



Default and Recovery Analysis Research Findings

28th Annual CFA High Yield Bond Conference

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FitchRatings



Historical and forecast default rates

Late-stage leveraged credit market

Bankruptcy Enterprise Valuation and Creditor Recovery case study
report series takeaways

Comparing recovery rate measures

Related Fitch Research reports



- **Probability of Default**

- The probability that an issuer will default on any debt obligation
- Captured in the Issuer Default Rating (IDR)
- Default rate data available in monthly Default Insight reports

- **Recovery Prospects**

- The amount a creditor can expect to recover in the event the issuer does default
- Fitch recovery estimates captured in the Recovery Rating (RR)
- More important factor at lower end of IDR rating scale
- Measured by post-default issue bid prices and Ultimate recovery rates in court disclosure statements that are available in bankruptcy case study reports

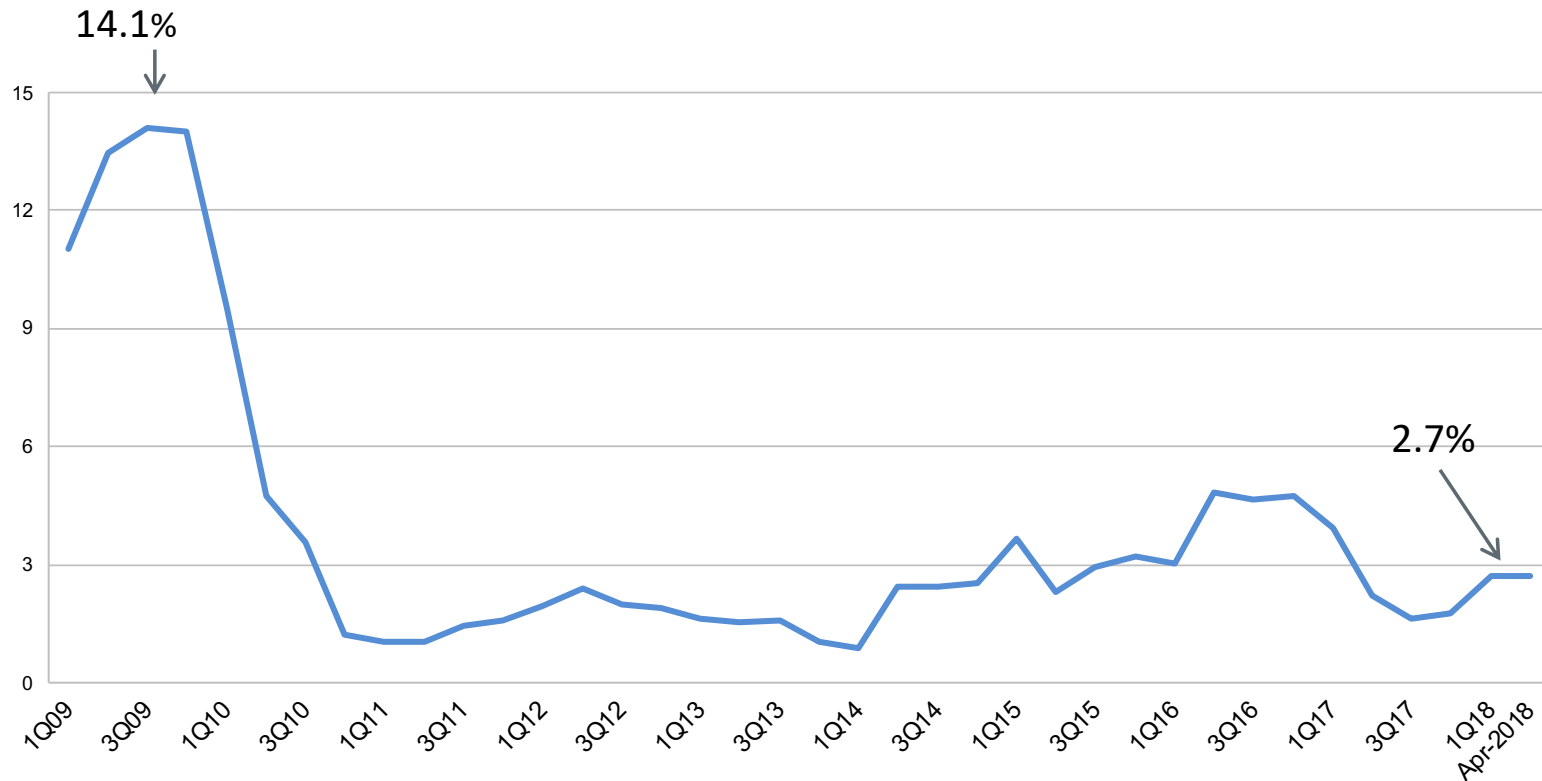
