

## Recoveries, from Drexel through the Credit Crunch—via LossStats

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Despite a slow start, 2016 was a good year for the credit markets.

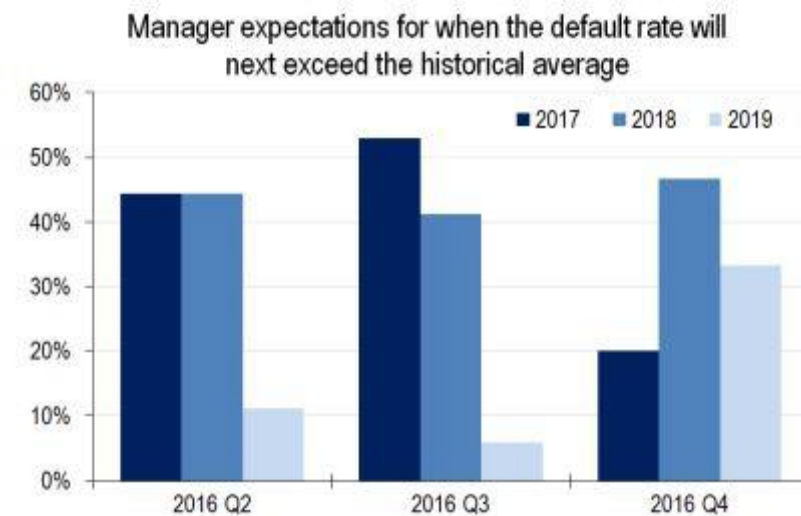
The market value return of the S&P/LSTA Leveraged Loan Index (LLI) was 4.8% in 2016, as the weighted average bid rose nearly seven points, to 98.08. Secondary pricing soared as demand outstripped supply for most of the year. The share of facilities priced at par or higher reached 68.3%, after starting the year at just 1.3%.

Given the steady rise in prices in 2016, it comes as no surprise that the outlook for defaults, based upon LCD's buyside survey conducted at year-end, became far more optimistic.

At the start of 2016, loan market participants thought default rates would next exceed the historical average in 2017. By the fourth quarter survey, however, the expectation for 2017 had halved, and the prediction was pushed out into 2018 (and for many, into 2019).

But with the lagging-12-month default rate, based upon amount, at 1.6% at the end of 2016, rising default rates appear inevitable.

With these factors in mind, LCD has revisited S&P Global Market Intelligence's LossStats database to take a look at recoveries for the credit markets.

