Credit
Market
Insights

Q4 2018

BainCapital
CREDIT

Addressing Concerns in the Loan Market

Introduction

In the past several quarters we have received inquiries from our investors regarding the current state of the loan market. Specifically, we have been asked to address the following topics, among others:

- Growth in the below-investment grade credit markets
- Increased covenant-lite loan issuance and its effect on recoveries
- Fundamentals of issuers in the leveraged loan market
- Rising interest rates and the impact on bank loans
- CLOs versus GFC-era ABS

We believe these are all fair concerns that deserve a thoughtful explanation, so we felt it would be appropriate to provide our thoughts on each. We welcome the opportunity to discuss these topics further with you.

Credit Market Growth

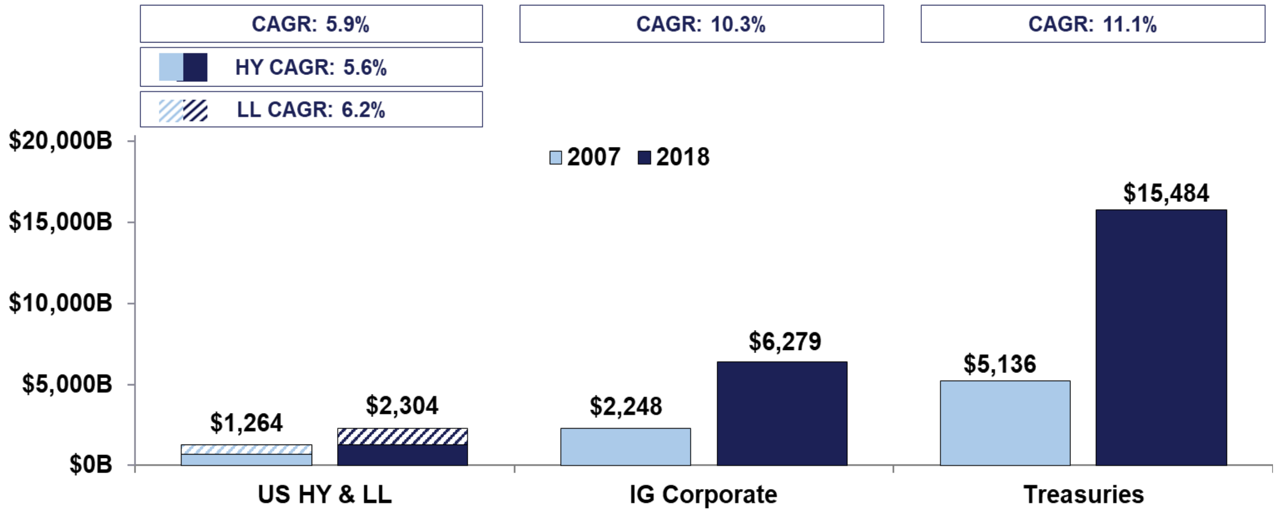
Since 2007, US leveraged loan and high-yield bond markets have grown considerably. Low interest rates in the developed world, positive economic momentum in the US, and yield-seeking investor behavior all contributed to growth in credit markets globally. To gauge this growth as excessive or not, we can look at 1) growth relative to other asset classes and 2) changes in fundamentals, since signs of a "bubble" would certainly leak into credit statistics (leverage, interest coverage, etc.).

High-yield bonds and leveraged loans combined have grown from $1.3 trillion to $2.3 trillion from December 31, 2007 to June 30, 2018, equivalent to a compound annual growth rate ("CAGR") of 5.9%. Over that same time period, investment grade ("IG") credit grew from $2.2 trillion to $6.3 trillion or 10.3% annually. One interesting observation within IG is the decrease in quality over the time period, as the BBB-rated bond portion of the index grew from 35% to nearly 50%,[1] compared to high yield and loans whose average quality distributions were relatively unchanged. Finally, the US Treasury market grew from $5.1 trillion to $15.5 trillion, at an average annual rate of 11.1%. In other words, while sub-IG credit has experienced substantial growth in the past decade, compared to both IG credit and US Treasuries, the growth is relatively moderate.[2]

Represents Bain Capital Credit's view as of the date of this document and is subject to change.

[1] Data as of June 30, 2018. Source: ICE Data Indices; ICE BofAML US Corporate Index.