Below-Average Default Rate Environment



- Leveraged loans: 2.5% forecast equates to \$28 billion of volume
- High yield bonds: 2.0% forecast equates to \$27 billion of volume
- Rates peak and trough with wide variation around the average
- Default rates are a lagging indicator of a credit cycle downturn

Issue Type	TTM May 2018 Default Rate	TTM December 2018 Default Forecast	Long-Term Average
Secured Term Loans	2.5%	2.5%	2.7% (2007- 2017)
High Yield Bonds	2.7%	2.0%	4.1% (2001 - 2017)

U.S. High Yield TTM Default Rate

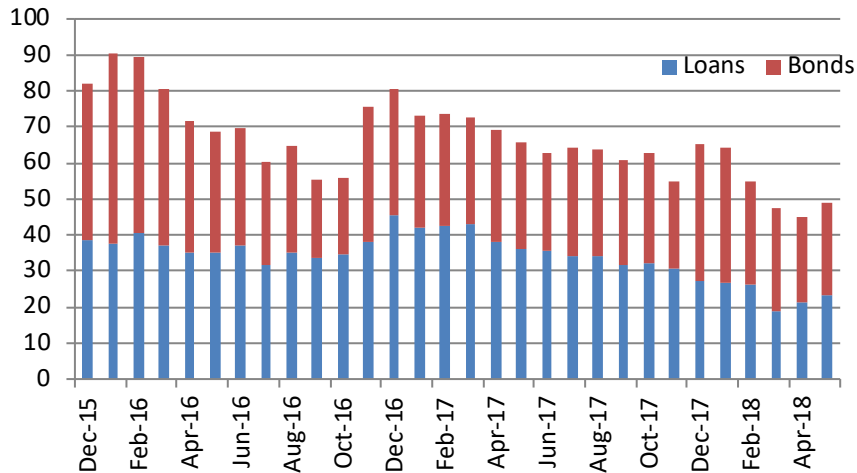


Source: Fitch U.S. High Yield Default Index.

Indicators of Still Low Near-Term Default Rates in 2019



(\$ Bil.) Fitch Top Loans and Bonds of Concern



U.S. High Yield Distress Ratio

Year	%
1999	12.9
2000	37.3
Peak Recession Highest Point	38.1
2006	1.6
2007	10.3
2008	81.3
Peak Recession Highest Point	83.0
2017	6.1
April 2018	4.1

Note: High yield distress is defined as spreads >1,000 bps.

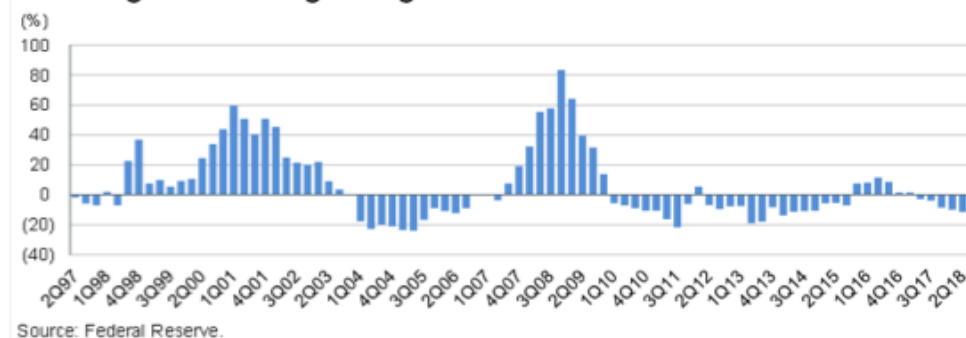
Source: Bank of America Merrill Lynch.

