided by a shift in financing preference to high-yield bonds from leveraged loans driven by lower interest rates and

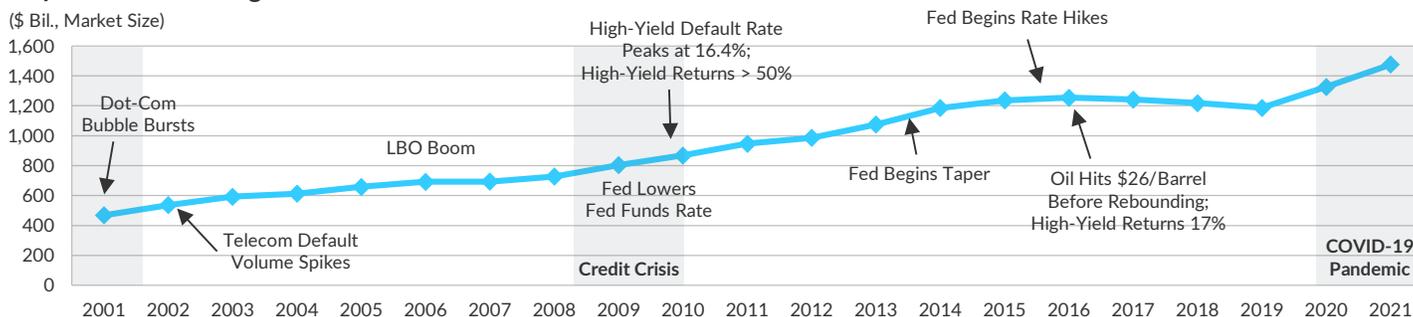
support from the Fed during the pandemic. A unique feature of the market is a heavier weighting toward the Energy and Metals/Mining sectors, which make up nearly 20% of the total market size, compared with the loan market. It also makes issuance somewhat more dependent on conditions within these sectors.

### Annual High-Yield Bond Issuance



Source: Fitch Ratings, Bloomberg.

### Key Events in the High-Yield Bond Market



Note: Grey sections represent a recessionary period, as defined by the National Bureau of Economic Research.

Source: Fitch Ratings, Bloomberg.

## Second-Lien Bonds

### What Are Second-Lien Bonds?

Second-lien bonds are secured bonds that constitute a bifurcated deal structure in which the first-lien bondholders stand before second-lien bondholders for payments on asset claims. Due to their lower position in the capital structure, second-lien bonds are perceived to be riskier, and are consequently more expensive and have higher yields for investors than first-lien bonds. Second-lien bonds make up a relatively small portion of total high-yield issuance.

## PIK Bonds

### What Are PIK Bonds?

Payment-in-kind (PIK) is a relatively expensive source of debt funding that allows issuers to pay interest in the form of additional securities rather than cash. Paying in kind can be optional — known as a toggle option — mandatory, or a combination of the two. Contingent cash-pay requirements were frequently included in recent PIK transactions. This means the issuer must make payments in cash when financial thresholds are met. When not met, the issuer may or must pay in kind, depending on the deal-specific terms. Thresholds vary from restricted payment basket availability under the company's bank facility to maximum leverage or minimum liquidity levels. Maximum limits on the total number of payments that could be made in kind were relatively common in recent PIK issue indentures.

PIK issuance tends to fluctuate with the credit cycle and generally accounts for a small minority of deals, generally for low-rated issuers that have few alternatives. PIK issuance all but disappeared in 2015, as conditions tightened amid the commodity downturn, but has been trending upward since. However, current levels remain far behind 2007 (\$16 billion) and 2008 (\$14 billion) PIK volumes that represented 11% and 27%, respectively, of total U.S. high-yield issuance.

PIK options allow flexibility for the issuer in the event of cash flows temporarily deteriorating and liquidity becoming a concern. PIK debt has recently been used primarily to fund dividend recapitalizations of LBO targets or as a restructuring tool for distressed issuers. Periods of elevated PIK issuance tend to be driven by dividend deals.

## High-Yield Bond Defaults

### What Happens in an Event of Default?

Please refer to the *Defaults* section on page 22 for Fitch's explanation of what happens in an event of default.

### What Options Are Available to Issuers Under U.S. Bankruptcy Law?

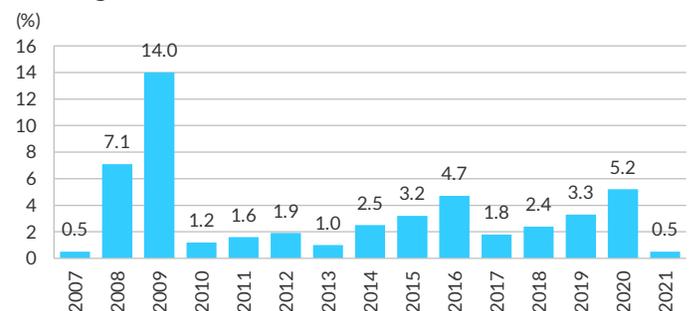
Please refer to the *Defaults* section on page 22 for Fitch's explanation of options available to issuers under U.S. bankruptcy law.

## What Are the Historical Default Rates for High-Yield Bonds?

### 2001–2021

The U.S. high-yield bond default rate averaged a little under 4.0% over the past 20 years, with significant variation around the mean. The average during economic recessions over that period was approximately 10.2%, while the nonrecessionary average is a benign 2.4%. The 2009 recession involved multiple industries, leading to a 14% default rate. In more than half of the years since the global financial crisis (GFC) of 2007–2009, the default rate has been below 2%, with an uptick between 2014 and 2016 attributable to defaults in the Energy sector due to the commodity glut, and another in 2020 catalyzed by the coronavirus pandemic. This was led by Telecommunications with a 14.5% sector rate (due to the bankruptcy of Frontier Communications Corporation), Energy with 14%, and Leisure and Entertainment with 13.5%. However, despite the spike in defaults in certain sectors, the full market default rate did not rise to the level experienced during the GFC.

### U.S. High-Yield Default Rates



Source: Fitch U.S. High-Yield Default Index.

Historically, the Telecommunications sector paced the 2001–2002 recession, producing 46% of the default volume. The default rate climbed to a peak 16.8% in 2002. Unlike 2001–2002, there were seven sectors in 2009 whose default rate topped 20%. Automotives led the way and produced the high sector mark at over 44%. Adverse credit markets led to financing difficulties for car buyers and liquidity problems for manufacturers. Substantial reductions in vehicle sales consequently led to cutbacks in original equipment manufacturers' production and reduced parts demand from suppliers. At the same time, legacy labor and benefit costs were burdensome and prices of raw materials, including steel, were on the rise. These challenges caused widespread auto defaults.

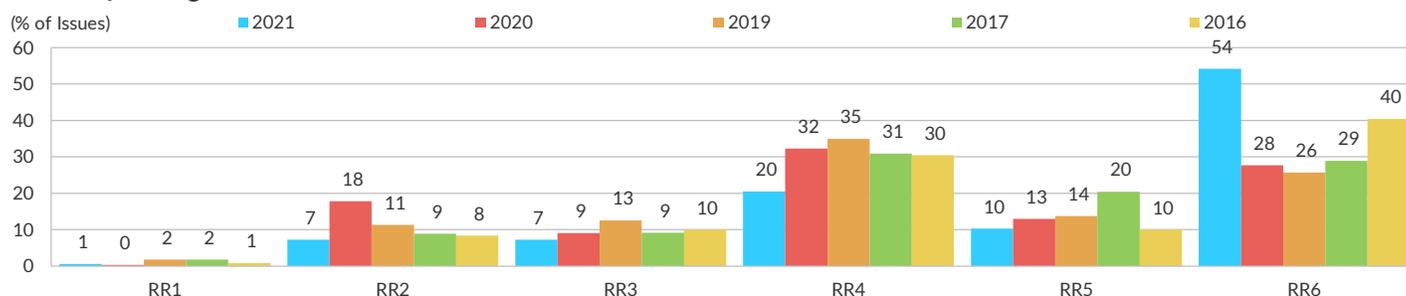
### Distressed Debt Exchanges for High-Yield Bonds

Fitch categorizes defaults under three methods: a bankruptcy filing, a missed interest payment in which the issuer does not cure its payment within the 30-day grace period or a DDE. A DDE occurs when bond investors are offered securities with structural or economic terms that are diminished compared with those of existing bonds. For companies with untenable capital structures but sustainable operating profiles, DDEs can be seen as an efficient way to restructure all or part of existing debt.

In considering whether a HY bond restructuring should be classified as a DDE, Fitch applies the following two prong test: the restructuring imposes a material reduction in terms compared with the original contractual terms; and the restructuring or exchange is conducted to avoid bankruptcy, similar insolvency or intervention proceedings, or a traditional payment default. If a key term is being changed (for example, par amount, maturity or priority) it will satisfy the first prong in most cases. Fitch's criteria presumes changes to key terms are to be deemed material unless there is clear evidence investors would be indifferent to the difference between the original and new terms. Fitch expects a high bar for this indifference test in this environment. In particular, an interest rate increase is not likely to be sufficient to net against any changes to key terms.