[2] Data as of December 31, 2007 and September 30, 2018. Source: Bloomberg, LSTA and Federal Reserve Economic Data. US HY data shows the face value of the ICE BofAML US HY index. LL data shows the LSTA US LL face value. US IG is the ICE BofAML US Investment Grade index face value. Treasuries shows publicly held treasury securities from Federal Reserve Economic Data.



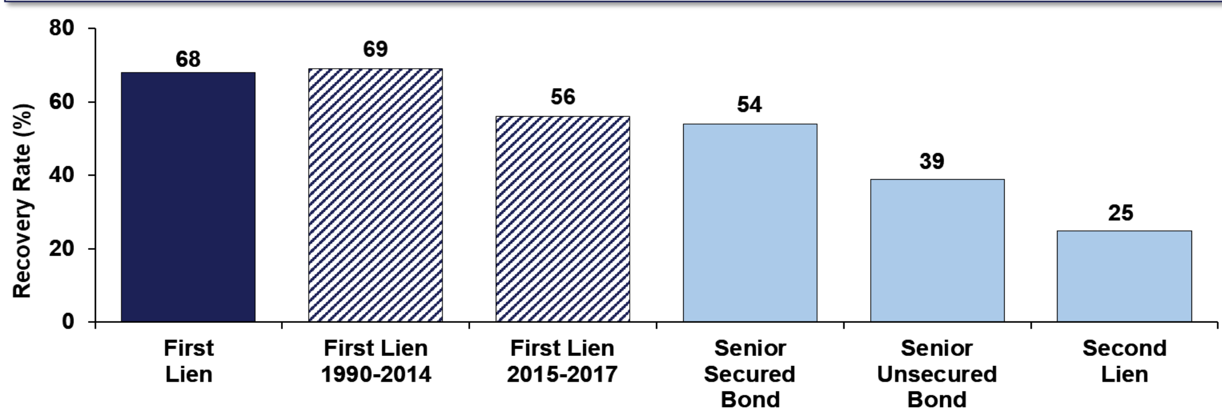
This, in and of itself, should not mitigate concerns, as leverage is a function of both the level of debt and its size relative to earnings. We expand on this in the Leverage section below, but, in short, leverage (debt/EBITDA) in outstanding loans has remained relatively stable over the past several years. This is in contrast to new-issue debt, which has come to market at increasingly higher debt multiples. We believe that, while credit growth is a risk factor that must be monitored, the fundamental and macro backdrop has been supportive of this growth.

Covenant-lite Loan Issuance

We have witnessed the weakening of loan documentation in recent years, exemplified by the growth in covenant-lite (”cov-lite”) loan issuance. “Cov-lite” is a term that refers to a loan without maintenance covenants, or financial covenants that are required to be tested on a quarterly basis. Over the past several years cov-lite loans have become the market standard. Interestingly, the paradox today is that there is generally a negative correlation between credit quality and covenants, as lower-quality issuers are often only able to borrow money with covenants. Nonetheless, we have been monitoring this trend, as we expect it will have some impact on future loan recoveries.

Historically, senior secured loans have recovered 68% on average. While we do believe weaker documentation will impact future recoveries, it is difficult to quantify the exact impact. Moody’s and Barclays have both attempted to quantify the impact and estimate a range of 4-15 point lower recoveries, which we believe are reasonable estimates. That said, we believe that part of this impact may have already been priced into recent defaults, as average recoveries since the beginning of 2015 have been 56%. It is also instructive to look at long-term recovery rates for secured bonds, which have historically recovered 54% on average. Secured bonds typically do not have maintenance covenants (i.e. are “covenant-lite”) and therefore are a good proxy for the potential impact of weaker documentation on loan recoveries.[3]

