



Fitch U.S. Leveraged Loan Default Insight

Top Loans, Tier 2 Loans of Concern Totals Grow; TTM Default Rate Steady at 1.5%

August 27, 2019

FitchRatings

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Key Takeaways

- August TTM default rate at 1.5%, with Jack Cooper defaulting this month.
- *Top Loans* and *Tier 2 Loans of Concern* combined outstandings increased 26% from July.
- Institutional leveraged loan universe grows \$6 billion in July, to \$1.38 trillion.

Key Takeaways

Loans of Concern Total Climbs: Fitch Ratings' *Top Loans* and *Tier 2 Loans of Concern* combined total jumped to \$94.1 billion from \$74.5 billion in July. The *Top Loans of Concern* amount (\$40.9 billion) is the largest since March 2017, with six names added to the list and nearly all bid below 70 in the secondary market. The inclusion of Seadrill Partners, Ascena Retail Group Inc. and KCA Deutag US Finance pushes the combined retail and energy total to one-third of the *Top Loans of Concern* outstandings. Lumileds Holdings Ltd., Deluxe Entertainment Services Group and Montreign Resort Casino were the other additions.

Tier 2 Loans Total Rises: Our *Tier 2 Loans of Concern* total stands at \$53.2 billion, up from \$39.8 billion last month. Envision Healthcare Corp. \$5.4 billion of term loan debt comprises nearly 30% of this month's additions. The giant LBO transaction completed last September has languished in the secondary market. Envision, like other healthcare companies, has been pressured by uncertainty over the outcome of political efforts to cut medical bills. Technology accounts for the most Tier 2 additions this month, led by GTT Communications Inc. (see page 9 table for all Top/Tier 2 additions). The combined lists total equate to nearly 7% of the U.S. institutional loan universe.

TTM Default Rate Steady at 1.5%: The August TTM institutional loan default rate is at 1.5%, unchanged from last month and in line with our YE 2019 forecast. Jack Cooper Ventures Inc. was the lone default this month following four that tallied \$1.9 billion in July. Default activity remains benign, with the YTD default rate at just over 1%. YTD default volume stands at \$14.4 billion, down 14% versus last year.

Key Takeaways (Continued)

2020 Default Forecast: Fitch continues to maintain 2% default expectations for YE 2020 along with a 7% retail and a 10% energy rate (the August TTM retail and energy rates are 9.3% and 4.5%, respectively). The combined *Tier 2* and *Loans of Concern* lists rose 20% from June of this year. Continued growth in the lists would likely reflect deteriorating macroeconomic conditions and lead to greater default volume over the next several years. Fitch expects the bulk of this to occur after 2020, but recognizes the possibility of a modest upward revision to the 2020 forecast.

Universe Growth Slows Amid Repayments: Gross issuance totaled nearly \$31.5 billion in July, easing from June's \$40 billion tally. New money transactions accounted for roughly two-thirds of volume. However, the new supply was offset by a slew of loan paydowns due to M&A and refinancing. This kept the loan universe growth to a modest \$5.8 billion (total universe size at \$1.38 trillion), compared with the \$13.3 billion average during the prior three months. August growth is on pace to slow even further, with market volatility resulting in a handful of issuers withdrawing planned deals and compounding the usual late summer slowdown.

Broadcasting & Media Leads Issuance: Broadcasting & media issuance accounted for 24% of the July total with several large deals. Sinclair Broadcast Group issued \$4.6 billion to partially fund an acquisition and pay down existing debt. Consumer products and services & miscellaneous also accounted for 11% of total issuance each while sector leaders healthcare & pharmaceuticals and technology contributed only 5% and 3%, respectively.

Key Takeaways (Continued)

Sources of Demand Mixed: Leveraged loan funds tallied their 40th week of consecutive outflows, with the total reaching nearly \$36 billion over that time frame. For context, this corresponds to around 45% of the loan universe growth over the period (\$81 billion since November 2018). However, new CLO formation totaled \$102 billion over the same period — behind last year’s record pace but enough to keep demand balanced and move average spreads near YTD lows.

Loan Survey Shows Slight Loosening: The July Federal Reserve Senior Loan Officer Survey showed a modest loosening of lending standards on corporate loans for the second consecutive quarter, following a brief tightening at YE 2018. The net percentage of domestic banks that reported tightening lending standards was 2.8% versus 5.6% that reported loosening. Large banks drove the effect, with a net share of smaller banks reporting a modest tightening. The survey also notes narrowing interest rate spreads for large and middle-market firms, as well as easing loan covenants and increased credit line amounts.

Secondary Bid Levels: Trading volume was \$61 billion in July, in line with the prior two months. YTD volume is up 16% above last year’s record. Loan prices drifted higher throughout July, but declined in August as growth concerns weighed on markets more broadly.

- As of Aug. 23, the average bid on first-lien loans was 96.6, down from 97.1 one month earlier. The percentage of loans bid above par declined to 10% compared with 14% in July, but still well above 0% at the start of the year. The percentage of loans bid below 90 held steady at 8%.
- The average bid for retail was 91.2, compared with 91.7 in July. 34% of the sector is bid below 90 while only 2% is currently quoted above par. Retail makes up just over 4% of the overall loan universe.
- The average energy bid was 95.1. The amount bid below 90 stands at 19% while just 5% was bid above par.

Key Takeaways (Continued)

U.S. Institutional Leveraged Loan Default Rate Breakdown

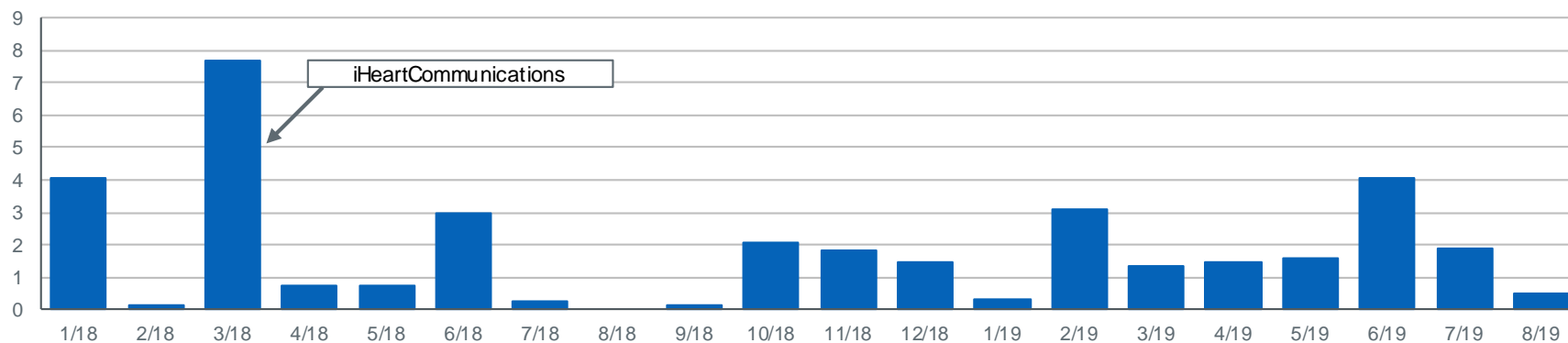
(%)	2018	7/19 TTM	2019F	2020F
All Issuers	1.8	1.5	1.5	2.0
Broadcasting/Media	14.7	2.7	4.0	0.5
Energy	11.2	4.5	5.0	10.0
Retail	4.7	9.3	7.0	7.0

F – Forecast.

Source: Fitch U.S. Leveraged Loan Default Index.

Institutional Loan Default Volume by Month

(\$ Bil.)



Source: Fitch U.S. Leveraged Loan Default Index.

A photograph of a modern glass skyscraper with the 'Fitch Ratings' logo in red and black on its facade. The building is set against a clear blue sky. A semi-transparent dark grey banner is overlaid on the bottom half of the image.

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Loans of Concern

- *Top Loans of Concern* rises to \$40.9 billion from \$34.7 billion in July.
- *Tier2 Loans of Concern* increases to \$53.2 billion from \$39.8 billion in July.
- 18% of the *Top Loans of Concern* due by YE 2020; 47% due by YE 2021.

Loans of Concern: Yoy Combined Growth 20%

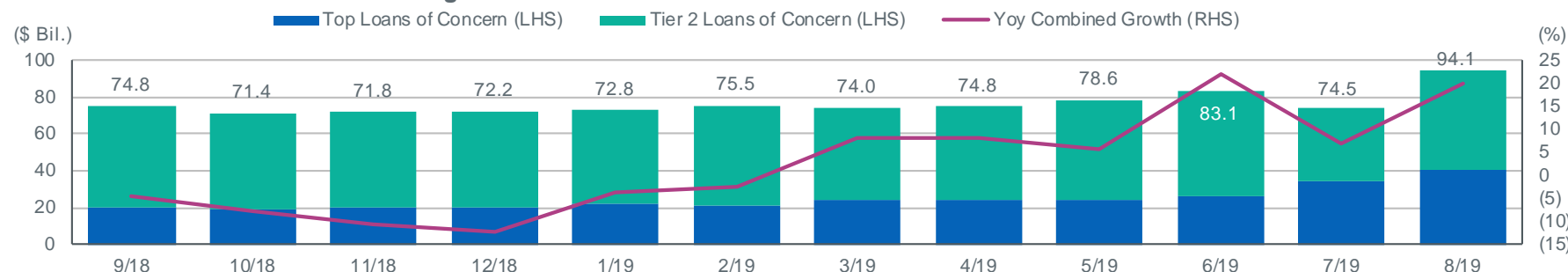
August New Additions

Issuer	Amount Outstanding (\$ Mil.)	Nearest Loan Maturity	Industry	Fitch-Rated CLO Holder Count	List
Envision Healthcare	5,436.4	12/1/2023	Healthcare & Pharmaceutical	468	Tier 2
Team Health Holdings Inc.	2,695.0	2/6/2022	Services & Miscellaneous	301	Tier 2
Seadrill Partners	2,621.8	2/21/2021	Energy	99	Top
McDermott International	2,232.0	5/10/2023	Industrial/Manufacturing	227	Tier 2
GTT Communications Inc.	1,752.3	5/31/2023	Telecommunications	288	Tier 2
Lumileds Holdings Ltd.	1,683.0	6/30/2022	Industrial/Manufacturing	300	Top
Harland Clarke Holdings Corp.	1,664.0	2/10/2022	Technology	230	Tier 2
Ascena Retail Group Inc.	1,371.5	8/21/2022	Retail	156	Top
Jo-Ann Stores	1,130.0	10/21/2021	Retail	155	Tier 2
Constellis Holdings LLC	1,087.5	4/21/2022	Services & Miscellaneous	156	Tier 2
Patterson Medical Supplies Inc.	863.9	8/28/2020	Healthcare & Pharmaceutical	71	Tier 2
Deluxe Entertainment Services Group	855.0	11/20/2019	Leisure & Entertainment	146	Top
NPC International Inc.	605.0	4/20/2022	Food, Beverage & Tobacco	175	Tier 2
Montreign Resort Casino	450.0	1/24/2022	Gaming, Lodging & Restaurants	8	Top
Internap Network Services Corp.	413.3	10/6/2021	Technology	70	Tier 2
KCA Deutag US Finance LLC	412.0	3/31/2022	Energy	55	Top
Jason Industries Inc.	381.7	12/31/2020	Automotive	58	Tier 2
Exela Technologies Inc.	365.0	7/12/2022	Technology	66	Tier 2
Trilliant Food and Nutrition LLC	295.0	9/28/2022	Food, Beverage & Tobacco	81	Tier 2
LSC Communications Inc.	239.0	9/30/2021	Broadcasting & Media	82	Tier 2

Note: Sorted by amount outstanding based on end of August figures.

Source: Fitch U.S. Leveraged Loan Default Index.

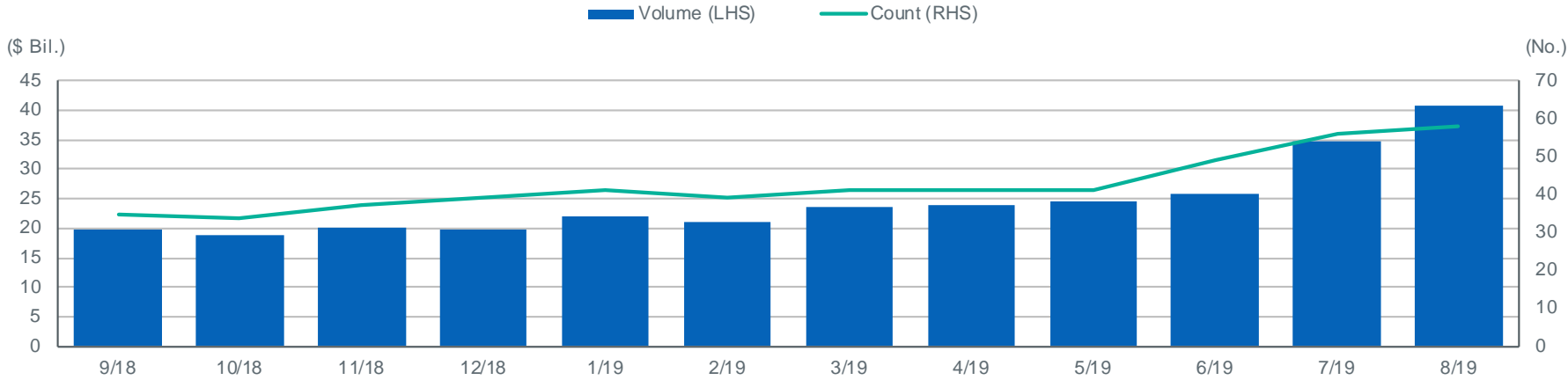
Loans of Concern Amount Outstanding



Source: Fitch U.S. Leveraged Loan Default Index.

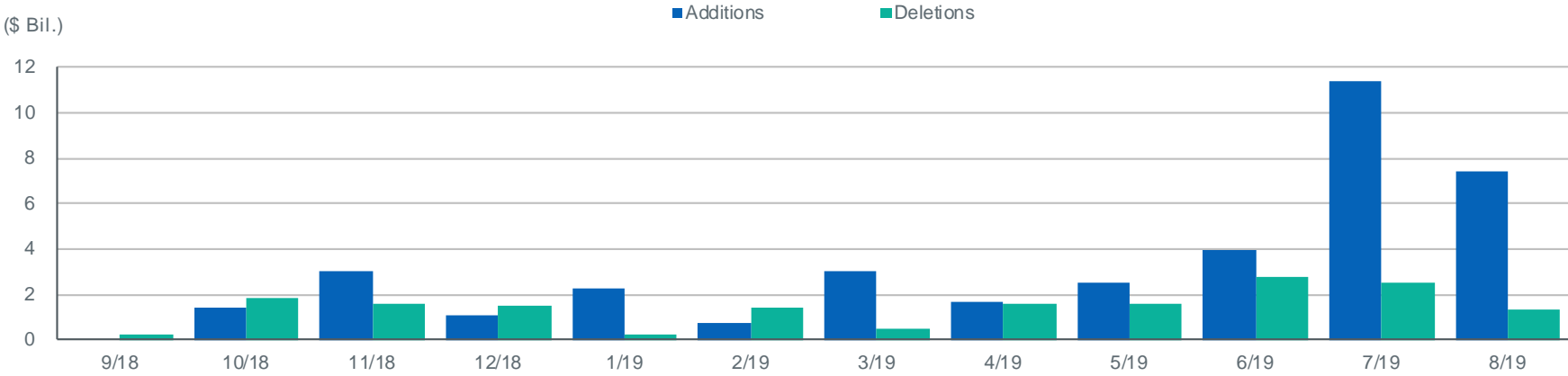
Top Loans of Concern: August Additions Exceed \$7 Billion

Top Loans of Concern



Source: Fitch U.S. Leveraged Loan Default Index.

Top Loans of Concern Additions/Deletions



Source: Fitch U.S. Leveraged Loan Default Index.

Top Loans of Concern: Retail Makes Up 19%

Top Loans of Concern

Issuer	Amount Outstanding (\$ Mil.)	Industry	Fitch-Rated CLO Holder Count
Seadrill Partners	2,621.8	Energy	99
Serta Simmons Bedding LLC	2,400.0	Retail	199
Skillsoft Corp.	2,035.0	Services & Miscellaneous	63
Acosta Inc.	1,993.0	Broadcasting & Media	118
Murray Energy Corp.	1,835.0	Metals & Mining	81
Revlon Consumer Products Co.	1,750.5	Consumer Products	156
Frontier Communications Corp.	1,708.0	Telecommunications	96
Lumileds Holdings Ltd.	1,683.0	Industrial/Manufacturing	300
JC Penney Corp. Inc.	1,572.1	Retail	70
Ascena Retail Group Inc.	1,371.5	Retail	156
J.Crew Group Inc.	1,369.8	Retail	64
Commercial Barge Line Co.	977.5	Transportation	47
Ultra Resources Inc.	973.2	Energy	100
IPC Systems Inc.	910.4	Telecommunications	70
Deluxe Entertainment Services Group	855.0	Leisure & Entertainment	146
Doncasters Group USA Finance	745.0	Transportation	71
Foresight Energy LLC	743.3	Metals & Mining	68
Moran Foods LLC	740.0	Supermarkets & Drug Stores	67
4L Technologies Inc.	693.0	Services & Miscellaneous	79
Sheridan Investment Partners II LLC	671.7	Energy	2
RentPath Inc.	662.4	Broadcasting & Media	80
TNT Crane & Rigging Inc.	655.0	Banking & Finance	65
Premiere Global Services Inc.	645.9	Telecommunications	20
Systems Maintenance Services Holding Inc.	645.0	Services & Miscellaneous	61
Millennium Health LLC	600.0	Healthcare & Pharmaceutical	21
Medical Depot Inc.	575.5	Healthcare & Pharmaceutical	11
Syncreon Group Holdings	505.0	Transportation	35
Global Eagle Entertainment	468.8	Services & Miscellaneous	53
Gavilan Resources LLC	450.0	Energy	40
Montreign Resort Casino	450.0	Gaming, Lodging & Restaurants	8

Note: Names reflect our view of the most concerning issuers in the institutional leveraged loan market. Sorted by amount outstanding based on SEC filings or available market information. Key components for inclusion in this table are low ratings, discounted secondary market bid levels relative to par, adverse market information/events (e.g. hiring restructuring attorney, issuer considering bankruptcy, etc.) and/or fundamental coverage analysts' input. Fitch-rated CLO holder count as of Aug. 17. *Continued on next page.*

Source: Fitch U.S. Leveraged Loan Default Index.

Top Loans of Concern: Retail Makes Up 19% (Continued)

Top Loans of Concern (Continued)

Issuer	Amount Outstanding (\$ Mil.)	Industry	Fitch-Rated CLO Holder Count
ASP MCS Acquisition Corp.	440.1	Services & Miscellaneous	117
Bowie Resources	435.0	Metals & Mining	0
KCA Deutag US Finance LLC	412.0	Energy	55
Flavors Holdings Inc.	400.0	Food, Beverage & Tobacco	23
Triple Point Technology	395.0	Technology	29
Phillips Pet Food & Supplies	390.0	Services & Miscellaneous	12
Jamul Indian Village Development Corp.	340.0	Gaming, Lodging & Restaurants	0
Contextmedia Health LLC	325.0	Healthcare & Pharmaceutical	3
CPI Card Group Inc.	312.5	Services & Miscellaneous	18
Lago Resorts & Casino	310.0	Gaming, Lodging & Restaurants	1
Caelus Energy Alaska O3 LLC	300.0	Energy	0
TOMS Shoes LLC	299.0	Retail	5
Mood Media Corp.	296.7	Leisure & Entertainment	0
Longview Power Inc.	289.0	Utilities, Power & Gas	16
Checkers Drive-In Restaurants Inc.	280.0	Gaming, Lodging & Restaurants	43
AAC Holdings Inc.	265.5	Healthcare & Pharmaceutical	11
Indra Holdings Corp.	232.0	Retail	14
Engine Group	224.0	Services & Miscellaneous	23
Express Energy Services	220.0	Energy	0
High Ridge Brands	220.0	Consumer Products	5
Pier 1 Imports Inc.	190.5	Retail	32
Steak N Shake Operations Inc.	185.9	Gaming, Lodging & Restaurants	52
Pioneer Energy Services	175.0	Energy	0

Note: Names reflect our view of the most concerning issuers in the institutional leveraged loan market. Sorted by amount outstanding based on SEC filings or available market information. Key components for inclusion in this table are low ratings, discounted secondary market bid levels relative to par, adverse market information/events (e.g. hiring restructuring attorney, issuer considering bankruptcy, etc.) and/or fundamental coverage analysts' input. Fitch-rated CLO holder count as of Aug. 17.

Source: Fitch U.S. Leveraged Loan Default Index.

Top Loans of Concern: Retail Makes Up 19% (Continued)

Top Loans of Concern (Continued)

Issuer	Amount Outstanding (\$ Mil.)	Industry	Fitch-Rated CLO Holder Count
Fairway Group Acquisition Co.	172.5	Supermarkets & Drug Stores	3
Iconix Brand Group Inc.	171.6	Retail	0
NYDJ Apparel LLC	100.0	Retail	4
Sheridan Production 1-A LP	91.9	Energy	7
Gold Standard Baking Inc.	90.4	Food, Beverage & Tobacco	1
Total	40,870.1		

Note: Names reflect our view of the most concerning issuers in the institutional leveraged loan market. Sorted by amount outstanding based on SEC filings or available market information. Key components for inclusion in this table are low ratings, discounted secondary market bid levels relative to par, adverse market information/events (e.g. hiring restructuring attorney, issuer considering bankruptcy, etc.) and/or fundamental coverage analysts' input. Fitch-rated CLO holder count as of Aug. 17.

Source: Fitch U.S. Leveraged Loan Default Index.

- \$7.4 billion added (Seadrill, Lumileds, Ascena Retail, Deluxe Entertainment, Montreign, and KCA Deutag) and \$1.3 billion deleted due to improvement (Lannett, Larchmont, Horizon Global and Verdesian) since July.

Deluxe Entertainment Leads Monthly Bid Decliners

Top Five Sector Exposure as Percent of Top Loans of Concern

Industry	%
Retail	19
Energy	14
Services & Miscellaneous	13
Telecommunications	8
Metals & Mining	7

Note: Percentage takes the amount outstanding from the *Top Loans of Concern* list divided by the total amount outstanding (\$41.3 billion).

Source: Fitch U.S. Leveraged Loan Default Index.

Top Five Loans of Concern Exposure as Percent of Loans Outstanding in Respective Sector

Industry	%
Metals & Mining	22
Retail	13
Energy	12
Supermarkets & Drug Stores	7
Consumer Products	7

Note: Percentage takes the amount outstanding from the *Top Loans of Concern* list divided by the amount outstanding within each industry in the institutional loan universe.

Source: Fitch U.S. Leveraged Loan Default Index.

- Metals & mining issuers on the *Top Loans of Concern Exposure as Percent of Loans Outstanding in Respective Sector* represent 22% of loan outstandings for the sector but only 7% on the *Top Loans of Concern*.

Monthly Bid Price Movers

Name	Industry	% Change
Top Decliners		
Deluxe Entertainment	Leisure & Entertainment	(64)
ASP MCS Acquisition Corp.	Services & Miscellaneous	(42)
Moran Foods LLC	Supermarkets & Drug Stores	(23)
Exela Technologies Inc.	Technology	(20)
TOMS Shoes LLC	Retail	(19)

Top Advancers

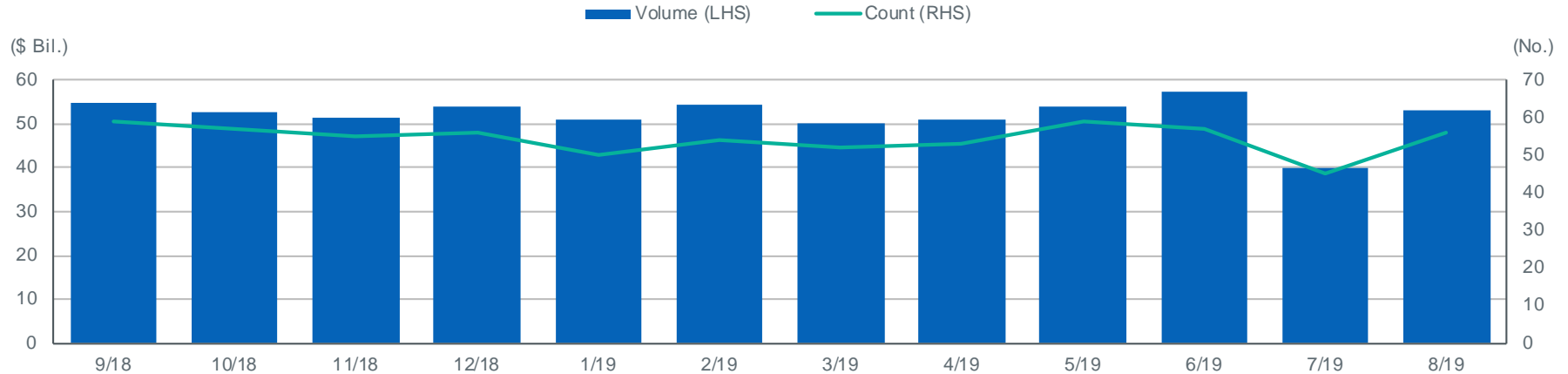
Phillips Pet Food & Supplies	Services & Miscellaneous	20
Indra Holdings Corp.	Retail	17
Systems Maintenance Services	Services & Miscellaneous	13
Premiere Global Services Inc.	Telecommunications	10
Ligado Networks LLC	Telecommunications	9

Note: Price change as of Aug. 23, 2019 based upon first-lien facilities.

Source: Advantage Data.