Similarly for the second prong, companies that propose such exchanges and investors considering these exchanges are likely doing so with insolvency as a possibility in this uncertain environment. Debt exchanges, as opposed to more traditional liability-management routes, are not part of the traditional liquidity playbook for solvent entities. Solvent entities that want to proactively manage their maturity schedules can more simply do so by tendering for existing bonds and issuing new debt.

### Recovery Rating Distribution – Senior Unsecured Debt



RR - Recovery Rating. Note: U.S. corporate public and private Issuer Default Ratings and Issuer Default Credit Opinions of 'B+'/'b+\*' and lower only. Source: Fitch Ratings.

### What Are the Historical Post-Default Prices for High-Yield Bonds?

As with leveraged loans, Fitch monitors the 30-day post-default price as a proxy for market expectations of ultimate recovery rates, although the two correlate only loosely due to the uncertainty surrounding bankruptcy outcomes at the early stages of the process, time-value of money and the effect of partial paydowns. However, taking bid levels one month following a default has the advantage of being easily observable and creates a robust sample size.

## Recovery

### What Is Recovery?

Please refer to the *Recovery* section on page 25 for Fitch's explanation of recovery.

### How Does Fitch Estimate Recovery?

Please refer to the *Recovery* section on page 25 for Fitch's approach to estimate recovery.

### How Do High-Yield Bonds Perform in Fitch's Recovery Analyses?

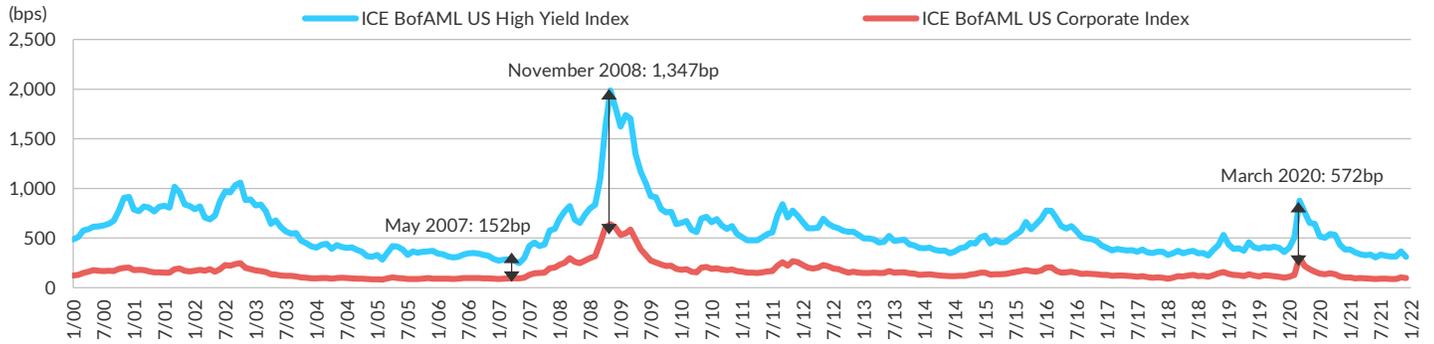
Most unsecured RRs trend in the average (RR4) to poor (RR6) ranges due to their lack of seniority in the capital structure. The tally that received the lowest 'RR6' rating increased significantly in our 2021 report, which consists of ratings for the most part performed during 2020. The large jump results primarily from lower GC EVs assumed as a result of uncertainty around the pandemic, and these securities' position in the recovery waterfall that generally results in first losses among a defaulting issuer's creditors.

The average 30-day post-default price varied significantly over the past 20 years, reaching a high of 66.4% of par in 2007 and a low of 23.3% in 2002. The historical recovery rate average is 39.8%.

The average 30-day post-default rate was 31.2% in 2020, down from 41.2% in 2019 and 54.8% in 2018. A high-default environment usually leads to low recovery rates. In 2021, the average 30-day post-default rate rebounded to 75.2%.

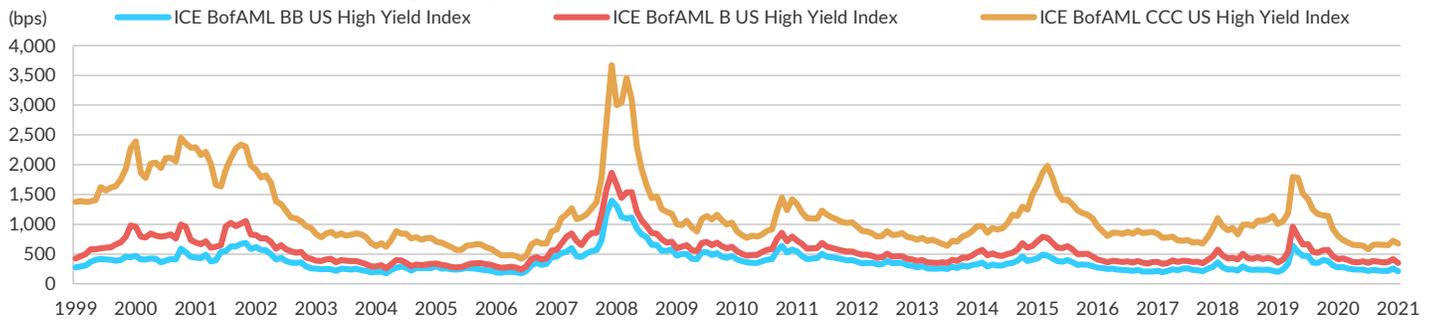
## High-Yield Bond Data

### Option-Adjusted Spread Comparison – Investment Grade Versus High Yield



Source: Intercontinental Exchange, Inc., used with permission.

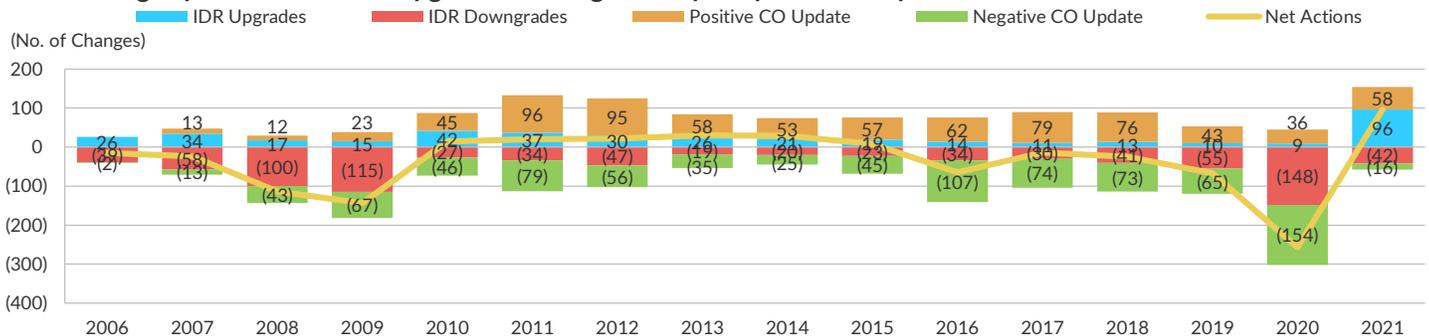
### Option-Adjusted Spreads by Rating Category



Source: Intercontinental Exchange, Inc., used with permission.

Appendix

Fitch Ratings Speculative-Grade Upgrades/Downgrades by Corporate Group



IDR – Issuer Default Rating. CO – Credit Opinion.  
Source: Fitch Ratings.

Rating Upgrades and Downgrades by Industry – 2021

Industry	Upgrade	Downgrade	Total Actions
Aerospace & Defense	1	2	3
Auto & Related	1	–	1
Building Materials & Construction	5	1	6
Chemicals	2	–	2
Consumer	3	2	5
Diversified Manufacturing	4	2	6
Diversified Services	3	1	4
Electric-Corporate	1	2	3
Energy (Oil & Gas)	15	5	20
Food, Beverage & Tobacco	7	3	10
Gaming, Lodging & Leisure	14	4	18
Health Care	13	2	15
Homebuilding	1	1	2
Media & Entertainment	4	2	6
Natural Gas & Propane	–	1	1
Natural Resources	8	3	11
Real Estate Investment Trusts	–	3	3
Retailing	9	1	10
Technology	2	4	6
Telecommunications	1	1	2
Transportation	2	2	4
<b>Total</b>	<b>96</b>	<b>42</b>	<b>138</b>

Note: Includes Issuer Default Ratings and analyst-based Credit Opinions.  
Source: Fitch Ratings.