U.S. Federal Reserve Senior Loan Officer Survey

Year	% Tightening
1999	9.1
2000	43.8
Peak Recession Tightest Point	59.7
2006	0.0
2007	19.2
Peak Recession Tightest Point	83.6
2017	(3.9)
2Q18	(11.3)

Source: Federal Reserve.

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

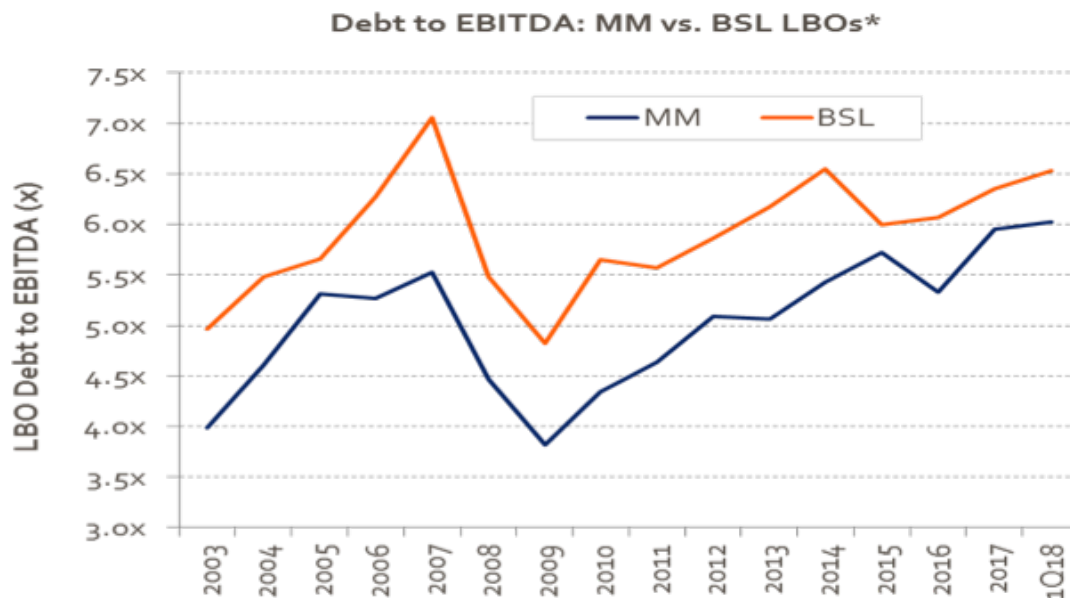


Source: Federal Reserve.