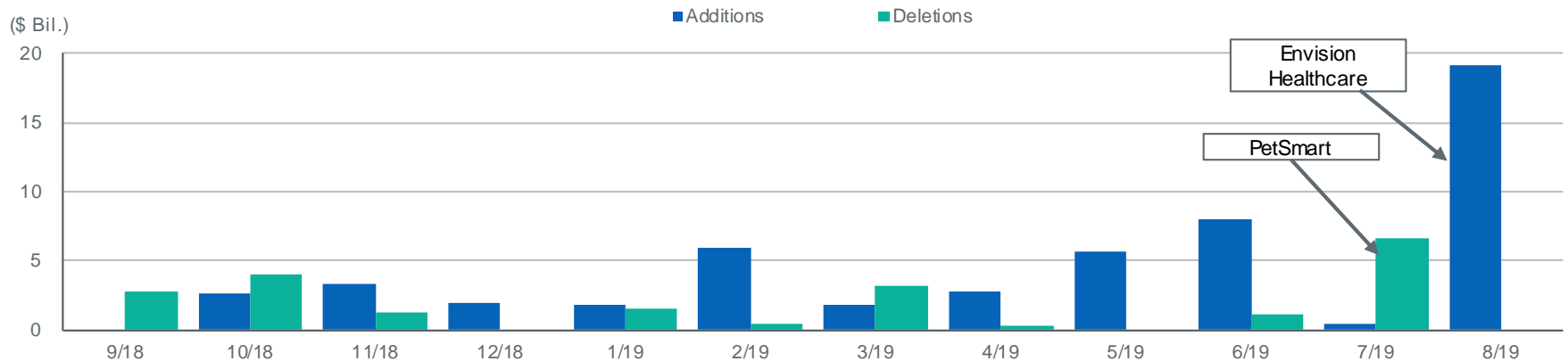
Tier 2 Loans of Concern: Envision Headlines Additions

Tier 2 Loans of Concern



Source: Fitch U.S. Leveraged Loan Default Index.

Tier 2 Loans of Concern Additions/Deletions



Note: Deletions refer to improvement.

Source: Fitch U.S. Leveraged Loan Default Index.

Tier 2 Loans of Concern: Retail Makes Up 16%

Tier 2 Loans of Concern

Issuer	Amount Outstanding (\$ Mil.)	Industry	Fitch-Rated CLO Holder Count
Envision Healthcare	5,436.4	Healthcare & Pharmaceutical	468
Ligado Networks LLC	4,638.0	Telecommunications	0
Team Health Holdings Inc.	2,695.0	Services & Miscellaneous	301
Petco Animal Supplies Inc.	2,449.3	Retail	205
Neiman Marcus Group Inc.	2,245.5	Retail	59
McDermott International	2,232.0	Industrial/Manufacturing	227
Uniti Group Inc.	2,055.3	Real Estate	54
GTT Communications Inc.	1,752.3	Telecommunications	293
Harland Clarke Holdings Corp	1,664.0	Technology	230
Academy Sports & Outdoors	1,635.2	Retail	126
Riverbed Technology Inc.	1,553.5	Technology	251
Air Methods Corp.	1,250.0	Transportation	243
Forterra Finance LLC	1,219.7	Industrial/Manufacturing	244
One Call Corp.	1,169.5	Healthcare & Pharmaceutical	51
Gulf Finance LLC	1,150.0	Banking & Finance	93
Jo-Ann Stores	1,130.0	Retail	155
Constellis Holdings LLC	1,087.5	Services & Miscellaneous	156
Patterson Medical Supplies Inc.	863.9	Healthcare & Pharmaceutical	71
Akom Inc.	843.7	Healthcare & Pharmaceutical	148
Sandy Creek Energy Associates	836.0	Utilities, Power & Gas	45
Del Monte Foods Inc.	813.0	Food, Beverage & Tobacco	88
Anchor Glass Container Corp.	797.0	Industrial/Manufacturing	124
Healogics Inc.	795.0	Healthcare & Pharmaceutical	72
Trimark USA LLC	795.0	Building & Materials	183
iQor US Inc.	780.0	Services & Miscellaneous	75
Quorum Health Corp.	777.7	Healthcare & Pharmaceutical	67
Zep Inc.	725.0	Chemicals	85
CSM Bakery Inc.	658.0	Food, Beverage & Tobacco	67
Lannett Company Inc.	624.3	Healthcare & Pharmaceutical	47
NPC International Inc.	605.0	Food, Beverage & Tobacco	175
Owens & Minor Inc.	481.6	Healthcare & Pharmaceutical	88
RGIS Holdings	453.1	Services & Miscellaneous	24

Note: Issuers have additional measures of financial flexibility, greater liquidity options and/or potentially more tenable capital structures than issuers on the *Top Loans of Concern* list. Amount outstanding based on available information. Key components for inclusion in this table are low ratings, discounted secondary market bid levels relative to par, adverse market information/events and/or fundamental coverage analysts' input. Fitch-rated CLO holder count as of Aug. 17. *Continued on next page.*

Source: Fitch U.S. Leveraged Loan Default Index.

Tier 2 Loans of Concern: Retail Makes Up 16% (Continued)

Tier 2 Loans of Concern (Continued)

Issuer	Amount Outstanding (\$ Mil.)	Industry	Fitch-Rated CLO Holder Count
Bluestem Brands Inc.	428.2	Retail	7
Intemap Network Services Corp.	413.3	Technology	75
Jason Industries Inc.	381.7	Automotive	58
Libbey Glass Inc.	378.0	Consumer Products	75
Isagenix International Inc.	375.0	Retail	53
Highline Aftermarket Acquisition LLC	368.0	Automotive	78
Exela Technologies Inc.	365.0	Technology	66
Vyair Medical Inc.	360.0	Healthcare & Pharmaceutical	40
Winebow Holdings Inc.	360.0	Services & Miscellaneous	56
APC Aftermarket	314.2	Automotive	59
Tensar Corp. LLC	309.0	Services & Miscellaneous	24
Pinnacle Operating Corp.	301.4	Chemicals	13
Blackbrush Oil & Gas	300.0	Energy	1
Trilliant Food and Nutrition LLC	295.0	Food, Beverage & Tobacco	81
Britax Childcare Ltd.	280.0	Consumer Products	2
Horizon Global Corp.	240.2	Automotive	15
LSC Communications Inc.	239.0	Broadcasting & Media	54
Global Knowledge Training LLC	225.0	Services & Miscellaneous	9
Hoover Group Inc.	218.4	Industrial/Manufacturing	11
Alpha Media Group	215.2	Broadcasting & Media	16
Dayton Superior Corp	209.5	Building & Materials	5
Blue Nile Inc.	168.9	Retail	0
Abaco Energy Technologies LLC	145.0	Energy	0
World and Main LLC (Hardware Holdings Inc.)	143.0	Industrial/Manufacturing	0
Total	53,244.3		

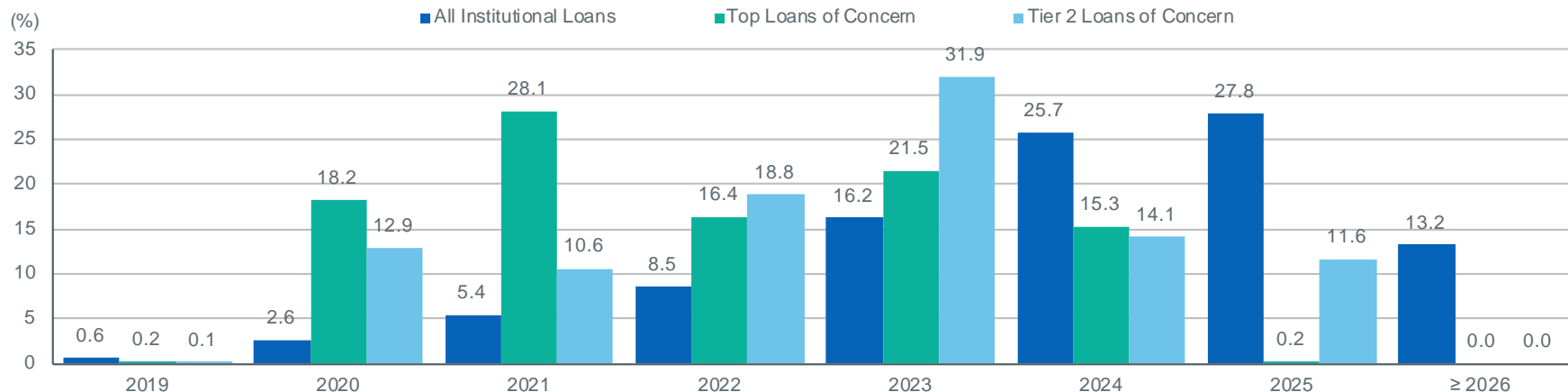
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Source: Fitch U.S. Leveraged Loan Default Index.

- \$19.2 billion added (Envision Healthcare, Team Health, McDermott, GTT Communications, Harland Clarke, Jo-Ann Stores, Constellis Holdings, Patterson Medical, NPC International, Internap, Jason Industries, Exela, Trilliant and LSC Communications), and \$6.5 billion moved to the *Top Loans of Concern* (Seadrill, Lumileds, Ascena Retail, Montreign, and KCA Deutag) since July.

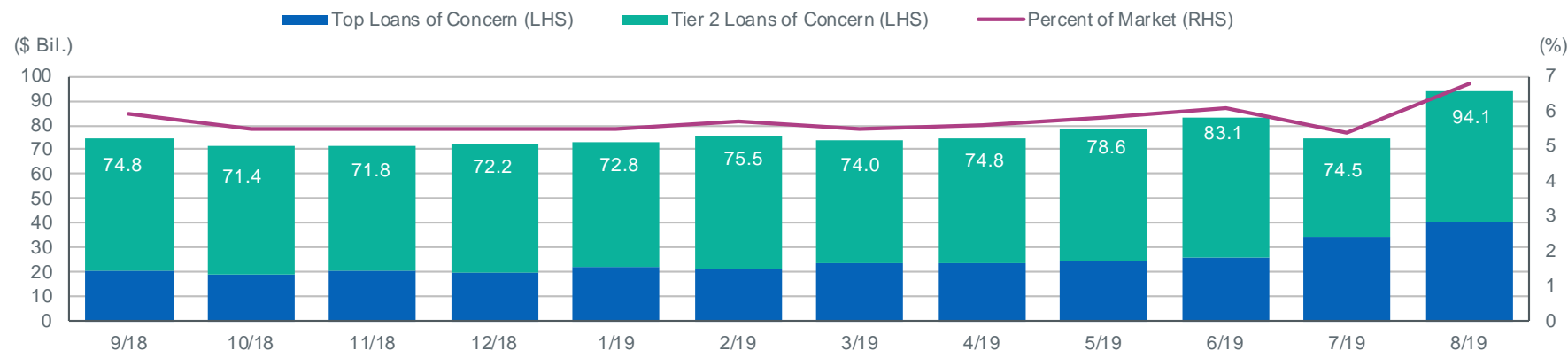
Loans of Concern 7% of Institutional Loan Universe

Loans of Concern Maturity Walls Versus Market



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

Loans of Concern as a Percent of Market



Source: Fitch U.S. Leveraged Loan Default Index.

A photograph of a modern glass skyscraper with the 'Fitch Ratings' logo in red and black on its facade. The building is set against a clear blue sky. A semi-transparent dark grey banner is overlaid on the bottom half of the image.

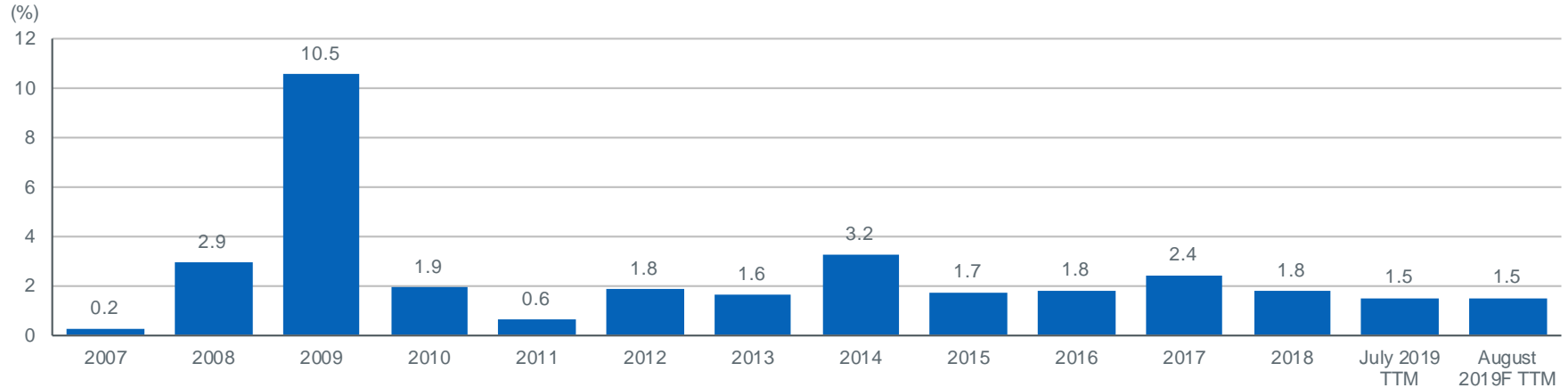
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Default Watch

- YTD default volume totals \$14.4 billion, down 14% versus 2018.
- August defaults tally \$0.5 billion.
- July BSL and LMM default rates are at 1.4% and 1.5%, respectively.

Default Watch: TTM Default Rate at 1.5%

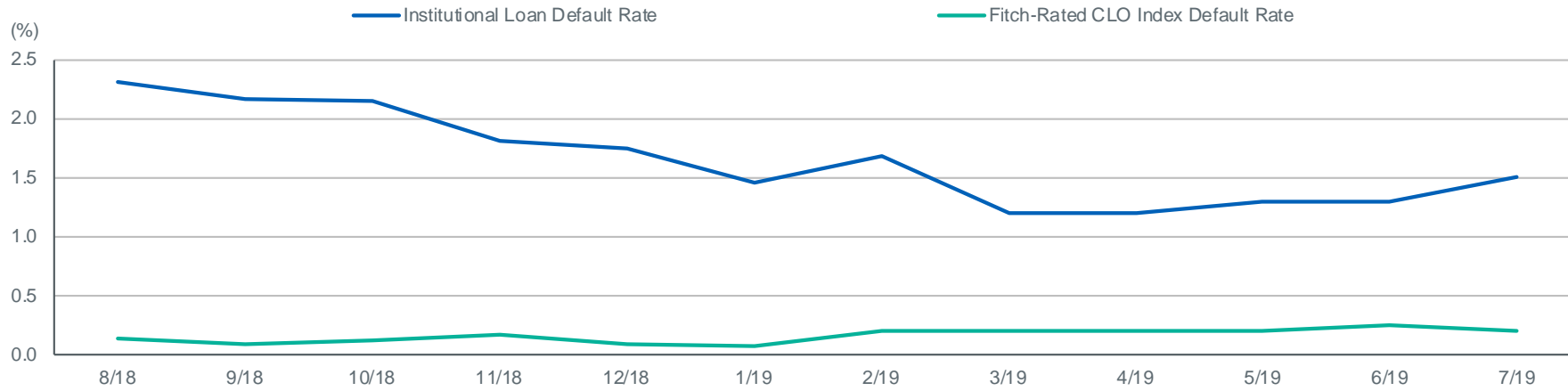
Institutional Leveraged Loan Default Rate



F – Forecast.

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

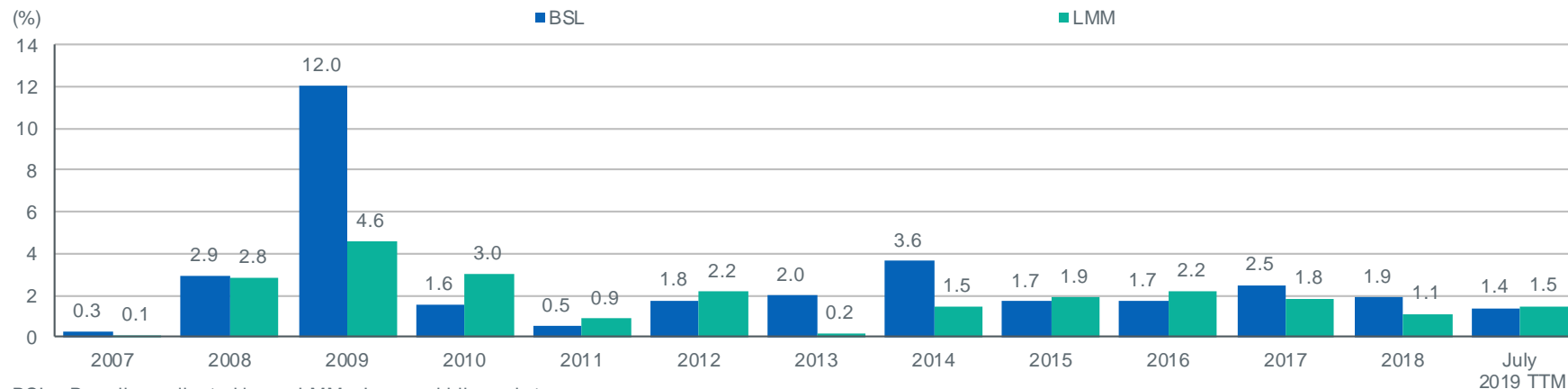
Fitch-Rated CLO Index Default Rate



Source: Fitch U.S. Leveraged Loan Default Index.

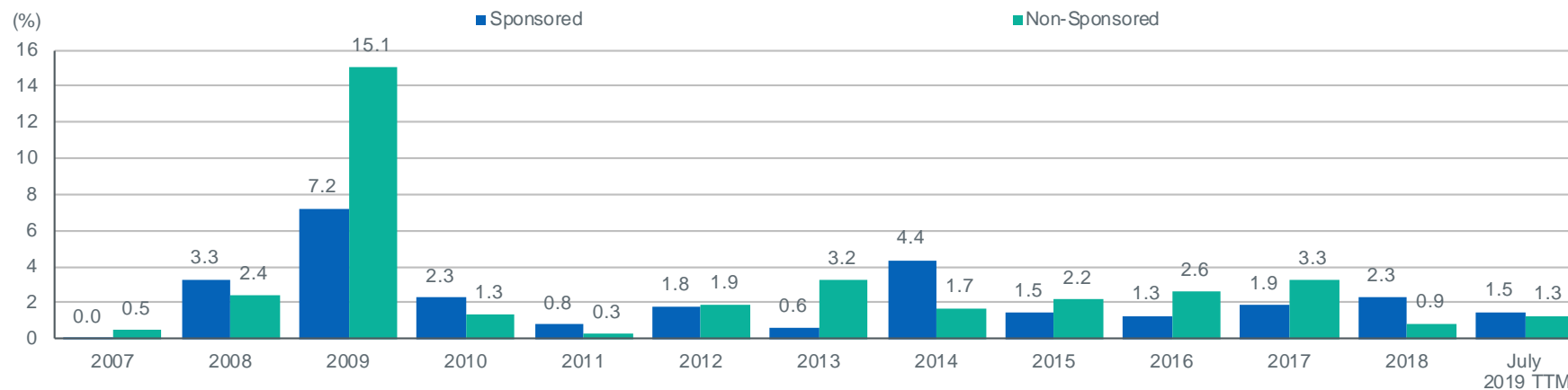
Default Watch: LMM Rate Narrowly Exceeds BSL

Institutional Leveraged Loan Default Rate: BSL Versus LMM



BSL – Broadly syndicated loans. LMM – Large middle market.
 Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Institutional Leveraged Loan Default Rate: Sponsored Versus Non-Sponsored



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

Default Watch: TTM Institutional Leveraged Loan Defaults

Month	Issuer	Par Value (\$ Mil.)	Default Date	Default Source	Industry
August 2018	No Default Activity				
September 2018	Product Quest Management LLC	120.0	9/7/18	Chapter 11 Filing	Healthcare & Pharmaceutical
	Subtotal	120.0			
October 2018	American Tire Distributors Inc.	695.0	10/4/18	Chapter 11 Filing	Automotive
	Westmoreland Coal Co.	319.8	10/9/18	Chapter 11 Filing	Metals & Mining
	Dixie Electric LLC	267.4	10/10/18	Missed Payment	Energy
	Tweddle Group Inc.	202.5	10/11/18	Restructuring	Services & Miscellaneous
	Sears Holdings Corp.	570.8	10/15/18	Chapter 11 Filing	Retail
	Subtotal	2,055.5			
November 2018	Fairway Group Acquisition Co.	139.0	11/6/18	Distressed Exchange	Supermarkets & Drug Stores
	FULLBEAUTY Brands Inc.	1,126.6	11/7/18	Missed Payment	Retail
	David's Bridal Inc.	481.2	11/19/18	Chapter 11 Filing	Retail
	Valitas Health Services Inc.	100.0	11/27/18	Restructuring	Healthcare & Pharmaceutical
	Subtotal	1,846.8			
December 2018	Checkout Holding Corp.	1,492.0	12/12/18	Chapter 11 Filing	Broadcasting & Media
	Subtotal	1,492.0			

Note: Defaults as of Aug. 26 include Jack Cooper. *Continued on next page.*

Source: Fitch U.S. Leveraged Loan Default Index.

Default Watch: TTM Institutional Leveraged Loan Defaults (Continued)

Month	Issuer	Par Value (\$ Mil.)	Default Date	Default Source	Industry
January 2019	API Heat Transfer ThermaSys Corp.	232.0	1/11/19	Distressed Exchange	Industrial/Manufacturing
	Shopko Stores Inc.	83.4	1/16/19	Chapter 11 Filing	Retail
	Subtotal	315.4			
February 2019	Charlotte Russe Inc.	89.3	2/3/19	Chapter 11 Filing	Retail
	Trident Holding Co. LLC	220.0	2/10/19	Chapter 11 Filing	Healthcare & Pharmaceutical
	Ditech Holding Corp.	961.4	2/11/19	Chapter 11 Filing	Banking & Finance
	Windstream Services, LLC	1,749.0	2/25/19	Chapter 11 Filing	Telecommunications
	One Call Corp.	104.5	2/26/19	Distressed Exchange	Healthcare & Pharmaceutical
	Subtotal	3,124.1			
March 2019	F+W Media	58.2	3/10/19	Chapter 11 Filing	Broadcasting & Media
	CTI Foods Holding Co., LLC	487.0	3/11/19	Chapter 11 Filing	Food, Beverage & Tobacco
	Savers Inc.	669.0	3/28/19	Distressed Exchange	Retail
	Vanguard Natural Resources LLC	123.4	3/31/19	Chapter 11 Filing	Energy
	Subtotal	1,337.6			
April 2019	Southcross Energy Partners LP	429.1	4/1/19	Chapter 11 Filing	Energy
	Crossmark Inc.	490.0	4/5/19	Missed Payment	Services & Miscellaneous
	Fusion Connect Inc.	575.9	4/8/19	Missed Payment	Telecommunications
	Subtotal	1,495.0			
May 2019	Sungard Availability Services Capital Inc.	800.7	5/1/19	Chapter 11 Filing	Technology
	Preferred Proppants LLC	481.6	5/9/19	Restructuring	Energy
	Empire Generating Co. LLC	333.4	5/19/19	Chapter 11 Filing	Utilities, Power & Gas
	Subtotal	1,615.7			
June 2019	Neiman Marcus Group Ltd.	2,739.6	6/3/19	Distressed Exchange	Retail
	Joems Healthcare Inc.	272.0	6/4/19	Missed Payment	Healthcare & Pharmaceutical
	Monitronics International Inc.	1,072.5	6/30/19	Chapter 11 Filing	Services & Miscellaneous
	Subtotal	4,084.1			
July 2019	Weatherford International Ltd	297.5	7/1/19	Chapter 11 Filing	Energy
	Philadelphia Energy Solutions	497.0	7/3/19	Missed Payment	Energy
	99 Cents Only Stores LLC	146.0	7/18/19	Distressed Exchange	Retail
	Blackhawk Mining LLC	957.3	7/19/19	Chapter 11 Filing	Metals & Mining
	Subtotal	1,897.8			

Note: Defaults as of Aug. 26 include Jack Cooper.
Source: Fitch U.S. Leveraged Loan Default Index.

Default Watch: Retail, Metals & Mining August TTM Rates at 9%

(%)	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	July 2019 TTM	2007–2018
Automotive	—	2.7	19.3	—	—	—	—	—	—	2.4	2.3	2.6	2.2	2.8
Banking & Finance	—	—	33.4	2.1	0.4	5.8	—	—	—	1.5	3.5	—	1.4	3.4
Broadcasting & Media	—	8.8	19.5	6.0	0.4	1.0	17.6	1.1	0.5	5.4	3.4	14.7	2.7	7.4
Building & Materials	—	13.8	31.2	4.2	—	3.0	1.9	—	—	—	—	—	—	4.1
Cable	—	—	28.1	—	—	2.3	—	—	—	—	—	—	—	3.2
Chemicals	—	3.7	44.2	—	—	—	—	—	—	1.3	—	0.5	—	5.0
Consumer Products	—	0.9	8.1	3.2	0.5	1.6	—	—	3.5	2.7	—	—	—	1.7
Energy	—	1.7	2.6	—	—	2.1	1.1	—	9.8	14.2	17.5	11.2	4.5	5.7
Food, Beverage & Tobacco	—	1.2	0.8	—	—	0.3	—	—	—	—	—	0.4	1.5	0.2
Gaming, Lodging & Restaurants	—	13.4	2.5	3.9	0.6	4.1	2.5	2.1	13.0	—	0.3	—	—	3.5
Healthcare & Pharmaceutical	0.2	0.3	1.0	1.7	—	0.4	0.1	0.3	2.3	—	1.6	0.6	0.6	0.7
Industrial/Manufacturing	—	—	4.0	1.9	—	—	—	—	—	—	1.9	—	0.5	0.6
Insurance	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Leisure & Entertainment	1.3	—	32.8	—	1.5	2.6	—	0.8	—	0.1	0.7	—	—	2.6
Metals & Mining	1.1	—	4.1	—	—	—	—	2.3	12.9	23.6	—	14.2	8.9	4.8
Paper & Containers	1.3	1.9	11.8	2.9	12.9	—	—	—	—	5.3	1.0	—	—	3.4
Real Estate	—	19.8	21.1	0.9	—	—	—	—	—	—	—	—	—	4.4
Retail	2.1	1.1	5.7	4.5	2.8	3.4	0.5	0.1	0.5	0.4	8.2	4.7	9.3	3.1
Services & Miscellaneous	—	1.2	0.6	1.0	—	2.5	1.0	1.9	0.6	0.5	0.3	0.8	1.1	0.8
Supermarkets & Drug Stores	—	—	4.2	—	—	—	—	—	—	2.2	—	1.1	1.1	0.6
Technology	—	—	1.9	0.2	—	—	—	0.2	0.1	0.4	0.3	0.0	0.5	0.2
Telecommunications	—	2.0	5.2	—	0.5	2.5	0.3	1.9	—	—	5.3	—	2.9	1.5
Transportation	—	4.6	1.2	—	0.1	9.8	1.0	3.3	—	—	0.9	1.6	—	1.6
Utilities, Power & Gas	—	—	—	5.7	0.2	1.5	—	50.9	—	1.5	2.9	1.2	0.9	6.3
Total Index	0.2	2.9	10.5	1.9	0.6	1.8	1.6	3.2	1.7	1.8	2.4	1.8	1.5	2.6

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

- Nonrecessionary default rate average 1.8%.
- Recessionary default rate average 6.6%.

