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SECTOR IN-DEPTH

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Non-financial companies - Americas

Concentration risk is something to watch in still-accommodative financing environment

- » **Credit erosion can be both abrupt and significant when a company loses a key customer or supplier.** Since late 2017, more than half a dozen low-rated companies have experienced multi-notch rating downgrades following the loss of an important customer or supplier relationship. The downgrades point to the criticality of concentration risk among companies rated single-B or lower that rely heavily on a small number of customers or suppliers. Even so, while an assessment of concentrated business exposures is a core tenet of our credit analysis, other factors such as liquidity, size and market importance often serve as mitigating considerations.
- » **High financial risk exacerbates the adverse impact of business concentration.** Companies positioned at the lower end of the rating scale are typically smaller, less diverse and less competitive than higher-rated companies, while also shouldering high debt burdens. These dynamics can complicate efforts to adjust to the departure of a top customer or supplier. The most important consequence of a major customer or supplier loss is the resulting heightened mismatch of a company's reduced earnings and cash flows relative to its unchanged debt service requirements.
- » **Leverage has weakened to pre-crisis highs.** Narrow spreads coupled with low interest rates have allowed more levered companies a better ability to service their growing debt stacks, as broadly improving interest coverage metrics can attest. Nonetheless, higher leverage and associated underlying financial risk leave companies with less flexibility to adjust to operational challenges, particularly the significant disruption that can occur following the loss of a key partner.
- » **Median metrics for B2- and B3-rated companies are broadly similar, regardless of concentration.** This finding is unsurprising in consideration of many other factors unrelated to concentration that drive our analysis of credit. Nevertheless, higher leverage and reduced cash flows of concentrated B2- and B3-rated companies supports our view that key partner losses will continue to result in significant debt to earnings mismatches, a trend that will likely worsen as the economic cycle slows further.
- » **We reviewed over 1,000 single-B rated non-financial corporates and found that 14% have noteworthy concentration risk.** Many of these companies are also highly levered. All else being equal, companies with debt-laden balance sheets have greater financial risk and less flexibility to absorb abrupt operational disruptions. An adverse change in business relationships would leave them exposed to potentially meaningful credit erosion.

Credit erosion can be abrupt and significant after loss of key customer or supplier

Since late 2017, more than half a dozen low-rated companies have experienced significant erosion of their credit profiles following the loss of an important customer or supplier relationship. Most of these adverse developments have been accompanied by multi-notch rating downgrades, followed by defaults in two cases. The downgrades point to the criticality of concentration risk among companies rated single-B or lower that rely heavily on a small number of customers or suppliers. Given their significant debt service requirements, companies at the low end of the rating scale are particularly vulnerable to concentration risk because they are ill-equipped to weather the sudden loss of earnings and cash flows that results from the departure of a key customer or supplier.

Even so, concentration is often a function of supply chain and industry structure, and is common in sectors such as automotive, aerospace & defense, and consumer products, for example. Certain such industries are more narrowly defined and have been consolidated over many years, rendering concentrated exposures almost inevitable. And so even more creditworthy, higher rated companies often remain exposed to the adverse impact of concentration risk. But other factors such as liquidity, size and market importance can and often do serve as mitigating considerations. An assessment of concentrated business exposures is a core tenet of our credit analysis. Among other qualitative and quantitative factors, our ratings reflect an assessment of what we believe to be the likelihood of a key customer or supplier loss, and the resulting impact on a company's earnings and cash flows. In assessing concentration risk, we broadly evaluate the length and strength of business relationships and conduct sensitivity analyses to gauge operational resilience.

The two companies that defaulted last year illustrate how detrimental the combination of concentration risk and high leverage can be. American Tire Distributors Inc. is a leading tire wholesaler that suffered the loss of two (out of four) key suppliers of premium tires in 2018 – [Goodyear Tire & Rubber Company](#) (Ba2 negative) and [Bridgestone Corporation](#) (A2 stable). Products from these two large global manufacturers accounted for about 25% of American Tire's revenue base. Despite the company's important role in the US tire distribution market, its significant debt burden and high fixed cost structure were not amenable to materially reduced volumes and related sales levels. As such, a restructuring of the company's significant debt obligations became necessary, with a bankruptcy filing occurring roughly six months after the loss of Goodyear and Bridgestone. On December 21, 2018, American Tire completed its recapitalization process, equitizing \$1.05 billion of its senior subordinated notes and extending the maturity of its term loan.

Tweddle Group, a developer of service manuals for automobiles, is another example of how quickly creditworthiness can erode after the disruption of important business relationships. The company opted to restructure its obligations after learning that it was losing [Fiat Chrysler Automobiles N.V.](#) (Ba2 positive), which as its largest customer comprised roughly 40% of total revenue. Facing the prospect of such a meaningful decline in associated earnings and cash flow, the company preemptively restructured its debt in order to have a better chance at completing a turnaround that would allow it to continue as a going concern.