## Criteria Overview

Name
<b>Master Rating Criteria</b>
<a href="#">Corporate Rating Criteria</a>
<a href="#">Sector Navigators – Addendum to the Corporate Rating Criteria</a>
<a href="#">New Asset SF Rating Criteria Addendum</a>
<a href="#">Rating Definitions</a>
<a href="#">Feedback Report: Sector Navigators – Addendum to the Corporate Rating Criteria</a>
<b>Other General Criteria Relevant for Corporates</b>
<a href="#">Parent and Subsidiary Rating Linkage</a>
<a href="#">Non-Financial Corporates Exceeding the Country Ceiling Rating Criteria</a>
<a href="#">Investment Holding Companies Rating Criteria</a>
<a href="#">Aircraft Enhanced Equipment Trust Certificates Rating Criteria</a>
<b>Criteria on Priority, Security and Recovery Ratings</b>
<a href="#">Corporates Recovery Ratings and Instrument Ratings Criteria</a>
<a href="#">Country-Specific Treatment of Recovery Ratings Criteria</a>
<a href="#">Corporates Hybrids Treatment and Notching Criteria</a>
<a href="#">Country-Specific Treatment of Recovery Ratings Criteria</a>
<b>Relevant Special Reports and Worked Examples</b>
(To help interpret our criteria, these special reports provide examples of how our criteria are applied in typical, practical situations.)
<b>Financial Ratios and Adjustments</b>
<a href="#">Cash-Flow Measures in Corporate Analysis</a>
<a href="#">Debt Factoring; Analytical Adjustments for Corporate Issuers and Their Recovery Ratings</a>
<a href="#">Treatment of Operating Leases in Corporate Analysis</a>
<a href="#">Adjusting for Fair Value of Debt and Related Derivatives in Corporate Analysis</a>
<a href="#">Treatment of Cash in Corporate Analysis</a>
<a href="#">Guide to Fitch's Credit Metrics, Financial Terms and Adjustments</a>
<b>Leveraged Finance</b>
<a href="#">Assigning Corporate Ratings to Issuers in Restructuring</a>
<a href="#">Differentiating Credits Rated 'B+' and Below</a>
<a href="#">Treatment of Junior Corporate Debt in Europe</a>
<a href="#">DIP (Debtor-in-Possession) Rating Criteria</a>
<b>Other Topics</b>
<a href="#">Using Commodity Prices in Corporate Projections</a>
<a href="#">Treatment of Intra-Group Loans in Corporate Analysis</a>
<a href="#">U.S. Public Power Rating Criteria</a>
<a href="#">U.S. Water and Sewer Rating Criteria</a>
<b>Related Resources: Other Cross-Sector Rating Criteria Relevant to Corporates</b>
<a href="#">Third-Party Partial Credit Support Rating Criteria</a>
<a href="#">National Scale Ratings Criteria</a>
<a href="#">Non-Financial Corporates Exceeding the Country Ceiling Rating Criteria</a>
<a href="#">Structured Finance and Covered Bonds Counterparty Rating Criteria</a>
<a href="#">Structured Finance and Covered Bonds Counterparty Rating Criteria: Derivative Addendum</a>
<a href="#">Completion Risk Rating Criteria</a>
<a href="#">Oil Vessel-Backed Financing Rating Criteria</a>
<a href="#">CLOs and Corporate CDOs Rating Criteria</a>
<a href="#">Exposure Draft: Transportation Infrastructure Rating Criteria</a>
<a href="#">Non-Bank Financial Institutions Rating Criteria</a>

Source: Fitch Ratings.

## Corporate Rating Methodology

Key Rating Factors	Description
Sector Risk Profile	Fitch determines an issuer's ratings within the context of each issuer's industry fundamentals. Industries that are in decline, highly competitive, capital intensive, cyclical or volatile are inherently riskier than stable industries with few competitors, high barriers to entry, national dominance and predictable demand levels.
Country Risk	The country risk associated with an issuer's operations has two distinct impacts on the credit profile – its operating environment, and its transfer and convertibility risk. The operating environment is a combination of the location of its revenues, income and assets; the funding environment; and the systemic governance of its primary location. Fitch recognizes that companies can both succeed and fail in the most hospitable environments. However, a higher risk environment can actively constrain a company's potential. Transfer and convertibility risk, the determinants of a country's ceiling, capture the risk of the imposition of exchange controls that would prevent or materially impede the private sector's ability to convert local into foreign currency.
Management Strategy/Corporate Governance	Fitch evaluates management by its ability to create a healthy business mix, maintain operating efficiency and strengthen the market position of the issuer. Fitch generally focuses on the following governance characteristics: governance structure, group structure and financial transparency. Although corporate governance has little to no impact on the issuer's credit ratings, a deficiency that may diminish debtholder protection may have a negative impact on the rating assigned.
Ownership, Support and Group Factors	Fitch assigns the IDR to the issuer of debt that has operations that help define its creditworthiness. Where the issuer is a holding company for the group, operating subsidiaries may be substantially funded by the parent, thus the IDR of the holding company represents the operations of the group as a whole. For group entities that are ring-fenced or have segregated funding, the agency considers the relationship between parents and their subsidiaries.
Business Profile	Fitch considers a variety of factors that indicate an issuer's ability to withstand competitive pressures, including its position in key markets, level of product dominance and its ability to maintain price. Size may be a factor if it confers major advantages in terms of operating efficiency, economies of scale, financial flexibility and competitive position. However, size may not always support higher ratings.
Financial Profile	The quantitative aspect of Fitch's corporate ratings focuses on an issuer's financial profile and its ability to service its obligations from a combination of internal and external resources. The sustainability of these credit-protection measures is evaluated over a period of time, using both actual historical numbers, but more importantly, Fitch's forecasts to determine the strength of an issuer's debt-servicing capacity and funding ability. Fitch's financial analysis emphasizes cash-flow measures of earnings, coverage and leverage. Sustainability of cash flow from operations provides an issuer with both internal debt-servicing resources and a stronger likelihood of achieving and retaining access to external sources of funding.

IDR – Issuer Default Rating.  
Source: Fitch Ratings.

## Rating Definition Summary

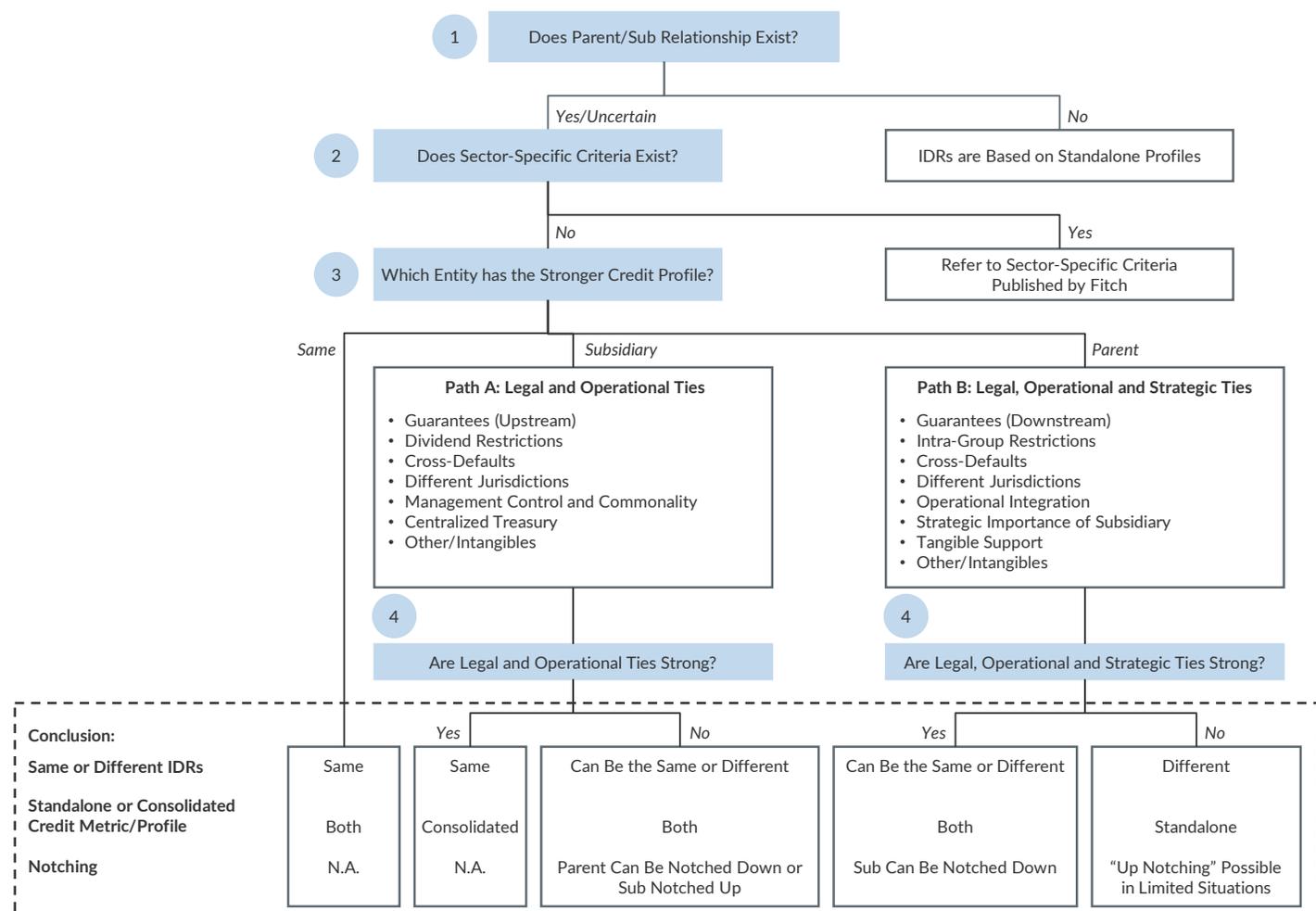
AAA: Highest Credit Quality	'AAA' ratings denote the lowest expectation of default risk. They are assigned only in cases of exceptionally strong capacity for payment of financial commitments. This capacity is highly unlikely to be adversely affected by foreseeable events.
AA: Very High Credit Quality	'AA' ratings denote expectations of very low default risk. They indicate very strong capacity for payment of financial commitments. This capacity is not significantly vulnerable to foreseeable events.
A: High Credit Quality	'A' ratings denote expectations of low default risk. The capacity for payment of financial commitments is considered strong. This capacity may, nevertheless, be more vulnerable to adverse business or economic conditions than is the case for higher ratings.
BBB: Good Credit Quality	'BBB' ratings indicate expectations of default risk are currently low. The capacity for payment of financial commitments is considered adequate, but adverse business or economic conditions are more likely to impair this capacity.
BB: Speculative	'BB' ratings indicate an elevated vulnerability to default risk, particularly in the event of adverse changes in business or economic conditions over time. However, business or financial flexibility exists that supports the servicing of financial commitments.
B: Highly Speculative	'B' ratings indicate material default risk is present, but a limited margin of safety remains. Financial commitments are currently being met. However, capacity for continued payment is vulnerable to deterioration in the business and economic environment.
CCC: Substantial Credit Risk	Default is a real possibility.
CC: Very High Levels of Credit Risk	Default of some kind appears probable.
C: Near Default	A default or default-like process has begun, or the issuer is in standstill; or for a closed-funding vehicle, payment capacity is irrevocably impaired. Conditions indicative of a 'C' category rating for an issuer include: <ul style="list-style-type: none"> <li>• The issuer has entered into a grace or cure period following nonpayment of a material financial obligation.</li> <li>• The issuer has entered into a temporary negotiated waiver or standstill agreement following a payment default on a material financial obligation.</li> <li>• The formal announcement by the issuer or their agent of a distressed debt exchange.</li> <li>• A closed financing vehicle where payment capacity is irrevocably impaired such that it is not expected to pay interest and/or principal in full during the life of the transaction, but where no payment default is imminent.</li> </ul>