Default Watch: Bankruptcies Comprise 59% of TTM Defaults

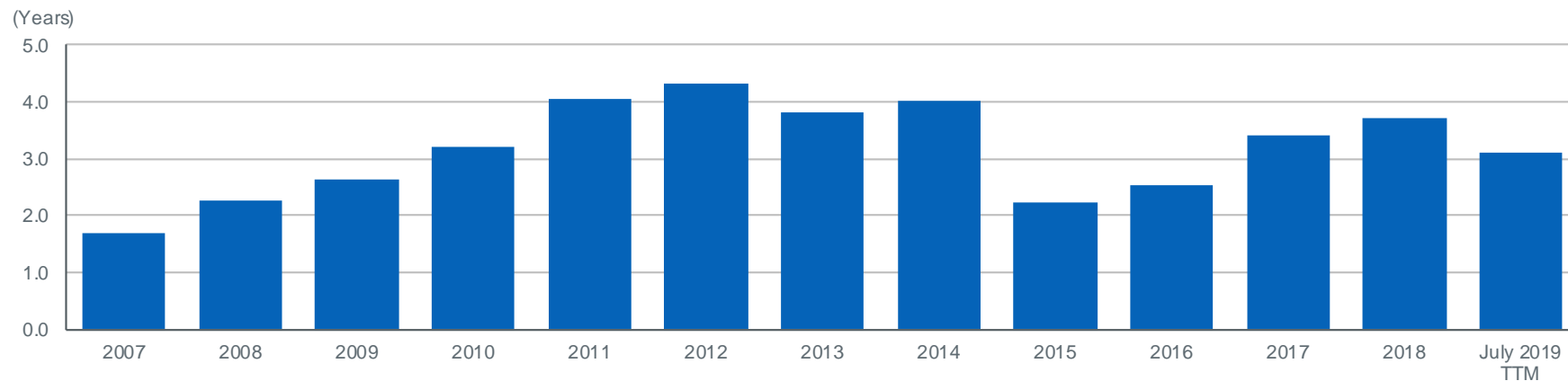
(\$ Bil.)	2018	July 2019 TTM
Issuance Year		
Pre 2010	0.0	0.0
2010	0.0	0.0
2011	0.0	0.0
2012	0.8	1.2
2013	11.5	1.4
2014	3.4	5.6
2015	4.3	2.6
2016	1.8	3.5
2017	0.4	2.1
2018	0.0	3.1
Total Default Volume	22.2	19.4
Default Source		
Bankruptcy	13.6	11.3
Missed Payment	4.9	3.2
Distressed Exchange and Non-Bankruptcy Restructurings	3.6	4.8
Market Share		
BSL	20.4	16.9
LMM	1.8	2.5
Covenant Status		
Covenants	14.7	12.0
Covenant Lite	7.5	7.4
Priority		
First Lien	19.1	17.7
Second Lien	3.1	1.7
Capital Structure		
Loans and Bond Issuers	11.6	10.1
Loan Only Issuers	10.6	9.3

BSL – Broadly syndicated loans. LMM – Large middle market.

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

Default Watch: TTM Time to Default Similar to Historic Average

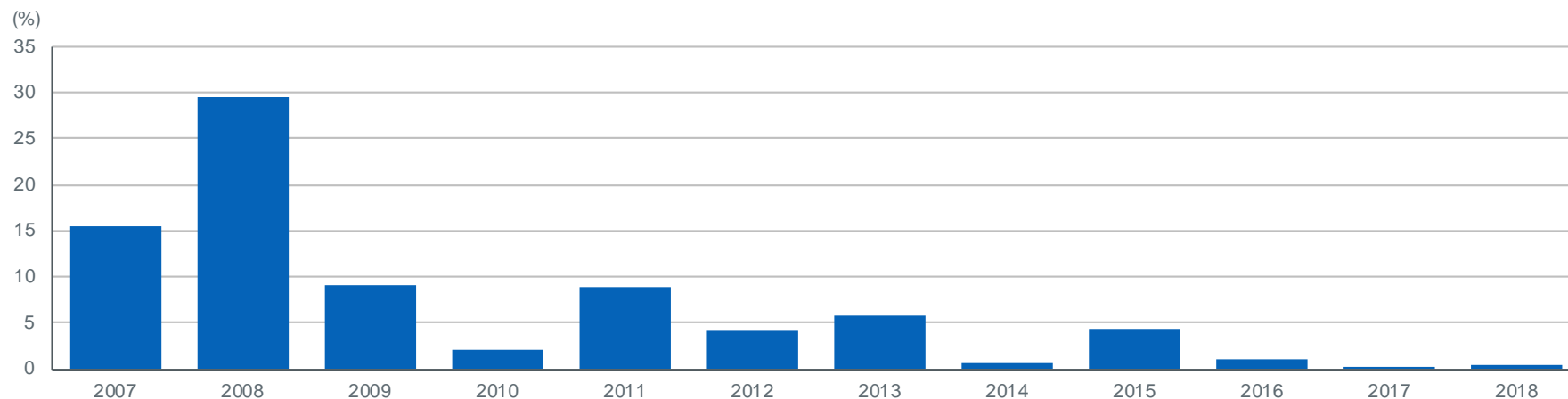
Time to Default



Note: 2007–July 2019 average: 3.0 years. Default time measured from date of issuance.

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

Cumulative Default Rates by Vintage



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

A low-angle photograph of a modern glass skyscraper with the 'Fitch Ratings' logo in red and black on its facade. The sky is clear blue.

4

Post-Default, Emergence Price Watch

- The July TTM 30-day, post-default, first-lien price stands at 70%, above the 63% average.
- Retail (79%) and telecommunications (94%) make up 50% of the sample on a volume basis.

Post-Default Price Watch: Yearly

Institutional Leveraged Loan 30-Day Post-Default Prices^a

Default Year	All	First Lien	Second Lien	First Lien							
				BSL	LMM	Cov	Lite	Bond and Loan Issuers	Loan Only Issuers	Sponsored	Non-Sponsored
2007	74.6	88.8	41.3	88.8	—	—	—	88.8	—	—	88.8
2008	46.9	49.4	18.5	48.0	58.6	37.6	45.3	56.4	39.9	70.0	
2009	53.5	54.9	31.9	56.1	39.7	42.0	63.0	42.1	45.7	63.6	
2010	64.8	77.9	12.1	84.7	64.9	—	82.7	76.5	78.6	76.1	
2011	47.7	60.5	13.5	68.9	54.5	—	97.5	49.2	50.3	76.9	
2012	62.0	65.5	26.5	67.3	60.0	59.0	68.9	64.5	66.0	64.5	
2013	68.9	69.4	40.0	68.8	93.6	54.1	71.5	66.7	64.0	71.6	
2014	76.3	78.4	53.3	78.5	77.6	—	78.3	80.1	76.8	94.6	
2015	49.9	49.9	49.6	52.3	39.0	32.9	53.3	44.3	62.1	42.8	
2016	46.2	50.1	23.7	46.5	40.7	43.1	48.2	52.0	49.2	50.7	
2017	67.8	70.2	28.6	69.0	82.7	65.4	74.6	59.6	63.1	77.3	
2018	61.2	67.8	18.3	69.2	44.9	66.0	77.4	52.0	65.5	79.3	
2019	77.0	78.9	33.3	81.1	60.3	78.5	84.6	66.7	76.6	83.0	
July 2019 TTM	65.9	70.3	13.7	72.8	49.0	76.0	83.0	49.3	64.7	82.2	
2007–2019	60.5	63.6	30.1	64.2	58.6	58.1	68.3	55.8	61.2	67.2	

Observations (\$ Bil.)

2007	1.2	0.8	0.4	0.8	—	—	0.8	—	—	0.8
2008	18.2	16.7	1.5	14.4	2.3	0.9	10.5	6.2	11.4	5.3
2009	51.4	48.1	2.3	44.7	3.4	4.1	29.4	18.6	23.4	24.7
2010	9.1	7.3	1.8	4.8	2.5	—	1.6	5.7	5.2	2.0
2011	1.3	1.0	0.4	0.4	0.6	—	0.2	0.7	0.6	0.4
2012	10.1	9.3	0.9	6.9	2.3	2.9	2.1	7.2	6.0	3.2
2013	9.3	9.1	0.2	8.9	0.2	1.7	5.2	4.0	2.6	6.5
2014	26.3	24.0	2.3	22.6	1.4	—	21.7	2.3	21.8	2.3
2015	12.0	9.8	2.2	8.0	1.8	4.3	6.2	3.6	3.6	6.2
2016	13.6	11.6	2.0	9.2	2.4	5.5	5.9	5.7	4.5	7.1
2017	25.1	23.7	1.5	21.6	2.1	17.3	16.8	6.9	11.8	11.8
2018	20.9	18.1	2.8	17.1	1.0	5.7	11.3	6.8	15.1	3.1
2019	11.4	10.9	0.5	9.8	1.2	5.3	7.4	3.5	7.0	4.0
July 2019 TTM	16.5	15.3	1.3	13.6	1.6	6.6	9.5	5.8	10.4	4.9
2007–2019	210.0	190.4	18.5	169.3	21.1	47.7	119.1	71.3	113.1	77.4

^aPar weighted and based on market prices post-default. The year above is specific to defaulted loans with price data (see pages 64–72 for more details). BSL – Broadly syndicated loans. LMM – Large middle market.

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

Post-Default Price Watch: Industry Detail

Institutional Leveraged Loan 30-Day Post-Default Prices^a

2018	First Lien									
	First Lien	Second Lien	BSL	LMM	Cov-Lite	Bond and Loan Issuers	Loan Only Issuers	Sponsored	Non-Sponsored	(\$ Bil.)
Automotive	88.6	—	88.6	—	—	88.6	—	88.6	—	0.7
Metals & Mining	85.6	—	85.6	—	—	85.6	—	—	85.6	2.0
Technology	—	76.0	—	—	—	—	—	—	—	—
Energy	74.1	17.8	80.8	10.0	77.3	—	74.1	74.1	—	2.8
Healthcare & Pharmaceutical	73.0	—	73.0	—	—	—	73.0	73.0	—	0.3
Broadcasting & Media	70.1	1.5	70.1	—	—	78.5	18.6	70.1	—	7.3
Food, Beverage & Tobacco	—	70.0	—	—	—	—	—	—	—	—
Retail	61.0	4.1	62.1	38.0	74.1	76.6	30.2	50.2	101.0	2.7
Chemicals	59.0	—	—	59.0	—	—	59.0	—	59.0	0.3
Transportation	42.0	—	42.0	—	42.0	—	42.0	42.0	—	0.8
Services & Miscellaneous	31.7	83.4	16.8	61.9	24.3	24.3	38.0	39.9	0.5	1.2
July 2019 TTM										
Telecommunications	93.8	30.0	93.8	—	—	100.0	72.0	—	93.8	2.2
Automotive	88.6	—	88.6	—	—	88.6	—	88.6	—	0.7
Retail	79.0	27.4	80.1	15.3	87.6	87.4	58.4	76.4	101.0	5.3
Healthcare & Pharmaceutical	75.7	—	85.3	72.0	85.3	85.3	72.0	75.7	—	0.4
Utilities, Power & Gas	72.0	—	—	72.0	—	—	72.0	—	—	0.3
Services & Miscellaneous	71.7	0.5	76.7	35.5	—	94.2	31.8	71.7	—	1.7
Industrial/Manufacturing	70.0	—	—	70.0	70.0	—	70.0	70.0	—	0.2
Banking & Finance	64.5	—	64.5	—	—	64.5	—	—	64.5	1.0
Food, Beverage & Tobacco	50.0	5.0	50.0	—	—	—	50.0	50.0	—	0.3
Energy	47.4	—	76.0	22.8	47.4	—	47.4	22.8	76.0	0.9
Technology	44.0	—	44.0	—	44.0	44.0	—	44.0	—	0.8
Metals & Mining	40.0	—	40.0	—	—	40.0	—	—	40.0	0.3
Broadcasting & Media	18.6	1.5	18.6	—	—	—	18.6	18.6	—	1.0

^aPar weighted and based on market prices post-default. BSL – Broadly syndicated loans. LMM – Large middle market.

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

Emergence Price Watch: Yearly

Institutional Leveraged Loan Emergence Prices^a

Default Year	All	First Lien	Second Lien	First Lien						
				BSL	LMM	Cov Lite	Bond and Loan Issuers	Loan Only Issuers	Sponsored	Non-Sponsored
2007	58.5	74.7	20.6	74.7	—	—	74.7	—	—	74.7
2008	54.7	58.6	2.3	59.6	48.2	80.3	70.5	23.3	71.0	27.4
2009	76.9	78.9	29.2	80.7	55.7	85.7	89.3	55.7	62.8	89.6
2010	57.8	76.2	6.5	86.5	58.0	—	60.9	81.7	73.7	83.6
2011	65.5	67.0	55.0	—	67.0	—	78.0	55.0	—	67.0
2012	57.1	57.1	—	58.8	43.5	53.9	54.2	63.9	58.8	43.5
2013	77.1	77.1	—	76.8	99.5	51.0	87.0	59.0	55.7	83.3
2014	66.4	70.2	60.8	76.5	47.3	—	90.5	58.7	55.0	77.6
2015	31.8	36.3	19.5	31.9	68.5	37.1	43.1	32.6	31.1	38.5
2016	70.4	71.6	11.5	69.6	83.3	81.6	74.0	67.0	53.0	78.0
2017	65.7	67.8	2.4	68.4	53.2	66.4	72.0	56.7	55.2	76.1
2018	41.8	62.7	11.6	63.1	10.0	63.3	69.6	49.0	63.2	42.0
2019	41.4	45.8	5.0	45.8	—	44.0	44.0	50.0	45.8	—
July 2019 TTM	32.6	38.8	2.3	40.5	10.0	40.1	57.5	20.9	38.5	42.0
2007–2019	65.4	69.5	22.2	70.5	57.7	65.6	77.8	53.2	62.0	76.8

Observations (\$ Bil.)

2007	1.2	0.8	0.4	0.8	—	—	0.8	—	—	0.8
2008	14.5	13.5	1.0	12.4	1.1	0.9	10.1	3.4	9.7	3.8
2009	40.3	38.8	1.2	36.1	2.8	3.2	26.9	11.9	15.5	23.4
2010	4.0	3.0	1.1	1.9	1.1	—	0.8	2.2	2.2	0.8
2011	0.3	0.3	0.0	—	0.3	—	0.2	0.1	—	0.3
2012	2.1	2.1	—	1.9	0.2	1.3	1.5	0.6	1.9	0.2
2013	8.0	8.0	—	7.9	0.1	1.5	5.2	2.8	1.8	6.2
2014	4.5	2.7	1.9	2.1	0.6	—	1.0	1.7	0.9	1.8
2015	5.9	4.3	1.6	3.8	0.5	2.8	1.5	2.8	1.2	3.1
2016	7.8	7.7	0.2	6.6	1.1	3.5	5.0	2.7	2.0	5.7
2017	16.9	16.3	0.5	15.7	0.7	12.0	11.8	4.5	6.5	9.9
2018	9.8	13.7	2.4	13.4	0.3	4.5	9.1	4.6	13.3	0.3
2019	1.3	1.1	0.1	1.1	—	0.8	0.8	0.3	1.1	—
July 2019 TTM	5.7	4.7	1.0	4.4	0.3	1.5	2.3	2.4	4.4	0.3
2007–2019	123.1	112.4	10.4	103.7	8.7	30.5	74.6	37.8	56.1	56.3

^aPar weighted and based on market prices at emergence. The year above is specific to issuers that have emerged from bankruptcy with loan-price data (See pages 64–72 for more details). BSL – Broadly syndicated loans. LMM – Large middle market.

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



5

Institutional Loan Market Profile

Market Profile: Largest Three Sectors Comprise 36% Universe

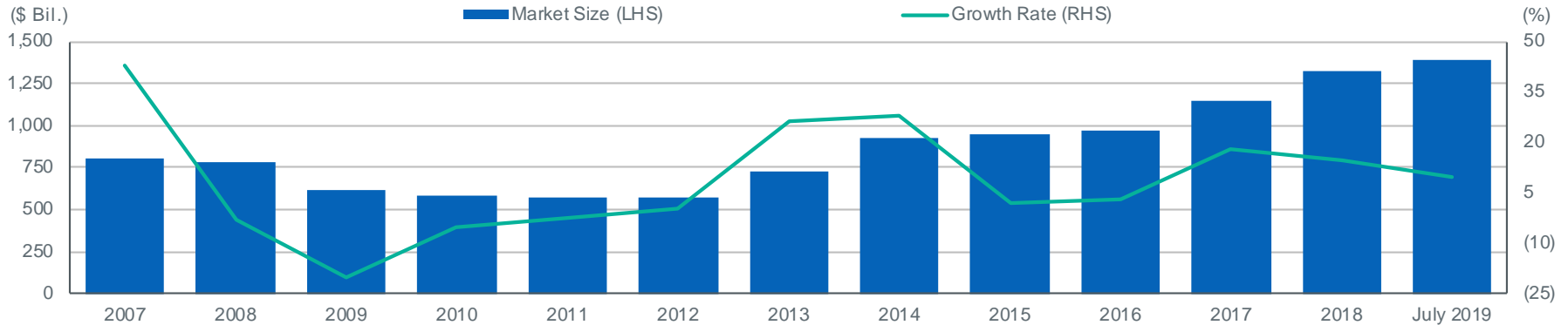
Industry	Amount Outstanding (\$ Bil.)	No. Issuers	% of Industry								
			(%)	Average Issue Size (\$ Mil.)	BSL	LMM	First Lien	Second Lien	Sponsored	Cov-Lite	
Automotive	35.1	3	53	3	408.5	90	10	93	7	67	81
Banking & Finance	66.8	5	90	5	473.8	86	14	96	4	68	79
Broadcasting & Media	61.0	4	68	4	655.8	90	10	97	3	52	87
Building & Materials	30.8	2	50	3	433.7	75	25	94	6	67	90
Cable	23.9	2	10	1	1,325.0	100	0	100	0	54	40
Chemicals	60.9	4	84	5	471.7	91	9	96	4	70	88
Consumer Products	30.0	2	49	3	399.3	82	18	93	7	65	79
Energy	49.5	4	79	4	490.0	81	19	93	7	60	28
Food, Beverage & Tobacco	30.8	2	54	3	375.5	76	24	96	4	71	66
Gaming, Lodging & Restaurants	66.8	5	70	4	703.6	89	11	99	1	36	81
Healthcare & Pharmaceutical	151.0	11	172	10	537.2	90	10	94	6	72	69
Industrial/Manufacturing	46.8	3	77	4	368.2	87	13	91	9	73	82
Insurance	36.6	3	28	2	589.7	92	8	88	12	98	90
Leisure & Entertainment	44.5	3	48	3	609.8	95	5	96	4	67	82
Metals & Mining	13.7	1	24	1	455.5	89	11	97	3	39	64
Paper & Containers	30.6	2	36	2	518.5	93	7	97	3	66	79
Real Estate	18.5	1	22	1	740.2	94	6	95	5	37	70
Retail	57.4	4	77	4	597.6	86	14	97	3	77	87
Services & Miscellaneous	166.7	12	275	16	345.2	82	18	91	9	88	80
Supermarkets & Drug Stores	13.3	1	15	1	533.4	87	13	93	7	79	88
Technology	179.8	13	200	11	548.3	90	10	92	8	79	86
Telecommunications	80.3	6	56	3	933.9	96	4	94	6	30	73
Transportation	51.5	4	72	4	409.1	86	14	96	4	48	61
Utilities, Power & Gas	39.3	3	50	3	530.9	87	13	100	0	45	60
Total	1,385.5	100	1,759	100	500.9	88	12	94	6	67	76

BSL – Broadly syndicated loans. LMM – Large middle market.

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

Market Profile: Universe Grows 10% Since July 2018

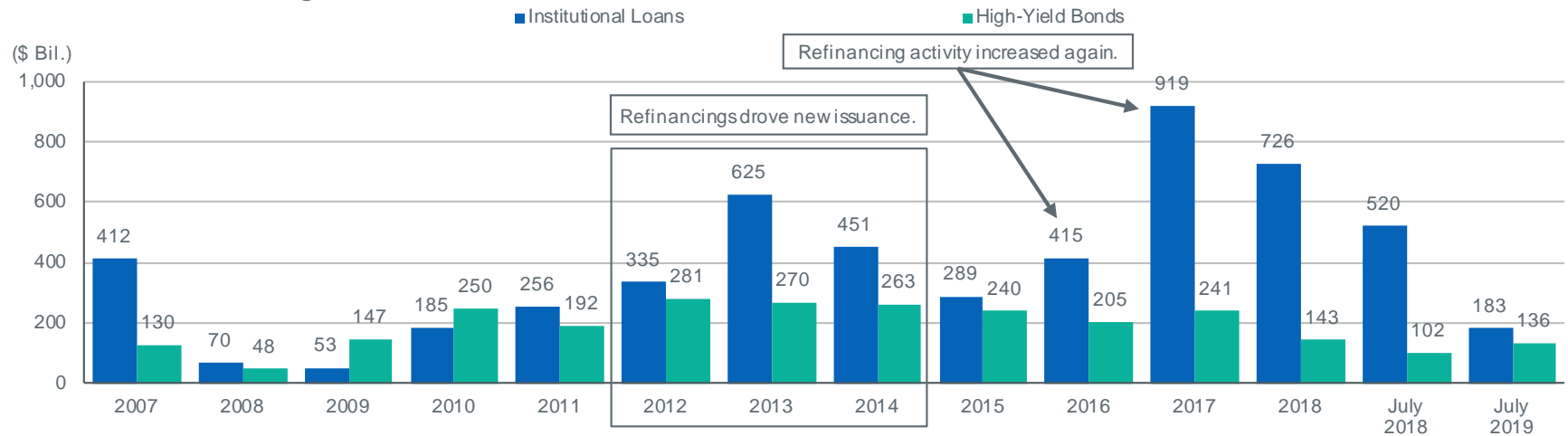
Market Size and Growth Rate



Note: July 2019 growth rate, year over year.