Considerations for Next Credit Cycle Downturn

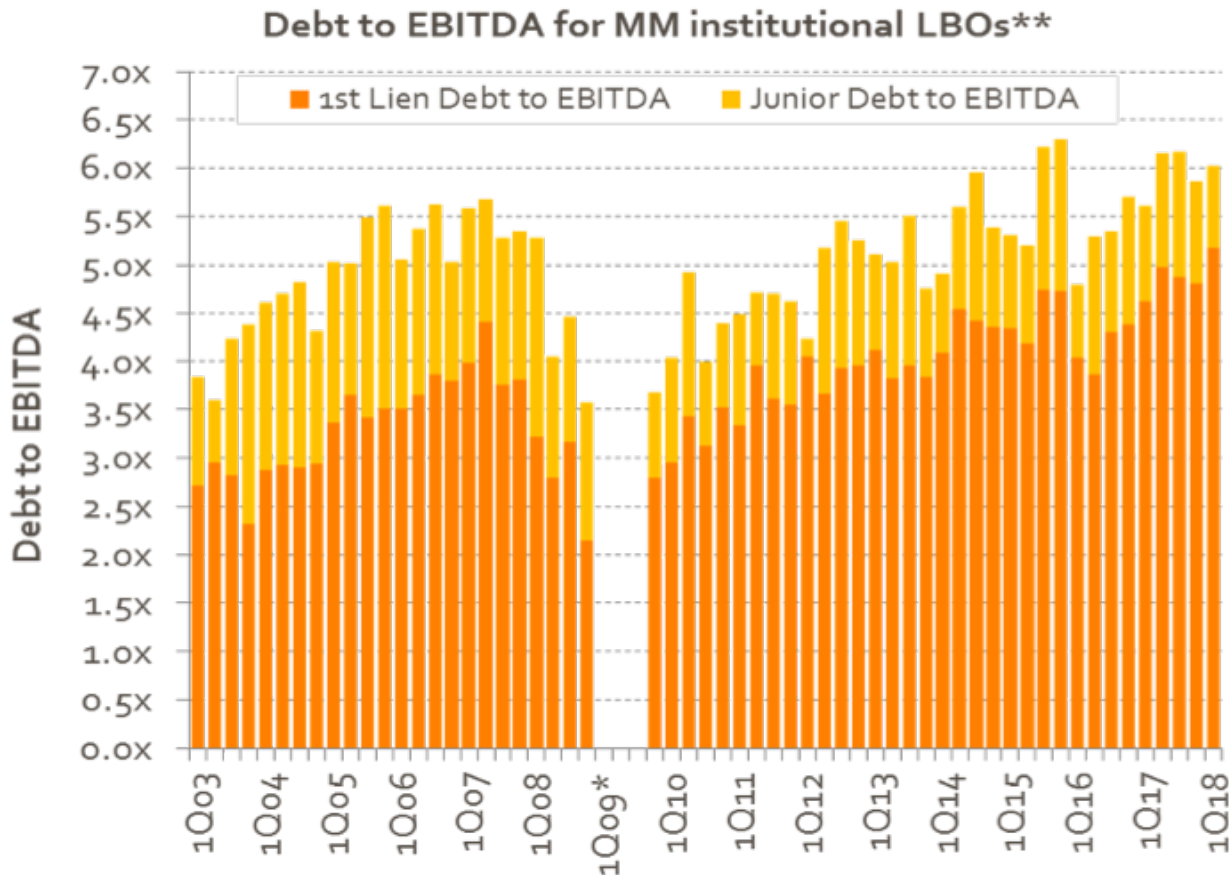


- Term loan market evolution to 80% cov-lite and looser restrictions on covenanted borrowers (more headroom) create tailwinds to lengthen this cycle
- Strong issuance volume in 2017 pushed out maturities: this also helps extend cycle. Historically, defaults have occurred an average of 3 years from issuance
- First-lien and total leverage on LBO transactions are becoming more aggressive



Thomson
Reuters LPC

Considerations for the Next Credit Cycle Downturn



Thomson Reuters LPC



- Twenty-one editions of Fitch Ratings' *Bankruptcy Enterprise Value and Creditor Recoveries* have been published covering 300 U.S. bankruptcy cases filed between Dec. 2002 and Nov. 2017
- Organized by sectors and each edition is updated annually
- Reports capture:
 - Bankruptcy filing drivers at individual company level and most common for sector
 - Outcome type – going concern or liquidation
 - Time in bankruptcy
 - Debt reduction in bankruptcy
 - Enterprise valuation or asset sale proceeds valuation
 - Exit multiples
 - Ultimate loan and bond issue recovery rates in court-approved Chapter 11 plans of reorganization
 - Form of issue recovery by seniority: Cash, new debt, new equity, combination
 - Other case information such as petition date revolver utilization, noteworthy executory contract or pension liability issues

Bankruptcy Case Study Sector Key Default Drivers



Retail

- Highly leveraged
- Rise of discounter competition
- Increased online penetration; declining mall traffic
- Spending shift toward intangible categories
- Tighter credit: liquidity crunch