### Rating Definition Summary

D: Default	'D' ratings indicate an issuer that, in Fitch's opinion, has entered into bankruptcy filings, administration, receivership, liquidation or other formal winding-up procedure, or that has otherwise ceased business.
RD: Restricted Default	'RD' ratings indicate an issuer that in Fitch's opinion has experienced an uncured payment default or distressed debt exchange on a bond, loan or other material financial obligation, but has not entered into bankruptcy filings, administration, receivership, liquidation, or other formal winding-up procedure, and has not otherwise ceased operating.

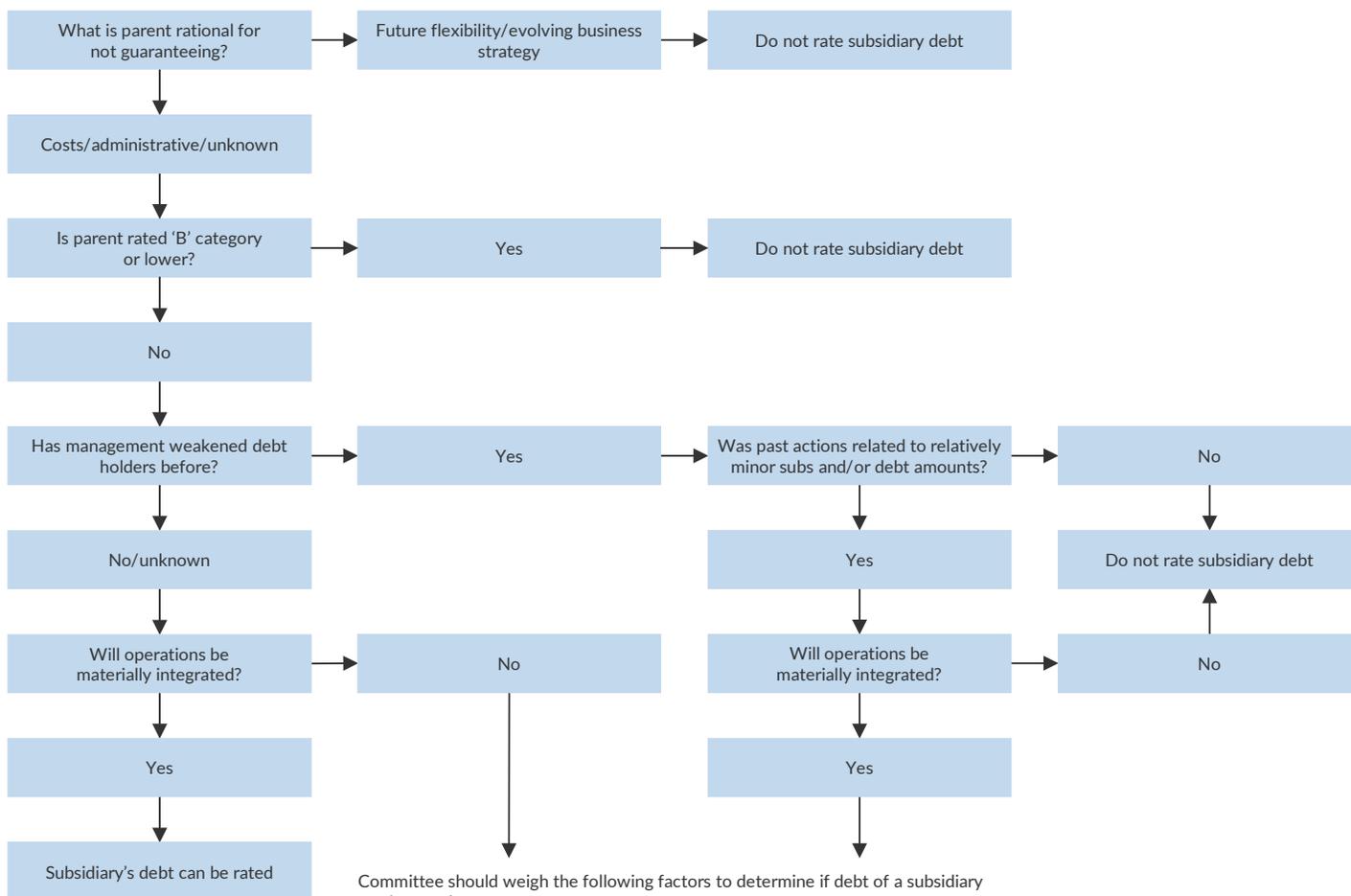
Source: Fitch Ratings.

### LCF Flow Chart



LCF - Linkage considerations framework. IDR - Issuer Default Rating. N.A. - Not applicable.  
Source: Fitch Ratings.

Rating Subsidiary Debt Without Standalone Financial Information or a Parent Guarantee



Committee should weigh the following factors to determine if debt of a subsidiary can be rated:

- Need for future bond market access;
- Material subsidiary cross-default language;
- Reputation risk;
- Overall parent credit strength (a 'BB' parent may get less leeway than an 'A' category);
- Stated public intentions of management (if any);
- Materiality of existing subsidiary debt compared with previous negative actions (if applicable).

Source: Fitch Ratings.

Recovery Analysis Methodology for Issuers Rated 'B+' or Below

Step 1: Estimate a Post-Restructuring Enterprise Value (EV) or Liquidation Value (LV)

In deriving a consolidated EV, Fitch may also separate the company's operating units by segment or by region to apply the most relevant valuation method to the various components.

Going Concern (GC) Approach

Cash Flow Multiple

Fitch's most often used method involves two elements:

- **GC EBITDA Analysis:** Fitch estimates a GC EBITDA, which assumes both depletion of the current position to reflect an assumed cause of distress that provoked default, and a level of corrective action assumed to occur during restructuring. This aims to establish the level of post-restructuring cash flow upon which it is most appropriate to base the valuation.
- **Multiple Selection and Application:** Fitch applies a multiple reflecting a company's individual financial and operational characteristics, industry dynamics and comparable peer data within the regional band.
  - **U.S.:** 4.0x–8.0x, with a 6.0x midpoint.
  - **Rest of the World:** 3.0x–7.0x, with a 5.0x midpoint.

## Recovery Analysis Methodology for Issuers Rated 'B+' or Below

The differential between regional ranges reflects lower transparency of insolvency valuation outside the U.S., historical public market trading multiple differentials and a generally less issuer-friendly process where liquidations immediately after default at trough-point valuations are more frequent.

**Four key factors determine the multiple assumption within the regional range:**

- **Industry Dynamics:** Subfactors include whether the sector is in a growth phase or in secular decline, the degree of barriers to entry, the regulatory environment and supply-chain concentration levels.
- **Company Business:** This includes an issuer's competitive position and operating profile. Subfactors that determine whether the multiple should be situated low, medium or high in the range include market share, customer churn rates, counterparty risk of customers, intangible value, the elasticity of end-market demand and asset quality.
- **Company Financial Position:** Subfactors range from scale, historical and anticipated cash flow trajectory, to certainty of revenues, margins and operating leverage.
- **Peer Comparables:** This factor evaluates data for multiples applied for close peers and for relatively large sectors, the sector midpoint, recent market M&A transaction multiples for comparable companies, public market trading multiples of close peers or historical distressed sales and reorganization data from bankruptcy studies, to the extent available.