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

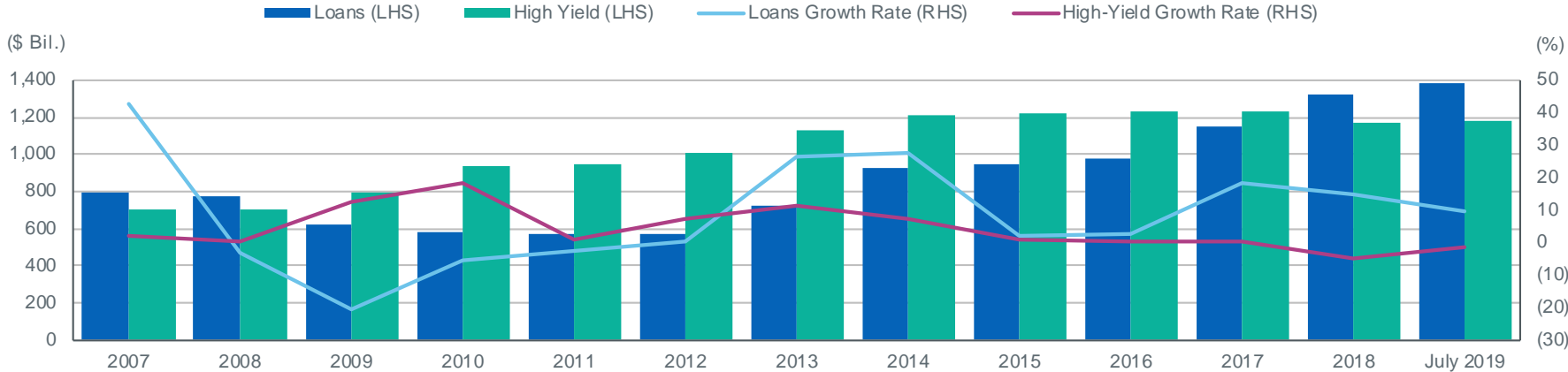
Institutional Loan and High-Yield Bond Issuance



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

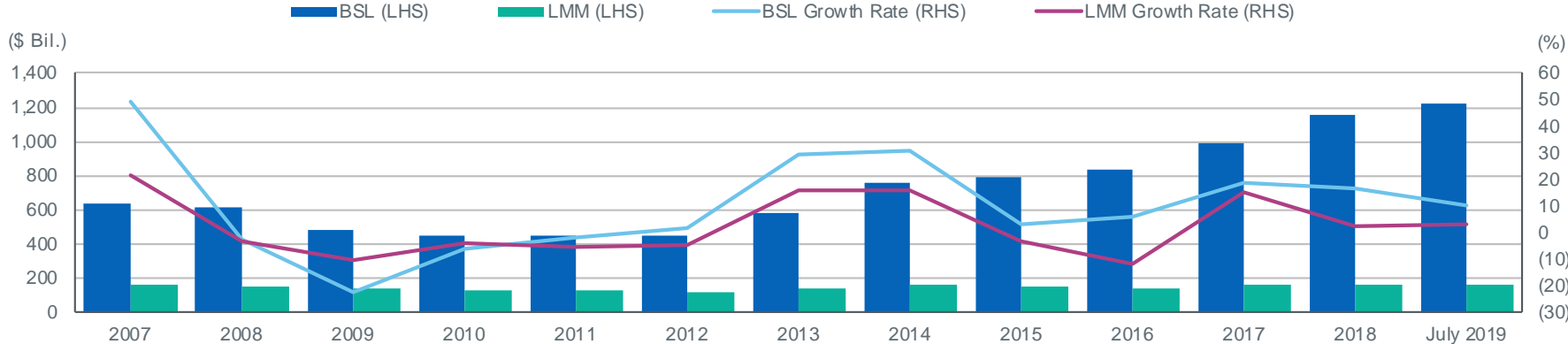
Market Profile: Universe Grows 10% Since July 2018 (Continued)

Cross-Market Trends Size and Growth Rate



Note: July 2019 growth rate, yoy.
 Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

BSL Versus LMM Size and Growth Rate



Note: July 2019 growth rate, yoy. BSL – Broadly syndicated loans. LMM – Large middle market.
 Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

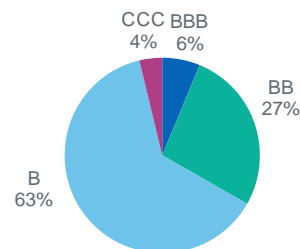
Market Profile: 63% of Issues Rated 'B'

(%)	% of Sector Rated BB	% of Sector Rated B	% of Sector Rated CCC Through C
Automotive ^a	46	52	3
Banking & Finance ^a	48	48	4
Broadcasting & Media ^a	44	51	5
Building & Materials	20	78	2
Cable ^a	72	28	0
Chemicals ^a	42	54	4
Consumer Products	32	56	12
Energy	25	67	8
Food, Beverage & Tobacco	26	69	6
Gaming, Lodging & Restaurants ^a	55	43	2
Healthcare & Pharmaceutical ^a	23	73	5
Industrial/Manufacturing	18	80	2
Insurance	1	99	0
Leisure & Entertainment ^a	29	69	3
Metals & Mining	8	77	14
Paper & Containers ^a	32	68	0
Real Estate	76	24	0
Retail ^a	20	56	24
Services & Miscellaneous ^a	20	76	4
Supermarkets & Drug Stores	43	50	6
Technology ^a	25	75	0
Telecommunications ^a	47	51	1
Transportation ^a	32	62	6
Utilities, Power & Gas ^a	70	29	1
Total^a	33	63	4

^aIssues rated BBB are included in percent of Sector Rated BB.

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

Rating Distribution of First-Lien Institutional Loans

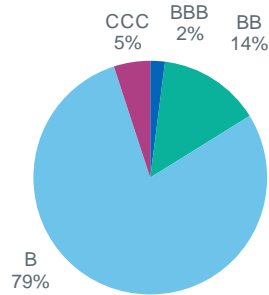


Note: Based on 1,525 issues rated by at least one of three rating agencies.

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

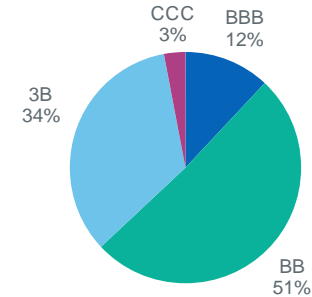
Market Profile: 79% Sponsored Issues Rated 'B'

Rating Distribution of First-Lien Sponsored Institutional Loans



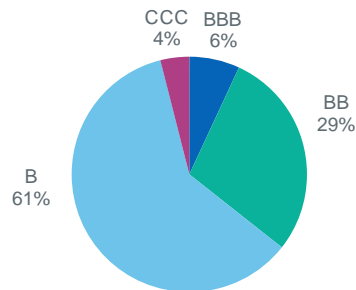
Note: Based on 1,017 issues rated by at least one of three rating agencies.
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

Rating Distribution of First-Lien Non-Sponsored Institutional Loans



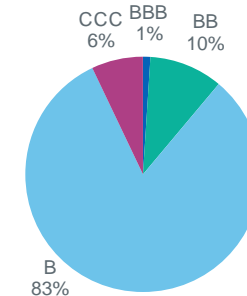
Note: Based on 508 issues rated by at least one of three rating agencies.
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

Rating Distribution of First-Lien BSL Institutional Loans



BSL – Broadly syndicated loans. Note: Based on 1,162 issues rated by at least one of three rating agencies.
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

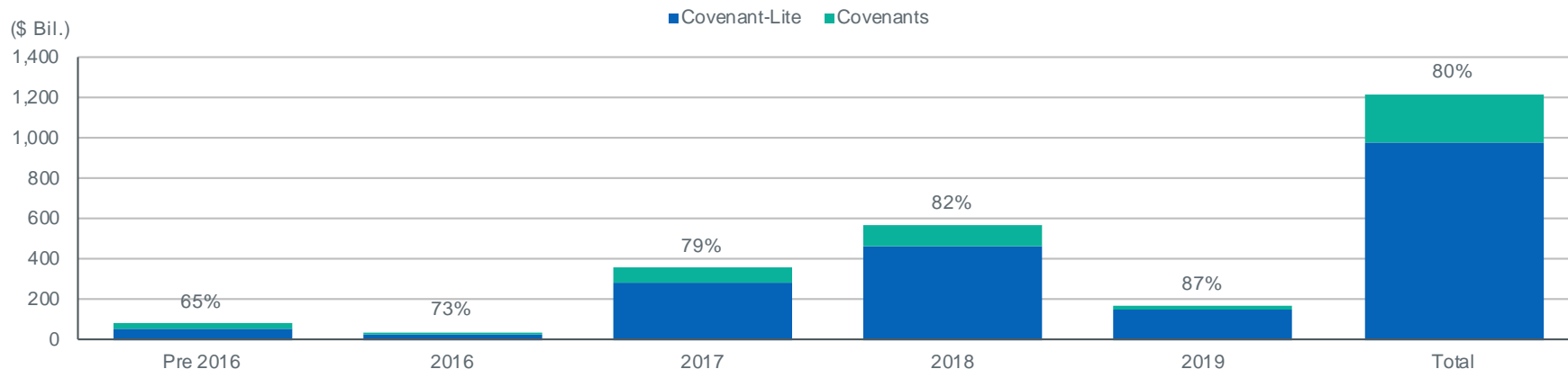
Rating Distribution of First-Lien LMM Institutional Loans



LMM – Large middle market. Note: Based on 363 issues rated by at least one of three rating agencies.
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

Market Profile: 80% BSL Market Covenant-Lite

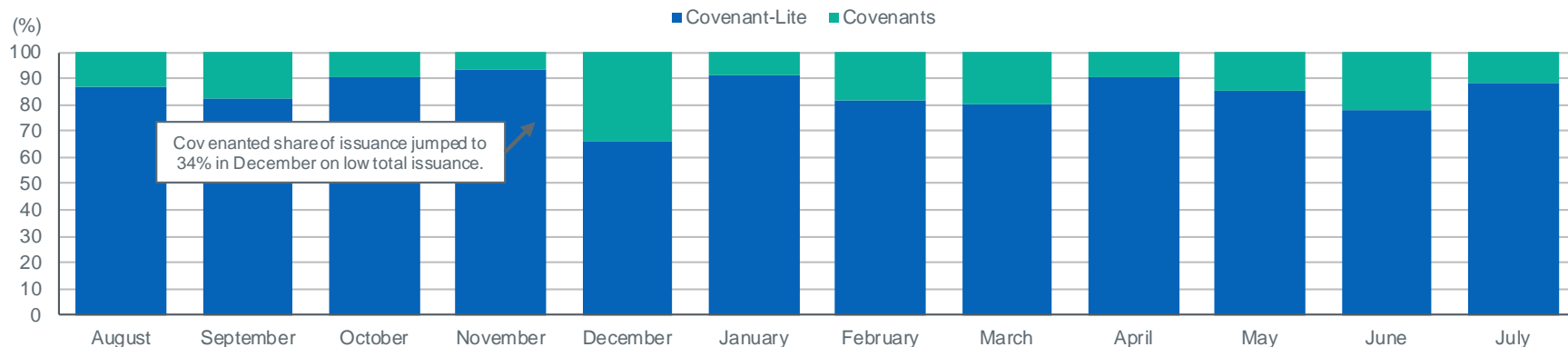
Outstanding Covenant-Lite Constitutes 80% of BSL Market



BSL – Broadly syndicated loans. Note: Covenant-lite percentages shown. Outstanding institutional leveraged loan market profile at end of July. Years reflect the vintage of current loans outstanding and not total issuance. Covenant-lite is defined as deals that do not have maintenance covenants.

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

Monthly Institutional Covenant-Lite Issuance

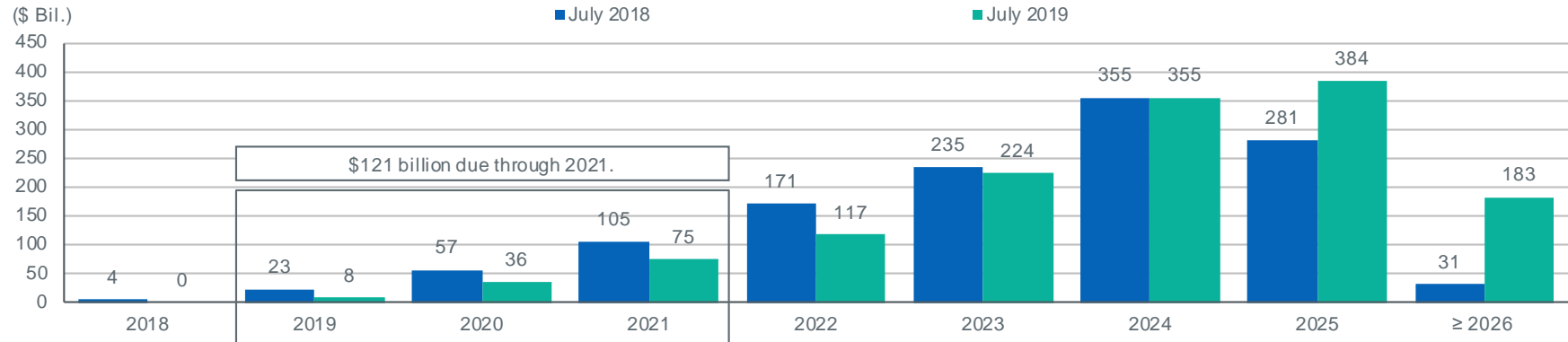


Note: Covenant-lite is defined as deals that do not have maintenance covenants.

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

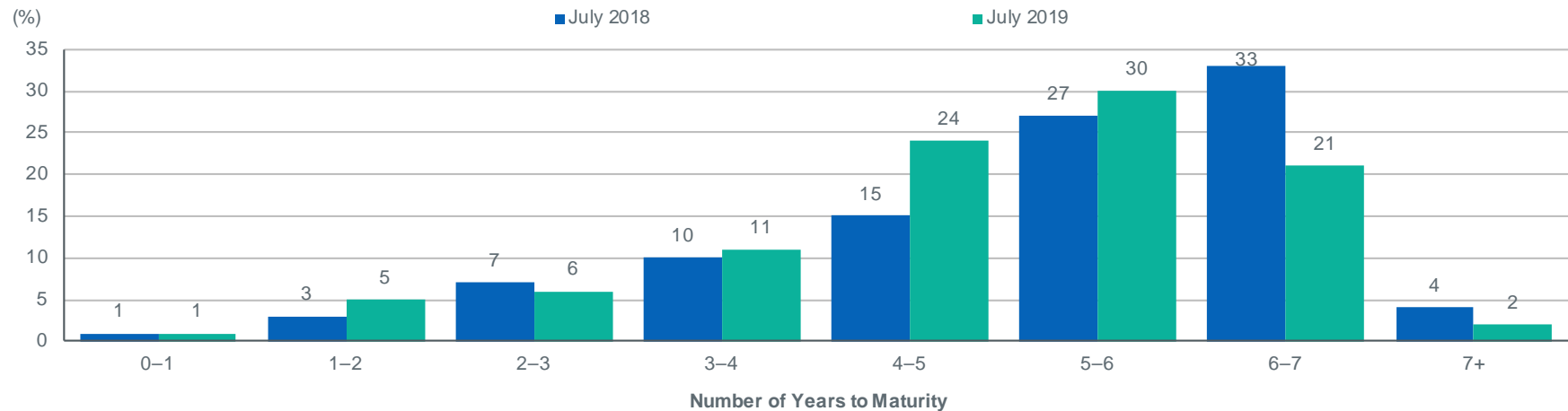
Market Profile: Refis Push Maturities to 2023 and Beyond

Institutional Leveraged Loan Maturities Year Over Year — Absolute-Year Basis



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

Institutional Leveraged Loan Maturities Year Over Year — Relative-Year Basis



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

Market Profile: Industry Maturity Profile Details

(\$ Bil.)	2019	2020	2021	2022	2023	2024	2025	≥2026
Automotive	0.0	0.6	2.3	2.5	3.6	7.6	9.2	9.4
Banking & Finance	0.2	2.9	1.8	5.9	10.5	20.9	16.7	8.0
Broadcasting & Media	0.4	1.8	3.5	6.5	9.6	13.6	9.5	15.7
Building & Materials	0.0	0.3	1.6	1.6	9.6	7.5	8.5	1.8
Cable	0.6	0.8	0.0	0.9	2.3	4.5	8.7	6.1
Chemicals	0.5	0.5	3.0	1.6	3.9	22.7	23.3	5.3
Consumer Products	0.3	0.4	0.4	1.0	4.9	7.3	11.3	4.4
Energy	0.3	2.0	7.5	3.2	3.5	14.2	12.6	6.0
Food, Beverage & Tobacco	0.0	0.8	3.5	1.7	5.1	6.3	10.6	2.6
Gaming, Lodging & Restaurants	0.3	0.6	2.2	1.6	9.3	33.5	12.0	7.2
Healthcare & Pharmaceutical	0.5	1.4	9.5	19.4	27.3	27.4	47.3	17.6
Industrial/Manufacturing	0.2	0.5	3.8	3.1	6.5	12.3	13.8	6.6
Insurance	1.0	0.4	0.0	4.8	6.6	11.3	11.4	1.0
Leisure & Entertainment	0.1	1.7	0.8	2.4	2.6	12.9	13.3	10.7
Metals & Mining	0.0	0.7	0.3	3.3	1.5	1.6	6.1	0.2
Paper & Containers	0.2	1.1	0.8	2.9	7.2	7.6	2.6	8.1
Real Estate	0.0	0.5	0.5	2.3	1.8	2.8	9.3	1.2
Retail	0.9	1.3	3.6	12.9	18.1	14.8	2.8	2.7
Services & Miscellaneous	1.2	2.1	13.4	14.8	22.6	35.3	55.7	21.2
Supermarkets & Drug Stores	0.0	0.2	0.3	1.3	3.4	0.5	7.0	0.7
Technology	0.9	1.4	7.0	17.3	34.9	44.8	50.4	22.1
Telecommunications	0.1	5.0	2.5	0.8	10.8	28.5	18.0	14.6
Transportation	0.0	4.3	4.4	3.2	8.4	11.7	14.2	5.0
Utilities, Power & Gas	0.0	4.9	2.0	1.9	10.6	5.2	10.0	4.6
Total	7.6	36.4	74.9	117.1	224.5	355.0	384.4	182.8

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

Market Profile: Broadly Syndicated Loan Maturity Profile

(\$ Bil.)	2019	2020	2021	2022	2023	2024	2025	≥2026
Automotive	0.0	0.3	2.3	2.2	2.0	7.3	8.0	9.4
Banking & Finance	0.0	2.0	0.3	4.1	10.1	18.3	15.3	7.4
Broadcasting & Media	0.4	1.5	3.2	4.8	8.5	12.7	8.3	15.3
Building & Materials	0.0	0.0	1.1	0.4	7.8	6.1	6.8	1.1
Cable	0.6	0.8	0.0	0.9	2.3	4.5	8.7	6.1
Chemicals	0.5	0.2	2.3	1.0	3.2	21.7	21.8	4.4
Consumer Products	0.3	0.1	0.0	0.0	4.5	5.8	10.3	3.6
Energy	0.0	0.7	6.6	2.2	2.7	12.2	10.1	5.9
Food, Beverage & Tobacco	0.0	0.4	1.9	1.4	4.1	5.0	8.1	2.3
Gaming, Lodging & Restaurants	0.0	0.3	1.7	0.5	8.9	32.4	9.0	6.6
Healthcare & Pharmaceutical	0.4	0.6	8.2	17.7	24.6	24.0	44.2	16.6
Industrial/Manufacturing	0.0	0.0	2.7	2.4	6.0	10.7	12.8	5.9
Insurance	1.0	0.1	0.0	4.1	6.3	10.9	10.8	0.5
Leisure & Entertainment	0.0	1.5	0.6	2.3	2.4	12.5	12.2	10.7
Metals & Mining	0.0	0.2	0.1	3.3	1.1	1.6	5.7	0.2
Paper & Containers	0.0	0.9	0.8	2.5	6.9	6.8	2.4	8.1
Real Estate	0.0	0.3	0.2	2.1	1.8	2.8	9.3	0.9
Retail	0.9	0.9	2.8	11.1	16.8	12.6	1.9	2.3
Services & Miscellaneous	0.6	0.9	10.2	11.2	17.0	30.3	47.8	18.7
Supermarkets & Drug Stores	0.0	0.0	0.3	1.3	2.7	0.4	6.7	0.2
Technology	0.7	0.3	5.2	14.8	34.1	40.1	45.8	20.0
Telecommunications	0.0	4.6	2.0	0.6	10.1	28.2	17.7	14.1
Transportation	0.0	3.3	3.7	2.0	6.9	10.8	12.6	4.8
Utilities, Power & Gas	0.0	3.8	1.4	1.3	10.0	5.0	8.6	4.1
Total	5.3	23.7	57.3	94.4	200.8	323.0	344.8	169.1

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

Market Profile: Large Middle Market Maturity Profile

(\$ Bil.)	2019	2020	2021	2022	2023	2024	2025	≥2026
Automotive	0.0	0.3	0.0	0.2	1.6	0.3	1.2	0.0
Banking & Finance	0.2	0.9	1.5	1.8	0.4	2.6	1.4	0.7
Broadcasting & Media	0.0	0.3	0.3	1.7	1.1	0.9	1.2	0.4
Building & Materials	0.0	0.3	0.5	1.2	1.8	1.4	1.8	0.7
Cable	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Chemicals	0.0	0.3	0.7	0.7	0.7	1.0	1.5	0.9
Consumer Products	0.0	0.3	0.4	1.0	0.4	1.5	1.1	0.8
Energy	0.3	1.4	0.9	1.0	0.8	2.1	2.5	0.2
Food, Beverage & Tobacco	0.0	0.4	1.7	0.3	1.1	1.3	2.5	0.3
Gaming, Lodging & Restaurants	0.3	0.3	0.5	1.1	0.4	1.0	3.1	0.6
Healthcare & Pharmaceutical	0.0	0.8	1.3	1.7	2.8	3.5	3.0	1.1
Industrial/Manufacturing	0.2	0.5	1.2	0.7	0.4	1.5	1.0	0.7
Insurance	0.0	0.3	0.0	0.7	0.4	0.4	0.6	0.5
Leisure & Entertainment	0.1	0.2	0.2	0.1	0.2	0.4	1.2	0.0
Metals & Mining	0.0	0.5	0.2	0.0	0.4	0.0	0.4	0.0
Paper & Containers	0.2	0.2	0.0	0.4	0.3	0.8	0.2	0.0
Real Estate	0.0	0.2	0.4	0.3	0.0	0.0	0.0	0.3
Retail	0.0	0.5	0.8	1.8	1.3	2.3	0.9	0.4
Services & Miscellaneous	0.6	1.2	3.2	3.7	5.6	5.0	7.9	2.5
Supermarkets & Drug Stores	0.0	0.2	0.0	0.0	0.6	0.0	0.3	0.4
Technology	0.2	1.1	1.9	2.5	0.9	4.8	4.6	2.1
Telecommunications	0.1	0.4	0.6	0.2	0.7	0.3	0.3	0.5
Transportation	0.1	1.0	0.8	1.2	1.5	0.9	1.7	0.3
Utilities, Power & Gas	0.0	1.1	0.6	0.6	0.6	0.2	1.4	0.5
Total	2.3	12.7	17.6	22.7	23.7	32.0	39.6	13.7

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

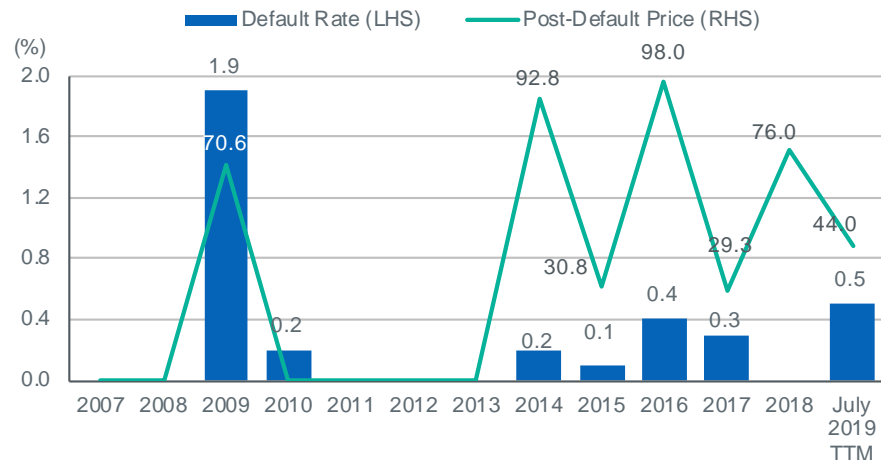


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Sector Highlights

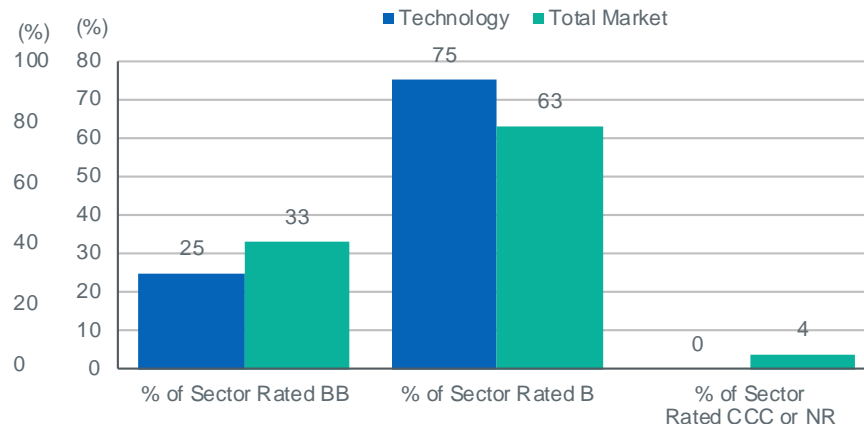
Sector Highlights: Technology

Technology Default and Post-Default Prices



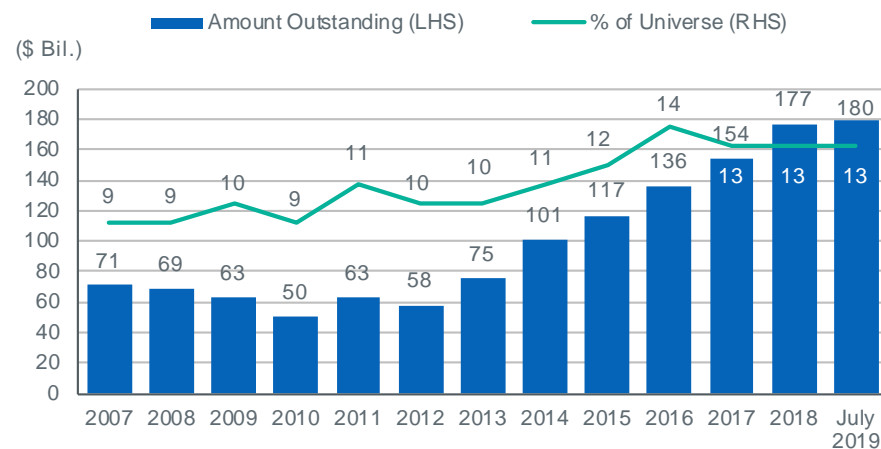
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Technology Rating Mix in Institutional Leveraged Loan Universe



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

Technology Composition in Institutional Leveraged Loan Universe



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

Top Five Technology Names in Institutional Leveraged Loan Universe

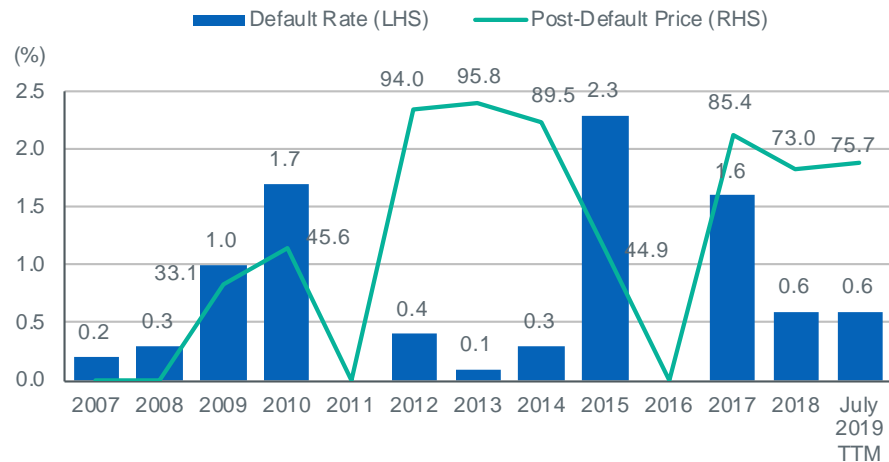
Name	Amount Outstanding (\$ Bil.)	Bid Level	IDR Composite Rating
Dell International LLC	4.9	100.125	BB
Change Healthcare Holdings LLC	4.9	98.625	B
Micro Focus International	4.4	99.125	B
SS&C Technologies Inc.	4.0	100	BB
Quest Software Inc.	3.8	98.5/97.5	NR

Note: Prices as of Aug. 23, 2019.

