Global Strategy

Leveraged loans: how much do credit ratings understate the risks?

Global Macro Strategy

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Concerns over loan ratings as an indicator of risk are growing

Our recent piece Will policy easing extinguish credit risks highlighted rising concerns related to bottom-up credit trends, with lower quality leveraged loans the top risk as technical weakness, driven by slowing CLO formation, combines with high levels of fundamental deterioration. Rating downgrades remain elevated (Figure 1), illustrating unease at the rating agencies. And scrutiny from regulators around leveraged loans and potential stability risks is persistent. Now we address a more structural question: do loan ratings accurately reflect the risks?

2019 deals have weak pro forma metrics, but ratings have moved in sync

Fundamental credit metrics for large corporate deals continue to deteriorate. On average total leverage in 1H19 is 5.4x (up 0.2x from '18) and the highest on record; interest coverage is 3.0x (down 0.5x from '18) and the lowest since 2006; cash flow coverage is 2.5x (down 0.3x from '18) and the lowest since 2007 (Figure 2). However, credit ratings on new deals have also migrated lower. For illustrative purposes we map the share of new deal credit ratings to average issuer-weighted default rates since 2005. The overall trend is up, with 2019 new deals at 2.8% (down 0.1x from '18), above the prior cycle's peak of 2.6x in '07. The trend, not the level, is more important as we use issuer and average ratings. YTD about 14% of new deals were rated B-, one rung above CCC+; this is in-line with '18 and up from 10% in '07 (Figure 3). The distribution of new deals by total leverage also depicts rising risk in the lowest quality deals; about 30% and 9% of new deals were marketed with leverage between 6-7x and above 7x, respectively, up from 22% and 7% in '18 (and 15% and 12% in '07, Figure 4). In comparison, the distribution of new issues by cash flow coverage shows rising risk y/y, with 41% below 2 (vs. 26% in '18) but is below 72% in '07. Overall, the trends in new issue ratings look largely in-line with trends in leverage and interest/ cash flow coverage ratios. However, the above ratios are based on lender presentations; they are not adjusted for earnings add-backs.

Ratings do not adequately reflect low realizations of earnings add-backs

We have consistently pointed to earnings adjustments as a major risk factor in the loan market[1]. Earnings add-backs[2] in M&A and LBO deals have been the standard since at least mid-2017, with c$350bn of outstanding lower rated (B+ and below) loans impacted by adjustments. Average total leverage for new deals at 5.4x based on adjusted earnings compares with 6.7x excluding add-backs (vs. 4.9x and 5.2x, respectively, in '07, Figure 5). According to rating agency studies[3] issuers appear to systematically miss projections on adjusted earnings, with actual leverage missing estimated leverage for 2015 and 2016 deals by 3.4-4.2x in year 1 and 3.7-4.2x in Year 2 (Figure 6). This is largely consistent with prior academic literature that roughly half of M&A transactions fail to reach financial targets, particularly those done late cycle.

[1] Quantifying the hidden risks in US leveraged and private loans, M.Mish, 15 Aug 2018
[2] Earnings add-backs include savings, synergies, restructuring, compensation and other costs.
[3] The Continued Attack of the EBITDA Add-Back, S&P, 19 Sep 2019

This stark divergence is a combination of EBITDA missing estimates, sponsors not deleveraging as planned, and/or firms still waiting to realize estimated add-backs. We then extend the reality of low realization rates back to re-estimate leverage in new deals. If we adjust the distribution of large deals to exclude EBITDA add-backs historically, the results are striking: for 2019 about 20% and 46% of new deals have leverage between 6-7x and over 7x, respectively (Figure 7). While the rating agencies state that they use their own EBITDA adjustments and future projections, this mosaic suggests that the minor step-up in B- ratings from 10% in '17 to 14% in '19 – to a large extent – does not account for the spike in deals levered over 7x from 14% to 46% over the same three-year period.