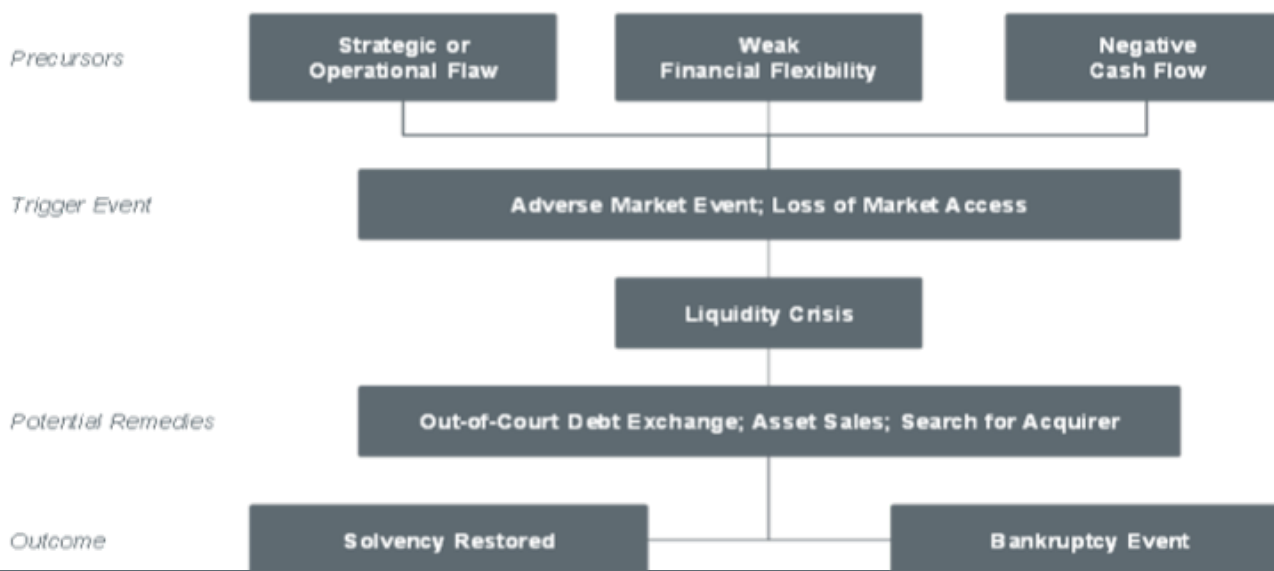
Telecom, Media and Technology

- Leveraging acquisitions
- Obsolete technology
- Disruptive consumption patterns
- Flawed business models
- Adverse regulatory changes
- Negative cash flow

Energy and Commodities

- Negative cash flow due to heavy capex followed by market price drop
- Small size, geographic concentration
- Legacy labor, contractual or environmental liabilities
- Liquidity crunch: ABL base cut