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

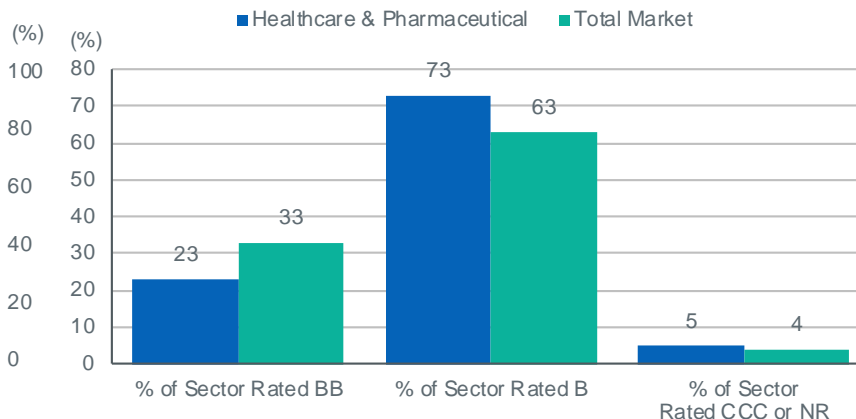
Sector Highlights: Healthcare & Pharmaceutical

Healthcare & Pharmaceutical Default and Post-Default Prices



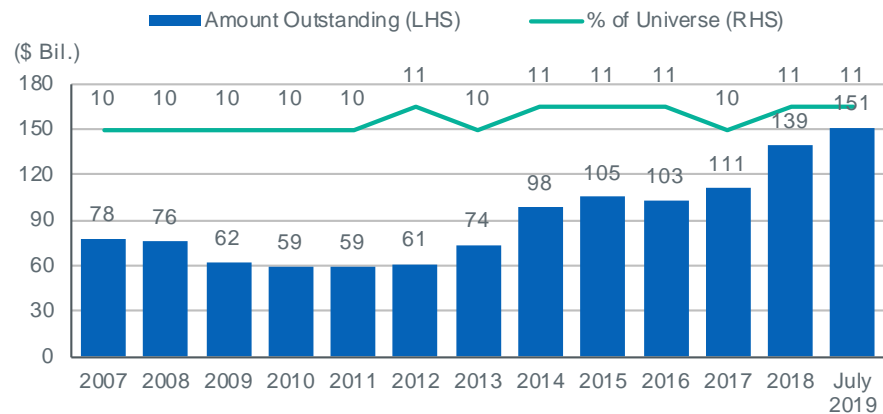
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Healthcare & Pharmaceutical Rating Mix in Institutional Leveraged Loan Universe



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

Healthcare & Pharmaceutical Composition in Institutional Leveraged Loan Universe



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

Top Five Healthcare & Pharmaceutical Names in Institutional Leveraged Loan Universe

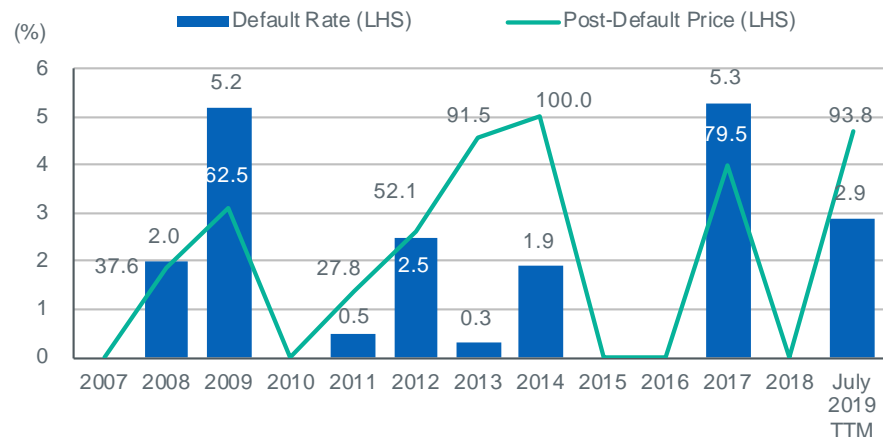
Name	Amount Outstanding (\$ Bil.)	Bid Level	IDR Composite Rating
Bausch Health Companies Inc.	5.5	100	B
Envision Healthcare	5.4	77.75	B
Royalty Pharma	4.5	100.125/98.875	BBB
Athenahealth, Inc.	4.5	100/99.5	B
US Renal Care Inc.	3.6	99.75/98.5	B

Note: Prices as of Aug. 23, 2019.

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

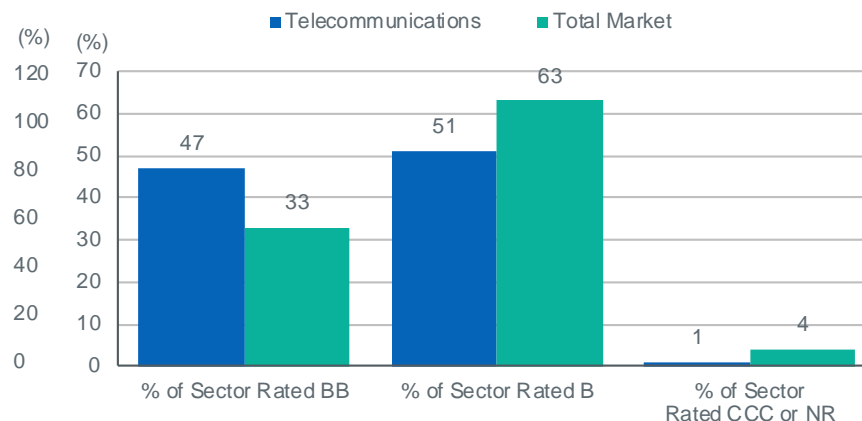
Sector Highlights: Telecommunications

Telecommunications Default and Post-Default Prices



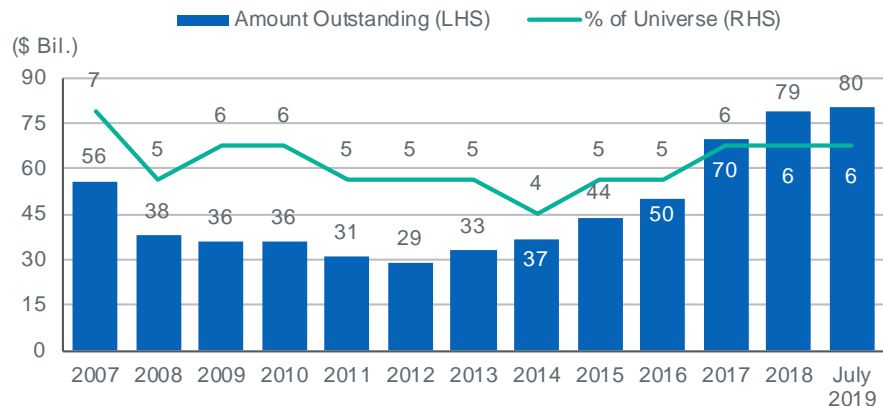
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Telecommunications Rating Mix in Institutional Leveraged Loan Universe



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

Telecommunications Composition in Institutional Leveraged Loan Universe



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

Top Five Telecommunications Names in Institutional Leveraged Loan Universe

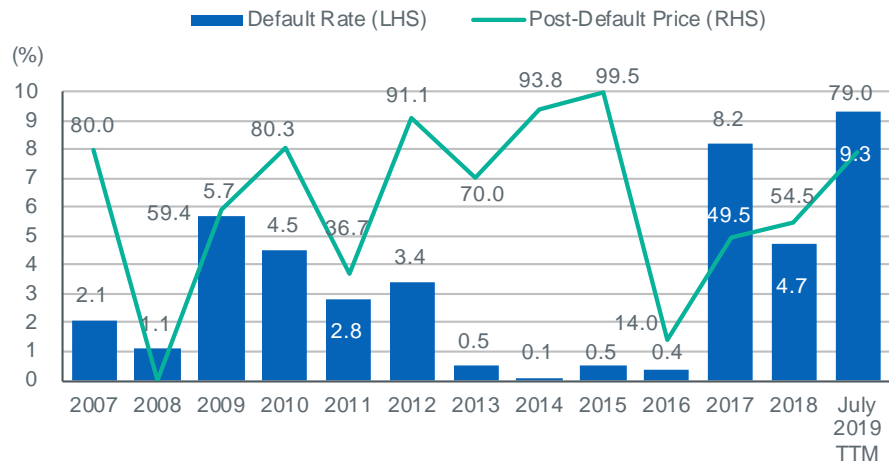
Name	Amount Outstanding (\$ Bil.)	Bid Level	IDR Composite Rating
CenturyLink Inc.	10.5	98.25	BB
Sprint Communications Inc.	5.9	99.75	B
Altice France	5.5	98.5/95.5	B
Ligado Networks LLC	4.6	84.625/37.5	NR
Virgin Media Investment Holdings	3.4	99.875	BB

Note: Prices as of Aug. 23, 2019.

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

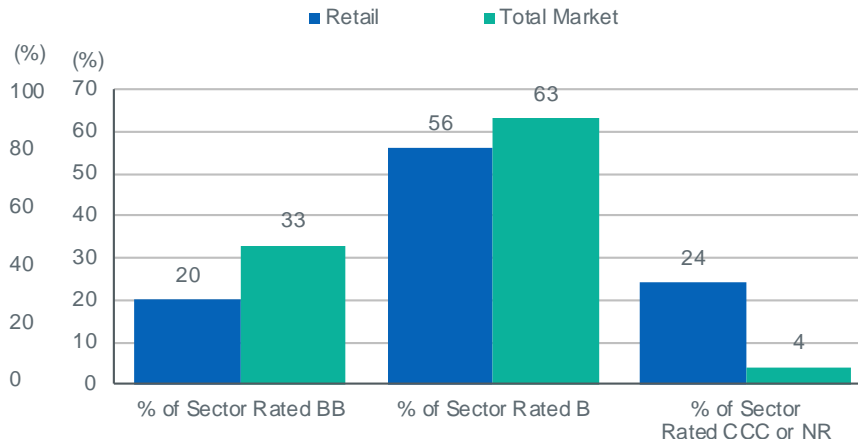
Sector Highlights: Retail

Retail Default and Post-Default Prices



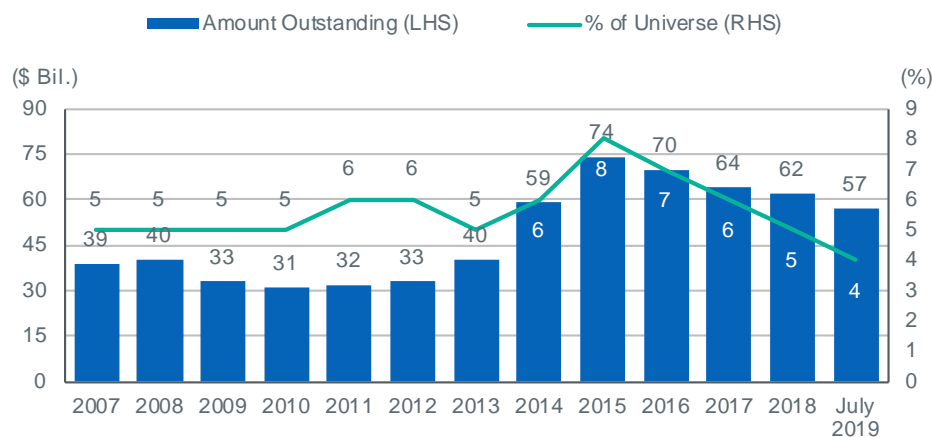
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Retail Rating Mix in Institutional Leveraged Loan Universe



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

Retail Composition in Institutional Leveraged Loan Universe



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

Top Five Retail Names in Institutional Leveraged Loan Universe

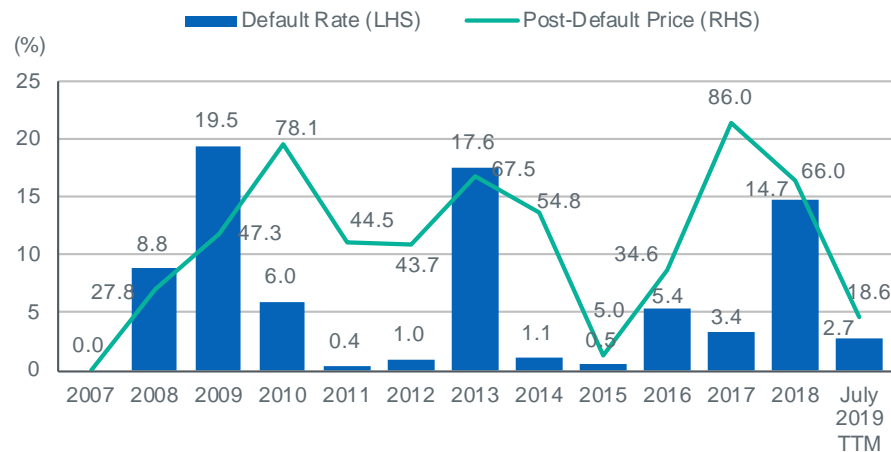
Name	Amount Outstanding (\$ Bil.)	Bid Level	IDR Composite Rating
Bass Pro Shops	4.2	95.25	B
PetSmart Inc.	3.9	97.25	B
Petco Animal Supplies Inc.	2.4	73.75	CCC
Serta Simmons Bedding	2.3	67/43.5	CCC
Staples Inc.	2.3	97.125/96.125	B

Note: Prices as of Aug. 23, 2019.

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

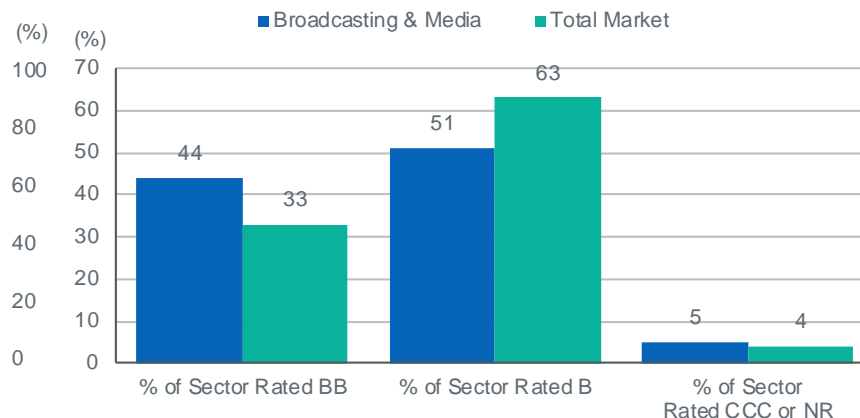
Sector Highlights: Broadcasting & Media

Broadcasting & Media Default and Post-Default Prices



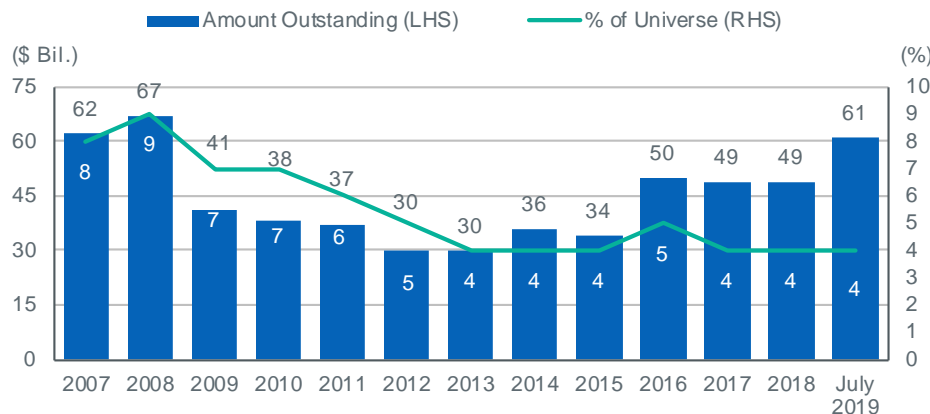
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Broadcasting & Media Rating Mix in Institutional Leveraged Loan Universe



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

Broadcasting & Media Composition in Institutional Leveraged Loan Universe



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

Top Five Broadcasting & Media Names in Institutional Leveraged Loan Universe

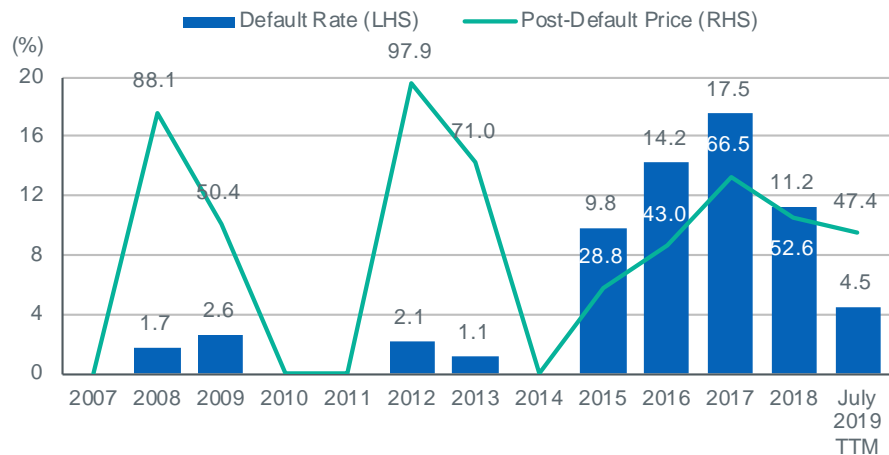
Name	Amount Outstanding (\$ Bil.)	Bid Level	IDR Composite Rating
Nexstar Broadcasting Group	4.5	100/99.625	B
Univision Communications Inc.	4.2	95.75	B
iHeartCommunications Inc.	3.5	100.125	B
Diamond SportsGroup	3.3	100.125	BB
ION Media Network	2.4	99.625/99.25	B

Note: Prices as of Aug. 23, 2019.

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

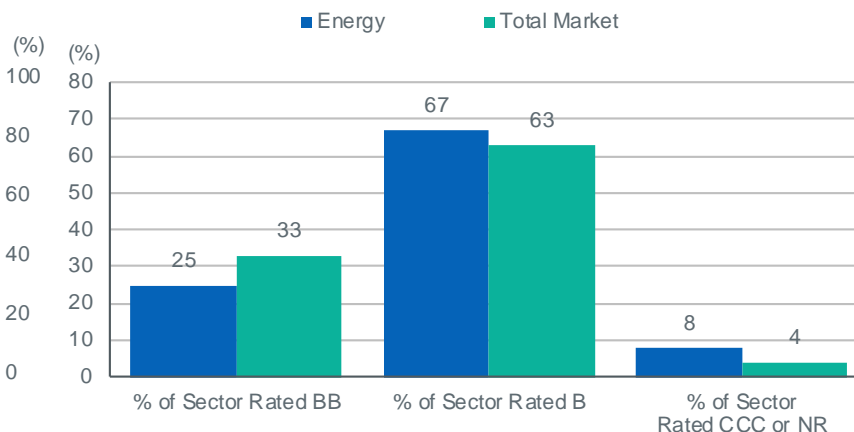
Sector Highlights: Energy

Energy Default and Post-Default Prices



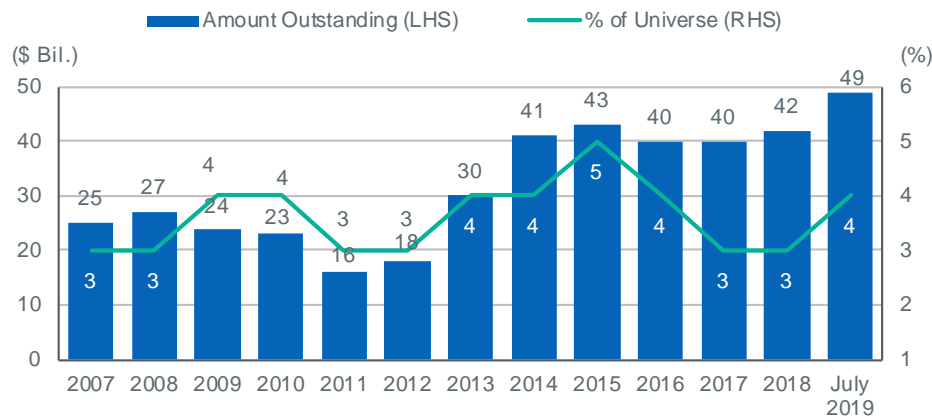
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC.

Energy Rating Mix in Institutional Leveraged Loan Universe



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

Energy Composition in Institutional Leveraged Loan Universe



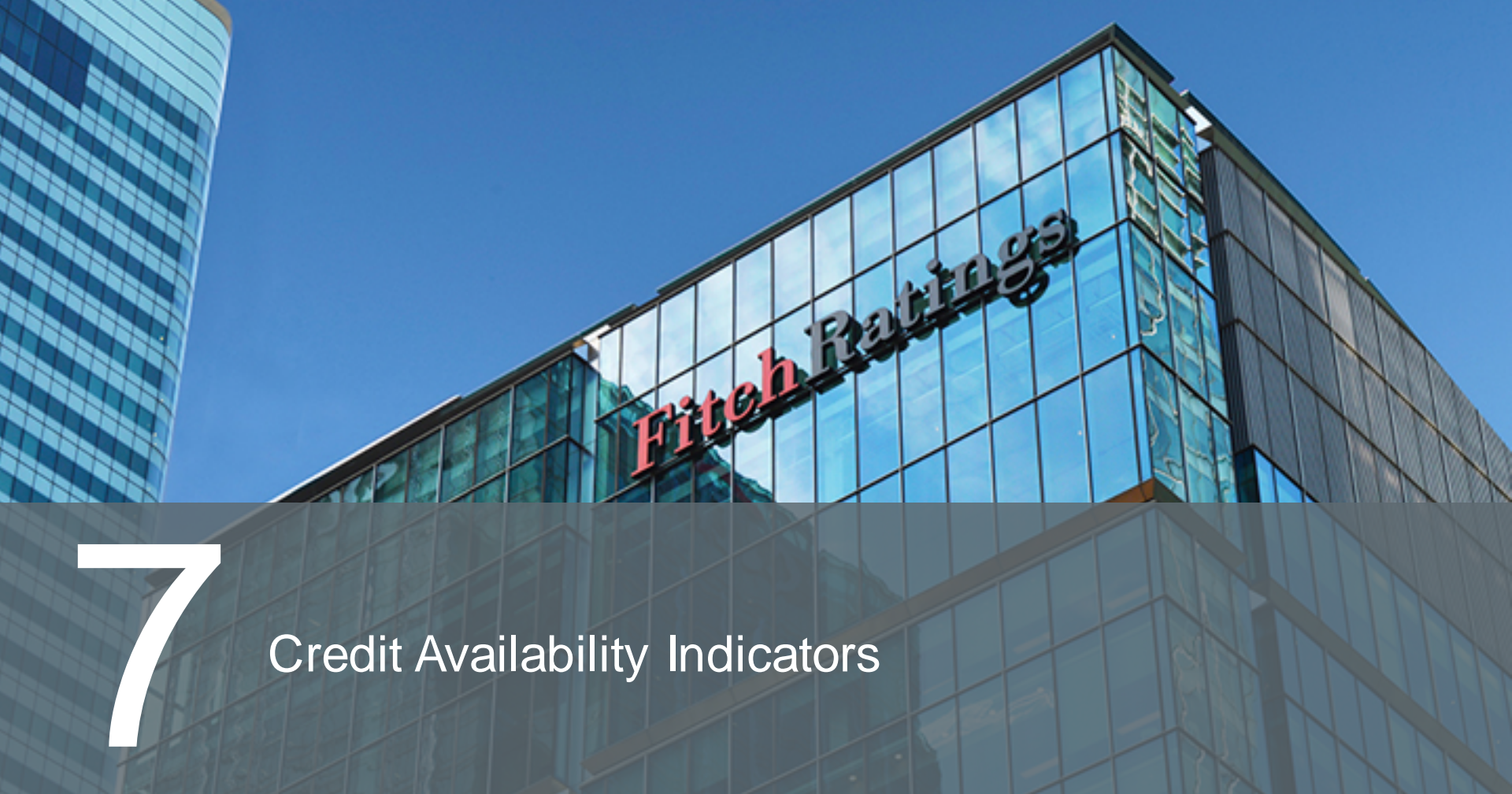
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Top Five Energy Names in Institutional Leveraged Loan Universe

Name	Amount Outstanding (\$ Bil.)	Bid Level	IDR Composite Rating
Seadrill Ltd.	2.6	59.5	CCC
Blackstone CQP Holdco LP	2.6	99.75	B
CITGO Petroleum Corp.	2.3	100.375/99.875	B
California Resources Corp.	2.3	89.5/88.5	CCC
Oryx Southern Delaware	1.5	97.5	B

Note: Prices as of Aug. 23, 2019.