Low interest rates and lack of covenants will not suppress defaults

Two of the main arguments against higher loan defaults are lower rates and lack of covenants. On lower rates, we believe the transmission mechanism of lower rates to leveraged loans is comparatively weak. Our recent work has shown that LL yields are little changed year-over-year, in part because wider spreads have offset modest declines in LIBOR rates. Looking ahead, 4 rate cuts in 2020 could help loan issuers but there are likely offsetting factors. One is that this assumes loan spreads do not widen, which we think is unlikely, particularly heading into 1H20 with US GDP growth slowing to 0.3-0.5% in 1H20. Two is if rating agency downgrades persist (as we expect) the future cost of new funding for issuers increases substantially with each rating notch; our analysis shows the current spread differential between a B- and a CCC+ loan is c300bp. Three is that the Fed has less room to stimulate: only 38-52% of the rate relief provided in the last two cycles.

On lack of covenants, the key driver of defaults historically is not covenant violations but insolvency and illiquidity. One of the more holistic papers compares these factors in triggering defaults and argues that low market asset value to debt is the key driver while, on average, covenants add limited additional information[4]. We believe lack of covenants will change the event of default, with more distressed exchanges likely. But it is not clear this is a good outcome. Covenants had weakened leading up to the '15-16 energy default cycle, yet default rates were elevated (peak 22%) and many distressed exchanges failed with roughly half of firms re-defaulting. While loan downgrades to CCCs have been lagging those to B-, we are starting to see more evidence of downgrades to CCC. These decisions are primarily driven by weak operating performance, negative cash flow and capital structure unsustainability (even as issuers do not have maturities until 2020-22). Once a firm is downgraded to CCC, we believe the re-pricing in loan yields makes distressed exchanges likely, particularly in more stressed markets.

CCC rating downgrade risks are elevated, forced selling is the key risk

Our core thesis is the deterioration in loan credit ratings fails to largely incorporate the EBITDA add-back phenomenon of this cycle. And covenants will not defer the inevitable surge in CCC assets if earnings growth declines by 10-15%. The implication is that the loan market is riskier than that implied by credit ratings. We think earnings adjustments deflate leverage metrics by about 1.3x on average, and credit ratings incorporate only a small portion of this reality. This implies leverage is understated by about 1x on c$350bn of lower rated loans. Typically we observe the relationship between credit ratings and leverage is between 2:1 and 1:1. If we use the more conservative 1:1 relationship between rating and leverage, this

[4] Insolvency, Illiquidity, And the Risk of Default, S. Davydenko, 2013

implies the more realistic ratings distribution would shift about 25-30% of the lower rated loans down one notch. Figure 8 depicts a simple illustration of the results: the loan index ratings distribution would change with CCC loans up from 6 to 18%, B- loans up from 12% to 16% and B loans down from 28% to 12% (using a one notch drop in ratings for 28% of the loan index, at the lowest rating buckets).

The key risk for the loan market and CLOs is a spike in CCC rated assets. Using the current debt distribution in the LL index and our adjusted distribution by rating, we simulate annual CCC downgrade rates (from B to CCC only) using historical transition rates. The results suggest, in average and recessionary default years, CCC assets could increase almost 5% and 9%, respectively, using the current ratings. If we use the adjusted ratings, the results are very similar at 5% and 8%, reflecting the offset from higher B- vs. lower B rated loans (Figure 9). The net result would be cumulative CCC loan exposures of 15% and 26% in these two scenarios (vs. average CLO baskets for CCCs capped at 7.5%). This highlights the risk in the next cycle stemming from CCC basket oversaturation, overcollateralization test violations, forced sales and lower demand for lower quality loans.