Long-Term Recovery Rates



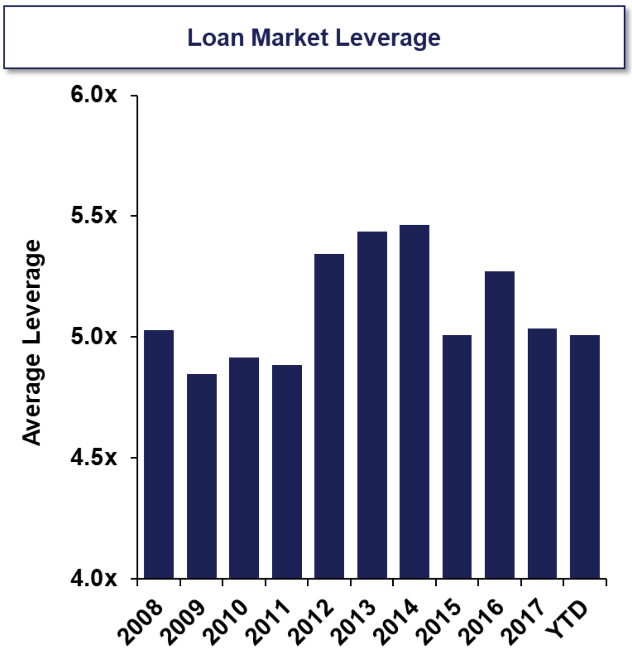
[3] Source: Courtesy of J.P. Morgan Chase & Co., Copyright 2019. Chart data as of December 31, 2018 Shows annual average recovery rate from December 31, 1990 to December 31, 2017 for First Lien, Senior Secured, and Senior Unsecured and December 31, 2008 to December 31, 2017 for Second Lien. Recovery rates are issuer-weighted and based on price 30 days after default.

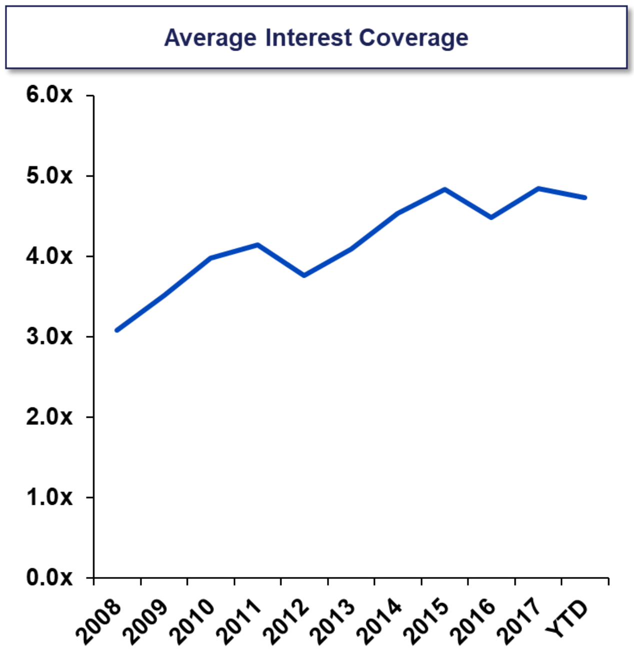
While a 10-15 point lower recovery may sound like a significant impact on the market, it is important to keep it in context. First, if it is true that 1st lien loan recoveries are lower in the next cycle, it is also likely that junior capital (unsecured high-yield bonds and 2nd lien loans) recoveries will also be lower. Historically these have averaged 20%-40% recoveries. Second, in order to compensate loan investors for 10-15 point lower recoveries, it would require an incremental 30-50bps of spread or yield.[4] Finally, in our experience, companies do not default due to covenants, but rather due to idiosyncratic and/or specific industry challenges. Far more important than the existence/quality of covenants is getting the credit analysis correct, which is our day-to-day focus.

In addition, in any given period, only a small percentage of the market is in default or approaching default. In the 10-year period of 2008-2017 the average annual default rate according to JPM was 3.1%, including 2009, a year with a 12.8% default rate. In other words, there is a deep pool of issuers in which to invest with lower (but not zero) probabilities of default. Beyond maintenance covenants, there are other covenants and protections (e.g. limitations on restricted payments) found within credit agreements. At the time of our underwriting, understanding these other covenants is a key element that goes into our overall decision on whether or not to lend to a particular issuer.

Leverage Levels in the Loan Market

While new-issue senior loan leverage has reached pre-crisis levels, total outstanding loan leverage has actually declined in recent years. Over a similar time period, interest coverage ratios have also improved.[5] [6]





This is due in part to the growth in corporate earnings, which has produced natural deleveraging for many issuers. That said, we recognize that we are in the midst of the second longest economic expansion in US history and with that come late-cycle signals, such as high new-issue leverage, less subordination in syndicated deals, and elevated M&A activity. Subsequently, in our liquid portfolios we maintain a relatively cautious stance on the market and are holding a diversified, higher quality, and more liquid pool of issuers compared to the overall market, while being cognizant of factors such as loan-only capital structures and sponsor- versus corporate-owned businesses.

