

Bank Loans Position Paper

June 2019

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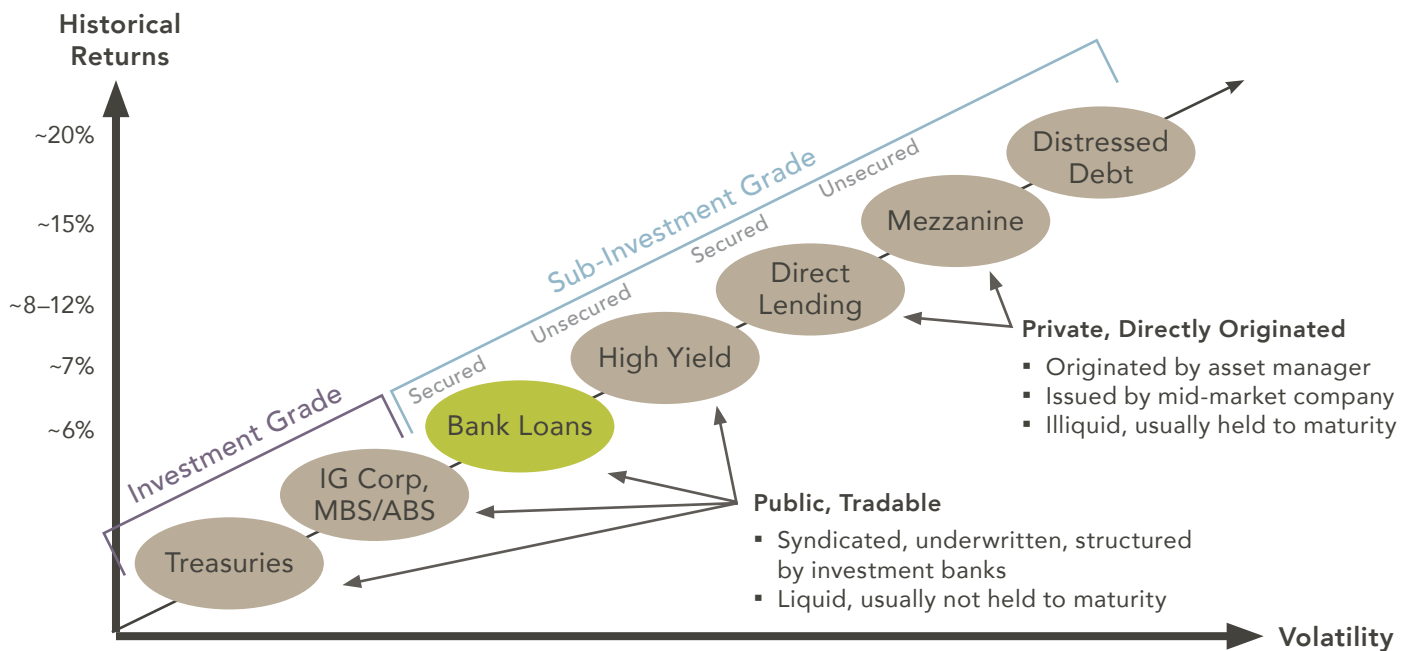


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AN INTRODUCTION TO BANK LOANS

Bank loans are a source of financing for corporate borrowers with a wide range of purposes. Companies utilize bank loans for new project investment, acquisitions or restructurings. Private equity investment firms utilize bank loans as a means to finance leveraged buy-outs (LBOs). They do this by issuing the bank loan through the target company they are buying out. The loans are underwritten and syndicated by large commercial and investment banks. On the risk-return spectrum, bank loans are between investment grade bonds and riskier credit such as high yield bonds, direct lending, mezzanine debt and distressed debt. The key difference between bank loans and high yield bonds is that bank loans are secured by the assets of the issuer while high yield bonds are not.

Exhibit 1: Fixed Income Risk-Return Spectrum



IG Corp = investment grade corporates; MBS = mortgage-backed securities; ABS = asset-backed securities

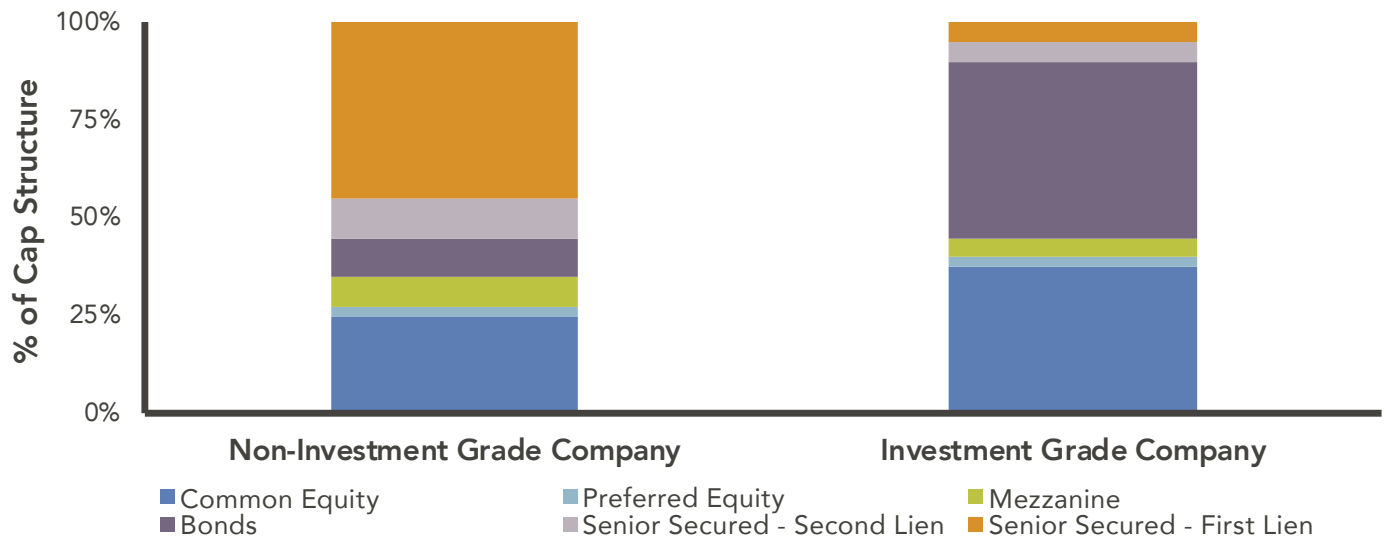
Borrowers may be classified into two main categories: investment-grade and non-investment grade. Investment-grade borrowers (BBB-/Baa3 rating or higher) have well-established relationships with banks willing to lend to them at very low interest rates due to the borrower's high credit rating. The yield generated on bank loans between the higher-rated companies and banks is not attractive to investors outside this relationship. These loans are typically revolving lines of credit upon which the investment-grade borrower can draw as needed. Investment-grade companies typically utilize bank loans for a relatively small amount of their capital structure and generally issue bonds or offer equity for most capital needs.

Bank loans for non-investment-grade borrowers (below BBB-/Baa3 rating) are very different from loans for investment-grade borrowers and give rise to attractive investment opportunities for institutional investors. Non-investment grade companies use a higher percentage of bank loans relative to other forms of raising money within their capital structure. Depending on business strategy, public/private status, sophistication and many other factors, these companies use a wide range of capital structures to incorporate bank loans.