Risk of lower recoveries is driven by many factors, some not in ratings

A common assumption among credit rating agencies and investors is that recovery rates are constant, particularly for secured loans (Figure 10). The credit rating agencies officially incorporated recovery rates into their rating methodology in 2006-07. The net result at that time was rating upgrades, particularly for secured loans and bonds, on average by one notch. This change helped drive the structural rise in issuance of loans and secured bonds over the last decade. But the literature suggests portfolio loss assumptions that assume uncorrelated defaults and recoveries understate realized losses by about one-third[5]. And a paper specifically focused on factors driving *bank loan recoveries* suggests that, in bad states, recoveries are influenced by macro factors including default rates (negative) and industry stress (negative) as well as micro factors including loan size (negative) and tangible and liquid assets (positive)[6]. Trends in several of these inputs arguably imply lower, not higher, recoveries this cycle.

Our expectations for peak annual loan defaults in this cycle near 14% (due to the slide in credit ratings and failure of ratings to calibrate add-backs) imply loan recoveries near 50% due to the inverse relationship between defaults and recoveries (with a 1% higher loan default rate implying a 2% lower recovery). And we also see risks from industry stress in concentrated sectors; two of the loan sectors that have seen the most debt growth and have the highest leverage vs. peers (software, business services) currently trade at very elevated multiples historically. Most of the collateral is software products and services, lacking liquid and tangible assets that typically support recovery values. This is evident in historical tech recoveries averaging about 11% below average (38% vs. 49%). While admittedly these sectors are among the market darlings, our view is that markets produce bad credit through excess leverage. The '15-16 energy crash is one of many examples where irrational earnings expectations and excessive debt and leverage triggered industry distress, causing recoveries to materially undershoot (e.g., 20% firm-level recoveries in '15).

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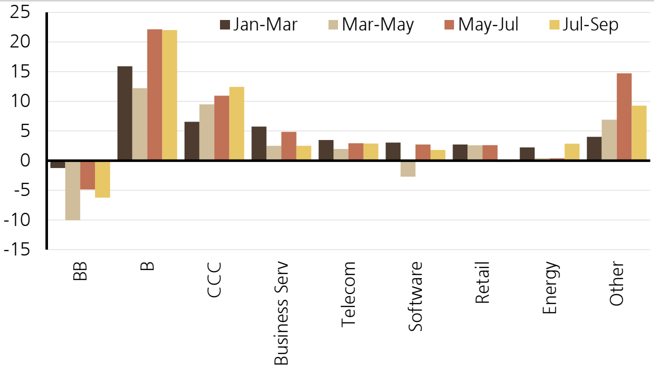
[5] What Determines Creditor Recovery Rates, N. Mora, 2012
[6] The determinants of bank loan recovery rates in good times and bad- new evidence, H. Wang, 2018

Lastly, we believe debt cushion is largely calibrated in credit ratings – this is the essence of the waterfall analysis run by the agencies. A key feature in this cycle is the persistent decline in debt cushion below 1st and 2nd lien loans (Figure 11). We calculate 60% and 68% of B and B- rated loans have no debt below the 1st and 2nd liens. HOWEVER, lack of covenants is not reflected in credit ratings. This variable is one of the more challenging to assess. More flexible incremental facilities, looser mandatory prepayment restrictions, and more limited collateral and guarantee protections imply lower recoveries. At the extreme material asset transfers or collateral stripping is one of the key risks, and the recovery differential between 1st and 2nd priority securities is quite severe: 34-39% (Figure 12). In times of stress we expect sponsors to maximize stakeholder value, particularly weaker sponsors; however, it is hard to predict wide scale execution of this type of investor behavior. We think the bigger risk is that a few high profile outcomes of collateral stripping compel new marginal loan investors to re-price this risk in loans, potentially creating a vicious cycle between (lower) loan prices and (lower) recovery rates.