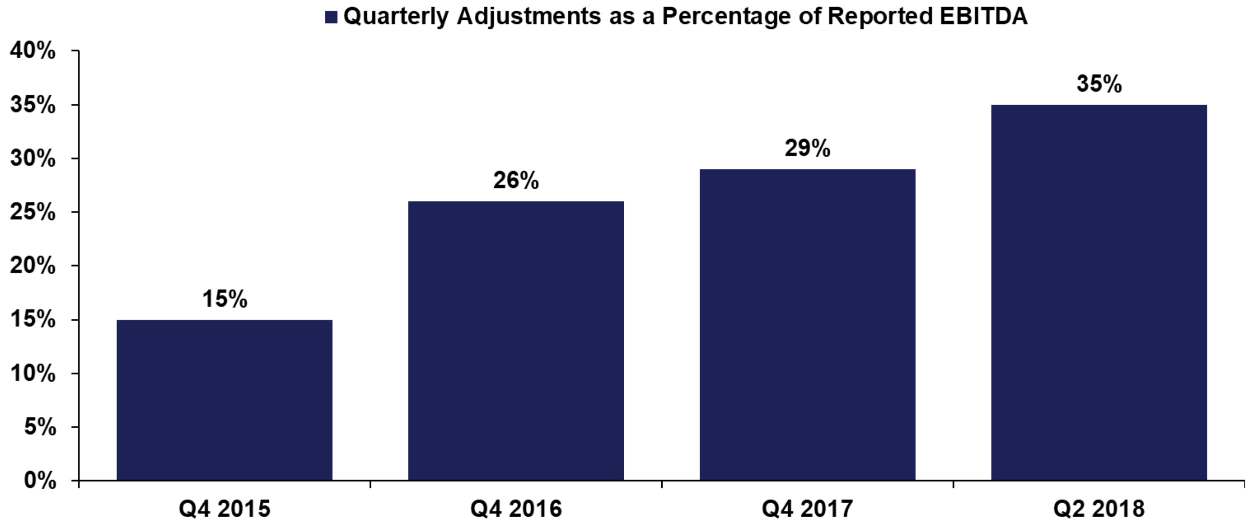
Increase in Pro-Forma EBITDA Adjustments

Pro-forma EBITDA adjustments, or the practice of eliminating one-time costs or expenses in financial reports, have increased in recent periods. These adjustments, or "add-backs," are typically applied to remove one-off or

[4] We believe the correct way to think about spreads or yield in the loan market is with loss-adjusted spreads or yields. To do this simply take the existing spread of the loan market (e.g. 3.5%) and subtract the loss adjustment, which is the long term default rate (3%) times the expected loss from defaults (if recoveries trend to 55% then losses are 45%). 3.5% – (3%* 45%) = 2.15%.
[5] Data as of June 30, 2018. Source: LCD, an offering of S&P Global Market Intelligence
[6] Data as of September 30, 2018. Source: LCD, an offering of S&P Global Market Intelligence; S&P/LSTA Leveraged Loan Index.

extraneous costs that are unlikely to occur in the future. For example, a company may add back the cost of a severance package paid to an outgoing executive or expenses associated with a merger. More recently, add-backs have grown and become increasingly aggressive, especially in acquisitions. In Q2 2018, EBITDA adjustments associated with acquisitions averaged 35%, up from 15% in Q4 2015. At face value, these have the effect of increasing EBITDA, thus improving associated metrics, including leverage. Taking it one layer deeper, some covenants may rely on leverage levels to trigger certain credit events. An inflated earnings figure may distort this risk management process embedded in loan agreements.[7]

EBITDA Addbacks



We find this development to be a "sign of the times" rather than a major risk to how we conduct our underwriting. Our team of industry researchers performs line-by-line level due diligence and accounts for misleading financial reporting tactics, such as EBITDA add-backs. When making final decisions on whether to buy, sell, or hold a specific credit, our analysis will be based on what we believe to be the true EBITDA figure rather than an adjusted one.