Exhibit 1

Major customer or supplier losses can quickly and significantly weaken corporate credit profiles

Ratings impact on companies hurt by the loss of a large customer or supplier

Issuer	Date of downgrade/review	Event	Pre-event rating	Post-event rating	Number of notches	Defaulted?
Affinion Group, Inc.	12/12/2018	Customer Loss	Caa1	Caa3	2	No
Lannett Company, Inc.	8/20/2018	Supplier Loss	B2	B3	1	No
ASP MCS Acquisition Corp.	6/18/2018	Customer Loss	B2	Caa1	2	No
PFS Holding Corporation	4/20/2018	Customer Loss	Caa1	Ca	3	No
American Tire Distributors, Inc.	4/17/2018	Supplier Loss	B3	Caa2	2	Yes
Tweddle Group, Inc.	4/9/2018	Customer Loss	B2	Caa1	2	Yes
APTIM Corp.	12/20/2017	Customer Loss	B3	Caa2	2	No
Mattel, Inc.	12/11/2017	Customer Loss	Baa3	B1	4	No

Source: Moody's Investors Service

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

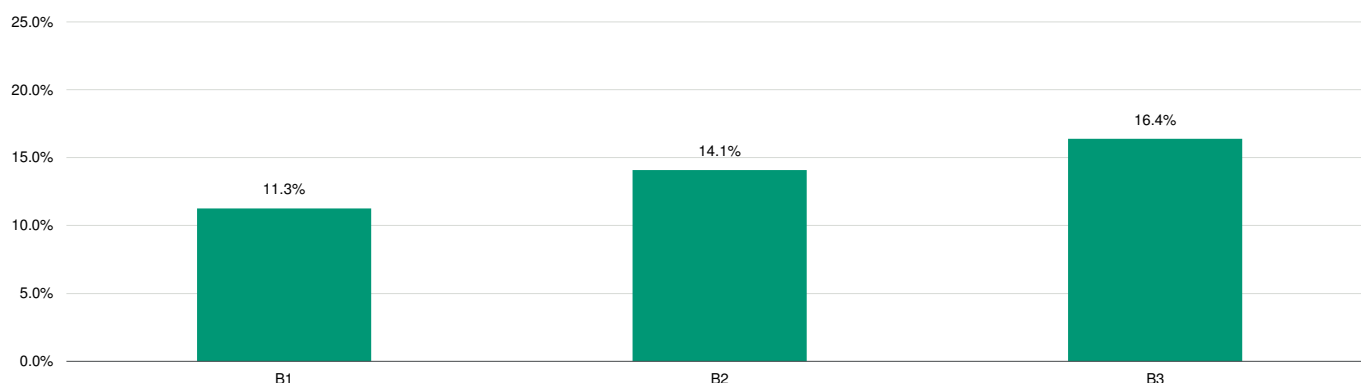
High financial risk exacerbates the adverse impact of concentration risk

Companies positioned at the lower end of the rating scale are typically smaller, less diverse and less competitive than higher-rated companies, while also shouldering high debt burdens. In addition to limiting a company's financial strength, these dynamics can also complicate efforts to adjust to the departure of a top customer or supplier. The most important consequence of a major customer or supplier loss for these companies – and ultimately the leading driver of our ensuing rating actions – is the resulting heightened mismatch of their reduced earnings and cash flows relative to their unchanged debt service requirements. Hence, comparatively small companies with both high concentration and high leverage tend to be rated lower, as seen in Exhibit 2.

Exhibit 2

Customer concentration can be more pronounced (and impactful) for less creditworthy companies

Percentage of issuers in a given rating category that have noteworthy customer concentration^[1]



[1] As cited in Moody's published research
Source: Moody's Investors Service

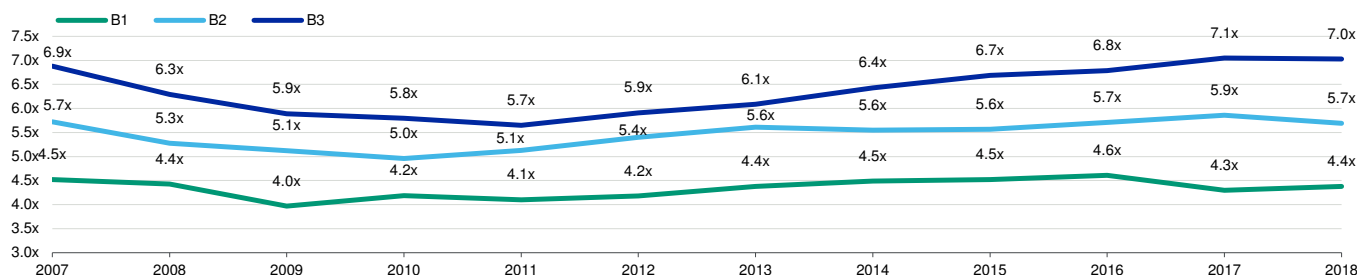
Leverage metrics have weakened to pre-crisis highs