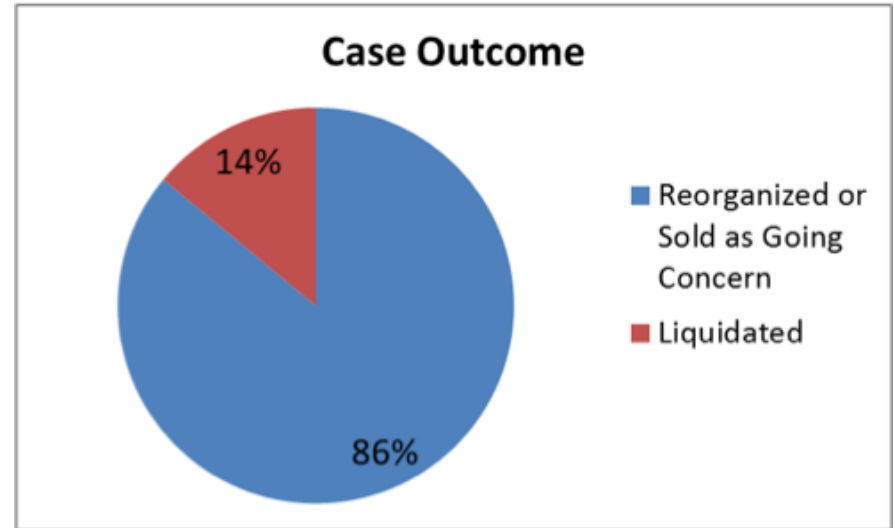
Corporate Default Drivers



Case Study Outcomes

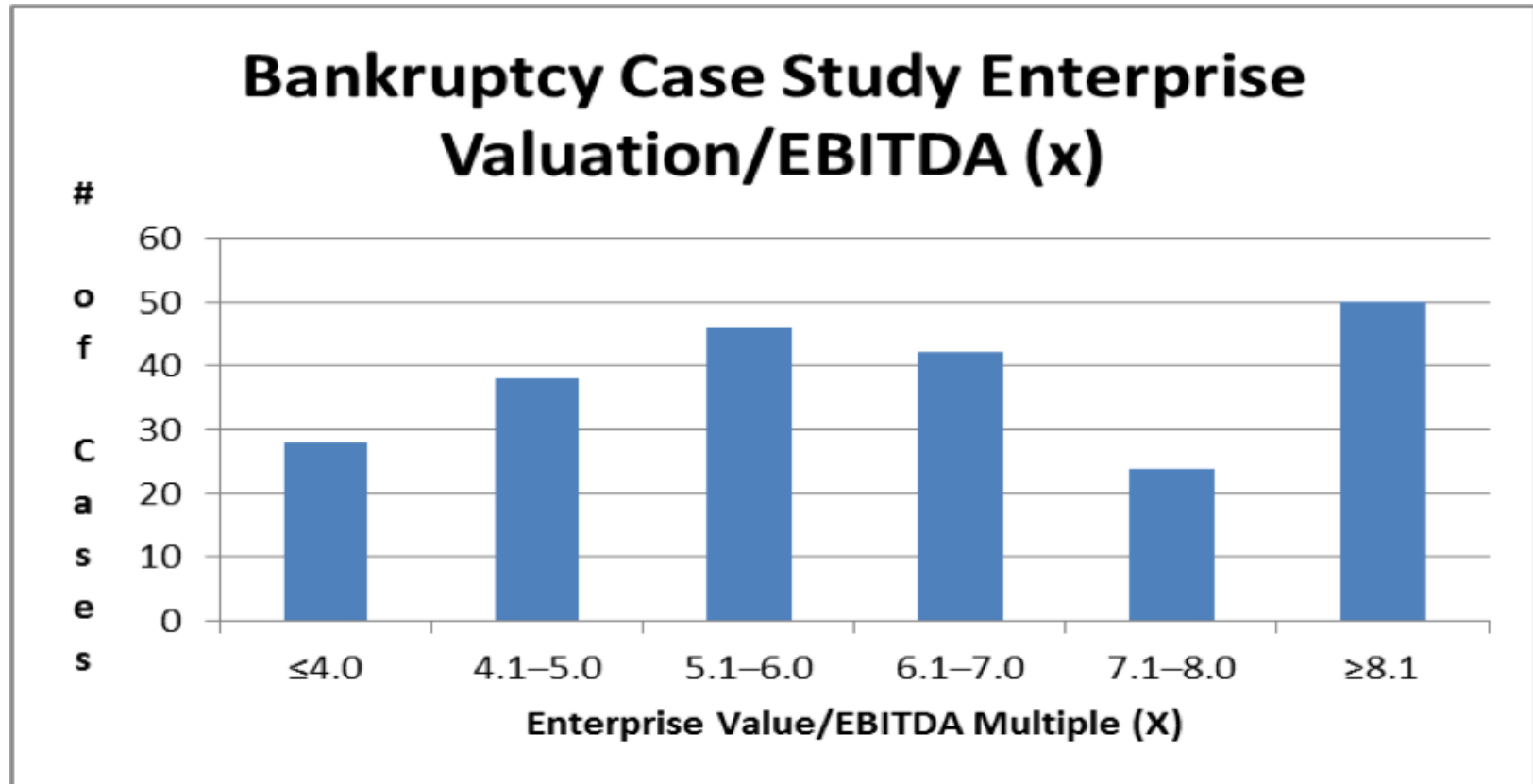


- Median case duration was 7 months
 - Cases are getting shorter due to more pre-filing restructuring support agreements
- Median debt reduction of 75%
- Median petition date assets of \$645 million
- Median enterprise value/EBITDA exit multiple of 6.1x
 - Multiple based on company forecast of EBITDA for year following year of exit from bankruptcy, and
 - Fundamental enterprise valuation included in court disclosure statement or based on proceeds from asset sales
- Liquidations more common in Retail sector case studies





Multiples for 245 going concern cases with sufficient data to estimate a multiple



Case EV/EBITDA multiples inform Fitch's recovery analysis multiple assumptions



Recovery range on petition date loan balances

Recovery Rate (% of par)	ABL Facility Count	Cash Flow Facility Count
0-10	1	2
11-30	0	5
31-50	1	13
51-70	4	11
71-90	2	20
91-100	<u>91</u>	<u>95</u>
	99	146