Risk to Leveraged Credit

The largest risk exposure in a loan portfolio is credit risk. A macroeconomic event that would negatively impact the market's pricing of credit risk would have an adverse effect on our loan portfolios. Given the current market environment and our conservative stance, we believe we are well positioned to capitalize on future volatility as it can often lead to investment opportunities. In addition, volatility can drive an improvement in document standards, should the supply/demand picture shift in favor of lenders.

It is unlikely that the next default wave will look exactly like those we have experienced in the past. However, we believe there are a few scenarios that could contribute to the next default cycle:

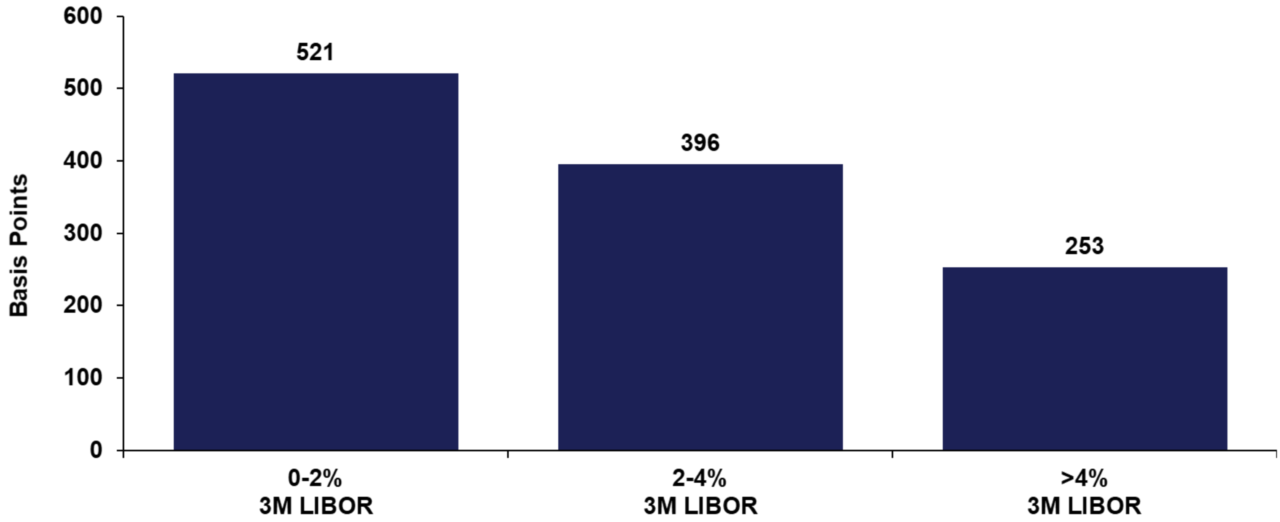
Scenario	Near Term Probability	Explanation
U.S. economy moves into a recession	Low	Supportive current economic and financial conditions: strong GDP and earnings growth, healthy employment, open capital markets and accommodating lending by banks in all sectors
Interest rate spike	Medium	Interest rate spikes, caused by the Fed explicitly hiking rates too quickly or inflation scares, can create volatility and negatively impact companies with floating-rate obligations
Industry challenges	Medium to High	Specific industries such as Retail, Utilities, and Autos are experiencing challenges that could impact performance in the leveraged loan market

[7] Data as of June 30, 2018. Source: Covenant Review. Shows adjustments across M&A.

Loans in a Rising Rate Environment

Generally speaking, a stable rising-rate environment is a positive signal for risky assets, including credit, as the Federal Reserve typically hikes rates in response to an improving economy. While rising interests may be good for credit spreads broadly, each sector will be impacted differently. From a pricing standpoint, IG fixed income assets typically experience the largest negative impact due to their long duration compared to other sectors. High-yield bonds normally experience yield increases partially offset by spread compression. This often leads to moderate price declines, but with positive total returns due to the high carry available in high-yield bonds. Leveraged loans have historically weathered rising rates better than most assets, primarily due to their floating-rate coupons. As interest rates increase, so do coupons paid to lenders, thus increasing expected total return. To illustrate how loans typically behave in rising-rate environments, the exhibit below shows average historical loan spreads at different levels of LIBOR. Historically, higher LIBOR rates have been supportive of loan spreads.[8]

Loan Spread by Base Rate



In a scenario where IG yields are increasing, leveraged loan and other sub-IG credit asset class yields are expected to move higher as well. Historically, the yield differential between IG and leveraged loans has remained stable in most periods, preserving relative value between the two asset classes. Given the long duration of IG debt, a narrowing of the yield spread between IG and loans would lead to significant outperformance by loans.