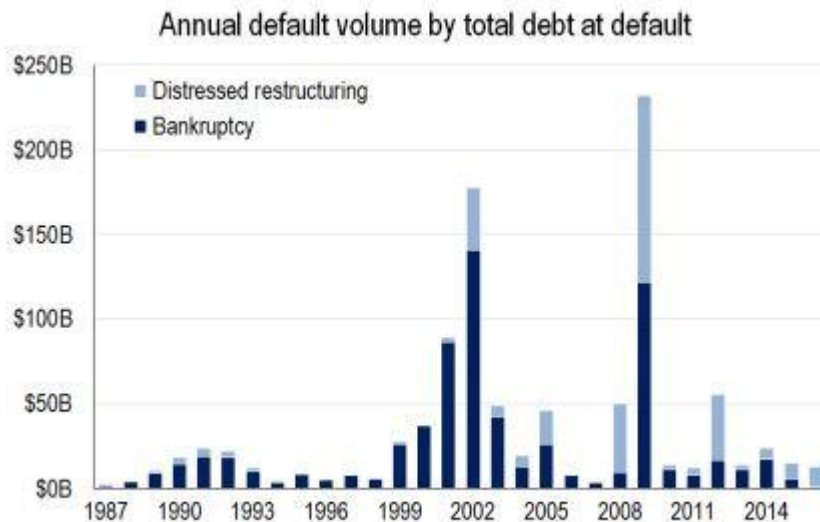


Source: LCD, an offering of S&P Global Market Intelligence

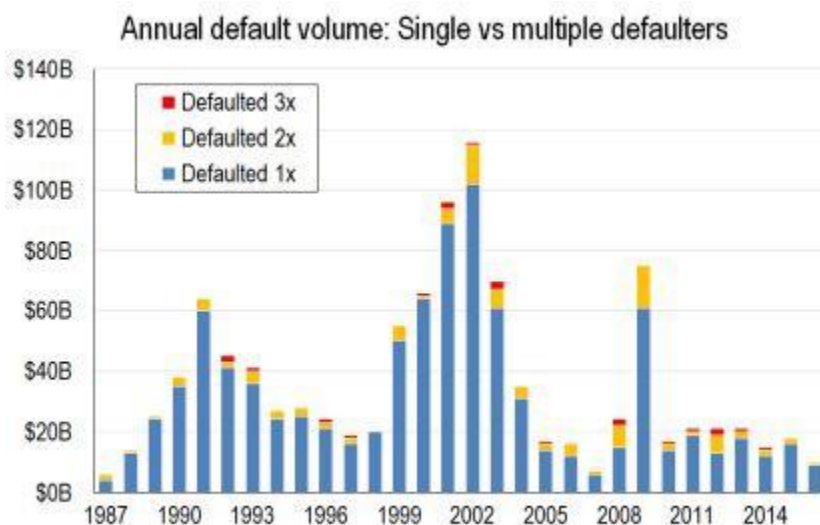
## 30 years of recoveries

The LossStats database appraises recoveries and, after the debt markets have had the opportunity to absorb and evaluate the instruments, prices recoveries by valuing the instruments at three different points in the recovery process: emergence, settlement, and liquidity event. The ultimate recovery number used in this analysis can reflect one of these three outcomes—looking for the earliest event.

The analysis looked at the entirety of the nearly 5,000 publicly traded defaulted instruments that have worked their way through ultimate recovery over the past 30 years. Within the dataset, there are 985 issuers encompassing 1,051 default events. Of those events, 840 were bankruptcies, and the balance were distressed restructurings. Some 126 of those defaults were part of a chain of defaults, of which half included multiple bankruptcies.