As described later, banks initiating the loans with non-investment grade companies will reduce their risk exposure of holding a large amount of low credit quality loans by offering portions, or tranches, of these large loans to other banks, financial institutions, insurance companies, and investment management firms. Working with the borrower, this "syndication" process naturally creates different asset classes with their own diverse credit and

interest rate risk, yield, and correlation characteristics. These tranches include senior secured (first and second lien), senior unsecured, and various levels of subordinated loans. Due to the abundant attractive qualities of the senior secured¹ tranche of loans, the majority of the remaining discussion will focus on this asset class. Exhibit 2 provides an example of the capital structures within an investment-grade company and a non-investment-grade company; most striking is how bank loans constitute a much larger portion of the capital structure for non-investment grade companies.

Exhibit 2: Company Capital Structure



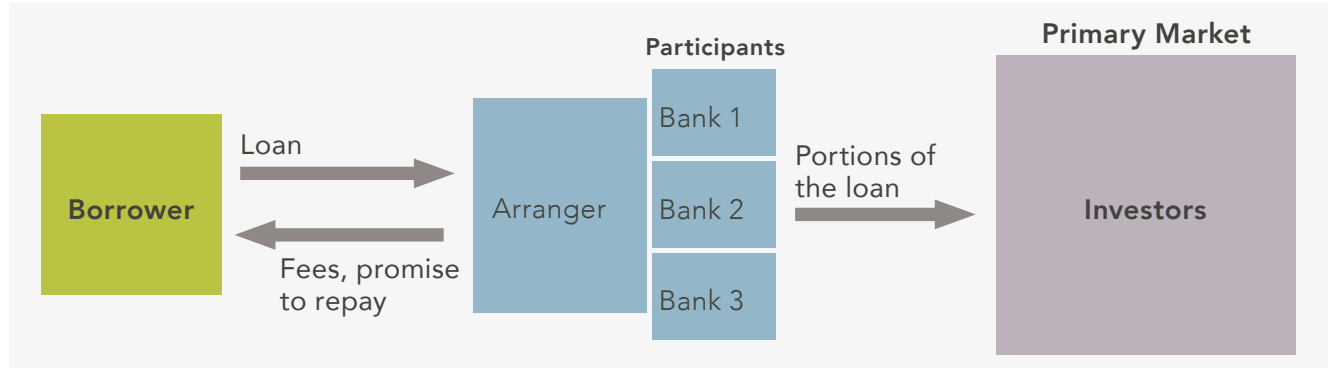
When non-investment grade companies seek loans from the large commercial or investment banks, they naturally must accept higher floating coupon rates. Companies utilizing senior secured loans generally settle for a rate associated with the London Interbank Offer Rate (LIBOR) plus a spread that will offset the credit risk of loaning money to a non-investment grade company. The coupon rates usually range from LIBOR+300 basis points to LIBOR+600 basis points. These senior secured loans are full legal agreements between the lenders and borrowing companies, and typically include strict covenants.² The issuance of covenant-light³ loans has been ascending since the 2008 financial crisis in conjunction with the market’s reach for yield. However, this has primarily been due to the structural change of bank loans as an asset class going from more like private credit 10 years ago to more like high yield bonds today. The difference is that private credit has heavy covenants since they are privately negotiated and traded, while high yield bonds have little to no covenants since they are publicly negotiated and traded.

HISTORY

Senior secured loans as an asset class emerged in the early 1990s due to many catalysts from the late 1980s including new technology, new government regulation, and increasing sophistication of institutional investors.⁴ From the mid-to-late 1980s, merger and acquisitions (M&A) and LBO activity rose significantly.⁵ To participate in these financial transactions, companies utilized larger and larger loans from commercial and investment banks. These loans were attractive to borrowers because they provided flexible sources of capital that were relatively quick to raise, without the disclosure requirements of the traditional bond market. The banks issuing these loans enjoyed a short period of exclusive loan investing that generated a high amount of yield. At the end of the 1980s, the Office of the Comptroller of the Currency, the FDIC, and the Federal Reserve enacted regulations to limit the amount of highly leveraged transaction loans that the banks could hold. This dampened the M&A and LBO

boom, but gave rise to loan syndication. Loan syndication involves multiple different lenders in one loan. As shown below in Exhibit 3, an arranger (lead bank) originates the loan, and works with participants (typically other banks) to provide funds for the borrower. Portions of the loan are then sold to investors in the primary market.

▾ **Exhibit 3:** Loan Syndication



In the primary market, a senior bank will originate a loan and arrange the syndication. By arranging syndication, senior banks can avoid regulatory and risk issues arising from holding concentrated positions, as well as receive fee income. Junior banks may participate because they lack origination capacity, or to build a relationship with the borrower (usually with the intent to earn more lucrative business from the borrower in the future).

By the early 1990s, many financial institutions (Citibank, Credit Suisse, Goldman Sachs, etc.) had established a network of trading desks. This network along with a newly formed Loan Syndications and Trading Association (“LSTA”) created a group of market participants and gave rise to a large and robust secondary market. The secondary loan market serves two main purposes: it enables large financial institutions to reduce risk by removing loans from their balance sheets and enables investors to access the leveraged loan market.⁶ The size of the U.S. Leveraged Loan market at the end of 2018 was \$1.1 trillion.

CHARACTERISTICS OF LOANS

Investing in fixed rate bonds involves risks, chief among them interest rate risk and credit risk. While loans have little interest rate risk as they pay floating rate coupons, they are exposed to reinvestment risk if interest rates fall. Because they are issued by below-investment grade companies, loans have more credit risk than investment grade corporate bonds, but less credit risk than high yield bonds as they are higher in the capital structure. Since the loan market is relatively young, liquidity is more dynamic than other sectors of the bond market. Consequently, loans are exposed to liquidity risk, or the risk that an investor may not be able to easily buy or sell an asset, leading to an adverse price or opportunity cost losses. Additionally, while investment grade bonds are typically non-callable and high yield bonds are subject to call penalties, loans are typically callable with few if any penalties.

In this paper, we examine risk in five ways, comparing senior secured loans to investment grade and high yield bonds:

- **Standard Deviation** – We examine bank loan standard deviation, particularly as it has changed in light of the 2008 credit crisis. Care must be used here, as the return distribution of bank loans is non-normal.
- **Credit Risk** – We define credit risk in terms of the default loss rate,⁷ which is the percentage of loans that default adjusted for bankruptcy recovery rate.

- **Liquidity Risk** – While liquidity risk can be difficult to quantify, we examine price fluctuations of bank loans in excess of what would be expected based on the underlying credit risk.
- **Interest Risk** – Though bank loans have little exposure to interest risk, other elements of a traditional fixed income allocation do have interest risk exposure. We will compare the effects of changes in interest rates on bank loan returns and fixed rate bond returns.
- **Reinvestment Risk** – Because loans are floating rate investments, they are exposed to reinvestment risk if rates fall causing income to be reinvested at a lower rate.

Exhibit 4 summarizes the characteristics of bank loans as compared to investment grade and high yield bonds.