Borrower friendly market conditions, growth in private equity, and low rates and spreads have allowed companies to take on increasingly significant amounts of debt, resulting in a weaker ratings distribution (see [Leveraged finance - US: Convergence of bonds and loans sets stage for worse recoveries in the next downturn](#)). In the North American speculative-grade rated universe, more companies than ever (64% as of 2018, versus 47% in 2006) are rated B2 or lower, and 44% of first-time issuers were rated B3 in 2018. Median leverage and cash flow metrics for companies rated B2 and B3 – the proverbial “sweet spot” for these mostly financial sponsor-backed companies – have deteriorated to pre-crisis levels not seen since 2007. This oftentimes leaves little room for earnings deterioration, be it from customer/supplier losses, operational missteps or an economic downturn. While median debt/EBITDA has also risen among Baa-rated companies during the same period, improvements in scale, profitability and interest coverage have mitigated the impact of higher leverage (see [Nonfinancial Corporates - US: Credit strengths of Baa-rated companies mitigate risks of higher leverage](#)). As seen in Exhibit 3, median leverage for B2- and B3-rated companies has returned to pre-crisis highs of 5.7x and 7.0x, respectively.

Exhibit 3

Median leverage for B3-rated companies is now higher than it was in the 2007 prior peak

Median leverage by rating category, 2007-LTM



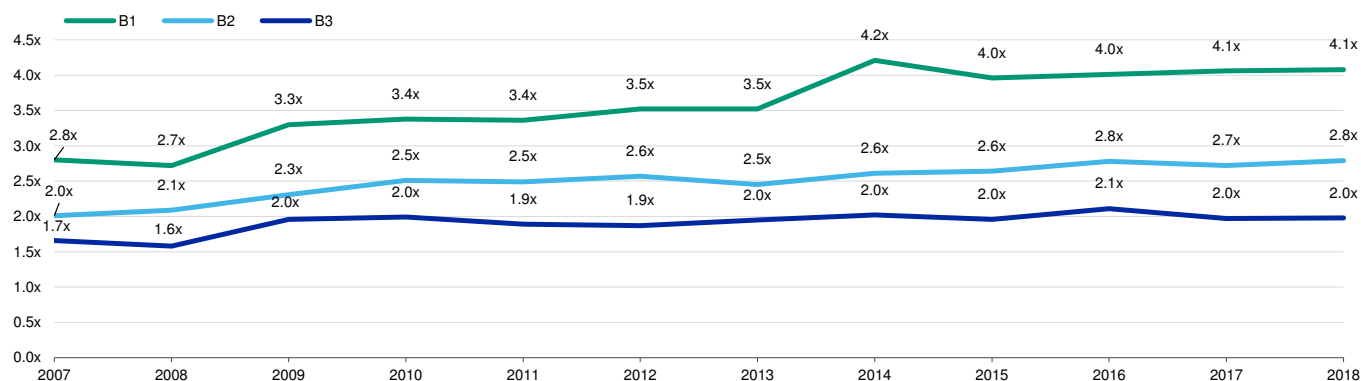
Source: Moody's Financial Metrics

While leverage metrics have weakened, interest coverage has improved amid historically low rates and spreads. This has made borrowing cheaper than long-term historical norms, both in absolute and relative terms, and serves as a mitigating consideration.

Exhibit 4

Interest coverage has improved since 2007, owing to persistently low borrowing costs

Median EBITDA/Interest by rating category, 2007–TLM



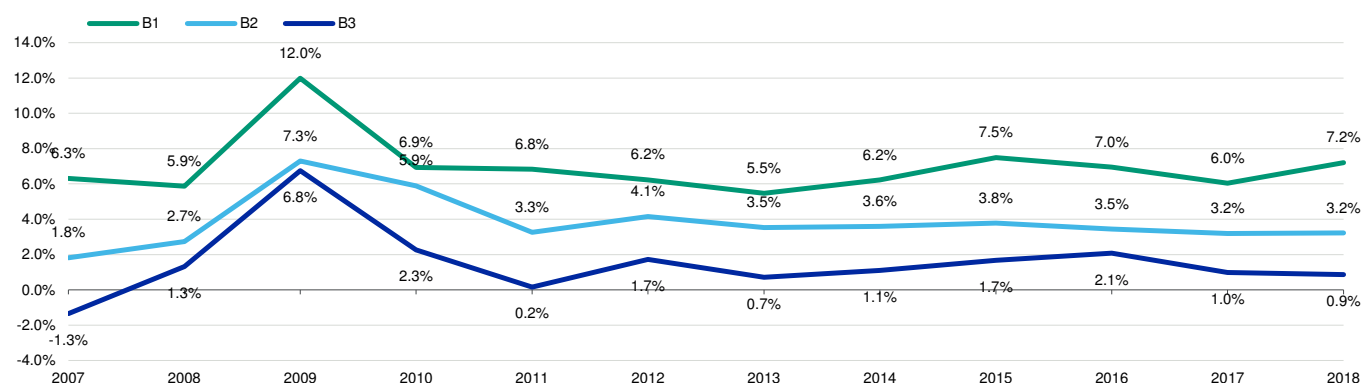
Source: Moody's Financial Metrics

Pre-dividend free cash flow (cash flow from operations minus capital expenditures) has been steadily weakening on a dollar basis, and as a proportion of debt, for both B2- and B3-rated companies. Once again, the issue is most pronounced for B3-rated companies, as median B3 free cash flow for this cohort has become fairly nominal at about \$6 million, or less than 1% as a proportion of debt, on a per annum basis.