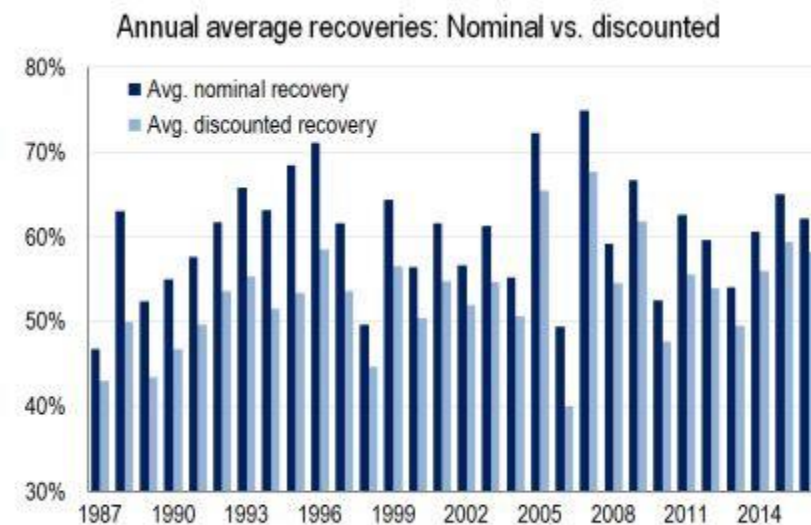


Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence



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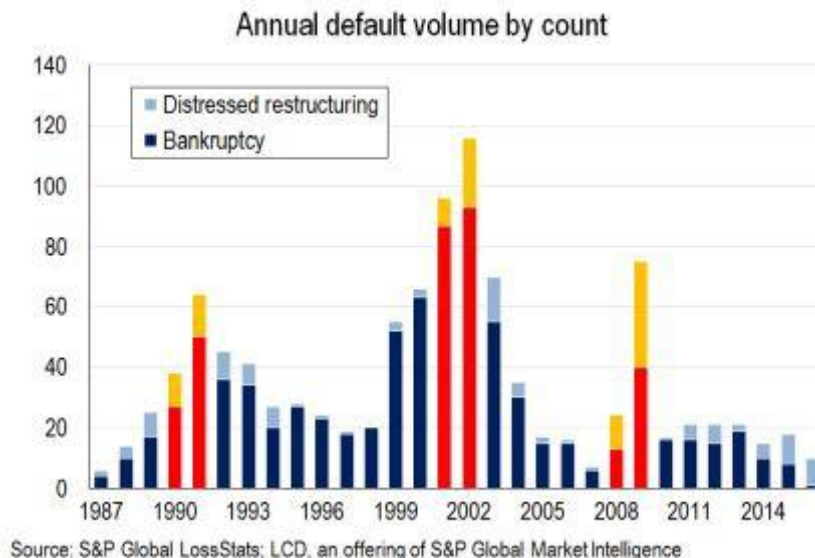
For the purposes of this analysis LCD has used discounted recoveries, as opposed to nominal. Because restructurings can last years (and years), eliminating the noise of time is important to maintain comparability. The discounted recovery normalizes recoveries over long periods of analysis.



Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence

## From Drexel to Credit Crunch

The LossStats database covers a long history, including the three significant historical default cycles: the Drexel Burnham cycle of 1990/91, the tech bubble of 2001/02, and the credit crunch of 2008/09. It is important to note that, despite the fact that bankruptcy-based restructurings have become more efficient over the decades, a number of bankruptcies from the last cycle have yet to achieve ultimate recovery. LossStats database appraises recoveries and, after the debt markets have had the opportunity to absorb and evaluate the instruments, prices recoveries by valuing the instruments at three different points in the recovery process: emergence, settlement, and liquidity event. The ultimate recovery number used in this analysis can reflect one of these three outcomes—looking for the earliest event.



Of the 127 credit defaults that LCD identified in 2008 and 2009, only a third are included in this analysis, with the balance either still in bankruptcy or lacking a liquidity event for the restructured debt. We know from experience that the longer a restructuring takes, the more costly it is; so, in all likelihood, as the remainder of the 2008/2009 bankruptcies emerge, they will negatively skew the average for those bankruptcies.

One of the first studies that LCD published on ultimate recovery was the May 2000 article, "Suddenly Structure Mattered: Insights into Recoveries of Defaulted Debt." More than 16 years and two more default cycles later, the lessons from that story remain: in restructuring, the factors that matter are structure, debt cushion, and restructuring time.

Where an instrument sits in the capital structure is important. Bank loans are less risky than bonds because they are higher up in the food chain. Based upon the discounted recovery, which eliminates the noise created by time in default, for all facilities, bank loans had an average recovery of 78%, a premium of 75% to the 45% average for all bonds.

**Bank loan vs bond recoveries**

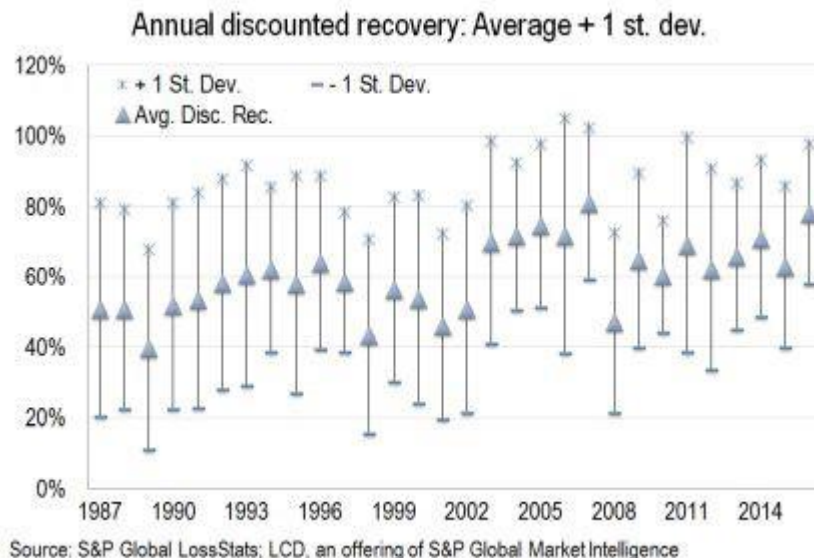
	Average discounted recovery	Coeff. of variation (CV)
All bank loans	78%	0.38
All revolvers	83%	0.33
All term loans	73%	0.44
First-lien term loans	75%	0.41
Second-lien term loans	52%	0.84
All covenant-lite	80%	0.33
 All bonds	 45%	 0.81
Secured bonds	64%	0.52
Senior unsecured bonds	49%	0.70
Subordinated bonds	32%	1.11
Junior subordinated bonds	18%	1.62

Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence

Within the bank loan universe, the trends seen in prior studies remain. Revolvers, the lifeline for a company in default, outperform term loans. They have an average discounted recovery of 83%, versus 73% for term loans. First-lien term loans, of course, fare better, recovering 75%, versus 52% for second-liens. With an average discounted recovery of 80%, covenant-lite continues to recover better than term loans, reinforcing the logic that only better-situated companies can issue covenant-lite, and their stronger fundamentals at issuance buoy recoveries at default.

Within the bond universe, average recoveries play out along the same lines. Senior secured has an average discounted recovery of 64%, 15 points higher than the senior unsecured average of 49%. Subordinated debt drops to 32% and junior subordinated to 18%.

It is important to also note that, while the average matters, the variance around that average is very important. How fat the first standard deviation is around the average indicates the risk of not achieving the average.

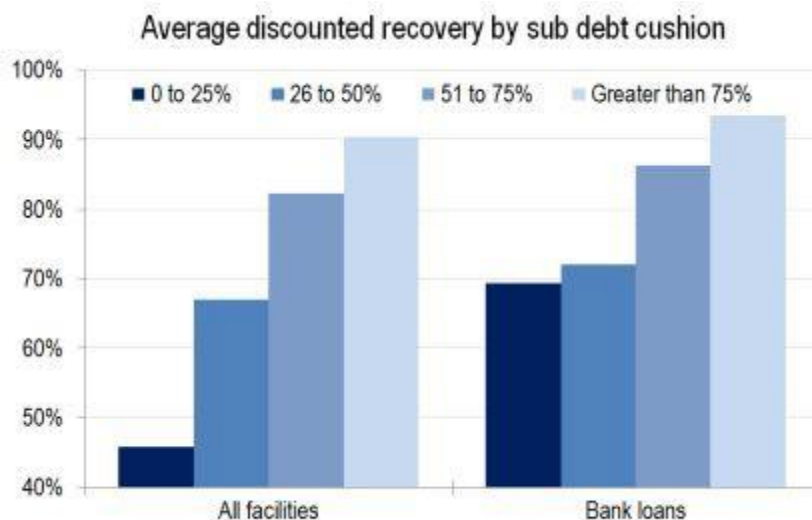


As the average recovery declines due to loss of seniority, the variance around that average widens. The coefficient of variation (CV—the ratio of standard deviation to the mean) for bank debt overall is 0.38 because the standard deviation is 30.1% around the 78% average. For bonds, the CV more than doubles, to 0.81, as the standard deviation is 36.4%, versus the 45% average. With bank loans, not only is the average recovery better, but the downside risk is less painful than with bonds. After structure, debt cushion and limiting the time in bankruptcy can help to further minimize that risk.

## Soft(er) landing

Having a cushion to take the impact of losses is always good, and the more there is, the better. (The cushion is calculated as the percent of total debt that is subordinated to the instrument being assessed.) Instruments with more than 50% of cushioning have an average discounted recovery of 85%, versus a 50% average recovery for debt with 50% or less cushioning.

The trend is clear if you slice the analysis into quarters. Instruments with greater than 75% of cushioning have an average discounted recovery of 90%, a 10% premium to those with 51–75%, with an average recovery of 82%. In the 26–50% range, the average drops to 67%, and for 25% or less is that figure dips to 46%.



Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence

The recoveries improve if you narrow the data to just bank loans. For loans with a cushion of more than 75%, the average discounted recovery is 93%. In the 51–75% range, the average is 86%. In the 26–50% range, the average is 72%, and it is 69% for the lowest cushion, which is very high relative to the bond universe. The data also reflect that the CV tightens with the better-structured bank loans.