▾ **Exhibit 4:** Characteristics⁸

	Investment Grade Bonds	Senior Secured Loans	High Yield Bonds
Security	Unsecured	First Lien	Unsecured
Typical Term	10 Years	5 Years	7 Years
Coupon	Fixed	Floating	Fixed
Prepayment Penalty	Typically non-callable	Minimal	Heavy Penalties/ Call Premiums
Duration (Years)	4.80 ⁹	0.25 ¹⁰	4.39 ¹¹
Default Rate¹²	0.11%	3.28%	4.87%
Recovery Rate^{12,13}	35%	64%	49%
Default Loss Rate^{12,14}	0.07%	1.18%	2.50%
Relative Liquidity	High	Medium/Low	Medium

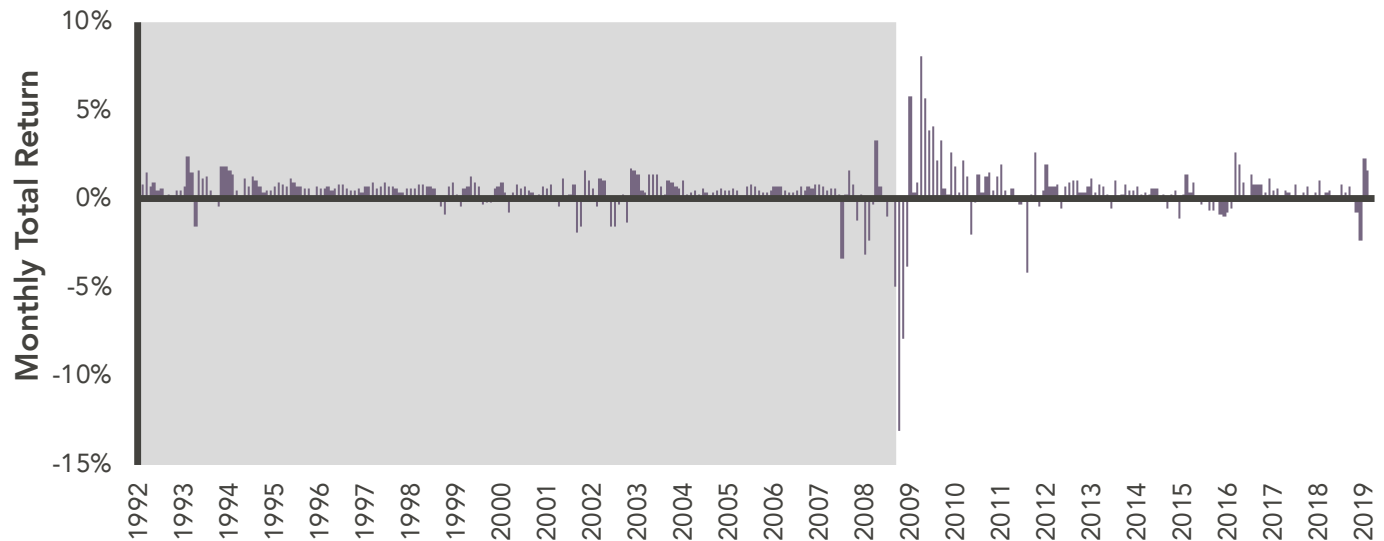
Sources: Moody's, Credit Suisse, Barclays

Note: Investment grade bonds duration represented by Bloomberg Barclays U.S. Aggregate index (default rate, recovery rate and default loss rate from Moody's investment grade corporate bonds based on available data), senior secured loans represented by Credit Suisse Leveraged Loan index, high yield bonds represented by Bloomberg Barclays U.S. High Yield Corporate index

HISTORICAL RETURNS AND CORRELATIONS

For our analysis of historical returns, we use the Credit Suisse Leveraged Loan Index as a benchmark for the institutional loan market as it has the longest history. The historical return profile of senior secured loans changed dramatically following the 2008 credit crisis. Before September 2008, returns for senior secured loans were relatively stable and characterized by low volatility. By the end of 2008, volatility had spiked dramatically, and the asset class experienced the first year of negative returns in its history. Monthly historical returns are shown in Exhibit 5 on the following page. While some of the downturn was driven by the credit risk inherent in the underlying investments, the fall in price was not commensurate with default loss probabilities. In 2008 and 2009, default rates were higher and recovery rates lower than during the trough of the previous credit cycle a decade earlier, but the primary driver of the steep decline in loan prices was liquidity risk. As forced sellers attempted to execute transactions into an illiquid market, prices fell sharply.

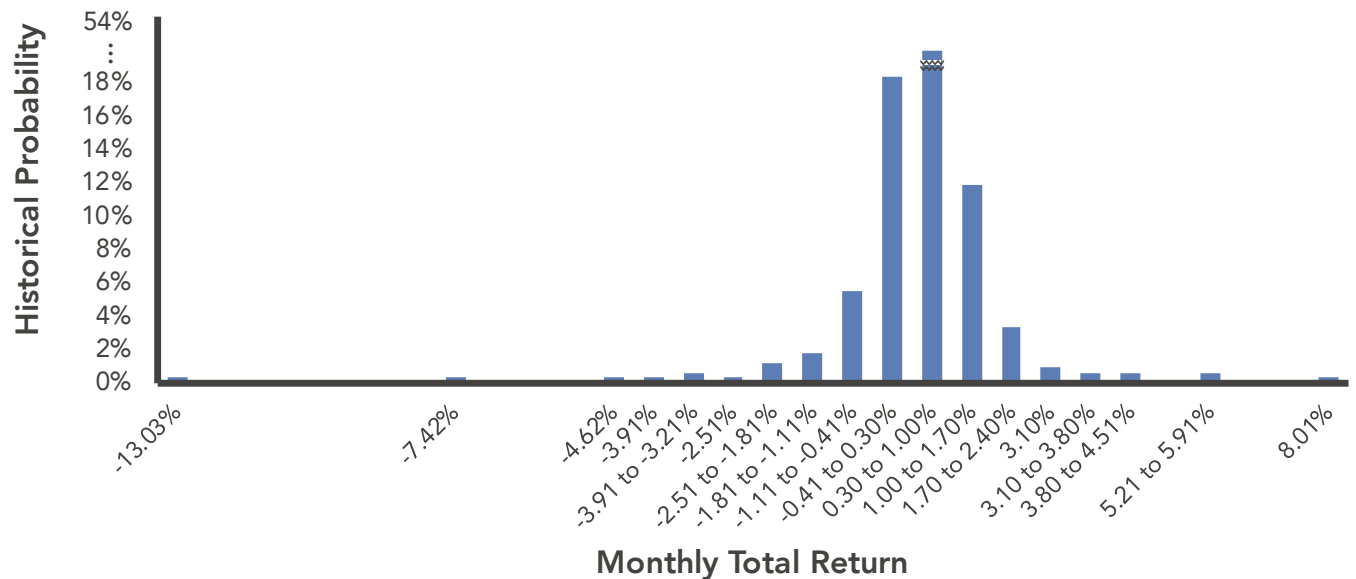
Exhibit 5: Historical Monthly Returns



Source: Credit Suisse as of March 31, 2019

Exhibit 6 shows the historical distribution of monthly returns. The vast majority of returns are steady and positive, with 52.6% of returns between 0.3% and 1.0%. However, the fat tails of the distribution highlight the potential risks of a young market with unpredictable liquidity. Examples of these large outliers in the distribution include a -13.0% return in October 2008 and an 8.0% return in April 2009.

Exhibit 6: Distribution of Monthly Returns



Source: Credit Suisse, 1992–2019

Exhibit 7 (next page) shows a summary of the historical return and standard deviation of bank loans for their total history as well as their pre-financial crisis history compared to other asset classes. Notice how dramatically the risk/return profile changed for loans after the credit crisis of 2008. While previously viewed as a low volatility asset class, the risk/return profile now appears more similar to investment grade bonds. Again, however, it is important to point out that standard deviation misstates historical risk as the distribution of returns is non-normal. In other words, losses tend to be much larger than what the overall average return and standard deviation would suggest.