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

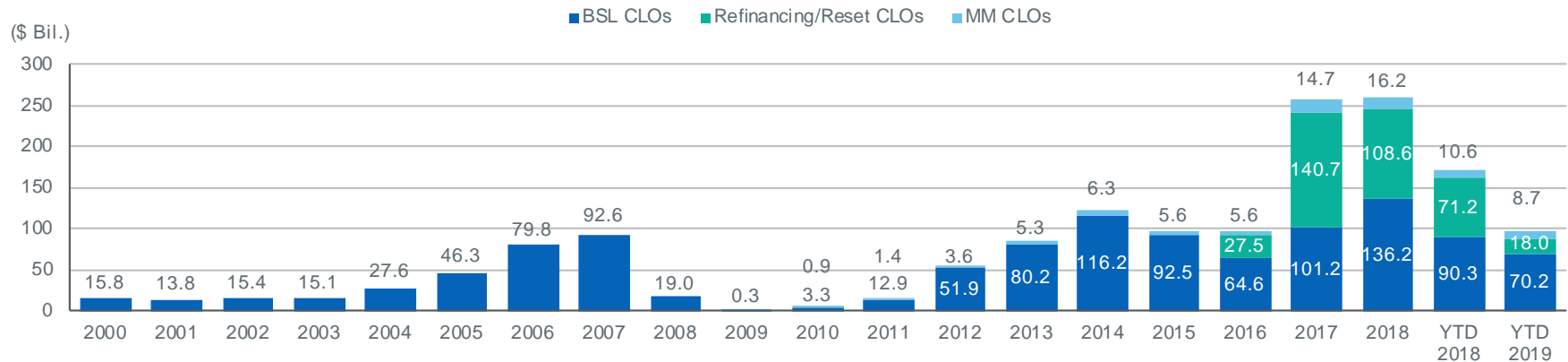


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Credit Availability Indicators

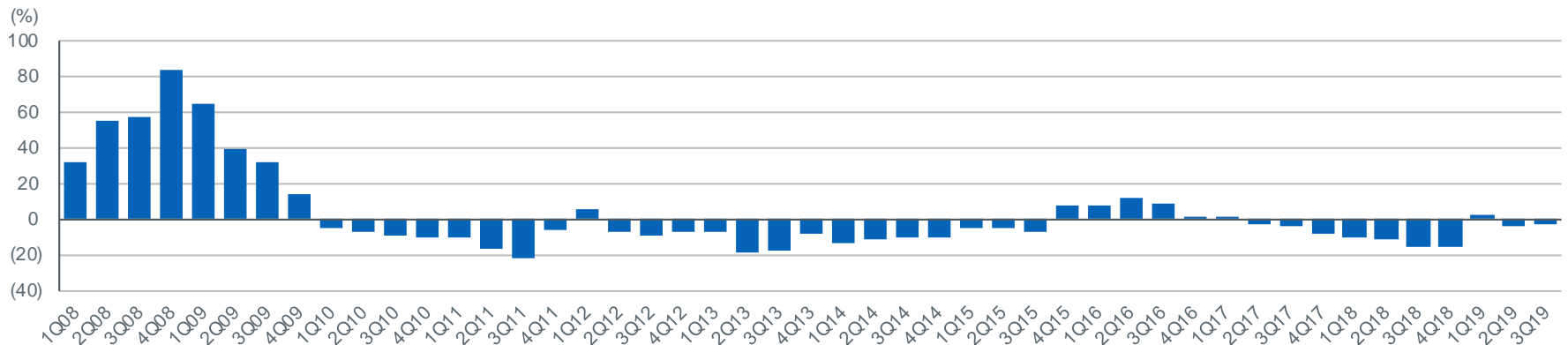
Credit Availability Indicators: CLO Issuance Trails Last Year

U.S. CLO Issuance (As of Aug. 15, 2019)



BSL – Broadly Syndicated Loan. MM – Middle Market; MM not captured prior to 2010.
Source: Fitch U.S. Leveraged Loan Default Index, The Royal Bank of Scotland, public domain.

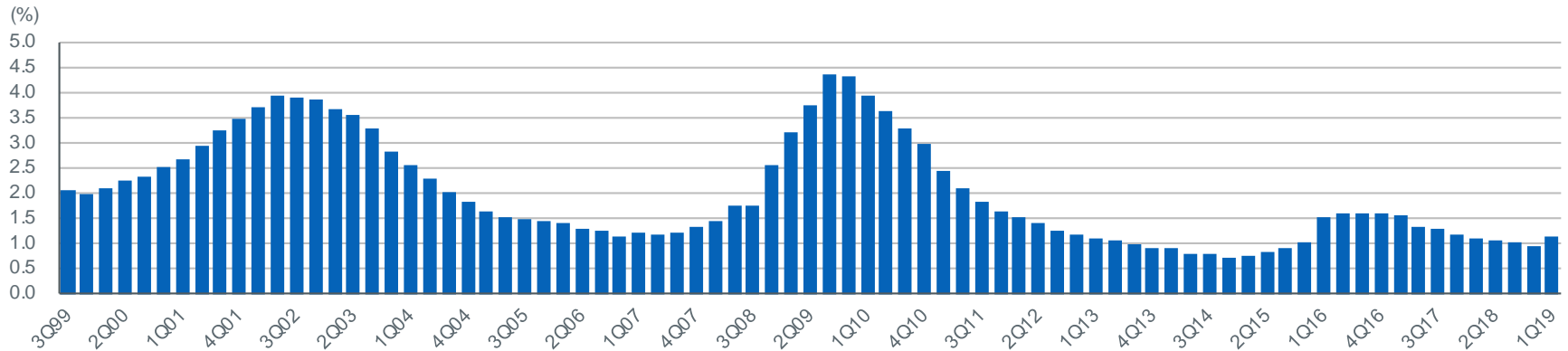
Federal Reserve Senior Loan Officer Survey — Percentage of Banks Tightening Standards on C&I Loans



C&I – Commercial and industrial.
Source: The Federal Reserve.

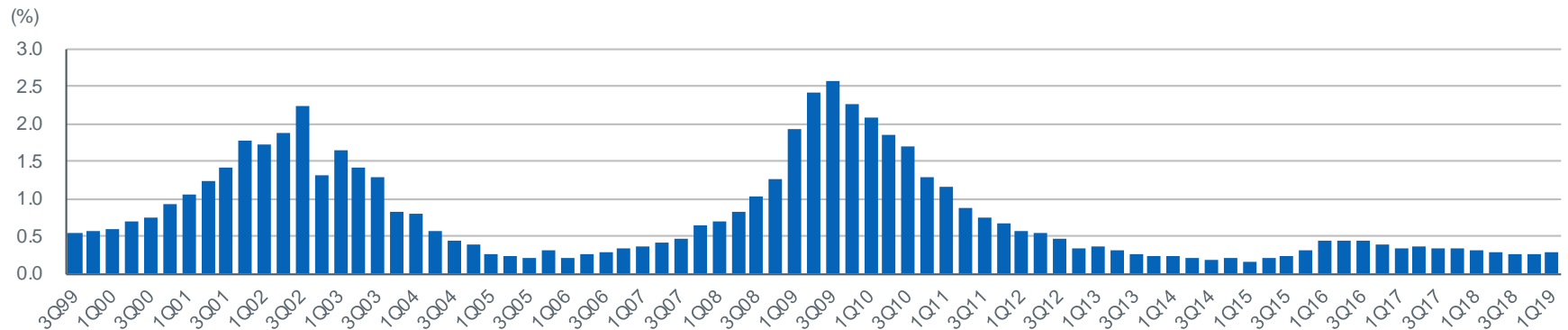
Credit Availability Indicators: C&I Delinquency Rates Low

Commercial and Industrial Loans Bank Delinquency Rates



Source: The Federal Reserve Board.

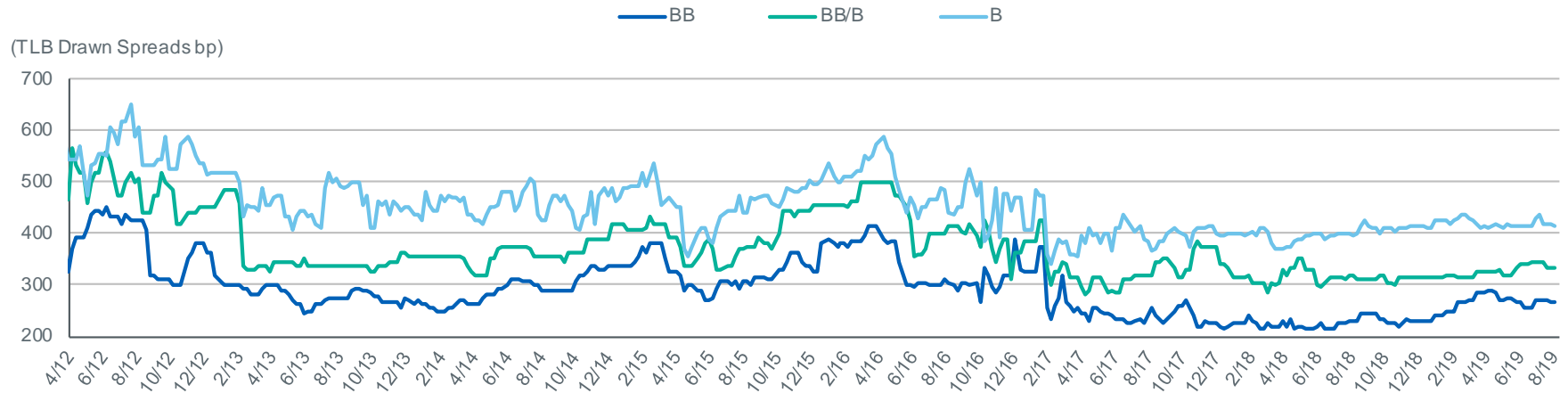
Commercial and Industrial Loans Bank Charge-Off Rates



Source: The Federal Reserve Board.

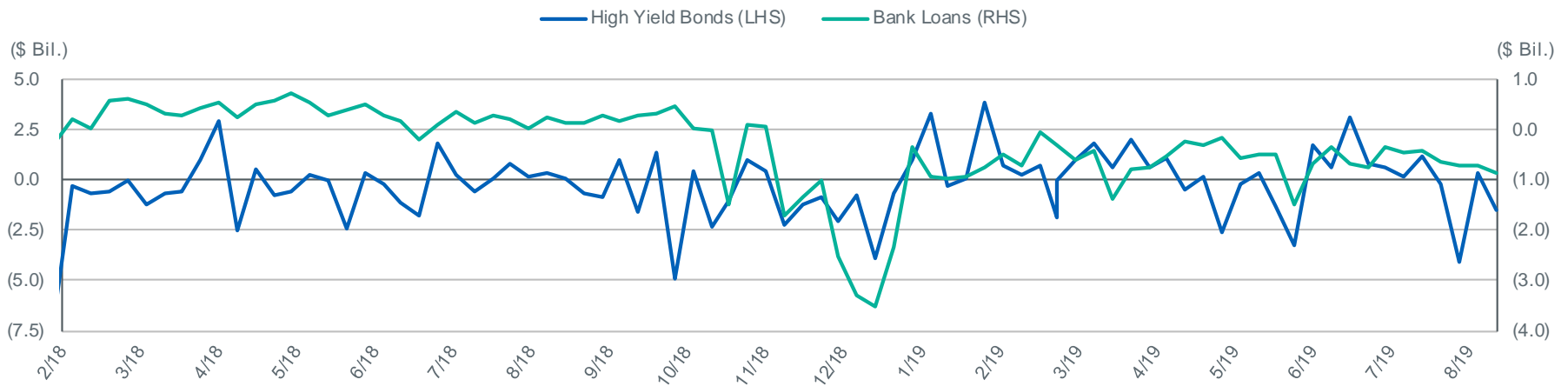
Credit Availability Indicators: LL Outflows for 40 Straight Weeks

Primary Market Spreads — Term Loan B



Source: Refinitiv LPC.

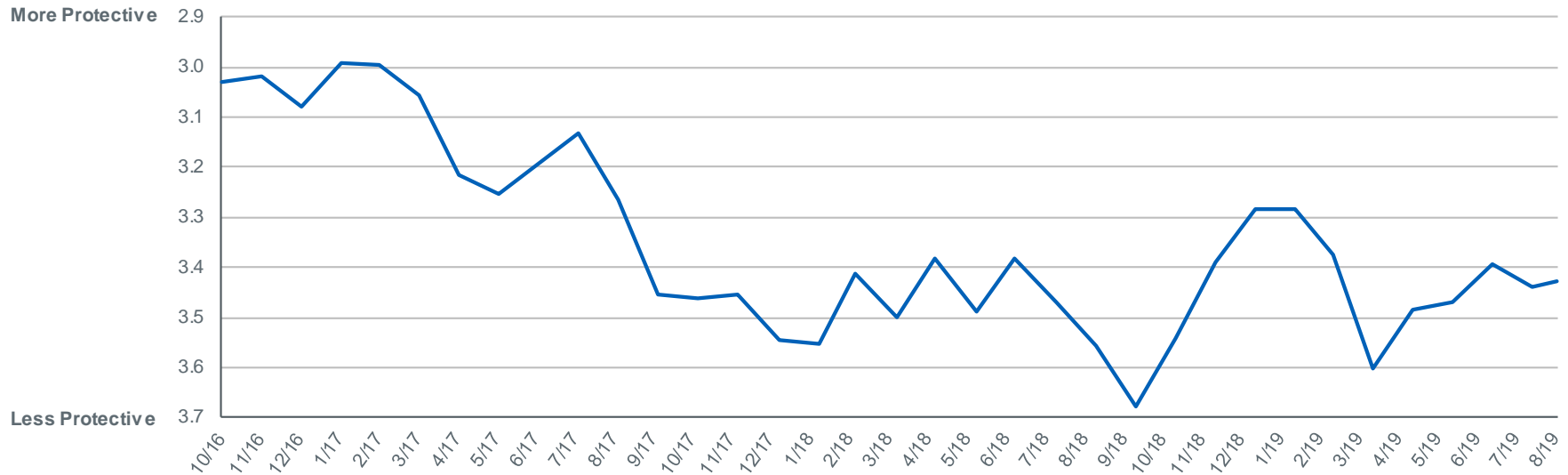
High Yield Bond and Bank Loan Mutual Fund Flows



Source: Refinitiv LPC.

Credit Availability Indicators: Documentation Weakens

Covenant Review's Composite Documentation Score — Three-Month Rolling Average



Note: Covenant Review's Documentation Scoring Overview: The score, subscores and qualitative scores will be expressed as follows: 1, Most Protective; 2, Fairly Protective; 3, Flexible; 4, Deficient; 5, Seriously Deficient. To augment these scores, Covenant Review will modify scores that fall in between the main categories with pluses and minus, resulting in a 13-point scale: 1, 1-, 2+, 2-, and so forth to 5 (there will be no 1+ or 5-).

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 Jonathan Blau, Quantitative Consultant to Covenant Review, jblau@covenantreview.com.

Source: Covenant Review.

A photograph of a modern glass skyscraper with the 'Fitch Ratings' logo in red and black on its facade. The building is set against a clear blue sky. A semi-transparent dark grey banner is overlaid on the bottom half of the image.

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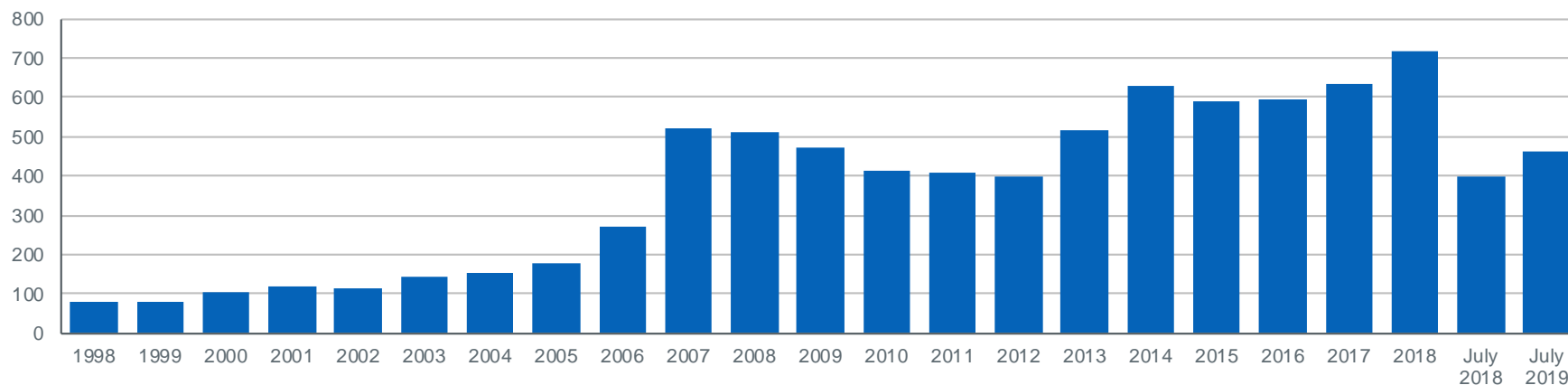
Secondary Trends

- Average secondary bids are at 96.6, up from 94.9 at YE 2018.
- 10% of the market bid above par; 16% bid below 95.
- Secondary trading volume up 16% versus last year's record.

Secondary Trends: Trading 16% Ahead Last Year's Record Volume

Historical Secondary Trading Volume

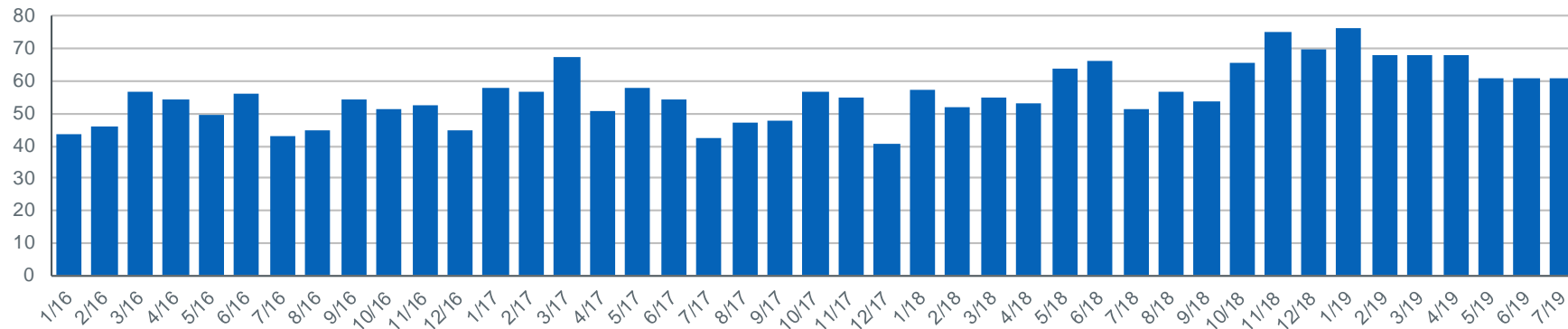
(\$ Bil.)



Source: LSTA.

Monthly Secondary Trading Volume

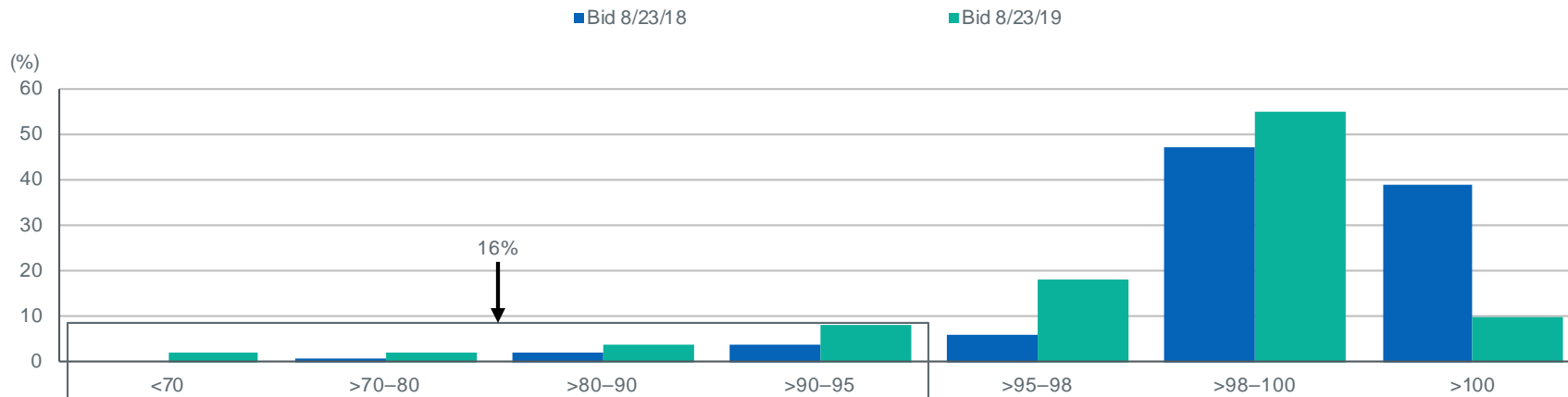
(\$ Bil.)



Source: LSTA.

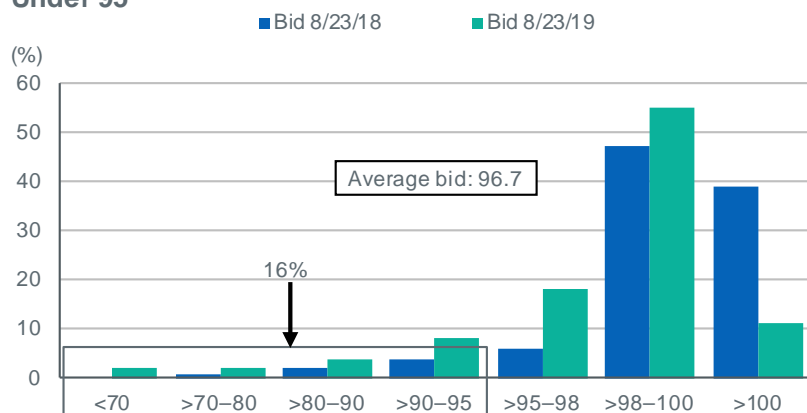
Secondary Trends: 65% First-Lien Loans Bid Above 98

16% of Outstanding First-Lien Institutional Loans Bid Under 95



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

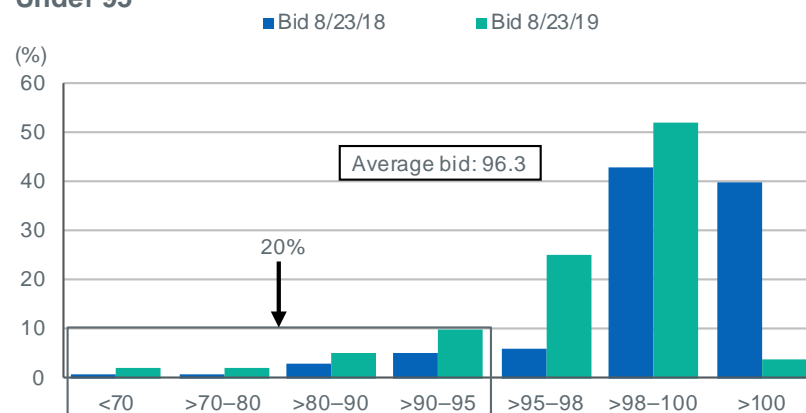
16% of Outstanding First-Lien BSL Institutional Loans Bid Under 95



BSL – Broadly syndicated loans.

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

20% of Outstanding First-Lien LMM Institutional Loans Bid Under 95

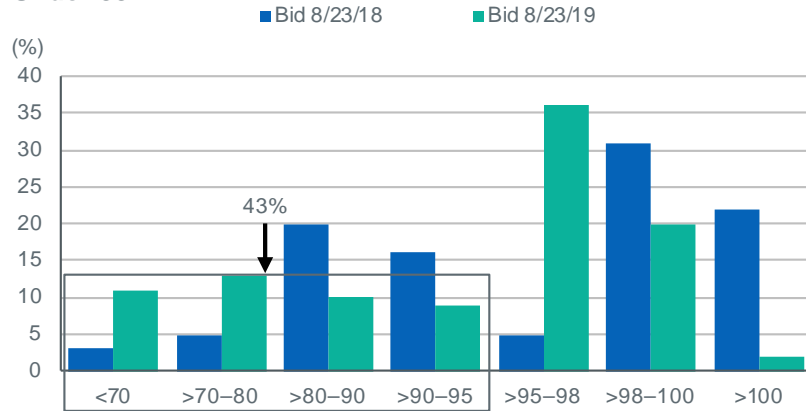


LMM – Large middle market.