Source: Fitch Revolving Credit Facility Performance in Bankruptcy May 22, 2018 and Fitch Bankruptcy Enterprise Valuation and Creditor Recovery report series

Utilization rates

- Median petition date utilization rate of 92% for cash flow revolvers
- Median petition date utilization rate of 74% for ABLs
- Some of the recent E&P defaulters had maxed out their borrowing bases or had borrowing base deficiencies under their ABLs
- Retail ABL median utilization rate of 59%
- Actual petition date utilization rates support Fitch recovery analysis analytical assumptions
- Creditor distributions made in cash-only for 64% of revolver claim sample.



Median Recovery Rates

(% of Par)	30-Day	Emergence	Ultimate
First-Lien Loan Median	61.9	81.3	77.5
Secured Bond Median	50.9	58.9	57.0
Senior Unsecured Bond Median	19.6	21.1	17.1

Source: Fitch Ratings.

- Three measurement methods used by Fitch.
 - Secondary market issue bid prices 30-days post default
 - Secondary market issue bid prices at emergence
 - Ultimate recovery rates based on plan valuations for bankruptcy court documents or sales proceeds
- Recent study compared ultimate recovery rate outcomes to the two price-based measures for defaulted institutional term loan and bond issues
- Fitch's Recovery Ratings (RR1 through RR6) are based on estimates of Ultimate rates
- Outcomes relatively less certain at point 30-days after bankruptcy filing
- There are advantages and disadvantages to each approach

Comparing Recovery Rate Measures



30-Day Issue Bid Approach

Pros

- Data easy to gather
- Early stage indicator
- Most appropriate for holders that cannot or wish not to hold through bankruptcy process

Cons

- Ultimate recoveries can markedly differ – particularly in sectors with more volatile cash flow or longer duration cases
- Tend to be lower than final outcomes due to technical pressures and uncertain resolutions (if not a pre-pack)

Emergence Issue Bid Approach

Pros

- May best reflect market's expectations of the value of distributions made in the form of new debt or new common shares
- Easier data collection than ultimate

Cons

- Does not capture partial or full pay-downs
- Less liquid secondary as outcome of case becomes more certain towards end of reorganization process
- Bids may be stale

Ultimate Recovery Rates

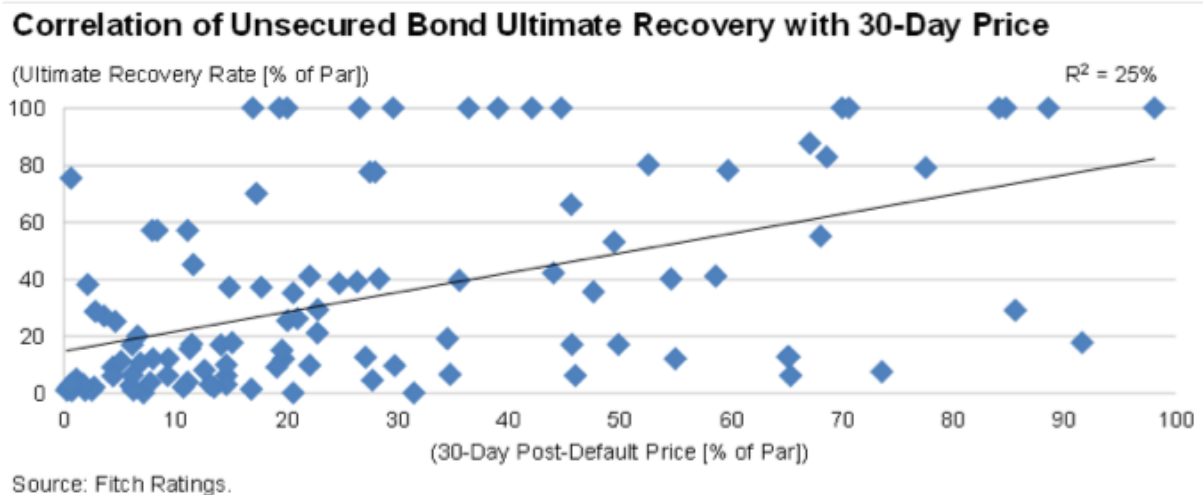
Pros

- Includes data on securities that are not Fitch-index eligible such as revolvers
- Captures the impact of partial pay-downs or full repayment