▾ **Exhibit 7:** Historical Long-term Risk and Return¹⁵

	Bank Loans '92-'19	Bank Loans '92-'08	Inv. Grade Credit '92-'19	High Yield Bonds '92-'19	Large Cap Equities '92-'19	Small Cap Equities '92-'19	International Equities '92-'19
Avg. Return	5.61%	5.96%	5.40%	7.83%	9.48%	9.48%	5.60%
Ret. - Rf	3.10%	2.11%	2.89%	5.26%	6.88%	6.87%	3.08%
St Dev	4.94%	2.68%	3.53%	8.14%	14.01%	18.50%	15.89%
Sharpe	0.63	0.78	0.82	0.65	0.49	0.37	0.19

Source: Bloomberg as of March 31, 2019

Note: Bank loans represented by Credit Suisse Leveraged Loan index, Investment grade bonds represented by Bloomberg Barclays U.S. Aggregate index, high yield bonds represented by Bloomberg Barclays U.S. High Yield Corporate index, large cap equities represented by S&P 500 index, small cap equities represented by Russell 2000 index, international equities represented by MSCI EAFE index

Exhibit 8 shows the historical correlation between bank loans and other traditional asset classes. Loans exhibit a low correlation to investment grade bonds (-0.03) and they exhibit a high correlation to high yield bonds, owing to their credit risk.

▾ **Exhibit 8:** Historical Correlations

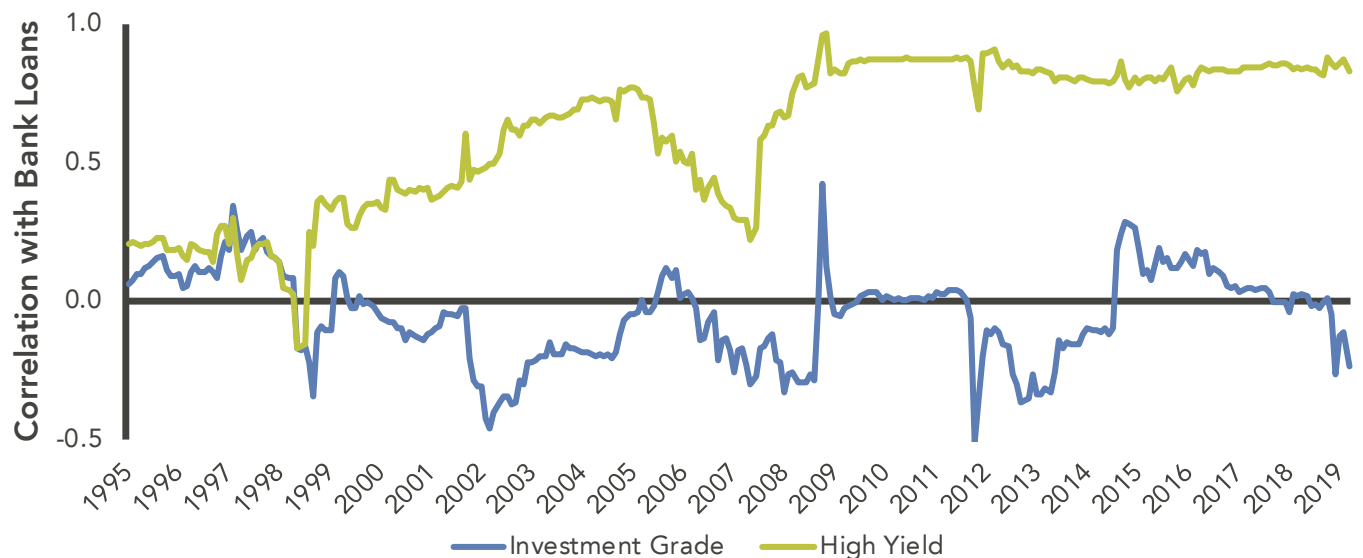
	Bank Loans	Inv. Grade Credit	High Yield Bonds	Large Cap Equities	Small Cap Equities	International Equities
Bank Loans	1.00					
Inv. Grade Credit	-0.03	1.00				
High Yield Bonds	0.75	0.21	1.00			
Large Cap Equities	0.43	0.04	0.61	1.00		
Small Cap Equities	0.44	-0.07	0.62	0.80	1.00	
International Equities	0.45	0.05	0.62	0.79	0.70	1.00

Source: eVestment from January 1992 to March 2019. Correlations were calculated using monthly returns.

Note: Bank loans represented by Credit Suisse Leveraged Loan index, Investment grade bonds represented by Bloomberg Barclays U.S. Aggregate index, high yield bonds represented by Bloomberg Barclays U.S. High Yield Corporate index, large cap equities represented by S&P 500 index, small cap equities represented by Russell 2000 index, international equities represented by MSCI EAFE index

Exhibit 9 (*next page*) shows how this correlation has increased over time as the loan market has matured and become more integrated into the high yield market. While this correlation is unlikely to converge to one as high yield bonds are exposed to interest risk whereas bank loans are not, it does appear that the true correlation was historically understated in the early years due to the loan market's lower liquidity.

Exhibit 9: Rolling 3 Yr Correlations with Bank Loans



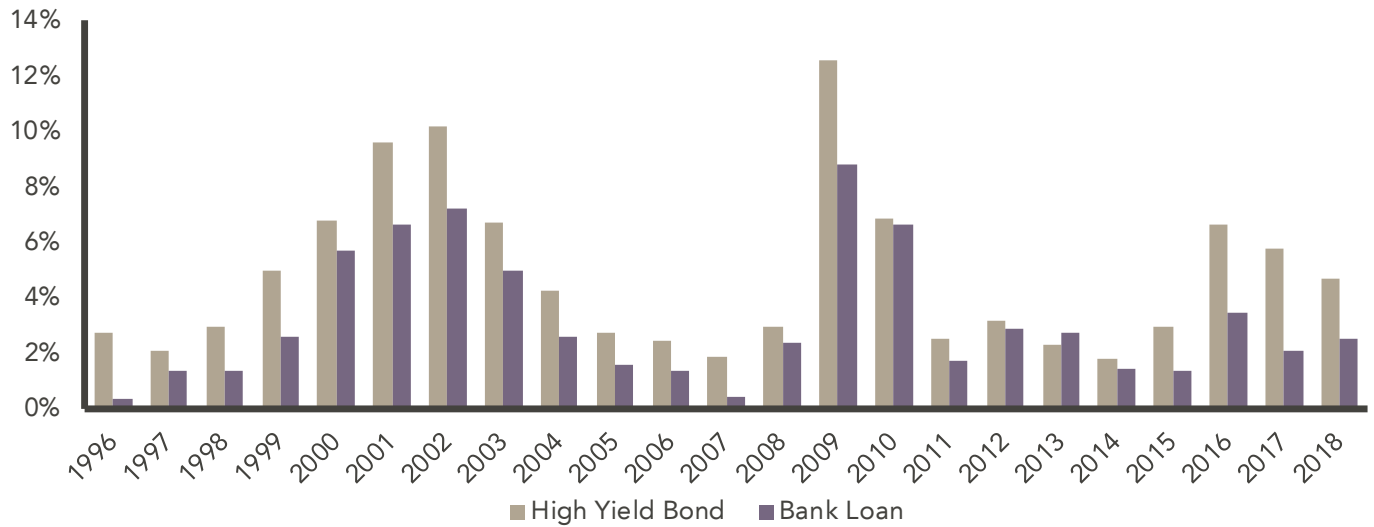
Sources: Credit Suisse, Barclays. Correlations were calculated using monthly returns.