Traded Asset Value	Acceptable for industry sectors with valuation approaches for assets that are actively traded on exchanges or frequently bought or sold.
Discounted Cash Flow	Acceptable when future cash flows can be estimated with adequate precision.
<b>Liquidation Value (LV) Approach</b>	Involves discounting the book value of balance sheet assets and summing the results to estimate the total asset liquidation proceeds in a hypothetical liquidation process

### Step 2: Estimating Creditor Claims

**Fitch estimates existing claims through:**

- Claims that are typically taken on as a credit quality deteriorates;
- Claims that are necessary to the reorganization process; and
- Claims that have priority under the relevant bankruptcy code.

**Fitch's analysis includes the following:**

- Revolving claims;
- Priority and administrative claims;
- Lease-related claims ;
- Concession assumption;
- Pension and other post-employment benefit (OPEB) obligations;
- Other nondebt and contingent claims.

### Step 3: Distribute the Greater of the EV or LV According to Priority

After the valuation is complete, the total estimated amount is allocated to creditors according to the relative seniority of their claims (the waterfall, with the surplus recovery over the most senior claim, if any, flowing down to the next priority).

**The following factors may affect the distribution of value in Fitch's analysis:**

- **Structural Subordination:** Organization structure can also affect priority in all jurisdictions.
- **Treatment of Cash Balances:** The general assumption is that cash and cash equivalents on the balance sheet dissipate prior to bankruptcy or during the process.
- **Considerations Primarily for U.S. Issuers:**
  - **Absolute Priority:** Unsecured administrative claims must be paid in full before secured claims for a Chapter 11 Plan of Reorganization (or Plan of Liquidation) to be confirmed.
  - **Guarantee Contributions:** Fitch allocates the guarantee burden proportionally among the guarantors with sufficient liquidity and/or cash flow available to perform under the guarantee (unless contra-indicated by jurisdictional practice or provisions of the guarantee agreement).
  - **Nondomestic Subsidiaries:** Value from foreign subsidiary guarantees of debt or residual equity value available is factored into the recovery waterfall at the appropriate relative priority level of the claim.
  - **Treatment of ABL Facilities:** In the case of ABL facilities with credit-protective features, Fitch assumes ABL debt is senior to other first-lien debt claims that do not share a first lien on the working capital asset collateral.

ABL – Asset-backed loan.  
Source: Fitch Ratings.

## Recovery Ratings (RR) Scale

Recovery Rating	Description	Recovery (%)	Issue Notching for 'B+' and Lower IDRs
RR1	Outstanding	91-100	+3 (first-lien debt only)
RR2	Superior	71-90	+2 (second-lien and unsecured are capped at 'RR2') <sup>a</sup>
RR3	Good	51-70	+1
RR4	Average	31-50	+0
RR5	Below Average	11-30	-1
RR6	Poor	0-10	-2 to -3 <sup>b</sup>

<sup>a</sup>Unless the issuer is a structurally senior subsidiary issuer in a multilevel corporate group structure. <sup>b</sup>As many junior debt instruments may be rated 'RR6', varied notching enables differentiation in subordination of the debt within this category. IDR – Issuer Default Rating. Note: In the bespoke approach, we apply 'RR2' caps to unsecured and second-lien instruments, except when issued by structurally senior operating subsidiaries in a multitier corporate structure. RRs on subordinated debt that ranks after senior secured debt and senior unsecured debt in the priority of payment would typically be capped at 'RR4'. RRs in the Native American gaming sector are capped at 'RR2'. Regardless of IDR, some sectors may benefit from above-average recovery assumptions upon default and receive an uplift. We refer to these sectors as Uplift Sectors in this report and they currently include equity REITs and equivalent property investment companies (PICs), collectively referred to as REITs, and regulated utility companies.  
Source: Fitch Ratings.

## 'B+' and Below IDR/Debt Instrument Mapping

IDR	B+	B	B-	CCC+	CCC	CCC-	CC	C/RD/D
RR1	BB+	BB	BB-	B+	B	B-	CCC+	CCC
RR2	BB	BB-	B+	B	B-	CCC+	CCC	CCC-
RR3	BB-	B+	B	B-	CCC+	CCC	CCC-	CC
RR4	B+	B	B-	CCC+	CCC	CCC-	CC	C
RR5	B	B-	CCC+	CCC	CCC-	CC	C	C
RR6	B-/CCC+ <sup>a</sup>	CCC+/CCC <sup>a</sup>	CCC/CCC- <sup>a</sup>	CCC-	CC/C <sup>a</sup>	C	C	C

<sup>a</sup>Differentiation in notching between two instruments at the 'RR6' level depends on structural and contractual features. Where there is only a single instrument at the 'RR6' level, -2 notching from the IDR will apply. IDR – Issuer Default Rating. RR – Recovery Rating. RD – Restricted Default.  
Source: Fitch Ratings.

## Notching for 'BB' Category Issuers (Excluding Uplift Sectors)

	BB+		BB		BB-	
	RR	Notching	RR	Notching	RR	Notching
Super Senior Revolving Credit Facility	RR1	+1	RR1	+2	RR1	+2
Asset-Backed Loan (ABL) Facility	RR1	+1	RR1	+2	RR1	+2
Category 1 First Lien <sup>a</sup>	RR1	+1	RR1	+2	RR1	+2
Category 2 First Lien <sup>b</sup>	RR2	+1	RR2	+1	RR2	+2
Second Lien/Unsecured	RR4	+0	RR4	+0	RR4	+0
Subordinated	RR5	-1	RR5	-1	RR5	-1
Deeply Subordinated	RR6	-2	RR6	-2	RR6	-2

### Category 2 First-Liens Include:

- First liens ranked contractually, structurally or practically junior to ABL facilities;
- First liens with excessive fully drawn secured gross leverage, measured as secured gross debt of all liens greater by 50% than the midpoint of 'BB' category leverage expectations for that sector;
- First liens for enterprises with a projected enterprise value (EV) of less than \$250 million using the sector's median multiple for that region;
- First liens secured only by a subsidiary equity pledge and where there is material subsidiary-level debt;
- First liens for financial investment vehicles or similar entities where the collateral is composed of minority equity holdings;
- First liens secured on collateral composed of assets with unusually speculative or hard to verify valuations (e.g. art work, musical performance rights);
- First liens that otherwise exhibit capital structure or EV characteristics detrimental to the first-lien loan recovery prospects sufficient to preclude the likelihood of an ultimate recovery rating better than 'RR2';
- All first-lien instruments issued by non-U.S.-based borrowers, or where the majority of EV is outside the US. First-lien instruments issued by non-U.S.-based borrowers but secured by assets that are predominantly in the U.S. could still be eligible for Category 1 treatment.

<sup>a</sup>Category 1 first-liens are reserved for first liens of U.S.-based borrowers that do not feature any of the limitations in Category 2 on a current or projected basis. <sup>b</sup>Category 2 first liens are detailed below. IDR – Issuer Default Rating. RR – Recovery Rating.  
Source: Fitch Ratings.