As mentioned in *Credit Market Growth* section above, IG has also gravitated lower in credit quality (BBB IG bonds have seen the most significant growth), so any comparison of yields in the IG market today to prior periods should be done on a quality-adjusted basis.

Difference Between CLOs and Crisis-Era ABS[9]

On the surface, it would be easy to associate the letters “CLO” with other complex financial instruments that suffered steep losses in the fallout of the GFC. Indeed, several media outlets have recently commented on the growth in CLOs, drawing comparisons to sub-prime mortgage-backed securities (“sub-prime MBS”), even going so far as to say that they could trigger the next downturn. We believe it is important not to confuse cash flow CLOs with structures employing mark-to-market leverage or collateralized debt obligations such as ABS CDOs. There are a few reasons why we believe this:

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[8] Data from January 1, 2001 to September 30, 2018. Using the 3-Month LIBOR as the base rate. Source: Federal Reserve Economic Data and Credit Suisse.

[9] Any prospective investor should review a CLO’s offering documents for specific terms, representations, and other disclosures.

Diversification
CLOs generally benefit from a high level of company and industry diversification. A typical CLO will hold between 150-400 unique issuers. These issuers span geographies, industries, maturity, and quality, leading to lower correlation among CLO holdings. Although sub-prime MBS in the GFC consisted of thousands of underlying mortgages, they were exposed to primarily one sector – housing. As home prices declined, many of these structures and associated derivatives suffered, which triggered a chain reaction in the investment and banking sectors. CLOs during this time period exhibited mark-to-market volatility, but a significant majority of the structures performed well and experienced few, if any, losses.

Senior Secured Investments
Unlike pools of residential mortgages, CLOs primarily invest in first lien, secured loans of a diverse pool of corporate borrowers. The secured nature of the loan, along with the creditor's position in the company capital structure, typically results in higher recoveries should a company run into financial difficulty.

Structural Enhancements
We believe CLOs are structured to withstand periods of volatility better than their sub-prime counterparts do. For one, CLOs are actively managed, whereas sub-prime MBS were static securitizations that had limited means of weathering volatility or losses. CLOs are able to buy and sell credits, and reinvest proceeds for a pre-determined period of time, allowing collateral managers to add alpha and/or avoid poor credits. Second, because CLOs have a reinvestment period, prepayments are reinvested into the loan market. In loan markets with elevated defaults, typically these reinvestments will occur at discounted prices, enabling the managers to offset losses. In addition, the net interest margin will be used to buy new collateral, further offsetting portfolio losses. Another benefit of CLO debt is term-financing, which is not subject to mark-to-market volatility of the assets. In other words, CLO debt covenants are based on the par value of loans rather than market value. As an example, CLO debt covenants related to cash flow are based on whether assets are currently paying their coupon. This robust structure means that, in many scenarios, holders cannot force a CLO to sell assets, which is a powerful attribute in times of volatility. These structural enhancements are some of the reasons why CLOs differ from GFC-era sub-prime MBS.

Financial Crisis Performance[10]
An examination of historical performance reveals that CLOs proved resilient during the 2008 financial crisis, due in part to the characteristics listed above. An S&P study conducted for the 20-year period 1994-2013 shows that CLOs experienced very few defaults and minimal losses over that time. Importantly, no tranche in the study rated AAA or AA at new issue experienced a loss through the observed period, even during the GFC years of 2008 and 2009. According to S&P, only 25 tranches across all categories have had their rating lowered to D, resulting in a cumulative default rate of 0.4%.