Exhibit 5

FCF/debt is approaching its 2007 low, particularly for B3- and B2-rated companies

Median FCF/debt by rating category, 2007–TLM



Note that the 2009 spike in FCF/debt among single-B rated issuers was likely driven by the effective removal of weak credits that defaulted, a lack of new issuance (and associated transaction costs), a lack of dividends, lower interest rates, and a winding down of working capital.

Source: Moody's Financial Metrics

All else being equal, higher leverage and weaker cash flow leave B3-rated companies with less flexibility to respond to headwinds from rising interest rates, slowing economic growth, and/or a major customer or supplier loss. Despite this erosion in quantitative credit quality, companies have been able thus far to support B3 (or in some cases B2) ratings because rates and spreads have been so low and liquidity has generally been consistent with highly accommodative capital market conditions, making it easier to support such substantial and growing debt burdens. Additionally, favorable economic conditions have supported our expectations for deleveraging through earnings growth. However, these supportive conditions have been showing some modest signs of receding as interest rates steadily rise and GDP growth slows, portending a potentially more challenging environment to come and rendering appropriate ever more vigilant monitoring of such exposed companies.

If borrowing costs continue to rise and economic growth slows, already-weakened free cash flows will likely deteriorate further, stressing the ratings of these highly leveraged companies. This trend would be exacerbated if a sudden and protracted economic downturn were to trigger a pronounced decline in earnings, and potentially more so in the event of a key customer or supplier loss.

Median metrics for B2- and B3-rated companies broadly similar, regardless of concentration

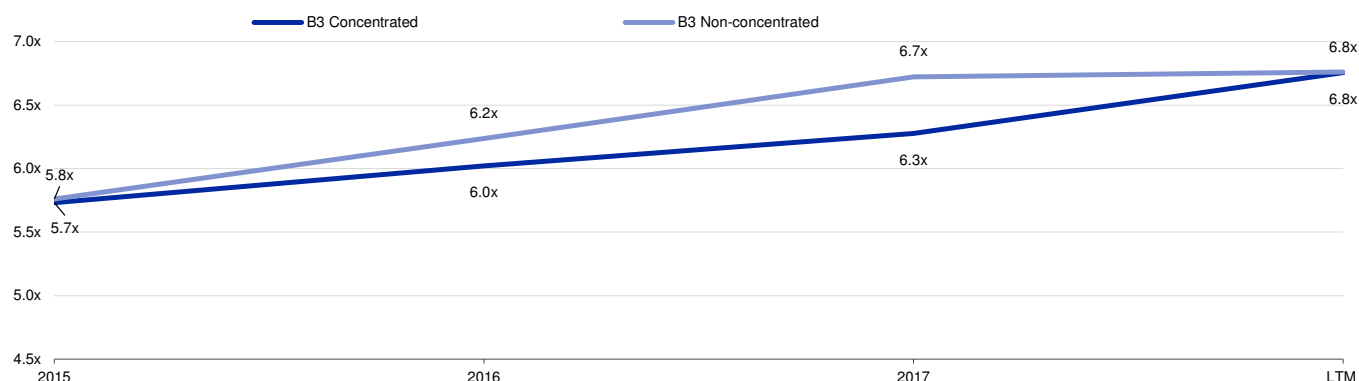
Our analysis of Moody's Credit Opinions for 1,153 single-B-rated companies in the US, Canada and Latin America identified 163 issuers (14%) that were referenced to have noteworthy customer concentration as cited by a Moody's analyst in our research during the 12 months ended 30 November 2018. After categorizing each company as either concentrated or non-concentrated, we calculated medians for each group's key credit metrics, including debt/EBITDA, EBITDA/interest, pre-dividend free cash flow (FCF, defined as cash flow from operations minus capital expenditures, or CFO – capex) and pre-dividend FCF/debt.

There are only modest differences in the median metrics of concentrated and non-concentrated companies. This finding is unsurprising in consideration of many other factors unrelated to concentration that drive our analysis of credit. Nevertheless, higher leverage and reduced cash flows of concentrated B2- and B3-rated companies supports our view that key partner losses will continue to result in significant debt to earnings mismatches, a trend that will likely worsen as the economic cycle slows further. As shown in Exhibit 6, leverage levels have broadly risen, but the pace of increase has been similar for both concentrated and non-concentrated B3-rated companies.

Exhibit 6

Concentrated and non-concentrated B3-rated companies are operating with similar debt levels

Median debt-to-EBITDA, concentrated and non-concentrated B3-rated companies, 2015–LTM



Note that the data above will not foot to Exhibit 3 given differences in the sample cohorts and some degree of survivorship bias (see appendix).