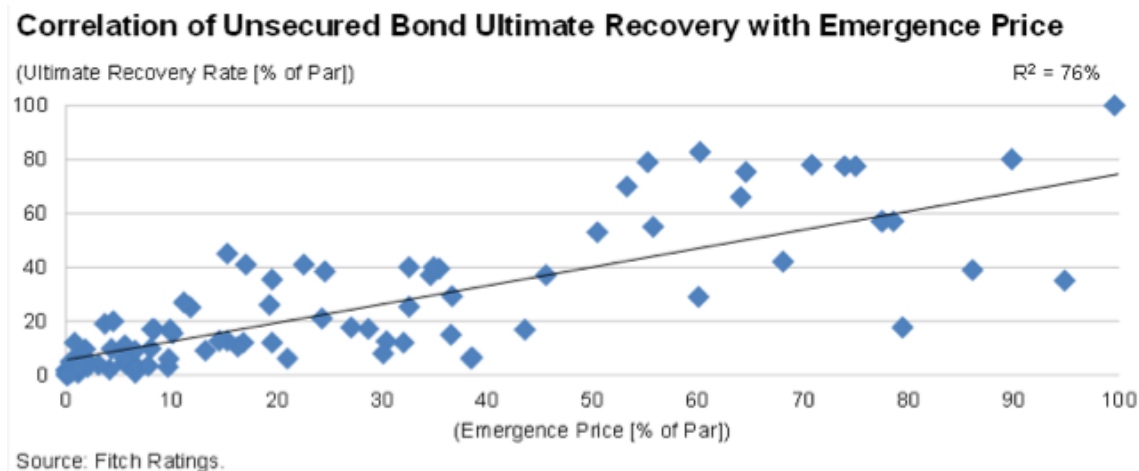
Cons

- Valuation made by third-party financial advisor may differ from market view of value of new securities
- More time-consuming to collect in bankruptcy court documents

Recoveries Less Certain at 30-Day Post-Filing Date Point



111 issues



109 issues

Fitch U.S. Top Bonds of Concern

(\$ mil)



Issuer	Outstanding	Industry
Community Health Systems Inc.	10,225.0	Healthcare & Pharmaceutical
EP Everest LLC	4,413.5	Energy
Neiman Marcus Group Inc.	1,743.4	Retail
Murray Energy Corp.	1,102.2	Metals & Mining
Jupiter Resources Inc.	1,100.0	Energy
Jones Energy Inc.	1,009.1	Energy
American Tire Distributor Inc.	975.0	Automotive
Hornbeck Offshore Services Inc.	816.9	Transportation
Fresh Market Inc.	800.0	Supermarkets & Drug Stores
Sears Holdings Corp.	717.1	Retail
Westmoreland Coal Co.	350.0	Metals & Mining
Imperial Metals Corp.	325.0	Metals & Mining
Getty Images Inc.	315.6	Broadcasting & Media
David's Bridal Inc.	270.0	Retail
High Ridge Brands Co.	250.0	Consumer Products
Community Choice Financial Inc.	241.9	Banking & Finance
BakerCorp International Inc	240.0	Banking & Finance
Mood Media Corp.	182.1	Leisure & Entertainment
Total	25,076.9	

Source: Fitch Ratings, data as of June 5, 2018.



- U.S. High Yield Default Spike Characteristics (June 4, 2018)
- Revolving Credit Performance in Bankruptcy (May 22, 2018)
- Leveraged Loan Default Insight (May 21, 2018)
- High Yield Bond Default Report (May 11, 2018)
- Telecom, Media and Technology Bankruptcy Enterprise Value and Creditor Recoveries (May 10, 2018)
- Comparing Recovery Rate Measures (April 5, 2018)
- Looser Documentation Marks Late-Stage Credit Cycle (April 3, 2018)
- Energy, Power and Commodities Bankruptcy Enterprise Value and Creditor Recoveries (March 15, 2018)
- Retail Enterprise Value and Creditor Recoveries (Nov. 30, 2017)

(includes Fitch Research subscriber only content)

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