U.S. CLO Defaults and Losses: 1994-2013

	Total Tranches	Defaulted Tranches	Default Rate	Loss Rate
AAA	1,992	0	0.0%	0.0%
AA	1,005	0	0.0%	0.0%
A	1,119	5	0.5%	0.1%
BBB	1,069	3	0.3%	0.2%
BB	841	14	1.7%	0.8%
B	115	3	2.6%	1.1%
Total	**6,141**	**25**	**0.4%**	**0.0%**

The Investment Case for Leveraged Loans

We believe that the loan asset class, and sub-IG broadly, should be viewed by institutional investors as long-term allocations alongside other liquid and less liquid traditional and alternative assets. We believe this is true for a few reasons:

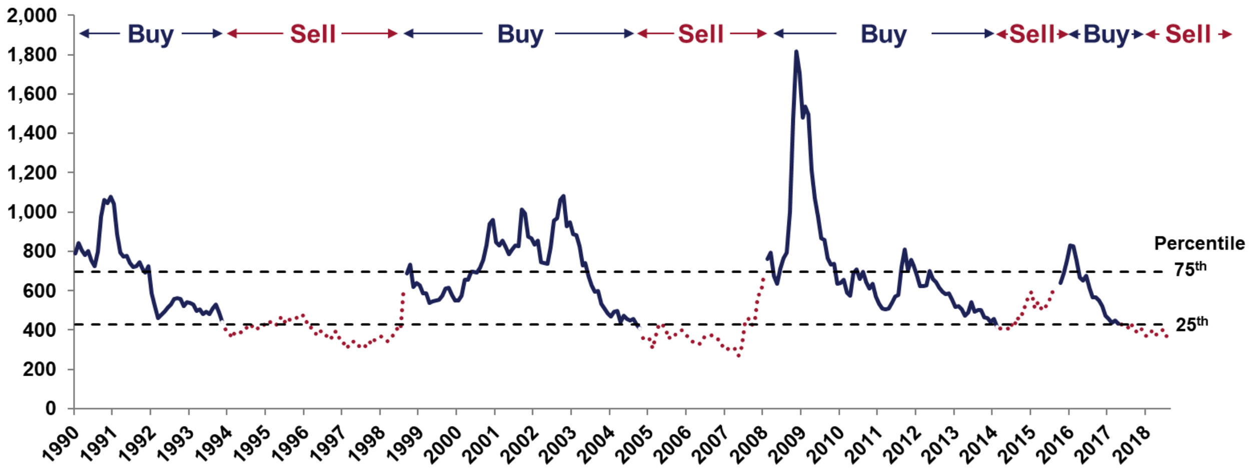
1. Historical returns: leveraged loans have provided high current income and attractive risk-adjusted and total returns historically[11]

[10] Source: S&P ratings "Twenty Years Strong: A Look Back at US CLO Ratings", published January 31, 2014.
[11] Source: Bain Capital Credit analysis.

2. Floating-rate: loans have low interest rate sensitivity, and coupon payments increase as rates rise
3. Senior in capital structure: relative to high-yield bonds and other subordinated debt, leveraged loans are higher in the capital structure and receive priority in the event of default
4. Presence of CLOs: approximately 50% of the loan market is owned in CLO structures which provide a long-term, stable base of demand that does not exist in many other fixed income asset classes

Finally, as a long-standing investor in sub-IG credit, we believe that maintaining an allocation to the sector through cycles, rather than attempting to time the market, is a preferable strategy. We conducted an analysis to demonstrate this point using high-yield bonds, due to their lengthier available track record. Historically, an investor who holds high-yield bonds through the full period is better served than an investor who moves in and out of cash when valuations meet certain thresholds (25th and 75th percentile in the analysis). However, shifting between CCC- and BB-rated bonds – a proxy for actively rotating quality at different points in the cycle – has historically added value.[12]

Illustrative High-Yield Spread and Investment Strategy Return (bps)



Strategy	Annualized Return	MoM
Always Hold	8.7%	10.7
Market Timing – With Cash	8.1%	9.2
Market Timing – BB vs. CCC	9.0%	11.8

[12] Data as of August 31, 2018. Source: Credit Suisse. Returns are annualized from January 1, 1990 and are gross. Spread is spread to worst. Market timing – with cash strategy defined as holding the Credit Suisse High Yield Index until spread reaches 25th percentile and then moving to investing in 3-month Treasury bills until high yield spread hits its 75th percentile. Market timing – BB vs. CCC timing defined as holding the Credit Suisse High Yield Index BBs until spread reaches 75th percentile and then moving to investing in Credit Suisse High Yield Index CCCs until high yield spread hits its 25th percentile.

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