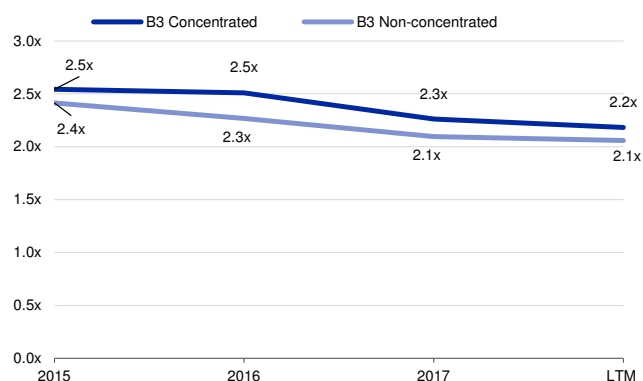
Source: Moody's Financial Metrics

Similarly, EBITDA/interest coverage has tracked fairly consistently for concentrated and non-concentrated B3-rated companies, but importantly this notably remains at a still relatively healthy level just above 2.0x. Median free cash flow for concentrated B3-rated companies is about \$13.1 million, only about \$8 million higher than the non-concentrated median – likely not enough to offset the loss of a major business partner.

Exhibit 7

Interest coverage very similar for concentrated and non-concentrated B3-rated companies

Median EBITDA-to-interest, concentrated and non-concentrated B3-rated companies, 2015–LTM



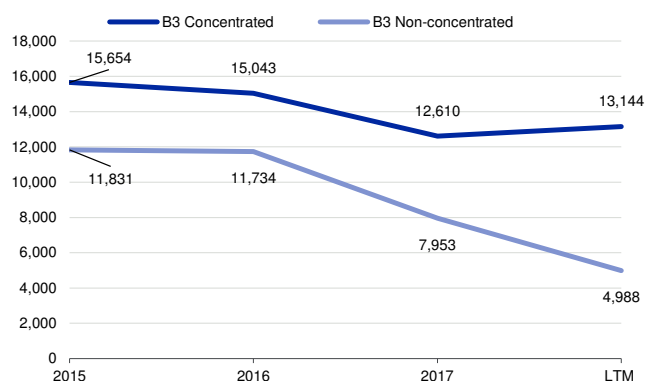
Note that the data above will not foot to Exhibit 5 given differences in the sample cohorts and some degree of survivorship bias (see appendix). For this chart in particular, historical measures of interest coverage noted above are biased upwards.

Source: Moody's Financial Metrics

Exhibit 8

Free cash flow for concentrated B3-rated companies has been modestly more resilient

Median free cash flow, concentrated and non-concentrated B3-rated companies, 2015–LTM



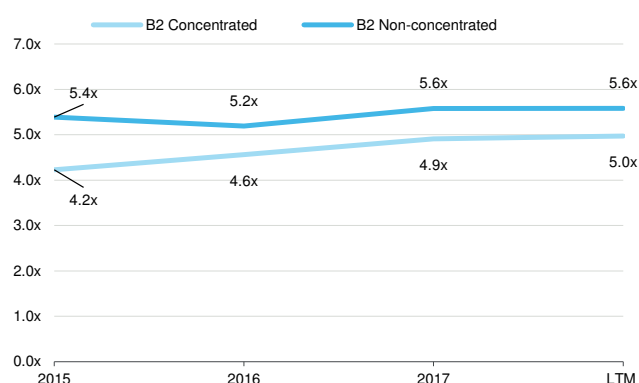
Interpretation: Depression in B3 non-concentrated FCF may be due to higher deal activity
Source: Moody's Financial Metrics

Among B2-rated companies, there is some differentiation in the median metrics of those with and without a concentration. But some favor the former, rather than the latter. For instance, median debt/EBITDA is lower among concentrated B2-rated companies than their non-concentrated peers, although there has been a modestly sharper increase in median leverage among the former since 2015 (see Exhibits 9 and 10).

Exhibit 9

Concentrated B2-rated companies still operate with less leverage, but the spread is narrowing

Median debt-to-EBITDA, concentrated and non-concentrated B2-rated companies, 2015–LTM

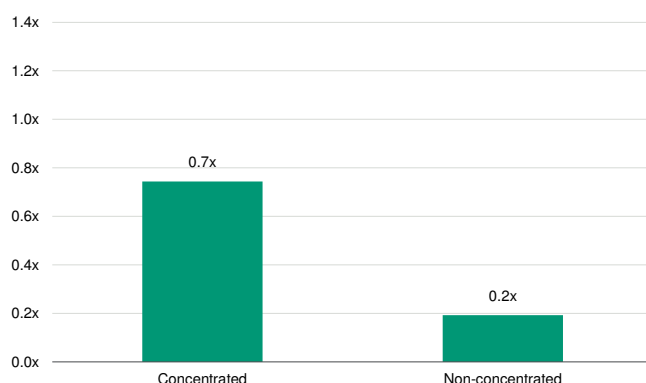


Source: Moody's Financial Metrics

Exhibit 10

Concentrated B2-rated companies have seen a steeper rise in leverage

Change in median debt-to-EBITDA, concentrated and non-concentrated B2-rated companies, 2015–LTM



Source: Moody's Financial Metrics

Once again, these findings are not surprising given that our ratings are not solely based on the few credit metrics presented – or credit metrics alone, for that matter; rather, they reflect our analysis of numerous qualitative and quantitative factors that affect expected loss, including size, competitive position, revenue stability, and cyclicity, among many others.