CREDIT RISK

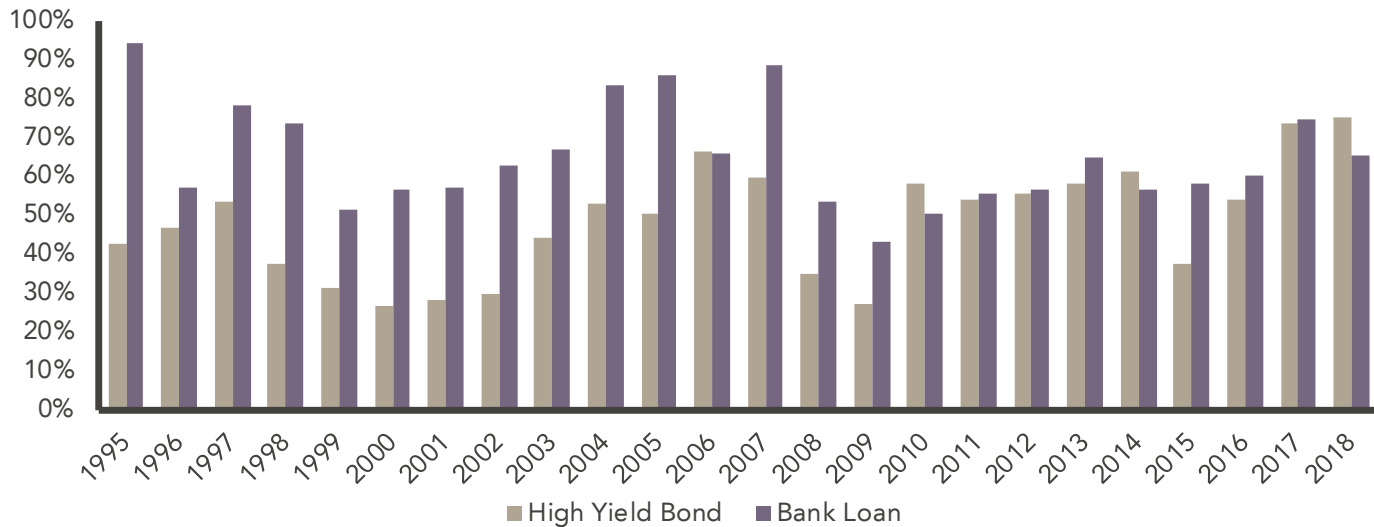
Credit risk is one of the primary drivers of volatility in bank loans, as shown by the correlation of bank loan returns to high yield returns. The key measures of credit risk are default rate (the percentage of borrowers that fail to pay) and the recovery rate (the percentage of the amount owed received from a defaulted borrower). The numbers combine to form the default loss rate,¹⁶ or the total amount lost in the event of default. While investment grade bonds are exposed to credit risk, the ultimate default loss rate is negligible. However, the default loss rates for below-investment grade debt, such as bank loans and high yield, are material.

Exhibit 10 on the following page shows the default rates and recovery rates for bank loans and high yield bonds. As seen in Exhibit 10, default rates are highly cyclical. Default rates run counter to the economic cycle, typically peaking at the trough of an economic cycle, and bottoming at the peak of an economic cycle. Historically, loans have had lower default rates than high yield bonds, as well as higher recovery rates due to their position at the top of the capital structure. This leads loans to have much lower default loss rates than high yield bonds. While the historical average default loss rate for high yield bonds has been 2.50%, loans have had an average default loss rate of 1.18%.¹⁷ The average default loss rate is low over time, but due to the nature of the credit cycle credit risk is an asymmetric risk, or tail risk. The average risk over a long period may not be high, but in crises, the credit risk can be much higher than average.

Exhibit 10: Default Rates (top) and Recovery Rates (bottom) for Loans and Bonds



Source: Moody's

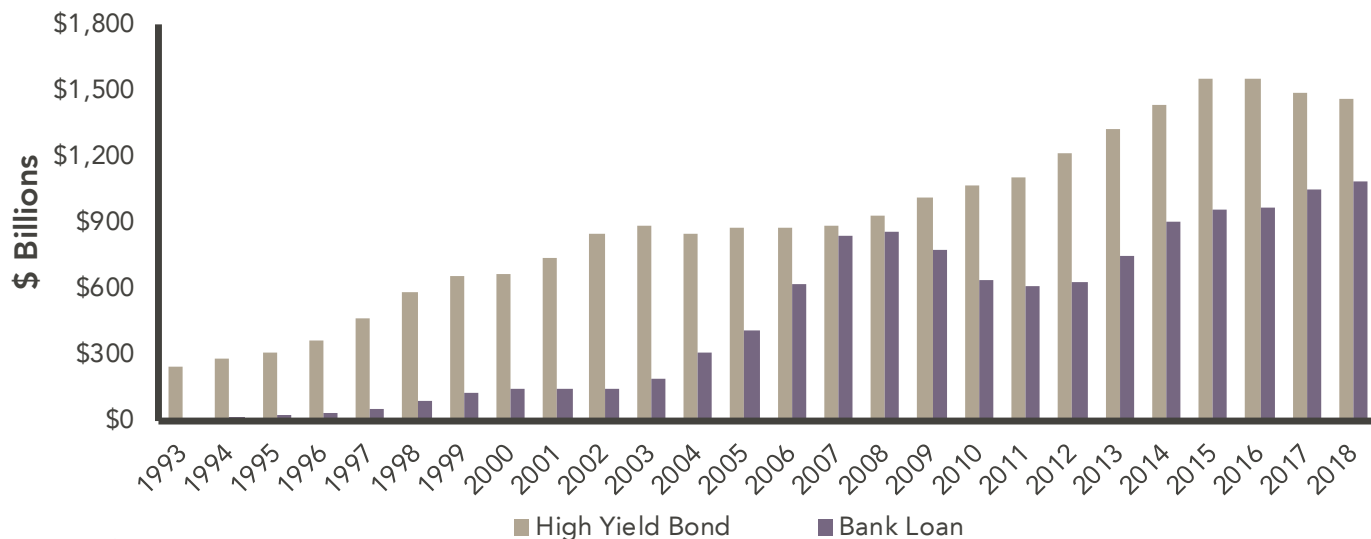


Sources: Credit Suisse, Barclays (1995–2015) and Moody's (2016–2018)

LIQUIDITY RISK

The other major risk associated with investing in bank loans, liquidity risk, is both a function of market liquidity and market leverage. Illiquid markets, or markets that are thinly traded with wide bid/ask spreads, impose higher transaction costs. More illiquid markets are also exposed to the risk of large moves in price if a large volume of shares is transacted at one time. The universe of investment grade corporate bonds is larger and more liquid than high yield bonds, which in turn is more liquid than the loan market, though liquidity in the loan market is improving. While traditional bonds settle in three days (T+3), loans settle in seven days (T+7), and in practice the settlement period can be longer. The liquidity profile of the bank loan market has been improving over time but it remains a relatively illiquid market, though it is increasingly comparable in liquidity to the high yield market. Exhibit 11 (next page) shows the historical size increase of the institutional loan market compared to the high yield market.

