Health of the Leveraged Loan Issuer white paper series

Part II: Impact of Higher Interest Rates on Leveraged Loan Issuers

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Key Takeaways:

(1) We assess the sensitivity of higher interest rates on leveraged loan defaults by looking at the highest risk/most vulnerable subset of leveraged loan issuers – private equity owned LBO issuers
(2) **With a normalized growing economy, an approximately 400 bp increase** in short-term rates (from YE 2021) would be required before a sharp uptick in loan default rates for LBO issuers
(3) **In the case of a recessionary economy, only an approximately 150 bp increase** in short-term rates (from YE 2021) would be required. This assumes a rapid bounce back from a recession (in other words, a prolonged recession would result in a sharp uptick in defaults regardless of a rate increase).
(4) The stability of LBO issuers from rising rates in a normalized growing economy should inspire confidence in the resiliency of the broader leveraged loan universe.
(5) We are working on an additional white paper, to be released in several weeks, combining this rates-up analysis with the actual U.S. economic outlook.

Introduction:

In August 2021, we published a white paper titled, "Why Credit Ratings for Leveraged Loan Issuers Have An Overly Conservative Bias". We argued that the current rating composition of the leveraged loan universe implies a forward default rate that is significantly **in excess of our expectations**. We concluded that there are 3 reasons why leveraged loan issuers are healthier than what their credit ratings imply:

(1) The historically low interest rate environment;
(2) The historically high enterprise valuation multiples; and
(3) The changes in industry composition from more capital-intensive issuers to less capital-intensive issuers.

With rising rates now on everyone's mind, we wanted to return to our original analysis to assess the potential impact of rising rates on the credit quality of leveraged loan issuers. Our goal is to determine the interest rate at which we should expect a spike in leveraged loan default rates. To do this, we have segmented our analysis in two ways:

(1) <u>Isolate LBO Issuers</u>: Our original white paper used average credit origination data for the entire LCD universe as the basis of our analysis. However, to assess vulnerability to increased interest expense, we decided to use average credit origination data for the riskiest tier of the leveraged loan issuers (i.e. private equity owned LBO issuers). These issuers have the highest amount of leverage at origination and are typically rated B-. In addition, for the past several months, rating

agencies have been ringing the alarm bells about the aggressiveness and volume of origination from issuers owned by private equity sponsors[1].

(2) GDP Growth (Normalized Economy) vs. GDP Contraction (Recessionary Economy): We are projecting 2023 EBITDA for both a normalized and recessionary economy.

Breakeven Analysis:

To model hypothetical Company ABC, we use LCD's historic average origination leverage of LBO issuers. We then use that leverage multiple to calculate total debt.

Company ABC (using LCD's average credit metrics of LBO issuers) at Historic and Forecasted Leverage Multiples:

	YE 2000	**YE 2007**	**Q4 2021**	*YE 2022*	*Q2 2023*	**Q2 2023 Normalized Economy**	**Q2 2023 Recessionary Economy**
EBITDA ($M)	100	100	100	100	100	114	75
Leverage (Debt/EBITDA)	4.2	6.23	5.9	5.9	5.9	5.2	7.8
Total Debt (EBITDA x Leverage)	420	623	588	588	588	588	588

Note: Normalized Economy EBITDA of (+14%) and Recessionary Economy EBITDA of (-25%) are derived by using historic (going back to 2001) average EBITDA growth during non-recessionary periods and average EBITDA contraction at the onset of a recession for public leveraged loan issuers.

Methodology to Assess Impact of Rate Increases:

Interest Rate Assumptions: For YE 2022 and Q2 2023, we are using a cumulative sum of a 150 bp rate increase. This increase is the median of the Federal Reserve's Dot Plot[2].

Cash Flow Coverage Ratio (EBITDA – Interest Expense)/Debt: In order to determine vulnerability to increased interest rates, we solve for a component of free cash flow that we are calling the "cash flow coverage ratio": [EBITDA – Interest Expense) as a percentage of Total Debt. This ratio provides us with the impact of both overall leverage coupled with the impact of interest rates on cash flow. We also factor in the interest coverage ratio, but to a lesser extent than the cash flow coverage ratio.

[1] Moody's Investors Service *Leveraged Finance - US* research titled "Private Equity Financial Policy: Pressuring credit quality and creditor protections" on December 16, 2021 by Christina Padgett, Evan Friedman, Derek Gluckman, et. Al.

[2] Federal Open Market Committee Meeting Minutes December 14-15, 2021: Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents, https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20211215.pdf, Page 2, Table 1

YE 2000 and YE 2007: To forecast the likelihood of the next default cycle, we compare current and projected credit ratios to those **from the years prior to the last 2 default cycles: YE 2000 and YE 2007**.

Impact of 6-Month LIBOR (SOFR from Jan 1, 2022)[3]

	YE 2000	YE 2007	YE 2021	YE 2022	Q2 2023	Normalized Economy Breakeven	Recessionary Economy Breakeven
6-Month LIBOR	6.20%	4.60%	0.31%	1.31%	1.81%	4.40%	1.75%
Interest Expense (@400 bp spread) ($M)	43	54	25	31	34	49	34
Interest Coverage Ratio (EBITDA/Int Exp)	2.3	1.9	3.9	3.2	2.9	2.3	2.2
Cash Coverage Ratio (EBITDA-Int Exp)/Debt	13.6%	7.5%	12.7%	11.7%	11.2%	11.0%	7.0%

Note 1: Fed Dot Plot Forecast

Note 2: No change in EBITDA, Leverage, or Total Debt from previous table

Normalized Economy Breakeven: In an environment of normally expanding EBITDA, this cohort of the highest risk issuers can absorb a sizeable interest rate increase without much deterioration in the cash flow coverage ratio. In interest rate terms, that is equal to 4.40%, a 409 bp increase from YE 2021.

Recessionary Economy Breakeven: In an environment of contracting EBITDA (-25% total), we believe that this LBO cohort has much less cushion and could only sustain an increase to 1.75%, equal to a 144 bp increase from YE 2021. This breakeven point is within the 150 bp increase projected in the Fed's Dot Plot forecast. The estimate is based on our analysis of EBITDA and revenue recoveries of leveraged loan issuers subsequent to previous recessionary periods.

Under the recessionary economy scenario, a rapid recovery in GDP growth and EBITDA would be required to avoid a larger spike in defaults. However, a period of prolonged recession would inevitably lead to a spike in defaults regardless of the short-term interest rate.

Findings:

Our analysis has:

(1) Used credit metrics for the higher leveraged cohort of LBO issuers to model the cash flow and credit profile of a hypothetical company (Company ABC);
(2) Stressed Company ABC with a 150 bp rate hike;

[3] Leveraged loans beginning in 2022 and ending June 30, 2023 are undergoing a transition period to reference SOFR instead of LIBOR. However, we have continued to use LIBOR for consistency purposes as we do not expect the transition to SOFR to materially impact financing costs for leveraged loan issuers.

(3) Estimated a breakeven point in interest rate increases under a scenario of a normalized growing economy and also a recessionary economy.

We conclude that:

(1) In a normalized growing economy, interest rates could increase approximately 400 bps from YE 2021 before we would see a sharp increase in leveraged loan default rates.
(2) In a recessionary economy, with contracting GDP and a 25% decrease in EBITDA, interest rates could increase approximately 150 bps from YE 2021 before we would see a sharp increase in leveraged loan default rates. However, in a prolonged recession, regardless of rates, there will be a spike in defaults.

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