Moreover, only five of 163 single-B-rated concentrated companies that we identified experienced a noteworthy operational disruption after losing a major customer or supplier. This equates to an incidence rate of just 3% over the past 18 months. The low likelihood of a significant customer/supplier loss, coupled with other offsetting considerations (most prominently including adequate backstop

liquidity provisions) likely contributes to the similarities in median credit metrics for the concentrated and non-concentrated companies in our analysis of single-B rated companies.

Even so, higher leverage and weaker measures of debt serviceability across concentrated B2- and B3-rated companies continues to drive our expectation that major customer or supplier losses would likely result in abrupt and meaningful mismatches between their earnings generating ability and debt service capacity. This broad risk is likely to be exacerbated as the economic cycle changes, particularly if concentrated companies remain highly levered.

With leverage for B2- and B3-rated companies at pre-crisis highs and free cash flow generation weakening, such companies that are also characterized by high concentration risk remain increasingly vulnerable to potential operational disruptions – particularly those typically accompanying the loss of a major business relationship, which are often abrupt and significant. This dynamic is likely to worsen during the next recession. As companies experience slowing earnings growth, or even a contraction, they will lean on their partners for better pricing terms, even on smaller order volumes. Concentrated companies will have more difficulty adjusting to such declines, particularly if they persist.

Appendix 1: Affected company list

We have broken down our list of concentrated companies by rating and leverage, highlighting those that we deem to have sizable concentration and published leverage metrics that rank in the bottom quartile among concentrated issuers in their respective rating categories. As the rating implies, B3-rated companies are perceived to be more at risk given their typically higher leverage and more modest free cash flows.

Our lists were created using companies that met the following criteria:

- » Most recently published debt/EBITDA leverage ranked in the bottom quartile of concentrated issuers in that rating category. This equates to leverage higher than 5.4x for B1-rated companies, 6.1x for B2-rated companies, and 7.5x for B3-rated companies.
- » A company's average concentration (i.e., the stated concentration divided by the number of customers that make up that concentration) is at least 10%; or, the top customer accounts for more than 10% of total revenue.

Links to our published research for these companies can be found within the following exhibits.

Exhibit 11

B3-rated companies with sizable concentration and high leverage

Industry	Issuer	Outlook	Concentration	Average Concentration	Top Customer	Published Leverage	Reported Debt (\$M)
Auto	GC EOS Buyer, Inc.	Stable	Top 2 account for 47% of revenue; Auto retailers	24%	24%	7.7x	\$778
Consumer Products: Durables	Hillman Group Inc. (The)	Negative	Top 3 (big-box retailers) account for 54% of revenue; disintermediation risk as it is a distributor	18%	-	8.0x	\$1,560
Consumer Products: Household & Personal Care	pH Beauty Holdings III, Inc.	Stable	Top 3 retailers account for more than 50% of revenue	17%	-	7.9x	\$198
	Alphabet Holding Company, Inc.	Negative	Top 2 account for 30% of revenue; top 10 account for 50%	5%	15%	7.5x	\$1,866
	Parfums Holding Company, Inc.	Stable	Top 5 account for 50% of revenue	10%	-	7.5x	\$752
Consumer Products: Pckd Food	Shearer's Foods, LLC	Stable	Top 2 account for 33% of revenue; one is contracted through 2020	17%	-	7.9x	\$1,017
Manufacturing	LTI Holdings, Inc. (Boyd) (New)	Stable	Top customer accounts for 20% of revenue	20%	20%	7.5x	\$1,615
Services	Packaging Coordinators Midco, Inc.	Stable	Top 2 account for 16% of revenue; Top customer accounts for 11%	8%	11%	8.0x	\$700

Note: Leverage and reported debt is as of the last published credit opinion, or is interpolated based on PF leverage at close and 2018E