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

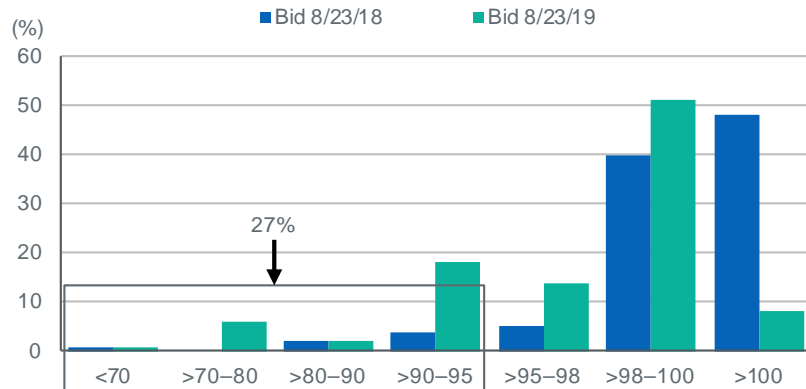
Secondary Trends: Only 2% of First-Lien Retail Bid Above Par

43% of Outstanding First-Lien Retail Institutional Loans Bid Under 95



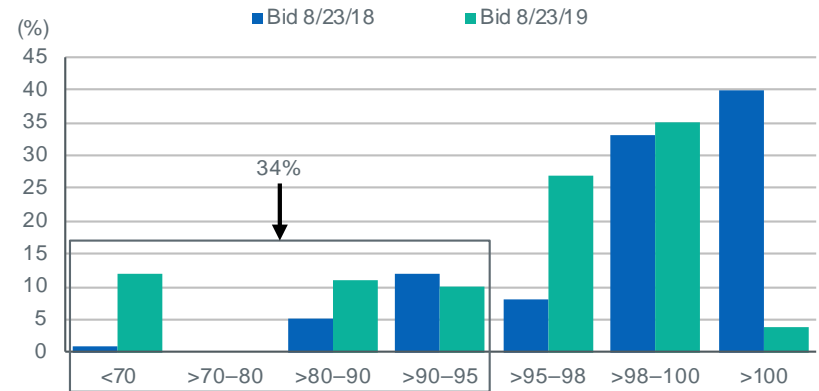
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

27% of Outstanding First-Lien Healthcare/Pharmaceutical Institutional Loans Bid Under 95



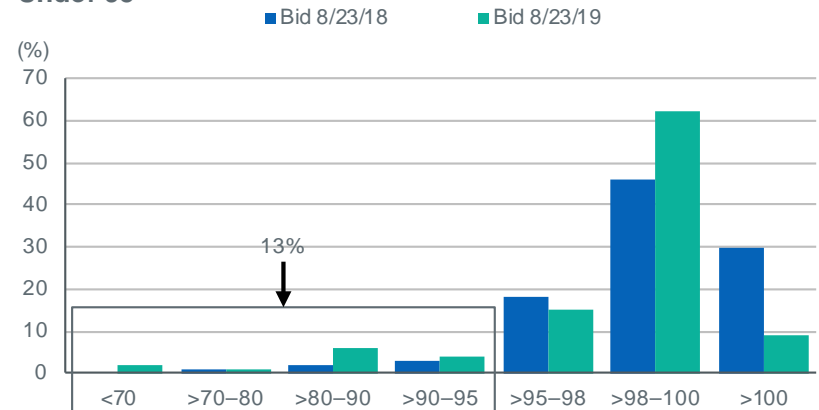
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

34% of Outstanding First-Lien Energy, Metals/Mining Institutional Loans Bid Under 95



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

13% of Outstanding First-Lien TMT Institutional Loans Bid Under 95



TMT – Technology, Media and Telecommunications.
Source: Fitch U.S. Leveraged Loan Default Index, Advantage Data, Refinitiv LPC.

A photograph of a modern glass skyscraper with the 'Fitch Ratings' logo mounted on its facade. The building is set against a clear blue sky. The logo consists of the word 'Fitch' in red and 'Ratings' in black, both in a serif font. The building's glass reflects the sky and surrounding environment.

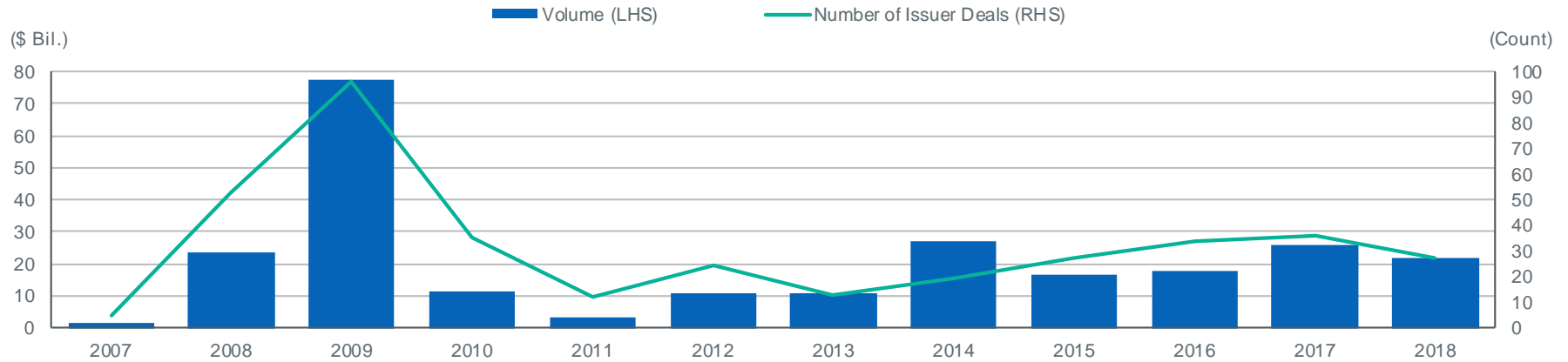
Fitch Ratings

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Historical Default and Post-Default, Emergence Prices

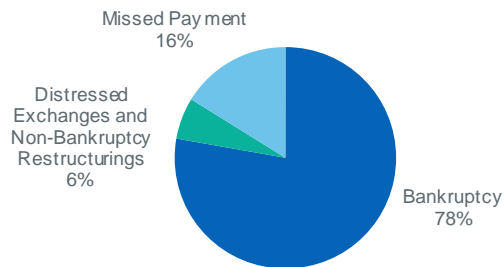
Historical Defaults: 2007–2018

Default Volume and Issuer Count



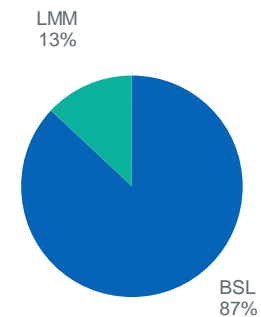
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Default Source



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

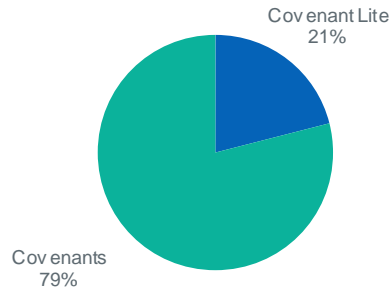
Market Share



BSL – Broadly syndicated loans. LMM – Large middle market.
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

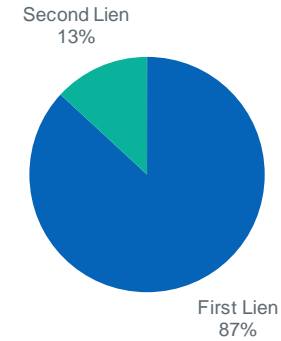
Historical Defaults: 2007–2018

Covenant Status



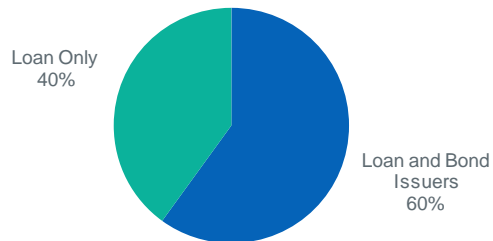
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Priority



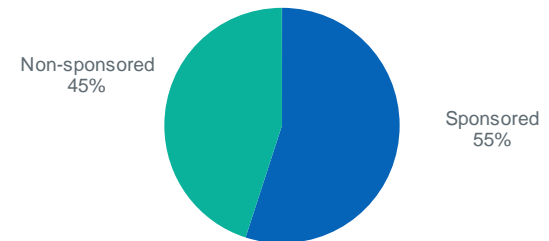
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Capital Structure



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

Sponsor Status



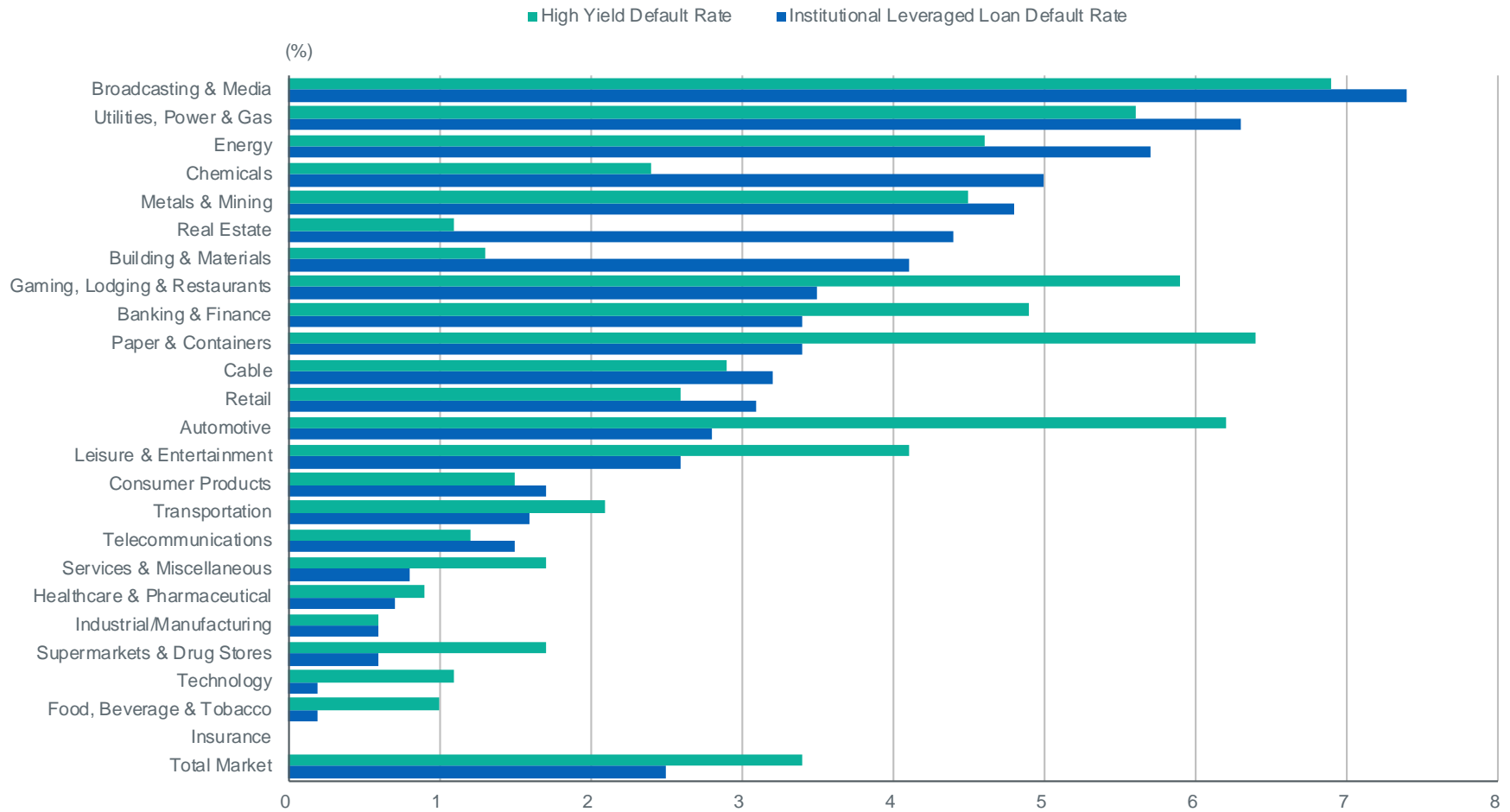
Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg.

Historical Defaults 2007–2018: Industry Details

(\$ Bil.) Industry	Loans	Bonds	Total	% of Total
Energy	25.9	75.5	101.4	15.6
Broadcasting & Media	45.1	40.3	85.4	13.1
Banking & Finance	13.9	65.7	79.6	12.2
Utilities, Power & Gas	25.4	30.5	55.9	8.6
Gaming, Lodging & Restaurants	15.0	33.6	48.6	7.5
Metals & Mining	9.7	22.0	31.7	4.9
Retail	16.5	13.0	29.5	4.5
Automotive	7.4	17.7	25.1	3.9
Paper & Containers	6.0	18.8	24.9	3.8
Chemicals	17.9	6.3	24.1	3.7
Telecommunications	7.9	12.9	20.8	3.2
Cable	7.8	12.6	20.4	3.1
Services & Miscellaneous	9.0	9.8	18.8	2.9
Healthcare & Pharmaceutical	7.5	8.8	16.3	2.5
Building & Materials	6.6	6.4	13.0	2.0
Leisure & Entertainment	6.2	5.7	11.9	1.8
Transportation	6.3	5.4	11.7	1.8
Technology	2.3	6.7	9.0	1.4
Real Estate	4.7	2.9	7.6	1.2
Consumer Products	3.8	2.3	6.2	0.9
Industrial/Manufacturing	2.0	1.7	3.7	0.6
Food, Beverage & Tobacco	0.6	2.5	3.1	0.5
Supermarkets & Drug Stores	0.7	2.3	3.0	0.5
Insurance	0.0	0.0	0.0	0.0
Total	247.9	403.7	651.6	100.0

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

Historical Defaults 2007–2018: Industry Details (Continued)



Note: Ranked by highest to lowest loan default rate.

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

Historical Default and Post-Default Prices

Fitch U.S. Leveraged Loan Default Rate, Post-Default Prices and Loss Rate by Industry

(%)	2016			2017			2018		
	Default Rate	Post-Default Prices	Loss Rate	Default Rate	Post-Default Prices	Loss Rate	Default Rate	Post-Default Prices	Loss Rate
Automotive	2.4	67.4	0.8	2.3	53.1	1.1	2.6	88.6	0.3
Banking & Finance	1.5	40.9	0.9	3.5	84.2	0.6	—	—	—
Broadcasting & Media	5.4	34.6	3.5	3.4	86.0	0.5	14.7	66.0	5.0
Building & Materials	—	—	—	—	—	—	—	—	—
Cable	—	—	—	—	—	—	—	—	—
Chemicals	1.3	65.5	0.5	—	—	—	0.5	59.0	0.2
Consumer Products	2.7	98.9	0.0	—	—	—	—	—	—
Energy	14.2	43.0	8.1	17.5	66.5	5.9	11.2	52.6	5.3
Food, Beverage & Tobacco	—	—	—	—	—	—	0.4	70.0	0.1
Gaming, Lodging & Restaurants	—	—	—	0.3	—	—	—	—	—
Healthcare & Pharmaceutical	—	—	—	1.6	85.4	0.2	0.6	73.0	0.2
Industrial/Manufacturing	—	—	—	1.9	46.8	1.0	—	—	—
Insurance	—	—	—	—	—	—	—	—	—
Leisure & Entertainment	0.1	41.0	0.1	0.7	99.3	0.0	—	—	—
Metals & Mining	23.6	38.8	14.4	—	—	—	14.2	85.6	2.0
Paper & Containers	5.3	20.8	4.2	1.0	97.3	0.0	—	—	—
Real Estate	—	—	—	—	—	—	—	—	—
Retail	0.4	14.0	0.4	8.2	49.5	4.1	4.7	54.5	2.1
Services & Miscellaneous	0.5	71.1	0.1	0.3	78.6	0.1	0.7	35.7	0.5
Supermarkets & Drug Stores	2.2	93.1	0.1	—	—	—	1.1	—	—
Technology	0.4	98.0	0.0	0.3	29.3	0.2	0.0	76.0	0.0
Telecommunications	—	—	—	5.3	79.5	1.1	—	—	—
Transportation	—	—	—	0.9	71.9	0.2	1.6	42.0	1.0
Utilities, Power & Gas	1.5	47.1	0.8	2.9	90.6	0.3	1.2	—	—
Total Market	1.8	46.2	1.0	2.4	67.8	0.8	1.8	61.2	0.7

Note: Post-default prices based on price of defaulted issues 30 days after default. Includes first and second lien issues. Loss Rate = Default Rate x (1 - Post-Default Prices).

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

Historical First-Lien Post-Default and Emergence Prices

30-Day Post-Default Prices — First Lien (\$190.4 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	88.8	92.9	92.9	2
2008	49.4	59.0	65.8	32
2009	54.9	52.5	48.1	68
2010	77.9	71.8	75.3	23
2011	60.5	62.3	53.8	6
2012	65.5	66.2	68.5	24
2013	69.4	72.1	73.9	15
2014	78.4	78.9	82.0	15
2015	49.9	50.6	43.2	16
2016	50.1	54.9	52.0	30
2017	70.2	66.7	71.6	34
2018	67.8	60.4	59.0	27
2019	78.9	62.5	70.0	23
2007–2019	63.6	61.3	65.0	315

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

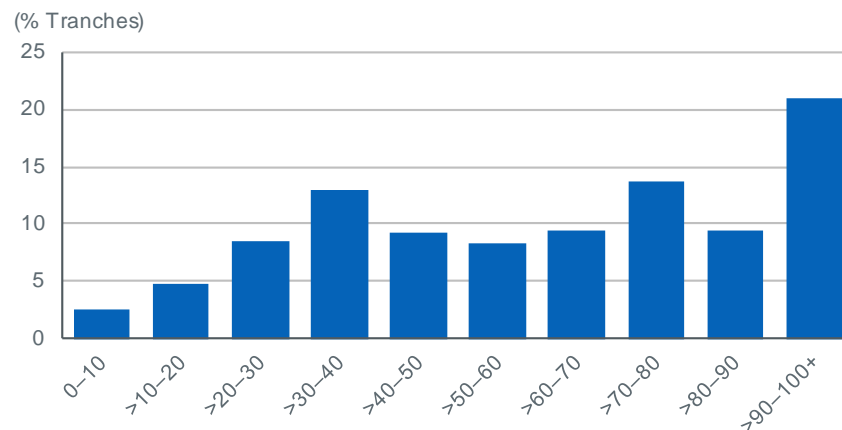
Emergence Prices — First Lien (\$112.4 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	74.7	83.2	83.2	2
2008	58.6	50.0	51.9	19
2009	78.9	74.1	89.3	49
2010	76.2	73.2	84.0	9
2011	67.0	66.5	66.5	2
2012	57.1	57.4	54.9	4
2013	77.1	66.5	70.0	9
2014	70.2	74.8	79.0	5
2015	36.3	42.5	39.0	6
2016	71.6	69.6	84.5	13
2017	67.8	57.2	55.5	20
2018	62.7	57.6	52.0	15
2019	45.8	46.2	50.0	3
2007–2019	69.5	64.4	69.3	156

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

Post-Default Price Distribution

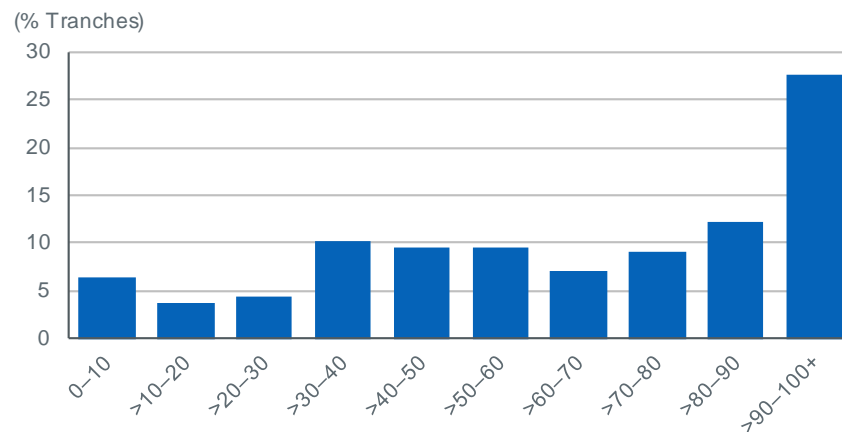
Average 63.6%, Median 65.0%



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

Emergence Distribution

Average 69.5%, Median 69.3%



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

Historical Second-Lien Post-Default and Emergence Prices

30-Day Post-Default Prices — Second Lien (\$18.5 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	41.3	41.6	41.6	2
2008	18.5	16.5	15.0	11
2009	31.9	24.2	11.3	18
2010	12.1	12.3	10.8	8
2011	13.5	29.6	24.8	4
2012	26.5	21.1	8.6	6
2013	40.0	40.0	40.0	1
2014	53.3	39.3	43.4	4
2015	49.6	52.1	54.8	7
2016	23.7	37.1	26.6	9
2017	28.6	30.0	16.9	9
2018	18.3	43.3	53.0	7
2019	33.3	29.5	17.5	4
2007–2019	30.1	29.2	15.9	90

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

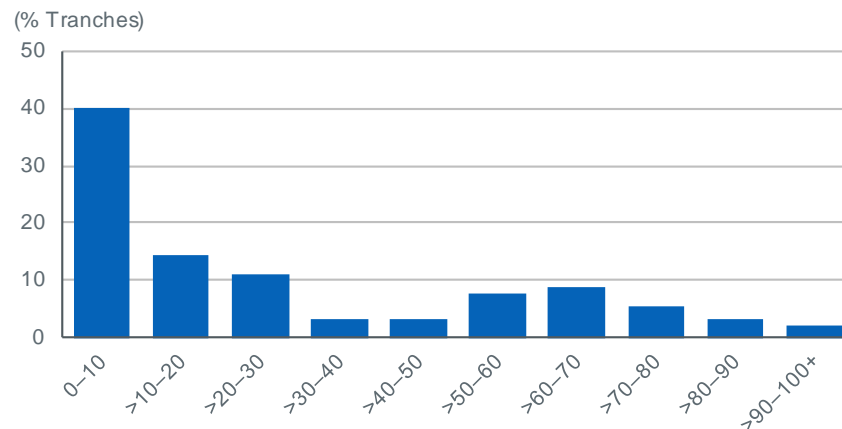
Emergence Prices — Second Lien (\$10.4 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	20.6	20.6	20.6	2
2008	2.3	2.5	2.0	6
2009	29.2	15.1	5.3	10
2010	6.5	6.2	0.8	4
2011	55.0	55.0	55.0	1
2012	—	—	—	0
2013	—	—	—	0
2014	60.8	61.2	61.2	2
2015	19.5	24.7	18.5	3
2016	11.5	11.5	11.5	1
2017	2.4	2.2	2.2	2
2018	11.6	6.8	2.7	3
2019	5.0	5.0	5.0	1
2007–2019	22.2	15.0	4.5	35

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

Post-Default Price Distribution

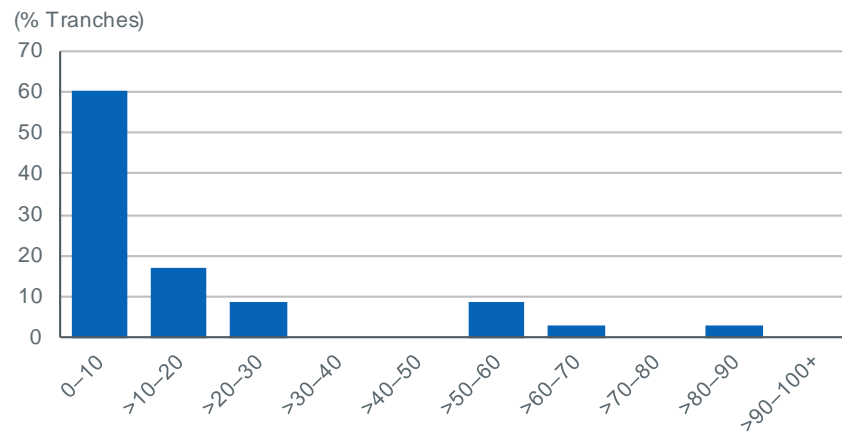
Average 30.1%, Median 15.9%



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

Emergence Distribution

Average 22.2%, Median 4.5%



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

Historical First-Lien BSL Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien BSL (\$169.3 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	88.8	92.9	92.9	2
2008	48.0	55.9	57.0	19
2009	56.1	55.8	56.2	47
2010	84.7	83.5	83.2	11
2011	68.9	80.1	80.1	2
2012	67.3	68.1	68.5	14
2013	68.8	68.8	71.0	13
2014	78.5	74.3	79.0	9
2015	52.3	55.8	49.3	10
2016	46.5	55.0	57.6	20
2017	69.0	63.5	62.2	26
2018	69.2	63.5	69.0	22
2019	81.1	71.9	70.6	13
2007–2019	64.2	63.1	66.6	208

BSL – Broadly syndicated loans.

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

Emergence Prices — First-Lien BSL (\$103.7 Bil.)

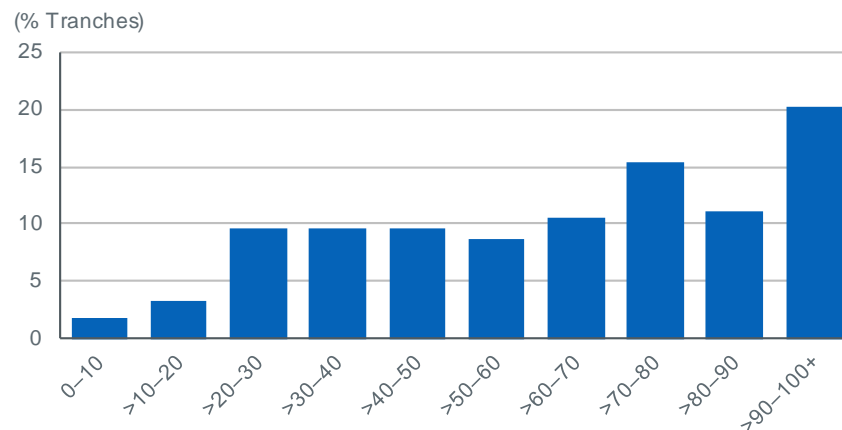
(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	74.7	83.2	83.2	2
2008	59.6	44.6	44.6	13
2009	80.7	78.8	91.2	34
2010	86.5	88.6	91.2	4
2011	—	—	—	0
2012	58.8	62.1	56.0	3
2013	76.8	62.4	59.3	8
2014	76.5	81.0	79.0	3
2015	31.9	30.3	34.7	4
2016	69.6	66.7	76.8	10
2017	68.4	59.9	55.5	17
2018	63.1	61.0	62.8	14
2019	45.8	46.2	50.0	3
2007–2019	70.5	65.3	71.0	115

BSL – Broadly syndicated loans.