#### Recoveries by subdebt cushion

	Average discounted recovery	Coeff. of variation (CV)
<b>All facilities</b>		
More than 75% cushion	90%	0.24
51 to 75% cushion	82%	0.33
26 to 50% cushion	67%	0.51
25% or less cushion	46%	0.80
<b>All bank loans</b>		
More than 75% cushion	93%	0.18
51 to 75% cushion	86%	0.26
26 to 50% cushion	72%	0.44
25% or less cushion	69%	0.48

Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence

The CV for the top of the heap—bank loans with more than a 75% cushion—is 0.18, reflecting a standard deviation of 16.9% to the average of 93%. In the middle two cuts, the CV rises to 0.26 for the 51–75% range, and 0.44 for the 26–50% range. At the lowest amount of cushion, less than 25%, the CV widens to 0.48; but based upon the average of



69%, that means the one standard deviation downside risk is around 36% recovery, which is still better than the average for subordinated bonds.

The last factor is also very intuitive: the faster the restructuring occurs, particularly if it is a distressed exchange, the more beneficial it is to lenders. In distressed exchanges, the borrower basically goes to the lender for assistance. Short bankruptcies usually mean there are a lot of assets, and most are pre-negotiated. The longer it takes, the more likely the restructuring will be complicated, and the negotiations contentious.

For all instruments in the analysis, the average discounted recovery for distressed exchanges is 77%, 18 points higher than the average of 59% for bankruptcies lasting 6 months or less, and 22 points higher than the average of 55% to those lasting 1 year or less. For bankruptcies lasting 1 to 3 years, the average discounted recovery drops to 48%.



For those lasting more than 3 years, the average rises slightly, to 58%. However, there are only 339 instruments in this cohort, and the variety of outcomes possible due to long negotiations results in a wide variety of returns.

## Default event

If we eliminate the noise that results from looking at averages of numerous facilities, and focus on the average recovery by defaulting entity (basically, we look at all facilities in a single default event, and create an average recovery for that event), the trend is cleaner.

Based upon an average discounted recovery by default event, if the event is a distressed restructuring, the average recovery is 75%. For bankruptcies lasting a year or less, the average drops to 57%. For those lasting 1 to 3 years, the average is 50%, and greater than 3 years it is 48%.



As would be expected, faster restructurings benefit bank loans, in particular. With distressed exchanges, bank loans have an average discounted recovery of 95%. With a year or less in bankruptcy, the average drops to 78%, and then at 1 to 3 years, to 73%. At more than 3 years the average widens a bit, to 75%, giving comfort to the idea that the bank loan's structuring does its job over longer periods of distress.

Recoveries by restructuring time	
	Average discounted recovery
All facilities	
Distressed exchange	77%
Bankruptcy: 1 year or less	55%
Bankruptcy: 1 to 3 years	48%
Bankruptcy: 3 or more years	58%
All bank loans	
Distressed exchange	95%
Bankruptcy: 1 year or less	78%
Bankruptcy: 1 to 3 years	73%
Bankruptcy: 3 or more years	75%

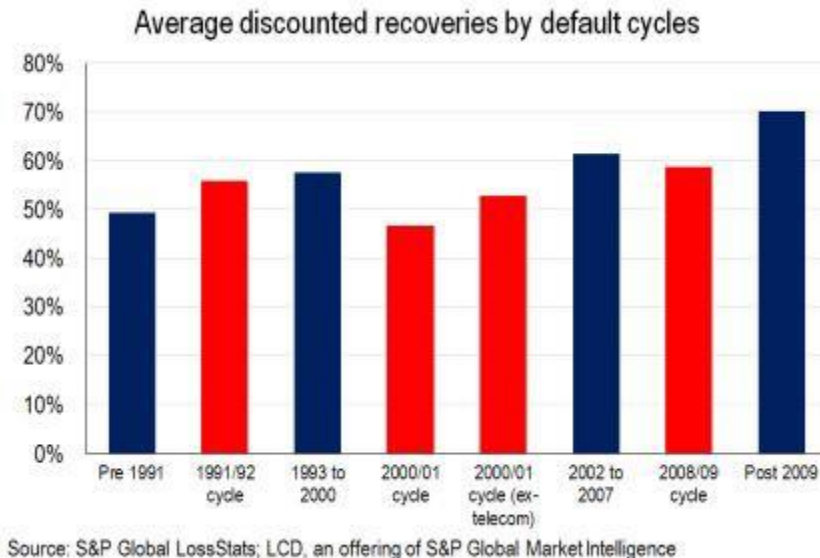
Source: S&P Global LossStats; LCD, an offering of S&P Global Market Intelligence