Source: Moody's Investors Service

Exhibit 12

B2-rated companies with sizable concentration and high leverage

Industry	Issuer	Outlook	Concentration	Average Concentration	Top Customer	Published Leverage	Reported Debt (\$M)
Auto	Dealer Tire, LLC	Stable	Top 3 account for 56% of revenue	19%	-	6.2x	\$724
Healthcare	Viant Medical Holdings Inc.	Stable	Top 3 account for 40% of revenue	13%	-	6.8x	\$725
Manufacturing	Energy Acquisition Company, Inc.	Stable	Top 2 account for 30% of revenue	15%	-	6.2x	\$695
Packaging	Anchor Glass Container Corporation	Negative	Top 3 account for 49% of revenue	16%	-	7.1x	\$768
Services	R1 RCM Inc.	Stable	Top customer, Ascension, accounts for a significant majority of revenue	>50%	>50%	8.7x	\$360
	GoodRx, Inc.	Stable	Top 3 account for a significant majority of revenue	>17%	-	6.7x	\$745
	PAREXEL International Corporation	Negative	Top 5 account for 37% of revenue; we estimate Pfizer accounts for 12% of revenue	7%	12%	6.9x	\$2,800

Note: Leverage and reported debt is as of the last published credit opinion, or is interpolated based on PF leverage at close and 2018E

Source: Moody's Investors Service

Exhibit 13

B1-rated companies with sizable concentration and high leverage

Industry	Issuer	Outlook	Concentration	Average Concentration	Top Customer	Published Leverage	Reported Debt (\$M)
Aerospace	TransDigm Inc.	Negative	Top 2 account for 25% of revenue	13%	-	7.9x	\$17,000
Consumer Products: Durables	Griffon Corporation	Negative	Top 2 account for 30% of revenue; Home Depot 20%, Government programs 10%	15%	20%	6.2x	\$1,121
Consumer Products: Pckd Food	B&G Foods, Inc.	Stable	Top ten account for 55% of revenue; Walmart accounts for 24%	6%	24%	5.6x	\$1,650
Oil Services	Archrock Partners, L.P.	Stable	Top 2 account for 23% of revenue; Williams Partners and Anadarko account for 14% and 9%, respectively.	12%	16%	5.4x	\$1,516
Services	Ironman Merger Sub, LLC	Stable	Top 10 customers account for 45% of revenue; top customer accounts for 10%	5%	10%	6.2x	\$760

Note: Leverage and reported debt is as of the last published credit opinion, or is interpolated based on PF leverage at close and 2018E

Source: Moody's Investors Service

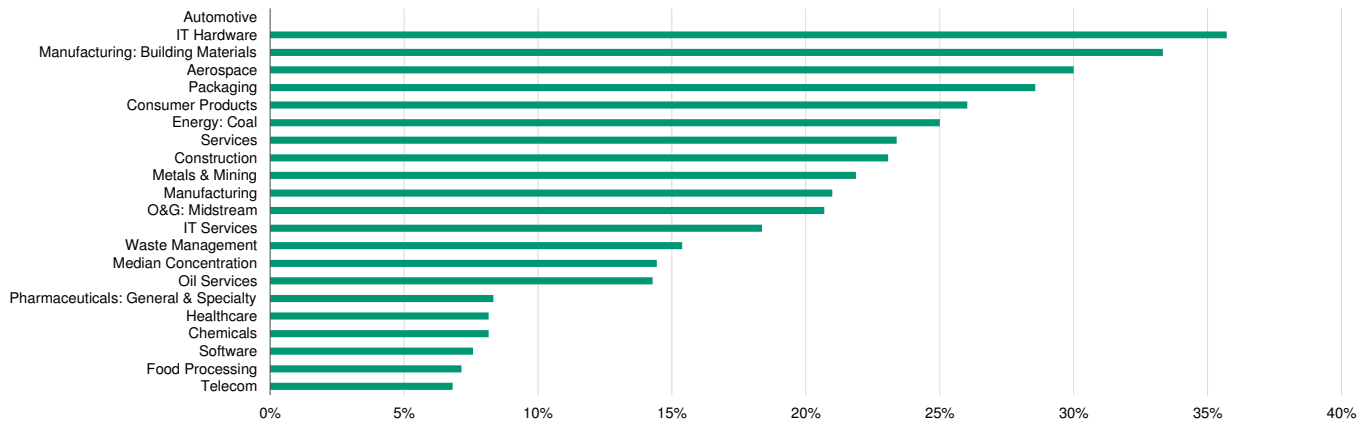
Appendix 2: Industry Data

The prevalence and degree of customer concentration varies by industry. Suppliers in the automotive, aerospace & defense, and consumer products industries often generate a high percentage of their revenues from a small number of large manufacturers.

Exhibit 14

Automotive is most concentrated industry

Percentage of issuers rated B1 to B3 in a given industry that have a customer concentration