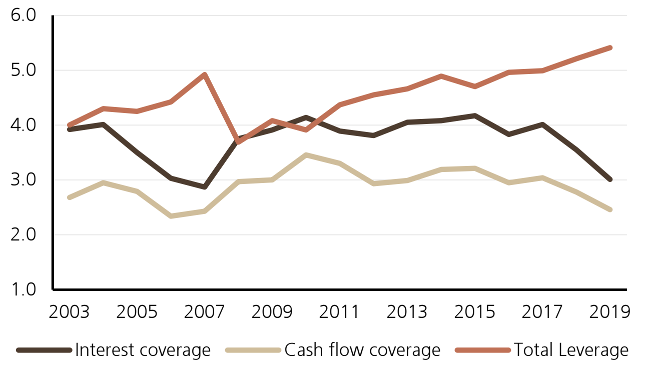
Bottom line, we believe the recovery risks tied to default, industry, and covenant factors are not well calibrated into credit ratings. The implication is that loan defaults peaking near 14% *in the next downturn* will coincide with recoveries near 50%, not 60%, both of which are more bearish than consensus estimates. We are underweight leveraged loans relative to high yield, overweight double Bs versus triple Cs, and overweight investment grade relative to speculative grade corporate credit in the US. (Figures continued on next page).

Figure 1: NET rating downgrades for the US Lev Loan (LL) index by rating and major sector ($, bn, 2mo intervals)



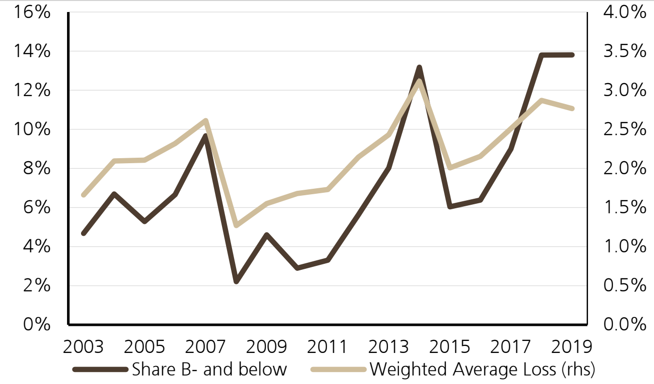
Source: Bloomberg, UBS

Figure 2: US LL new issue metrics: total leverage, coverage, and cash flow ratios (using adjusted EBITDA)



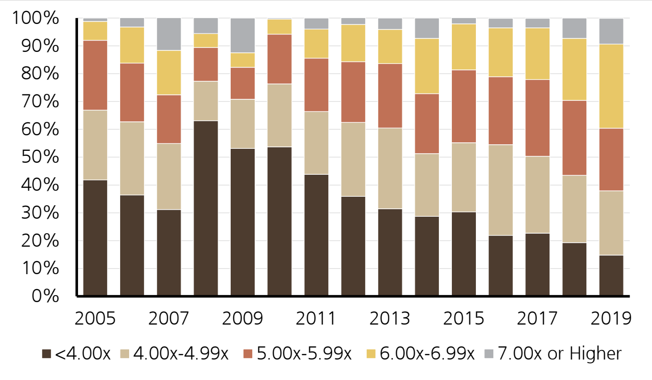
Source: S&P LCD

Figure 3: US LL new issues: share of B- rated deals and average rating-implied default rates



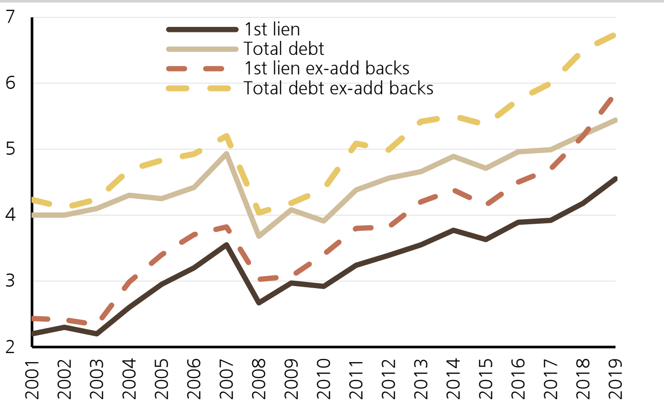
Source: Moody's, S&P LCD, UBS

Figure 4: Distribution of LL deals by total leverage ratio (Debt/EBITDA, using adjusted EBITDA)