A few other factors to note from this analysis: recoveries dip in default cycles, total size matters, and recoveries are less forgiving to repeat offenders.

## Tech/Crunch

Of the three default cycles covered by the LossStats database, the two most significant are the tech bubble of 2000/01 and the credit crunch of 2008/09. The Drexel Burnham-triggered default cycle is historically significant, but analytically is different because of the nascent nature of the credit markets at the time.

Looking at just the last two credit default cycles, we can see that recoveries for the credits involved in those events lagged the average. For the tech bubble of 2000/01, the average recovery for those defaulters is 47%, versus 58% for the years before, and 62% for the years after. If we exclude telecom companies from the analysis, the average for that 2000/01 cohort rises to 53%, still below the average for the prior and following periods.

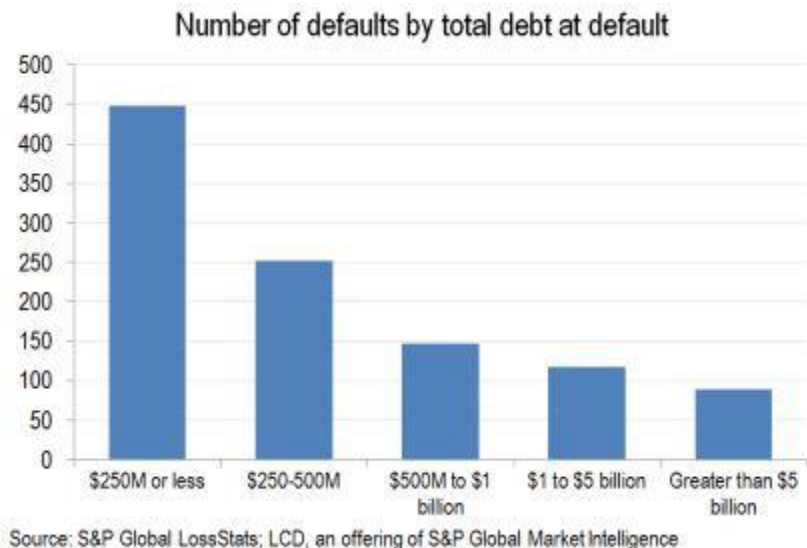


For the 2008/09 credit crunch, the average recovery is 59% for those defaulters who have restructured and reached a liquidity event. That compares with 62% in the years before and 70% in the following years. However, as noted before, about two-thirds of those involved have still yet to achieve an ultimate recovery, so the average is yet to fully settle, and will likely decline, as the longer bankruptcies result in lower recoveries.

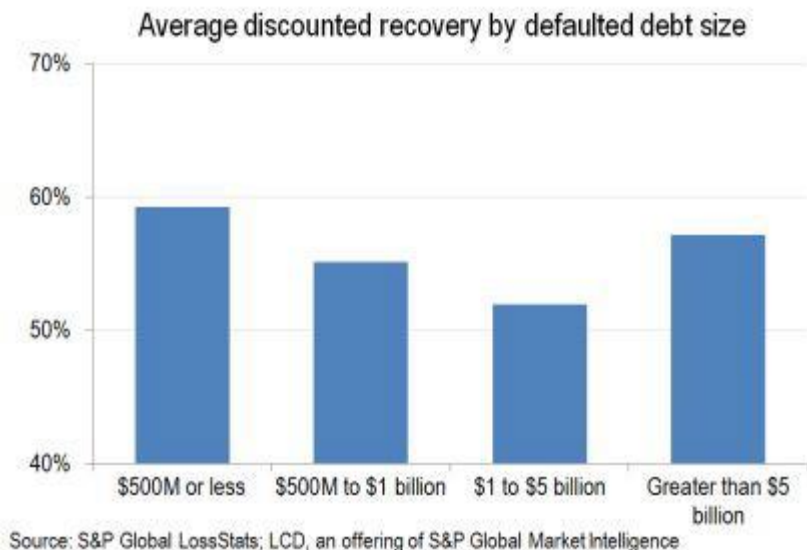
## Size matters

The issue of undue influence resulting from jumbo defaults is also a concern. How does the amount of defaulted debt influence the outcome? Of course, some of that issue is tied to where your investments sit in the capital structure.