## U.S. Leveraged Finance and CLO Research

Date	Report Title
4/27/22	Stagflation Could Push U.S. Leveraged Finance Default Rate to 5% (Top-Down Stress Test Suggests Rates Could Rise Materially, but Stay Well Below 2009 Highs )
4/27/22	Fitch U.S. Leveraged Finance Market Insight Report (Inflationary Pressure, Supply Chain Issues Contribute to Steep 1Q22 Loan, High Yield Issuance Declines)
4/20/22	Fitch U.S. Leveraged Loan Default Insight (Market Concern Total Rises, Halting 23 Straight Months of Declines; 2022 Default Forecast Remains at 1.5%)
4/13/22	Fitch U.S. High Yield Default Insight (2022 Default Forecast Remains at 1% Despite March Activity, Macro Concerns)
4/12/22	US CLO Asset Quality Steady, Defaults Remain Low
4/11/22	Fitch Ratings Debuts New US Corporates Bankruptcy & Creditor Recoveries Dataset
4/7/22	Retail Bankruptcy Enterprise Values and Creditor Recoveries (2022 Fitch Case Studies)
4/4/22	Regulator Series: U.S. Middle Market LIBOR Discontinuation (Middle Market Makes Considerable Progress in Transition from LIBOR)
3/22/22	Fitch U.S. Leveraged Loan Default Insight (Diamond Sports' DDE Lifts TTM Default Rate to 0.6%; Default Forecasts Maintained Despite Ukraine Crisis)
3/21/22	U.S. Leveraged Finance Restructuring Series: Ultimate Recovery Rate Study (First-Lien Term Loan Recoveries Dip in 2020, Begin to Recover in 2021)
3/14/22	Maturities Do Not Trigger Most Bankruptcies, Liquidity Shortages Do
3/14/22	U.S. Leveraged Finance Restructuring Series: Bankruptcy Triggers
3/11/22	LIBOR Act Protects US Legacy Contracts; New SOFR Use Growing
3/10/22	Fitch U.S. High Yield Default Insight (HY TTM Default Rate Inches Up to 0.5%; 2022, 2023 Default Forecasts Unchanged Despite Ukraine Crisis)
3/10/22	U.S. HY Defaults Return as Rate Inches Up to 0.5%; Forecasts Unchanged Despite Ukraine Crisis
3/9/22	US CLO Portfolios Stable at Start of Conflict in Europe
3/1/22	Airline and Transportation Bankruptcy Enterprise Values and Creditor Recoveries (2022 Fitch Case Studies)
2/22/22	Expansion of Permitted Investment Capacity May Raise Credit Risk
2/17/22	Fitch U.S. Leveraged Loan Default Insight (TTM Institutional Loan Default Rate Falls to 0.5%; Out-of-Court Restructurings More Prevalent)
2/10/22	Fitch U.S. High Yield Default Insight (High Yield TTM Default Rate Reaches Record Low 0.3%)
2/8/22	US CLOs Start 2022 by Transitioning More to SOFR, Improving Asset Quality
2/4/22	U.S. Leveraged Loan Chart Book: Fourth-Quarter 2021 (2021 New Money Issuance Highest on Record, Positive Rating Momentum Continues)
2/2/22	North America Leveraged Finance Rating Monitor: 4Q21 (Positive Rating Momentum Slowing)
2/1/22	Fitch 50 Organizational Structures Book (Corporate Structures for 50 Prominent U.S. Leveraged Issuers)
1/28/22	Fitch U.S. Leveraged Finance Market Insight Report (Strong 4Q21 M&A Volume Drives Institutional Loan Market; Record 2021 HY Issuance Despite Slow 4Q21)
1/27/22	Automotive Bankruptcy Enterprise Values and Creditor Recoveries (2022 Fitch Case Studies)
1/24/22	Global CLO Quarterly: Market Review - 4Q21
1/21/22	Fitch U.S. Leveraged Loan Default Insight (2021 Default Rate Ends at Decade-Low 0.6%; 1.5% Forecasted for 2022, 1.25%-1.75% in 2023)
1/14/22	Fitch U.S. High Yield Default Insight (2021 Default Rate Finishes at Record Low 0.5%; 1% Anticipated for 2022, 1%-1.5% in 2023)
1/14/22	U.S. Corporate M&A (Higher Rated Issuers Willing to Take on More Debt for Acquisitions)
1/13/22	Low US Institutional LL, HY Default Rates Anticipated in 2022, 2023
12/16/21	Fitch Ratings 2022 Outlook: U.S. Leveraged Finance
12/16/21	Industrial, Manufacturing, Aerospace and Defense Bankruptcy Enterprise Values and Creditor Recoveries (2021 Fitch Case Studies)
12/16/21	U.S. Leveraged Finance: Corporate Recovery Rating Trends (Stable First-Lien BSL and MM Recovery Prospects)
12/15/21	Fitch Event on U.S. Leveraged Finance: Defaults and Loan Documentation – What's in Store for 2022?
12/8/21	Fitch U.S. High Yield Default Insight (2021 Default Rate Expected to Finish Just Below 2007's 0.5% Record Low; 1% Anticipated for 2022)
12/7/21	US Middle Market Corporate Loan Issuers Most at Risk of Rising Rates
11/19/21	Fitch U.S. Leveraged Loan Default Insight (YE Default Rate Lowest Since 2011; Riverbed Filing Lifts YTD Rate to 0.6%)
11/18/21	Coronavirus-Related EBITDA Addbacks Enhance Flexibility (Adjustments Increase Covenant Cushion, Add Extra Financial Flexibility for Issuers)
11/10/21	Healthcare, Food, Beverage and Consumer Bankruptcy Enterprise Values and Creditor Recoveries (2021 Fitch Case Studies)
11/10/21	Fitch U.S. High Yield Default Insight (YTD Default Rate Below 2007's Record Low; Energy Default Rate Nears 2% for 2021)

## U.S. Leveraged Finance and CLO Research

Date	Report Title
11/9/21	Terms & Conditions Series: ESG in Credit Documents (ESG Terms in Natural Resources and Industrials Credit Documents)
11/4/21	North America Leveraged Finance Rating Monitor: 3Q21 (Positive Rating Activity Continues as Negative Actions Abate)
11/3/21	U.S. Leveraged Loan Chart Book: Third-Quarter 2021 (Solid New Money Issuance, Positive Rating Momentum Continues)
10/28/21	Global CLO Quarterly Shows Strong Issuance, Credit Review Progress
10/27/21	Fitch U.S. Leveraged Finance Market Insight Report (3Q21 Institutional Loan Volume Doubles 3Q20; Minimal Loan, High Yield Maturity Walls Through 2024)
10/20/21	Fitch U.S. Leveraged Loan Default Insight (YTD Default Volume Lowest Since 2011; TTM Rate Falls Below 1%)
10/12/21	Fitch U.S. High Yield Default Insight (TTM Default Rate Falls Below 1%; Market Concern Bonds Total Nears Pre-Pandemic Levels)
10/7/21	What Investors Want to Know: Fitch Stressed Portfolio for U.S. CLOs (Testing Flexibilities in Documentation Against Structural Protections)
10/5/21	Speculative-Grade Valuations Varied in 2020; on the Rise in 2021
9/23/21	Fitch U.S. Leveraged Loan Default Insight (Fitch Forecasts 1.5% 2022 Default Rate; Market Concern Loans Total Down 17th Consecutive Month)
9/21/21	Primer for Fitch Metrics for U.S. BSL CLOs (Fitch Collateral Quality Limits in a Matrix Allow for Dynamic Portfolio Management)
9/20/21	What Investors Want to Know: Middle Market Lending Appetite Intact (Credit Quality Improves after Pandemic Challenges)
9/15/21	Fitch U.S. High Yield Default Insight (Fitch Forecasts 1% 2022 HY Default Rate; Market Concern Bonds Continue to Improve)
9/13/21	Energy, Power and Commodities Bankruptcy Enterprise Values and Creditor Recoveries (2021 Fitch Case Studies)
9/9/21	2022 US Institutional Loan Default Rate Lowered to 1.5%, HY to 1%
8/20/21	Model-Based Credit Opinion EBITDA Adjustments for U.S. Corporates (Most Companies Assigned the Opinion Require Reported EBITDA Adjustments)
8/20/21	EBITDA Adjusted Down in Majority of Model-Based Credit Opinions
8/19/21	Fitch U.S. Leveraged Loan Default Insight (1.3% TTM Default Rate Lowest Since May 2019; YTD Default Volume Down 88% Versus 2020)
8/12/21	Fitch U.S. High Yield Default Insight (YTD Default Rate at 0.4%, Lowest Level Since 2007; Default Volume Down 90% Versus 2020)
7/30/21	U.S. Leveraged Loan Chart Book: Second-Quarter 2021 (1H21 Activity at Last Year's Level, Negative Rating Pressure Easing)
7/29/21	U.S. CLOs Experience Good Recoveries (Requirement to Hold Mostly First Lien Loans a Safeguard)
7/23/21	U.S. Leveraged Finance Market Insight Report (Loan Universe Surpasses \$1.5 Trillion; 1H21 High Yield Volume Exceeds 2020's Record Pace)
7/22/21	U.S. Leveraged Finance Restructuring Series: Revolving Credit Facility Performance in Bankruptcy (Corporate Utilization Rates Tick Up, Recoveries Remain Strong)
7/21/21	Fitch U.S. Leveraged Loan Default Insight (July TTM Default Rate Anticipated at 1.5%, Lowest Since September 2019)
7/15/21	Fitch U.S. High Yield Default Insight (July TTM Default Rate Expected at 1.4%, Lowest Level Since March 2014)
7/9/21	Telecom, Media and Technology Bankruptcy Enterprise Values and Creditor Recoveries (2021 Fitch Case Studies)

Source: Fitch Ratings.

## Additional Corporates and Relevant Research

Date	Report Title
4/28/22	Shipping Fragmentation, Importance Deprioritise Decarbonisation
4/26/22	Auto, Truck & Aircraft Makers Affected by Climate Vulnerability
4/25/22	Global Transport's Role, Demand Lessen Climate Vulnerability
4/25/22	Transportation Low-Carbon Transition Presents Major Challenges
4/25/22	Transportation - Long-Term Climate Vulnerability Scoresv
4/22/22	Health Care Cyber Risk Vulnerability Rises (Increased Frequency and Severity of Attacks Is a Potential Risk to Credit Ratings)
4/13/22	North American Midstream Energy Dashboard (First-Quarter 2022)
4/12/22	Downstate New York Casinos to Have Mixed Credit Impact on Operators
4/12/22	North American Utilities, Power & Gas Dashboard (First-Quarter 2022)
4/8/22	Russian Gas Replacement Only Feasible in Medium Term in Europe
4/5/22	Fitch Ratings Updates U.S. Airport & Toll Road Traffic Monitor with 2021 Data
4/5/22	US Packaging Ratings Are Resilient to Accelerating Inflation
4/1/22	Ukraine War Intensifies Low-Carbon Supply-Chain Disruptions
3/31/22	ESG in Focus: Social Relevance Scores Review 4Q21