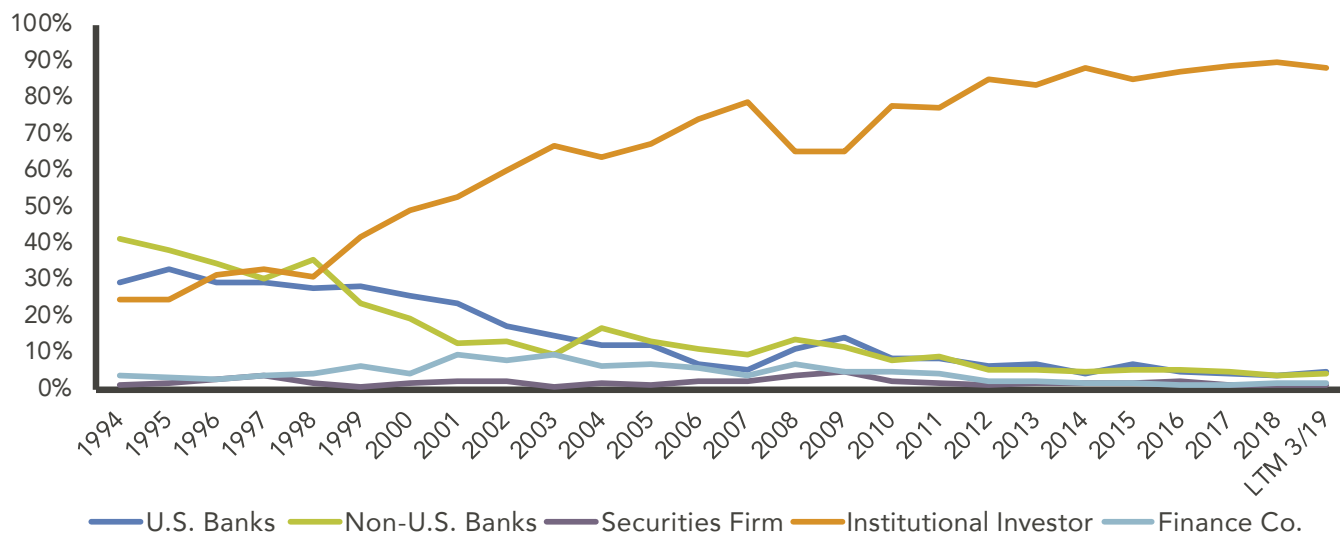
Exhibit 11: Institutional Loan Market Size vs. High Yield Market



Source: Credit Suisse

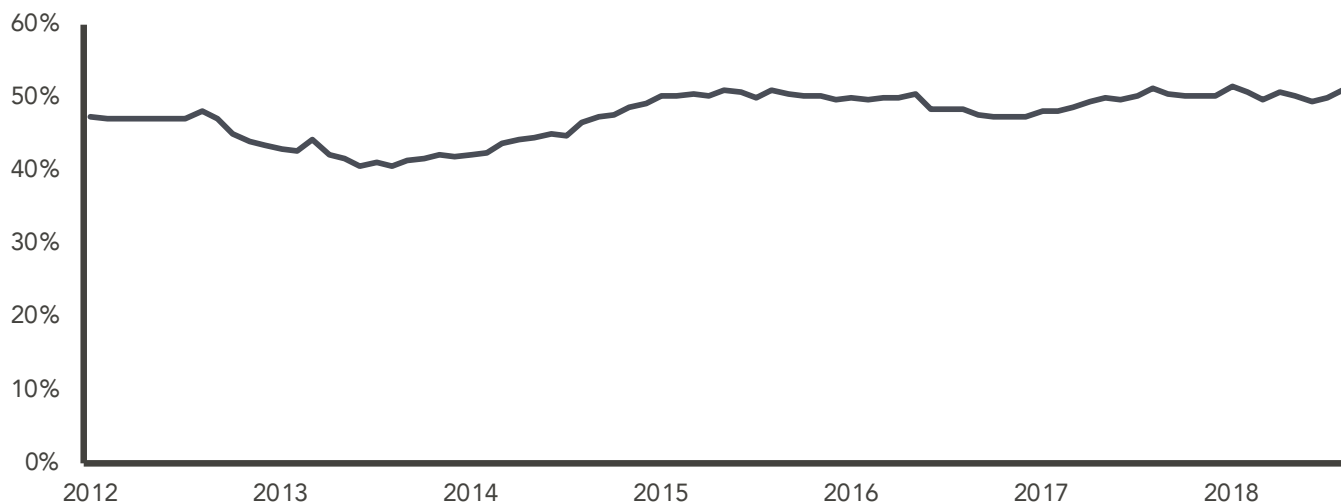
Importantly, in addition to being a relatively illiquid market, the bank loan market has long been characterized by a relatively high amount of investors utilizing leverage, such as Collateralized Loan Obligations (CLOs). Through most of the last decade, CLOs were the largest investors in the loan market. CLOs are structured vehicles that purchase loans using leverage, then pass the cash flow from these loans through to investors in various tranches. The riskiest CLO tranches could be levered eight to twelve times.¹⁸ Due to market stresses during the 2008 financial crisis, these investors were forced to sell by margin calls into a thin market, which quickly reduced prices. As shown in Exhibit 12 below, institutional investors hold most of the bank loans outstanding, at nearly 90% of the market versus about 10% for the rest of the holders combined, including banks and security firms. Within the institutional investor base, CLOs make up nearly half that share, as shown in Exhibit 13 on the next page. As long as there remains less leverage applied to the bank loan market, there is lower risk of a large liquidity shock.

Exhibit 12: Loan Investor Base Composition



Source: S&P Global Market Intelligence (pre-1996: L+250 and Higher; 1996 to date: L+225 and higher)

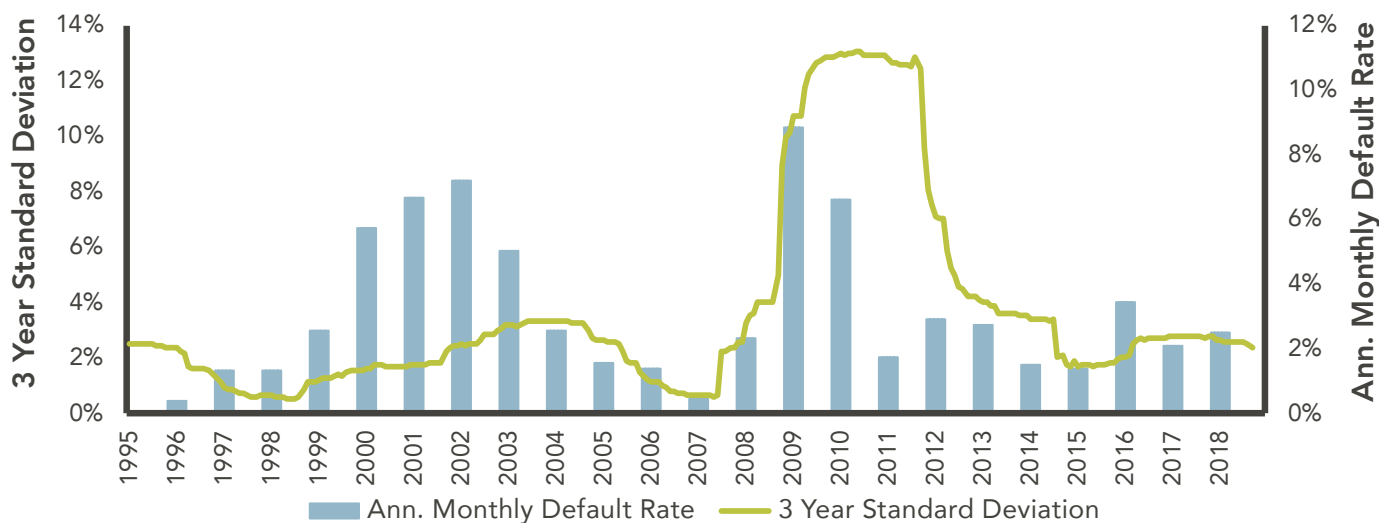
Exhibit 13: CLO Share of Institutional Investor Base



Source: Thomson Reuters as of March 2019

Exhibit 14 provides evidence that the highly negative returns experienced in 2008 were the result of liquidity risk as opposed to credit risk. While defaults were somewhat greater than those during the previous credit cycle, the rolling standard deviation of the asset class reached levels more than three times as high as the previous cycle. These trends suggest that it was not credit risk driving the large declines, since default rates were not remarkably higher than the previous cycle. Instead, the rapid decline in loan prices and quick snap back were driven primarily by liquidity risk due to a large amount of systemic leverage, not credit risk.