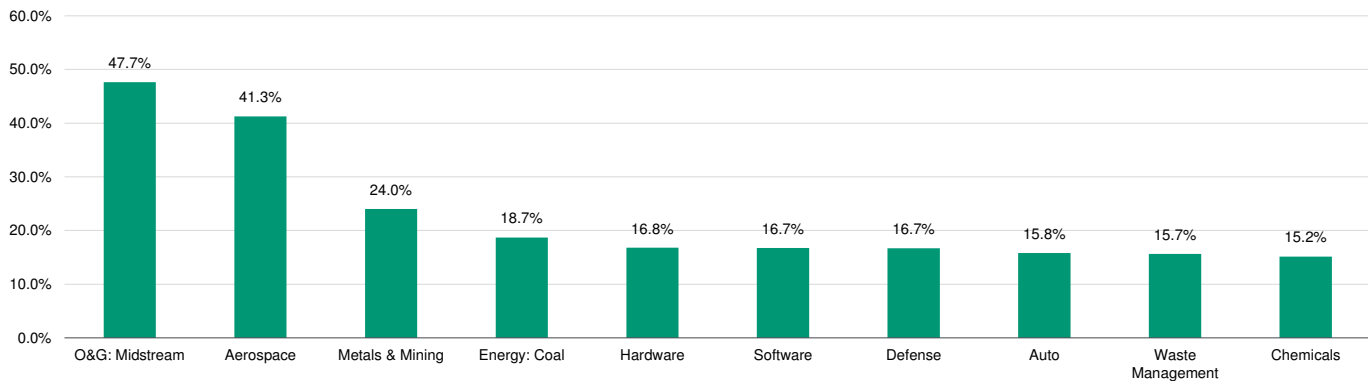


Source: Moody's Investors Service

Exhibit 15

Largest customers found in basic industries

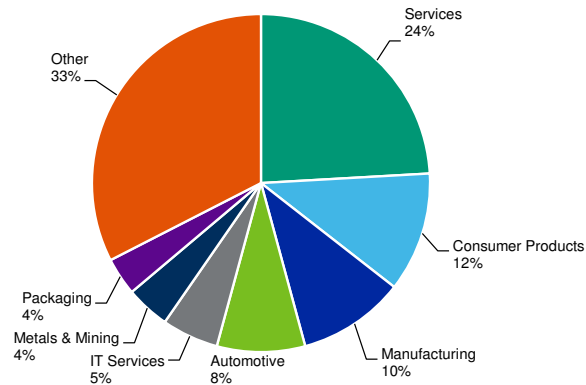
Average size of individual customer concentration by industry, for our group of 163 B1- to B3-rated concentrated issuers



Source: Moody's Investors Service

Exhibit 16

Concentrated single-B issuers more common in services, consumer products, manufacturing and automotive industries
Industry breakdown of our 163 single-B rated companies with high customer concentration

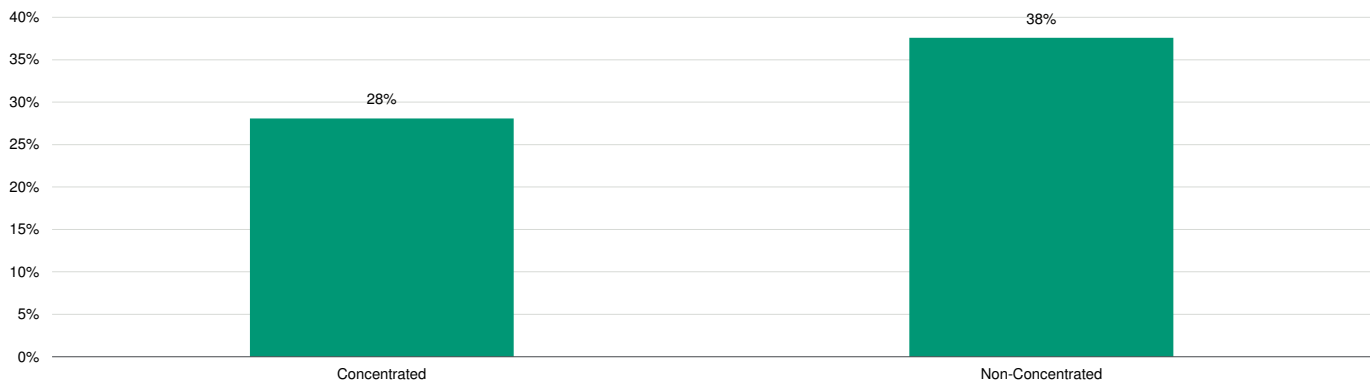


Source: Moody's Investors Service

Exhibit 17

Customer concentration typically reduces bargaining power, resulting in a sizeable margin differential between concentrated and non-concentrated issuers

LTM single-B median gross margins



[1] Gross margins from latest available LTM period

Source: Moody's Investors Service

Moody's related publications

Sector In-Depth

- » [Speculative-Grade Corporates - US: Refunding Risk 2019-23: Spec-grade maturities again top \\$1 trillion amid weakening market conditions, January 2019](#)
- » [Moody's B3 Negative and Lower Corporate Ratings List: Barely moving for most of 2018, the list edged up slightly in December, January 2019](#)
- » [Leveraged finance - US: Convergence of bonds and loans sets stage for worse recoveries in the next downturn, August 2018](#)
- » [Leveraged Finance - US: Tracking the largest private equity sponsors - LBO credit quality is weak, bodes ill for next downturn](#)
- » [Corporates - Global: High corporate leverage signals future credit stress even as the default rate remains very low](#)
- » [Corporates - US: Late cycle debt accumulation exposes credit vulnerabilities](#)
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