Additional Corporates and Relevant Research

Date	Report Title
3/25/22	A Quick Guide to Fitch's New Transportation Indicative Rating Guidance (Exposure Draft of New Transportation Infrastructure Rating Criteria)
3/24/22	Fitch Ratings Increases Short- and Medium-Term Fertiliser Price Assumptions
3/21/22	Fitch Ratings Raises Global Metals and Mining Price Assumptions
3/21/22	Fitch Ratings Raises Short- and Medium-Term Oil & Gas Price Assumptions
3/17/22	U.S. and Canadian Ports – Peer Review (Attribute Assessments, Metrics and Ratings)
3/11/22	Healthcare and Pharma Credit Rounds: 4Q21 (Credit Profiles Remain Solid Amid Uncertainty)
3/11/22	North American Midstream: 4Q21 Earnings Wrap-Up (Strongest Quarter in Years)
3/9/22	EU Energy Package Entails Costly Changes, Market Interventions
3/8/22	US Corporate Exposure to Russia Is Low, but Indirect Risks Are Broad
3/1/22	US Aerospace Supply Chain Risk May Rise with Prolonged Conflict
2/28/22	Viatrix' Contribution of Biosimilars Portfolio to Biocon is Credit Neutral
2/28/22	Diversification, Sustainability Targets Limit LatAm Protein ESG Risk
2/25/22	Oil-Price Shock Is A Material Risk for US, European Airlines
2/24/22	US Building Product Price Hikes May Dampen Demand in Some Categories
2/23/22	Global Pharma and Biotech Pivots Towards R&D Productivity
2/22/22	Sale of Merchant E-Solutions Is Neutral to Cielo's Rating
2/21/22	Pharma, Biotech Ratings Aided by Demand, but Costs in Focus
2/21/22	Global Big Pharma and Biotech - Peer Review
2/21/22	Growing Crypto Mining Could Affect Energy Markets
2/18/22	What Investors Want to Know: Recovery Prospects for Global Aviation (Despite Ongoing Recovery, Challenges Remain)
2/18/22	Airports, Lessors Lead Global Aviation Recovery, Airlines Lag
2/10/22	Global Tobacco's Robust Cashflows Improve Rating Headroom
2/9/22	Fitch Ratings Publishes Financial Data and Forecasts for the Global Automotive Sector
2/7/22	Geopolitical Tensions Add to European Gas Market Tightness
2/3/22	Fitch Ratings Updates the ESG Sector Template Compendium
2/2/22	Global Tobacco - Peer Review
2/2/22	Global Tobacco Ratings Stable on NGP Rise, Capital Allocation
1/28/22	What Investors Want to Know: Latin American Protein (Neutral Operating Environment with ESG Scrutiny)
1/27/22	Fitch Group Designated a "Best Place to Work for LGBTQ+ Equality" by the HRC Foundation
1/26/22	Boeing's Positive Rating Momentum Hinges on Operational Execution
1/20/22	Cruise Cancellations Will Not Affect Operator or Port Credit
1/19/22	Fitch Ratings Updates Public Finance and Global Infrastructure ESG Dashboard and Other Tools for 4Q21
1/18/22	Unilever Risks Downgrade with New Growth Strategy
1/14/22	North American Midstream Energy Dashboard (Fourth-Quarter 2021)
1/14/22	Omicron Weakens Global Lodging Revenue Recovery Prospects
1/11/22	New Variants Delay Lodging Recovery in 2022
1/11/22	Fitch Ratings 2022 Outlook: Global Lodging
1/10/22	Macau Gaming's Regulatory and Visitation Uncertainties Drive Negative Watches
1/10/22	What Investors Want to Know: Macau Gaming (Regulatory and Visitation Uncertainties Drive Negative Watches)
1/10/22	North American Natural Resources Capital Allocation Study; Issuers Show Prudence
1/10/22	North American Natural Resources Capital-Allocation Study (Issuers Pursue a Prudent Course During the Pandemic)
1/5/22	Trilogy Intl. Partner's New Zealand Subsidiary Sale Positive for Credit Profile
1/4/22	Fitch Event on US Healthcare: Transition to Endemic, Labor and Supply Chain Headwinds, M&A
12/20/21	Growing Demand, Supply Policies Support Global Oil Recovery
12/20/21	Global Oil Sector's Recovery Is Supported by Growing Demand and Supply Policies
12/16/21	Demand Normalisation Is Key for EMEA & US FMCG Sector Outlook

## Additional Corporates and Relevant Research

Date	Report Title
12/16/21	Fitch Ratings 2022 Outlook: US and EMEA Food, Beverage, Tobacco and Consumer
12/16/21	Innovation Drives Growth in Global Big Pharma & Biotech
12/16/21	Fitch Ratings 2022 Outlook: Global Big Pharma & Biotech
12/16/21	Financial Discipline Supports Global Oil & Gas Sector Outlook
12/16/21	Fitch Ratings 2022 Outlook: Global Oil and Gas
12/15/21	Omicron Highlights Risks to Commercial Aerospace Recovery
12/14/21	Fitch Ratings' ESG.RS Help Depict Global Oil & Gas Energy Transition Risks
12/14/21	ESG Relevance Scores for Global Oil and Gas
12/13/21	Base Metals Demand Growth Supports Global Mining Sector Outlook
12/13/21	Fitch Ratings 2022 Outlook: Global Mining
12/13/21	Supply Chain Issues Temper Outlook for U.S. Diversified Industrials
12/13/21	What Investors Want to Know: U.S. Diversified Industrials and Capital Goods (2022 Outlook Tempered by Supply Chain Challenges)
12/13/21	Strong Production Volumes Supports Global Steel Sector Outlook
12/13/21	Fitch Ratings 2022 Outlook: Global Steel
12/10/21	Global Airline Outlook Improving but Material Risks Remain
12/10/21	Fitch Ratings 2022 Outlook: Global Airlines
12/10/21	Fitch Ratings 2022 Outlook: North American Chemicals
12/10/21	Fitch Ratings 2022 Outlook: North American Chemicals
12/10/21	U.S. Healthcare and Pharma Outlook Neutral for 2022
12/10/21	Fitch Ratings 2022 Outlook: U.S. Healthcare and Pharmaceuticals
12/10/21	North American Energy (Oil & Gas) Neutral Outlook in 2022
12/10/21	Fitch Ratings 2022 Outlook: North American Energy (Oil & Gas)
12/9/21	Fitch Ratings 2022 Outlook: U.S. Leisure
12/9/21	U.S. Leisure Normalizing in 2022; Debt Paydown in Focus
12/9/21	Solid Credit Metrics Cushions Growing Headwinds for U.S. Homebuilders
12/9/21	Fitch Ratings 2022 Outlook: U.S. Homebuilders
12/9/21	Neutral Environment for North American Building Products in 2022
12/9/21	Fitch Ratings 2022 Outlook: North American Building Products and Materials
12/9/21	Auto Manufacturers and Suppliers: Key Rating Issues
12/8/21	Home Price Growth to Slow in North and Latin America in 2022
12/8/21	Global Home Price Growth to Slow in 2022
12/8/21	Global Housing and Mortgage Outlook - 2022
12/7/21	Commercial Metals Company's Ratings Unchanged Following Tensar Acquisition Announcement
12/7/21	Fitch Ratings Increases Short-Term Global Fertiliser Price Assumptions
12/7/21	Near-Term Oil & Gas Prices Raised, Long-Term Oil Price Unchanged
12/6/21	Fitch Ratings 2022 Outlook: North American and European FinTech
12/6/21	2022 U.S. Business Services Data and Analytics Sector Outlook Improving
12/6/21	Fitch Ratings 2022 Outlook: U.S. Business Services Data and Analytics
12/6/21	U.S. and Canadian Telecom & Cable Recovery Likely to Continue in 2022
12/6/21	Fitch Ratings 2022 Outlook: U.S. and Canadian Telecommunications and Cable
12/6/21	Neutral 2022 Outlook for U.S. Technology
12/6/21	Fitch Ratings 2022 Outlook: U.S. Technology
12/6/21	U.S. Media And Entertainment 2022 Outlook Improving as Ad Market Recovers
12/6/21	Fitch Ratings 2022 Outlook: U.S. Media & Entertainment
12/6/21	Global Auto Conditions to Improve in 2022, Supply Chain Risk Exists
12/6/21	Fitch Ratings 2022 Outlook: Global Automotive Manufacturers and Suppliers
12/6/21	Fitch Ratings 2022 Outlook: U.S. Retail -- Revenue Deceleration Expected