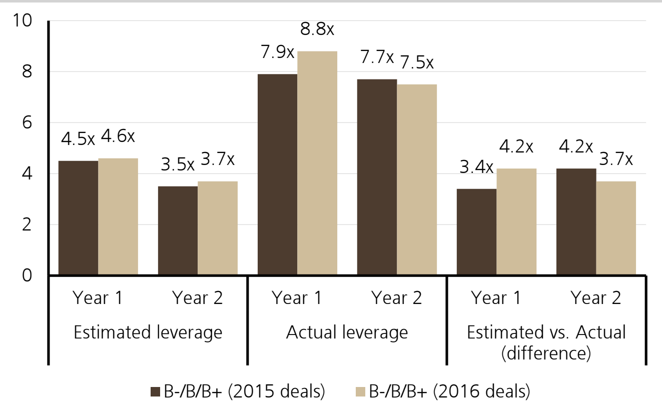
Source: S&P LCD

Figure 5: US LL new issue 1st lien and total leverage (using EBITDA adjusted and estimated ex-addbacks, x)



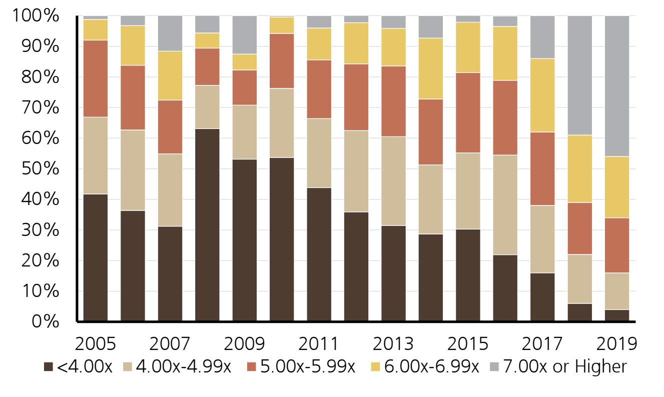
Source: S&P LCD, UBS

Figure 6: Projected vs. realized leverage for B rated deals (2015, 2016 deals)



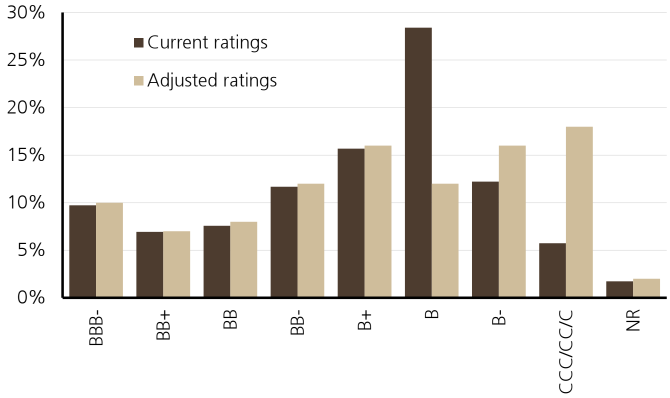
Source: S&P, UBS

Figure 7: Distribution of LL deals by total leverage ratio (estimated ex-addbacks)