Exhibit 14: Loan Standard Deviation & Default Rates



Sources: Credit Suisse, Moody's

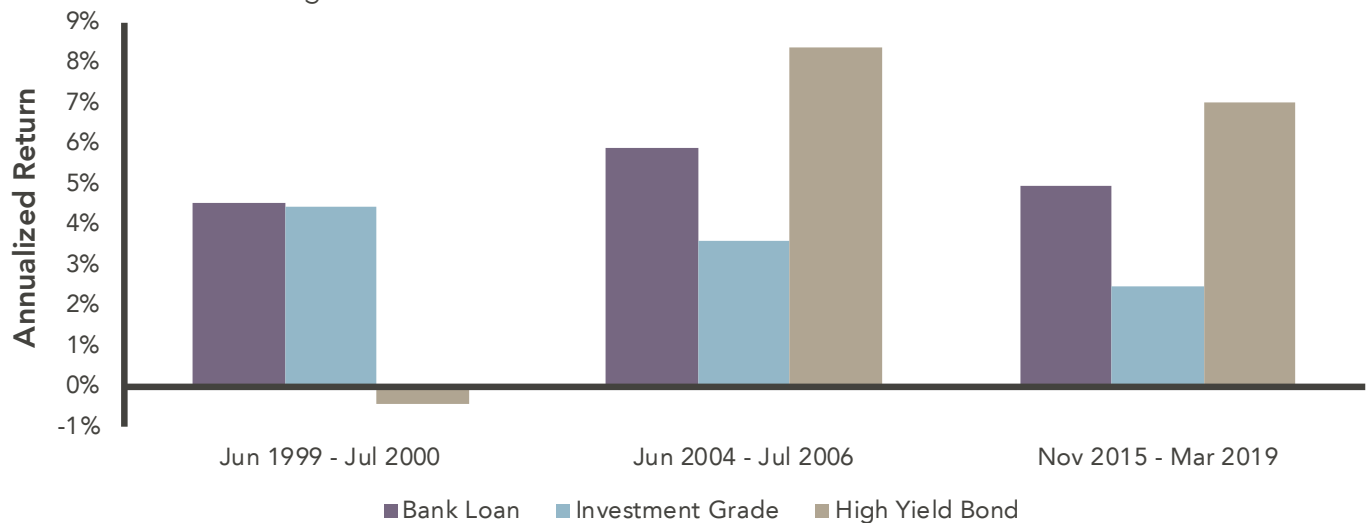
Although liquidity risk remains in the loan market, this risk will continue to evolve over time as the asset class matures. If the total market continues to grow and the investor base continues to evolve from primarily leveraged buy-and-hold investors, the liquidity profile of loans should improve. With less leverage in the system, the asset class should be less prone to large shocks. However, it is important for investors to understand that credit or liquidity shocks can drive loan prices to overshoot on the downside. Liquidity may be available, but it is likely to

be expensive. If, as in 2008, the price of a loan in the secondary market falls from par to 60 cents on the dollar, then within months trades at 92 cents on the dollar, it is much more preferable to hold onto the investment or even add at 60 than to sell. Though it is probable that risk measures leading up to 2007 understated risks in leveraged loans, looking only at 2008 overstates risks to leveraged loans.

INTEREST RISK & REINVESTMENT RISK

Since senior secured loans are floating rate securities, they have little exposure to interest risk. Interest risk, however, is one of the primary risks to holding investment grade bonds. The lack of interest rate risk in loans is what provides a potential diversification benefit to a fixed income portfolio. Due to the lack of interest risk, loans are virtually uncorrelated with investment grade fixed income, and less correlated with high yield bonds (although this correlation has been increasing over time). The potential benefit to bank loans can be seen by comparing total returns during periods of rising interest rates, as seen in Exhibit 15.

▾ **Exhibit 15:** Performance of Loans vs. High Yield and Investment Grade Bonds in Rising Rate Environments

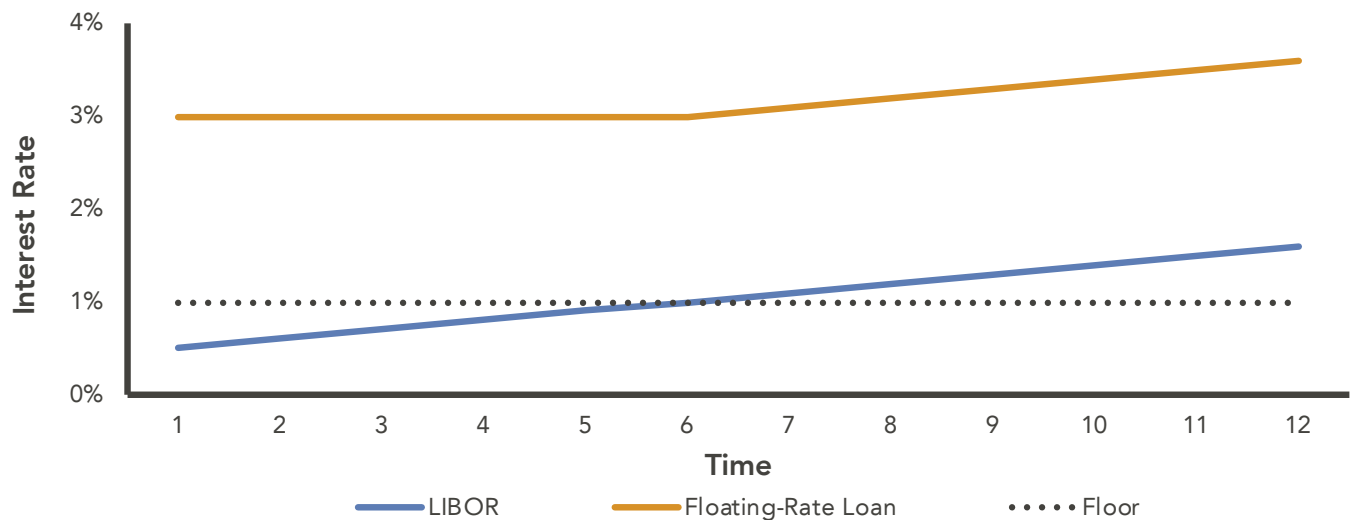


Sources: Barclays, Credit Suisse

Because of their floating rate nature and lower credit quality, bank loans enable investors to alter the risk exposure of their fixed income portfolios, decreasing interest risk and increasing credit risk.