On an event basis, large defaulters are not as common as one would think. The vast majority of the default events in the analysis have a total debt size of \$250 million or less. The smallest cohort is default events with more than \$5 billion of defaulted debt.



That being so, size does influence the outcome, but not always negatively. The average recovery for events with a defaulted debt of \$500 million or less, based upon event-level recoveries, is 59%. This is only marginally above the average for the \$500 million to \$1 billion category, which has an average of 55%. In the \$1–5 billion range, the average drops to 52%. But, above \$5 billion the average rises back up to 57%.



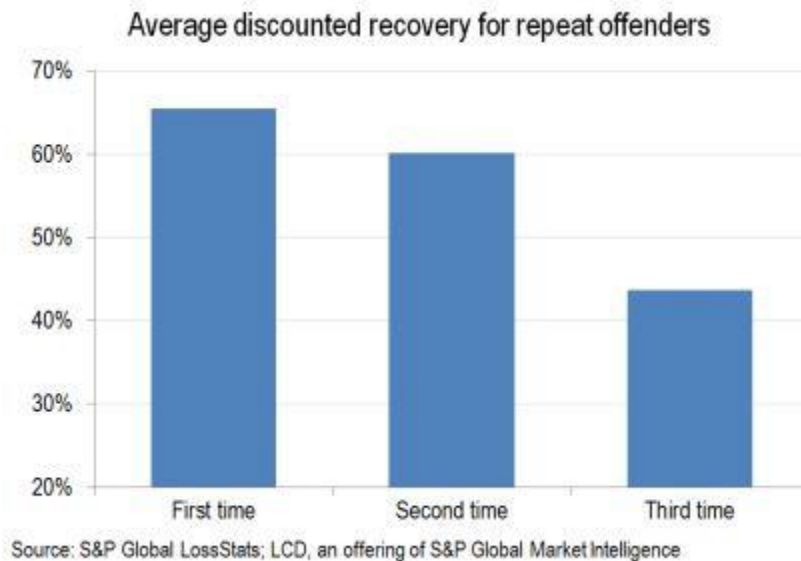
## Time and again

The time factor has some influence in this outcome. The average restructuring time for the \$500 million or less category is 10.7 months, and for \$500M to \$1 billion it is about the same, at 11.5 months. In the \$1–5 billion range, the average restructuring time rises to 14 months, and then above \$5 billion it falls to 12 months. The 17% of default events, based upon count, in that \$1–5 billion range is likely more complicated than the smaller ones, and have less liquidity resources than the behemoths in the \$5 billion-plus sector, so they may weather the storm less effectively.

Additionally, they represent 35% of the total debt defaulted in this analysis, which is a large amount for the system to process.

Finally, the market frowns upon those who are repeat offenders. Of the defaults in the analysis, 88% of the borrowers appear only once. Some 10% of the borrowers come back for a second helping, and 2% come back for thirds. However, those second- and third-time visitors to restructurings pay a price.

Based upon instrument-level recoveries for the repeat offenders, the first time around, the average recovery is 65%, on par with the average of 63% for all instruments in the analysis. During their second visit to a restructuring, however, the average recovery drops to 60%, and then to 44% for three-peat offenders. It seems that the old adage about “fool me once, shame on you; fool me twice, shame on me” holds true.



For further information about the LossStats database, please contact Arnold Gevero at [arnold.gevero@spglobal.com](mailto:arnold.gevero@spglobal.com) or 212.438.2922.

All charts and figures are for illustrative purposes only. Data presented is as of November 30, 2016.

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