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

Post-Default Price Distribution

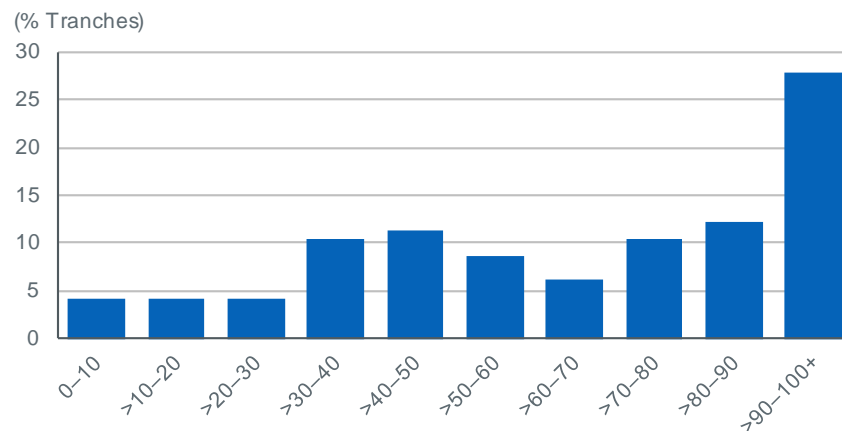
Average 64.2%, Median 66.6%



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

Emergence Distribution

Average 70.5%, Median 71.0%



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

Historical First-Lien LMM Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien LMM (\$21.1 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	58.6	63.4	67.0	13
2009	39.7	45.3	40.0	21
2010	64.9	61.0	69.9	12
2011	54.5	53.3	43.9	4
2012	60.0	63.6	66.6	10
2013	93.6	93.6	93.6	2
2014	77.6	85.9	93.3	6
2015	39.0	41.8	30.9	6
2016	40.7	54.9	47.5	10
2017	82.7	76.8	85.6	8
2018	44.9	46.5	38.0	5
2019	60.3	48.8	39.0	10
2007–2019	58.6	57.9	55.5	107

LMM – Large middle market.

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

Emergence Prices — First-Lien LMM (\$8.7 Bil.)

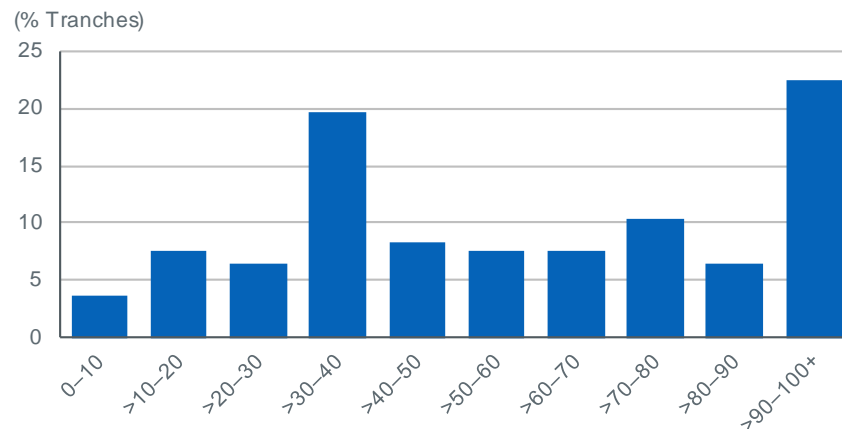
(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	48.2	61.7	57.8	6
2009	55.7	63.6	66.0	15
2010	58.0	60.8	61.5	5
2011	67.0	66.5	66.5	2
2012	43.5	43.5	43.5	1
2013	99.5	99.5	99.5	1
2014	47.3	65.5	65.5	2
2015	68.5	67.0	67.0	2
2016	83.3	79.6	85.5	3
2017	53.2	42.4	50.0	3
2018	10.0	10.0	10.0	1
2019	—	—	—	0
2007–2019	57.7	62.1	63.7	41

LMM – Large middle market.

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

Post-Default Price Distribution

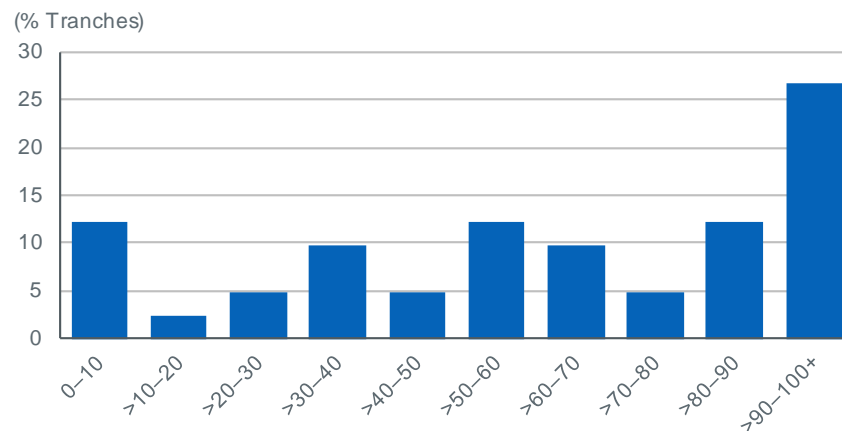
Average 58.6%, Median 55.5%



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

Emergence Distribution

Average 57.7%, Median 63.7%



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

Historical First-Lien Loans and Bonds Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien Loans and Bonds (\$119.1 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	88.8	92.9	92.9	2
2008	45.3	63.8	70.0	11
2009	63.0	61.7	66.1	33
2010	82.7	78.6	93.0	5
2011	97.5	97.5	97.5	2
2012	68.9	81.4	94.0	5
2013	71.5	78.2	84.3	4
2014	78.3	76.6	79.0	9
2015	53.3	49.4	42.4	10
2016	48.2	59.5	54.0	12
2017	74.6	73.8	80.1	18
2018	77.4	71.7	79.5	11
2019	84.6	77.7	87.7	8
2007–2019	68.3	68.2	77.9	130

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

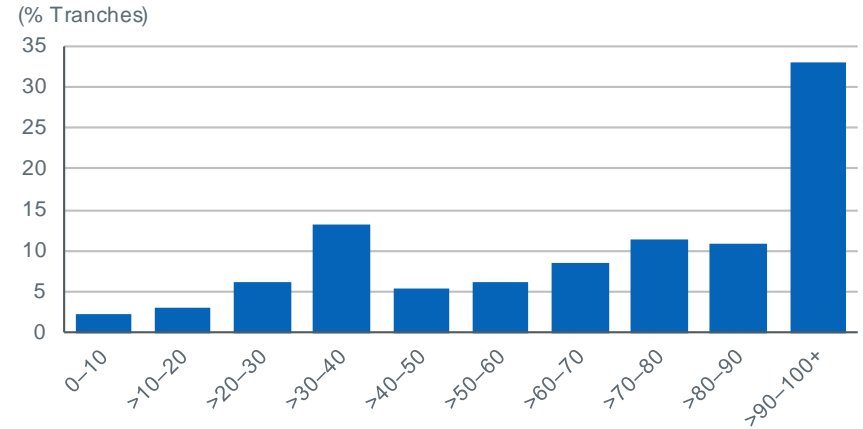
Emergence Prices — First-Lien Loans and Bonds (\$74.6 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	74.7	83.2	83.2	2
2008	70.5	67.8	75.0	10
2009	89.3	87.8	94.3	28
2010	60.9	54.3	54.3	2
2011	78.0	78.0	78.0	1
2012	54.2	54.9	54.9	2
2013	87.0	84.3	94.5	4
2014	90.5	89.3	89.3	2
2015	43.1	55.1	40.0	3
2016	74.0	74.1	85.5	7
2017	72.0	63.8	71.0	11
2018	69.6	62.0	62.8	8
2019	44.0	44.3	44.3	2
2007–2019	77.8	74.2	85.3	82

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

Post-Default Price Distribution

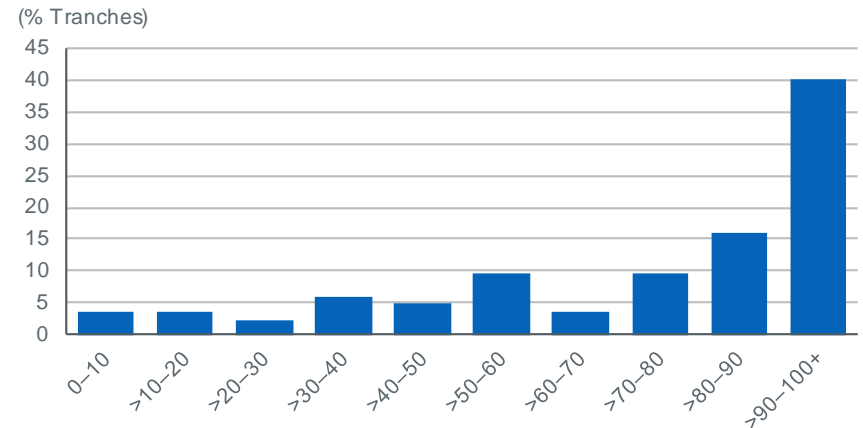
Average 68.3%, Median 77.9%



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

Emergence Distribution

Average 77.8%, Median 85.3%



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

Historical First-Lien Loans Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien Loans Only (\$71.3 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	56.4	56.5	65.0	21
2009	42.1	43.8	40.0	35
2010	76.5	69.8	74.6	18
2011	49.2	44.6	43.9	4
2012	64.5	62.2	66.7	19
2013	66.7	69.9	71.0	11
2014	80.1	82.4	89.8	6
2015	44.3	52.5	48.1	6
2016	52.0	51.9	52.0	18
2017	59.6	58.6	57.3	16
2018	52.0	52.6	52.9	16
2019	66.7	54.3	50.0	15
2007–2019	55.8	56.5	56.2	185

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

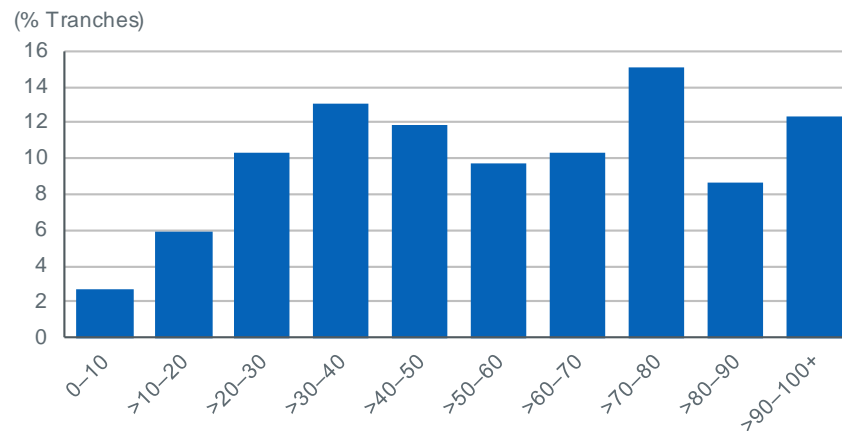
Emergence Prices — First-Lien Loans Only (\$37.8 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	23.3	30.1	25.8	9
2009	55.7	55.9	46.0	21
2010	81.7	78.5	84.0	7
2011	55.0	55.0	55.0	1
2012	63.9	59.9	59.9	2
2013	59.0	52.3	39.1	5
2014	58.7	65.2	64.5	3
2015	32.6	29.9	38.0	3
2016	67.0	64.4	62.0	6
2017	56.7	49.2	54.8	9
2018	49.0	52.5	42.5	7
2019	50.0	50.0	50.0	1
2007–2019	53.2	53.5	51.0	74

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

Post-Default Price Distribution

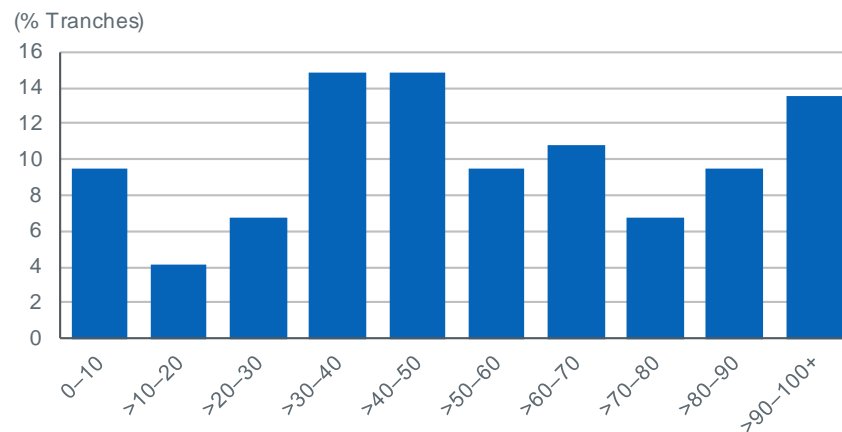
Average 55.8%, Median 56.2%



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

Emergence Distribution

Average 53.2%, Median 51.0%



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

Historical First-Lien Covenant-Lite Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien Covenant Lite (\$47.7 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	37.6	37.6	37.6	1
2009	42.0	33.5	34.2	8
2010	—	—	—	0
2011	—	—	—	0
2012	59.0	60.4	57.8	5
2013	54.1	58.8	39.1	5
2014	—	—	—	0
2015	32.9	33.0	30.7	6
2016	43.1	51.2	42.8	13
2017	65.4	60.2	59.4	23
2018	66.0	62.0	60.5	12
2019	78.5	54.7	39.0	13
2007–2019	58.1	53.5	50.2	86

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

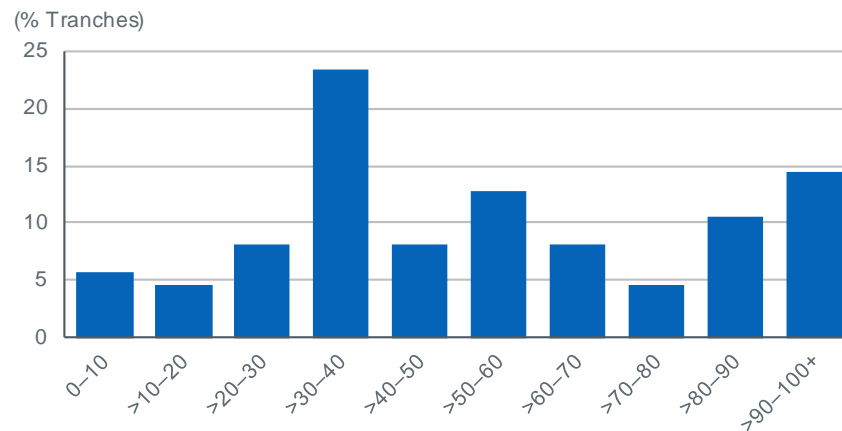
Emergence Prices — First-Lien Covenant Lite (\$30.5 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	80.3	80.3	80.3	1
2009	85.7	79.5	94.8	7
2010	—	—	—	0
2011	—	—	—	0
2012	53.9	53.9	53.9	1
2013	51.0	53.0	39.1	4
2014	—	—	—	0
2015	37.1	35.4	35.4	2
2016	81.6	77.3	85.0	4
2017	66.4	57.3	55.1	14
2018	63.3	61.4	52.0	9
2019	44.0	44.3	44.3	2
2007–2019	65.6	61.9	55.1	44

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

Post-Default Price Distribution

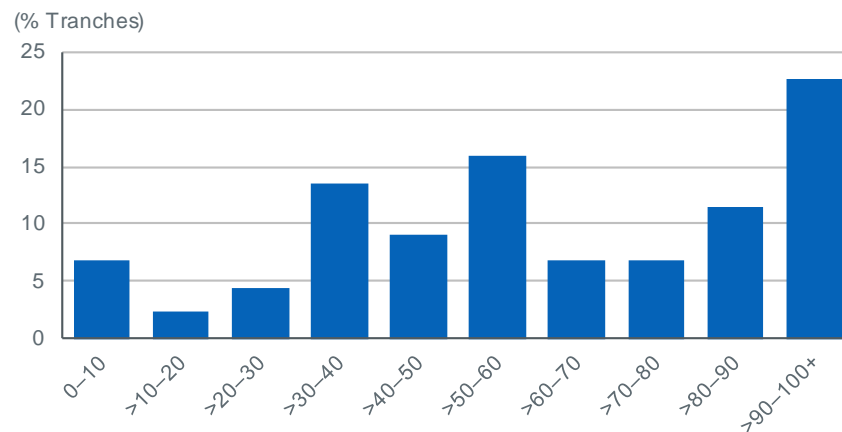
Average 58.1%, Median 50.2%



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

Emergence Distribution

Average 65.6%, Median 55.1%



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

Historical First-Lien Sponsored Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien Sponsored (\$113.1 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	39.9	55.5	65.0	19
2009	45.7	50.8	55.5	37
2010	78.6	73.0	75.3	15
2011	50.3	44.7	43.3	3
2012	66.0	66.7	76.8	16
2013	64.0	70.0	71.0	10
2014	76.8	70.2	78.7	10
2015	62.1	59.2	61.3	5
2016	49.2	53.1	50.0	13
2017	63.1	58.5	58.2	20
2018	65.5	59.1	56.0	21
2019	76.6	55.1	44.5	16
2007–2019	61.2	59.0	61.3	185

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

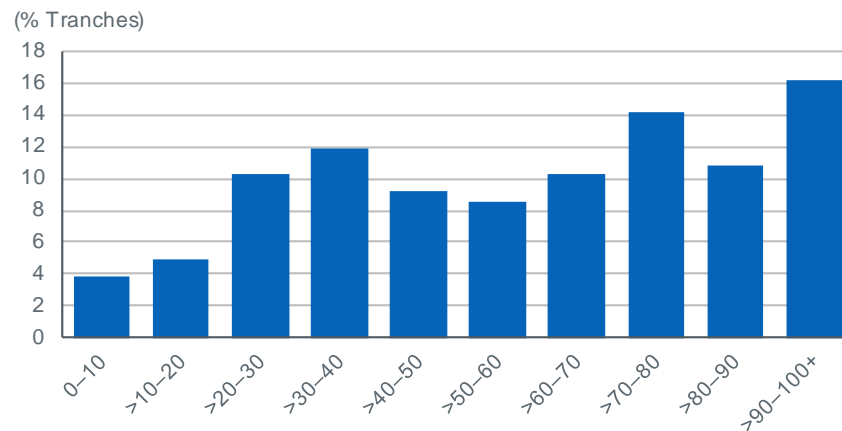
Emergence Prices — First-Lien Sponsored (\$56.1 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	—	—	—	0
2008	71.0	49.8	52.0	12
2009	62.8	67.1	84.6	24
2010	73.7	71.2	80.9	6
2011	—	—	—	0
2012	58.8	62.1	56.0	3
2013	55.7	63.6	54.5	6
2014	55.0	55.5	55.5	2
2015	31.1	33.7	33.7	2
2016	53.0	58.8	62.0	4
2017	55.2	44.8	50.0	11
2018	63.2	58.7	62.8	14
2019	45.8	46.2	50.0	3
2007–2019	62.0	58.3	55.0	87

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

Post-Default Price Distribution

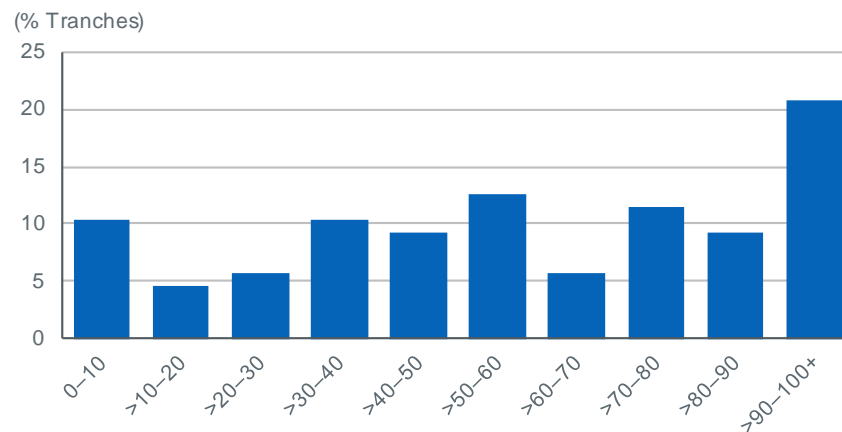
Average 61.2%, Median 61.3%



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

Emergence Distribution

Average 62.0%, Median 55.0%



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

Historical First-Lien Non-Sponsored Post-Default and Emergence Prices

30-Day Post-Default Prices — First-Lien Non-Sponsored (\$77.4 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	88.8	92.9	92.9	2
2008	70.0	64.1	67.0	13
2009	63.6	54.6	40.0	31
2010	76.1	69.5	76.0	8
2011	76.9	79.8	97.3	3
2012	64.5	65.2	64.8	8
2013	71.6	76.4	73.9	5
2014	94.6	96.4	99.0	5
2015	42.8	46.6	41.7	11
2016	50.7	56.3	54.0	17
2017	77.3	78.3	80.4	14
2018	79.3	64.9	76.7	6
2019	83.0	79.4	72.0	7
2007–2019	67.2	64.6	67.2	130

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

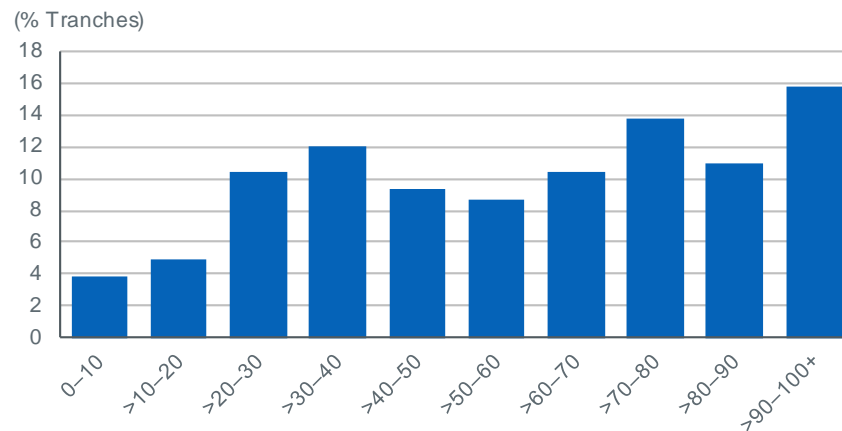
Emergence Prices — First-Lien Non-Sponsored (\$56.3 Bil.)

(% of Par)				
Default Year	Weighted Avg.	Straight Avg.	Median	Tranches
2007	74.7	83.2	83.2	2
2008	27.4	50.2	32.5	7
2009	89.6	80.9	92.0	25
2010	83.6	77.1	84.0	3
2011	67.0	66.5	66.5	2
2012	43.5	43.5	43.5	1
2013	83.3	72.3	74.1	3
2014	77.6	87.7	99.0	3
2015	38.5	46.9	40.8	4
2016	78.0	74.5	85.5	9
2017	76.1	72.4	71.0	9
2018	42.0	42.0	42.0	1
2019	—	—	—	0
2007–2019	76.8	72.2	84.5	69

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

Post-Default Price Distribution

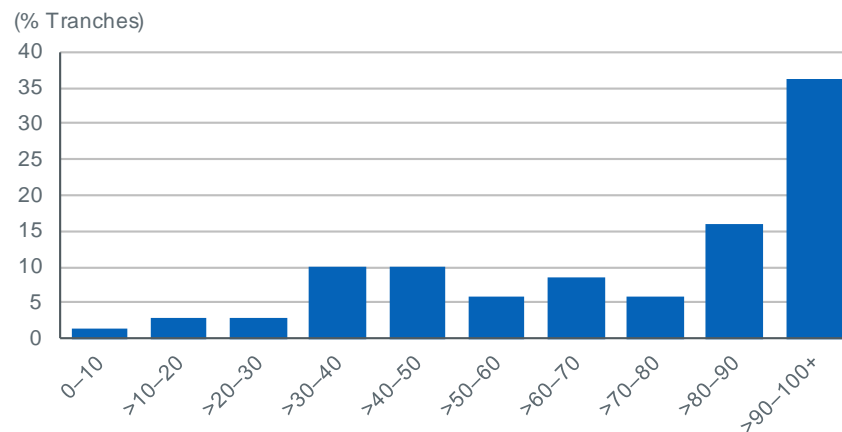
Average 67.2%, Median 67.2%



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

Emergence Distribution

Average 76.8%, Median 84.5%



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

U.S. Leveraged Loan Default Insight

Parameters of the Fitch Ratings U.S. Leveraged Loan Default Insight

- This index comprises rated and unrated, active institutional leveraged loans with a minimum deal size of \$100 million. The loan facilities are all denominated in U.S. dollars and are comprised of institutional term loans, drawn acquisition facilities, and bridge loans. Rated issuers in the index encompass companies with senior debt ratings from Fitch, Moody's, or S&P. Unrated issuers are included based on spread and leverage statistics.
- Broadly syndicated loans (BSLs) are defined as loans with a total deal size in excess of \$500 million, while large middle market (LMM) consists of loans with deal size of \$100 million–\$500 million. Those LMM loans with revenue of at least \$500 million are classified as BSL. Traditional middle market deals (under \$100 million) are not included.
- A default is recorded when an index company: 1) files for bankruptcy protection, 2) after a 30-day grace period expires for a missed bond payment or a five-day grace period expires for a missed loan payment without a forbearance, or 3) there is a distressed exchange, which affects the loan facilities. The default rate is calculated by dividing the par value of affected loans by the average size of the market over a stated time horizon.
- Source: Fitch U.S. Leveraged Loan Default Index, Refinitiv LPC, Bloomberg, SEC filings.

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[Healthcare, Food, Beverage and Consumer Bankruptcy Enterprise Values and Creditor Recoveries \(2019 Fitch Case Studies\) \(July 2019\)](#)

[Front-Loaded Maturities for Top Loans of Concern \(Majority of Top Loans of Concern Face Maturities by YE 2020\) \(June 2019\)](#)

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[Corporate Recovery Rating Trends \(First-Lien Recovery Prospects Lower in 2018\) \(April 2019\)](#)

[Investment-Grade Bond Market Monitor \(IG Universe Growth, Concentration Continues in 2019; M&A Activity Propels 2018 Issuance\) \(February 2019\)](#)

[Fitch Ratings 2019 Outlook: U.S. Leveraged Finance \(Forecast for Low 2019 Default Rates Despite Peak Credit Cycle Concerns\) \(December 2018\)](#)

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[Comparing Recovery Rate Measures \(Three Methods for Measuring Creditor Recoveries in Bankruptcy\) \(April 2018\)](#)

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