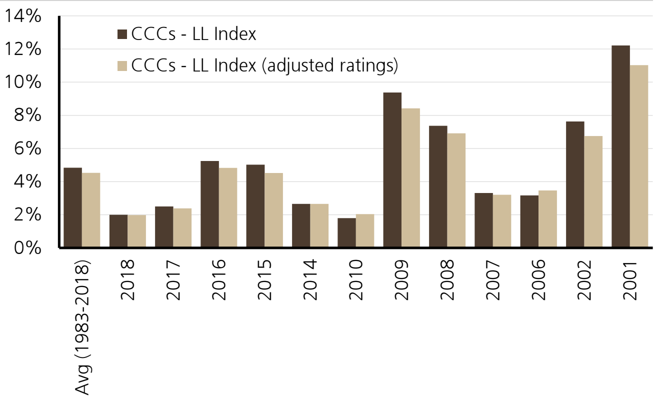
Source: S&P LCD, UBS

Figure 8: US LL index: current vs. adjusted ratings distribution



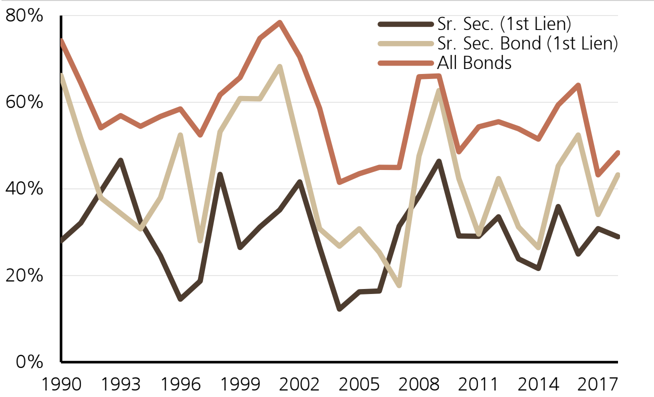
Source: S&P LCD, UBS

Figure 9: Projected increase in triple C debt annually for the current and adjusted LL index (using historical transition rates and prior years, % of total)



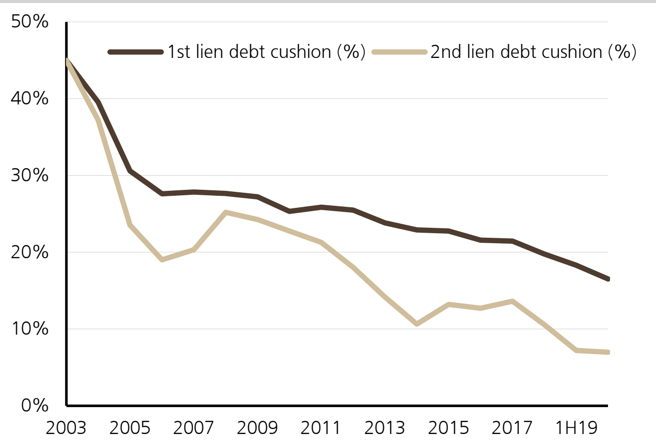
Source: Moody's, S&P LCD, UBS

Figure 10: Senior secured loan, secured bond, and all bond recovery rates



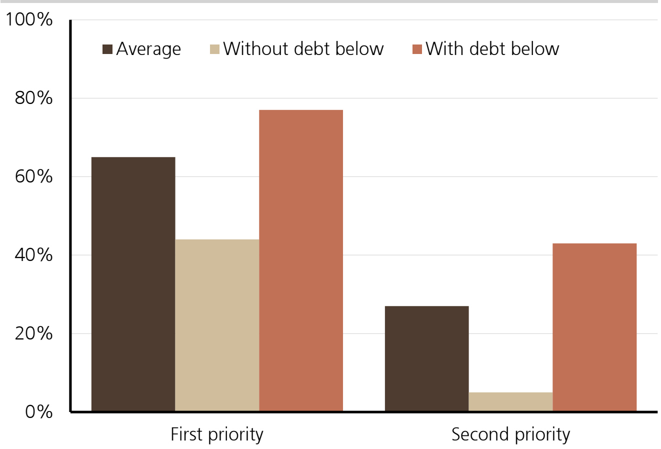
Source: Moody's, UBS

Figure 11: Loan debt cushions (share of total debt below the 1st and 2nd liens, %)



Source: S&P LCD, UBS

Figure 12: Recovery rates: first vs. second priority debt with and without debt cushion



Source: Moody's, UBS

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