## Additional Corporates and Relevant Research

Date	Report Title
12/3/21	Global Aerospace & Defense 2022 Outlook: Aerospace End Markets Improving, Defense Stable
12/3/21	Fitch Ratings 2022 Outlook: Global Aerospace & Defense
12/2/21	Fitch Ratings 2022 Outlook: North American Midstream Energy
12/2/21	Rebounding Activity Spells Continued Improvement for NA Midstream
12/2/21	Fitch Ratings 2022 Outlook: U.S. Lodging and Timeshare
12/2/21	Fitch Ratings 2022 Outlook: North America Finance and Leasing Companies
12/1/21	Fitch Retires Exposure Draft: Parent and Subsidiary Linkage Rating Criteria
12/1/21	Fitch Publishes Final Parent and Subsidiary Linkage Rating Criteria
11/30/21	U.S. Diversified Industrials and Capital Goods Outlook Neutral For 2022
11/30/21	Fitch Ratings 2022 Outlook: U.S. Diversified Industrials and Capital Goods
11/30/21	Global Air Traffic Recovery Will Continue in 2022, but Risk Remains
11/30/21	Global Air Traffic Will Accelerate in 2022, but Remain Below Pre-Pandemic Levels (A Full Recovery Is Still Expected for 2024, but the Trajectory Will Vary By Region)
11/28/21	Moderate Recovery, Challenges Remain for APAC Tech in 2022
11/24/21	North American Midstream: 3Q21 Earnings Wrap-Up (Good Fundamentals Widely Demonstrated)
11/24/21	North American Midstream Shows Healthy 3Q Earnings in Core Segments
11/23/21	APAC Gaming Markets to Lag Western Recovery Trajectories in 2022
11/23/21	Fitch Ratings 2022 Outlook: Global Gaming
11/23/21	US Drug Price Reform Would Affect Pharma Ratings Longer Term
11/23/21	Fitch Ratings Increases Most Global Metals and Mining Price Assumptions
11/18/21	MELI's Capital Increase is Credit Positive
11/17/21	Healthcare and Pharma Credit Rounds: 3Q21 (Operating Pressures from Labor and Supply Chains Dampen Otherwise Solid Credit Metrics)
11/17/21	Labour-Related Issues Rank Top of Investors' Social ESG Concerns
11/17/21	ESG in Credit - Labour-Related Issues
11/16/21	Global Pharma's Portfolio Repositioning Continues With J&J Split
11/12/21	Fitch Updates Its Investment Holding Companies Rating Criteria
11/12/21	Early Carbon Mitigation Aids Miners' Business Profiles
11/10/21	Economic Models, Patent Protection Key for Pharma Innovation
11/9/21	Viasat's Merger with Inmarsat Neutral to Credit Profile
11/5/21	Hillman Solution's Ratings Unchanged Despite Supply Chain Challenges
11/5/21	Pharma Business Model Questioned in Vaccine Debate
11/5/21	Spotlight: Pharma Innovation and Covid-19 Vaccines
11/4/21	U.S. REITs Adequately Positioned to Withstand Transitory Inflation Pressures (Sustained Elevated Inflation Levels Could Affect Cash Flows and Property Values)
11/4/21	Fitch Ratings Updates Structured Finance and Covered Bonds Counterparty Rating Criteria
11/4/21	Roche Headroom Eroded by Share Deal, Novartis Gains Flexibility
11/1/21	GE Sale of GECAS Improves Industrial Focus
10/27/21	Forcepoint's 'B' IDR Unchanged Following Announced Upsizing
10/26/21	Trilogy International Partner's Ratings Not Affected by Asset Impairment Announcement
10/25/21	Chilean Telecom Industry Faces 5G and Fiber Optic Investment Challenge
10/25/21	What Investors Want to Know: Chilean Telecom Industry (Start of 5G Development and Fiber Optic Expansion)
10/21/21	Fitch Ratings Plans to Continue Oracle's Ratings
10/18/21	Crypto Rating Considerations and Use Case Assessments (Corporates and Financial Institutions)
10/18/21	Buy Now Pay Later Gains Share But Credit Quality, Regs Remain Unclear
10/18/21	Fitch Rating's Takeaways from the 2021 Global Gaming Expo in Las Vegas
10/18/21	2021 Global Gaming Expo Takeaways
10/15/21	Feedback Report: Sector Navigators - Addendum to the Corporate Rating Criteria
10/15/21	Fitch Publishes Exposure Draft: Parent & Subsidiary Linkage Rating Criteria

## Additional Corporates and Relevant Research

Date	Report Title
10/15/21	Fitch Updates Corporate Rating Criteria and its Sector Navigators Addendum
10/15/21	Fitch Retires Two Corporate Exposure Drafts
10/14/21	North American Midstream Energy Dashboard: Third-Quarter 2021
10/14/21	Canopy Growth's Ratings Unchanged by Wana Brands Acquisition Announcement
10/14/21	Vaccinations, Lower Capex Support Genting Berhad's Recovery; Risks Remain
10/13/21	Sectoral Shifts, Higher Leverage Mean Fewer 'AA' Corporates
10/13/21	Top of the Charts in 2001-2021
10/8/21	Global Business Services Data Companies Resilient to Pandemic
10/8/21	Global Business Services Data and Analytics – Peer Review
10/7/21	Fitch Ratings Expects M&A to Slow for US & Canadian E&P Following Transaction Spike
10/7/21	U.S. and Canadian E&P Transactions (Permian Consolidation Continues, Gas-Focused and Williston Deals Rise)
10/7/21	Supply Chain Disruptions Hitting U.S. Diversified Industrials' Performance
9/27/21	U.S. Consumer and Retail Rating Migration (Accelerated Transition Between Investment Grade and High Yield)
9/27/21	Accelerated Migration Between Investment Grade and High Yield in U.S. Consumer/Retail
9/27/21	Latin American Real Estate -- 2021 Peer Review
9/23/21	Strong Demand Eases Chip Shortage Strain on Carmakers' Margins
9/23/21	Global IT Service Sector Growth to Accelerate amid Digital Transformation
9/17/21	Ongoing Supply-Chain Issues to Constrain US Building Product Sales
9/16/21	Higher Kansas City Southern/Canadian Pacific Merger Value Will Not Affect Ratings
9/15/21	VICI's Equity Issuance & Exchange Offer Are Key Steps Toward Venetian & MGP Acquisitions
9/10/21	Increased T-Mobile US Stake Supports Deutsche Telekom's Rating
9/8/21	Paidy Acquisition Bolsters PayPal's BNPL Offerings; Ratings Unchanged
9/8/21	Healthcare and Pharma Credit Rounds: 2Q21
9/7/21	More Stable Prospects for EMEA Small, Medium O&G Producers
9/2/21	Fitch Ratings Increases Gas Price Assumptions for 2021 and 2022
8/31/21	Semiconductor FCF To Rise As Buyer Patterns Change
8/31/21	Fitch Publishes Updated Aircraft EETC Criteria
8/30/21	US Lodging Recovery Trajectory Is On Track, Despite Coronavirus Spread
8/30/21	U.S. Lodging Cycle Concierge (August 2021 Update)
8/26/21	Sustained Vaccine Demand Will Support Pharma Revenue Growth
8/26/21	Fitch Ratings Expects BHP Divestments to Be Rating Neutral
8/25/21	US Homebuilders Are Unlikely to Sustain Strong Pricing Power
8/25/21	U.S. Homebuilders Are Unlikely to Sustain Strong Pricing Power (Meaningfully Improved Balance Sheets to Limit Credit Impact)
8/24/21	North American Midstream 2Q21 Earnings Wrap-Up
8/24/21	North American Midstream: 2Q21 Earnings Wrap-Up (Volume Growth, Higher Prices)
8/19/21	U.S. Diversified Industrials Approach Pre-Pandemic Performance
8/13/21	Willis Towers Watson's Ratings Unchanged Following Willis Re Divestiture Announcement
8/11/21	Fitch Publishes Exposure Drafts on Corp. Adjustments for Fin. Services Activities, Sector Navigators
8/5/21	Major Shocks See Divergence in Rating Migration to Distress
8/5/21	Distressed Ratings Analysis
8/4/21	What Investors Want to Know: Tech at Midyear (Post-Pandemic Semiconductor and Software Trends, Customer Concentration and Regulation)
7/28/21	US Healthcare System Faces Long-Term Cost Implications from Covid-19 (Evolving Chronic Health Issues Could Place Renewed Upward Pressure on Healthcare Costs)
7/28/21	US Healthcare System to Expand, Adapt to Long-Term COVID-19 Fallout
7/27/21	Aon's Ratings Unchanged Following Merger Termination
7/26/21	What Investors Want to Know: An Overview of Healthcare IT (Strong Secular Trend, Rising M&A Activity and Increased Issuance Drive Interest in the Sector)

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## Additional Corporates and Relevant Research

Date	Report Title
7/26/21	<a href="#">Nitrogen Fertilisers Most Affected by Tighter ESG Policies</a>
7/21/21	<a href="#">US E&amp;P Oil &amp; Gas Producers Take Advantage of Rising Commodity Prices</a>
7/21/21	<a href="#">U.S. E&amp;P Oil &amp; Gas Hedge Coverage (Producers Take Advantage of Rising Commodity Prices; Opportunities Persist)</a>
7/20/21	<a href="#">Vontier Corporation's Ratings Unchanged by DRB Acquisition Announcement</a>
7/15/21	<a href="#">North American Midstream Energy Dashboard: Second-Quarter 2021</a>
7/12/21	<a href="#">US Healthcare Supply Chain to Benefit as Biosimilars Commercialize</a>
7/12/21	<a href="#">What Investors Want to Know: Biosimilars in the U.S. Marketplace (Biosimilars Offer a Path to Reducing Healthcare Costs)</a>
7/12/21	<a href="#">Natural Resources Liquidity and Refinancing Risk (One Year Post Coronavirus: High-Yield Market Conditions Take a 180° Turn)</a>
7/12/21	<a href="#">Natural Resources Liquidity and Refinancing Risk; Market Conditions Take Sharp Turn</a>
7/9/21	<a href="#">Lev. Finance Markets Resilient in 2020; Maturities Pushed Out; Defaults Contained</a>
7/9/21	<a href="#">OPEC+ Delayed Output Decision Tests Coordination Capacity</a>
7/8/21	<a href="#">What Investors Want to Know: U.S. Gaming (Las Vegas Recovery Improving; Resorts World Joins the Party)</a>
7/8/21	<a href="#">Fitch Ratings Updates Public Finance and Global Infrastructure ESG Dashboard</a>
7/1/21	<a href="#">Fitch Ratings Publishes New Asset Structured Finance Criteria Addendum</a>

Source: Fitch Ratings.

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