Though a floating coupon can be attractive in a low rate environment, it can lead to reinvestment risk in a higher rate environment if rates decrease. Loan investors can receive some protection from reinvestment risk by purchasing loans with LIBOR floors, which provide for a minimum coupon. A LIBOR floor of 100bp means that an investor would earn a spread over the greater of LIBOR or 100bp. For example, if the spread on the loan is 400bp, and LIBOR is 50bp, an investor with a 100bp LIBOR floor would be paid a 500bp coupon. Not all loans have floors as the terms of loans are negotiable, but those that do can put a limit on downside income, which is especially valuable in a low or falling interest rate environment.¹⁹

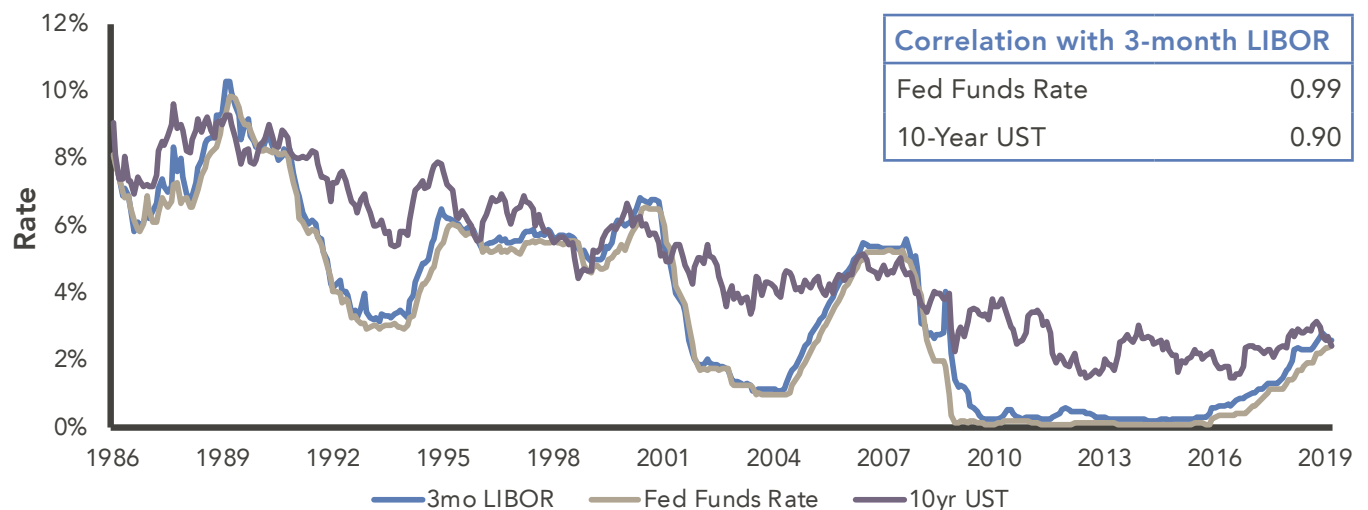
Exhibit 16: LIBOR Floor (Example)



VALUATION OF SENIOR SECURED LOANS

Whereas traditional fixed income securities pay a fixed coupon, senior secured loans typically pay a floating rate coupon based upon 3-month LIBOR, which is reset quarterly. In this case, LIBOR is the reference rate, or the rate upon which each reset is based. To compensate for credit risk, investors are paid a spread over the reference rate, or reference margin. As shown in Exhibit 17, LIBOR moves closely with the Fed Funds Rate, which is the short term interest rate that the Federal Reserve controls in setting monetary policy.

Exhibit 17: LIBOR & the Fed Funds Rate



Source: Federal Reserve

As senior secured loans are floating rate securities, it is difficult to compare their valuations directly to fixed rate securities. While the value of all future coupons is known for fixed coupon securities, only the value of the next coupon is known with any certainty for floating rate issues. Current yield, or the current coupon divided by the price of the security, is an unsatisfactory valuation measure because it fails to take into account potential changes

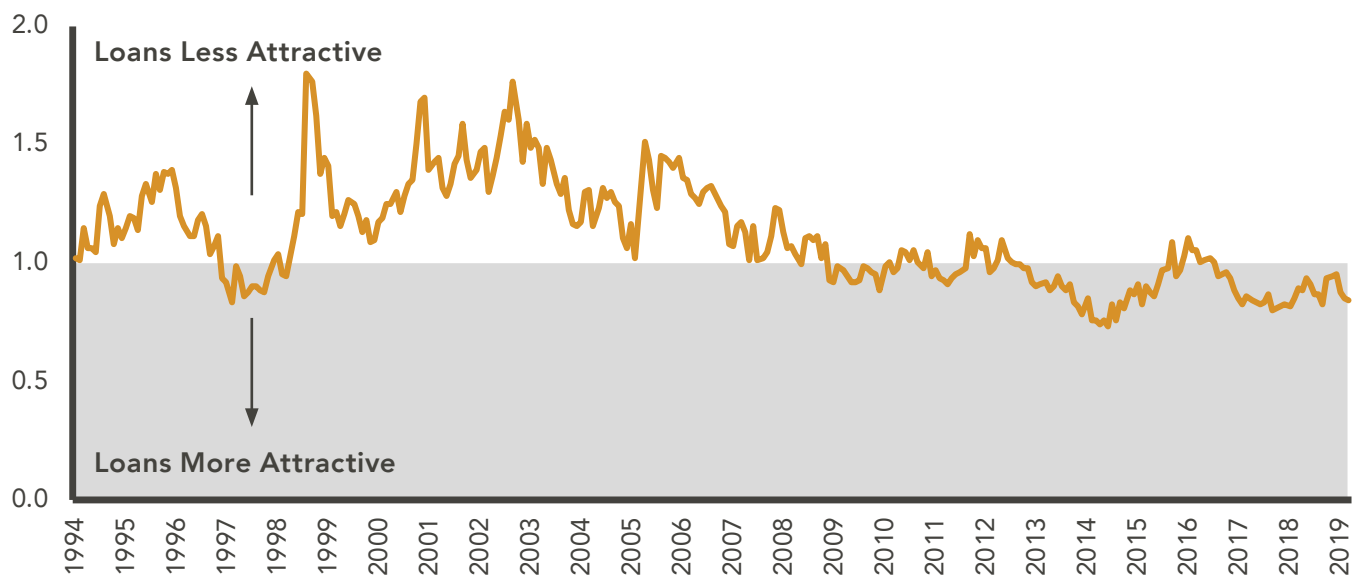
in price as well as future coupon payments. For floating rate debt, yield to maturity, which is the internal rate of return of holding a bond to maturity, requires an assumption about the future path of interest rates. Because forecasting the path of interest rates is notoriously difficult, it is standard to assume a constant interest rate in order to calculate yields for floating rate bonds.

For senior secured loans, an additional complexity is the borrower’s ability to prepay the loan before maturity. If a loan is trading at a discount, prepayment results in a higher yield. If a loan is trading at a premium, prepayment results in a lower yield. As a loan approaches maturity, its price moves closer to par. If a loan is priced below par, this effectively increases its yield as investors receive both coupon and price accretion. When called, the loan effectively “pays” all of the price increase in one period, resulting in a higher yield.

Perhaps the best measure to value floating rate debt is the discount margin. The discount margin is the spread over the reference rate the bond will earn over its lifetime. Discount margin can be calculated to maturity, or to an earlier date assuming the loan will be prepaid. Because loans are callable with little to no penalties, it is standard to use a 3-year discount margin. If a loan is trading at par, the discount margin is equal to the reference margin (the spread over LIBOR). If a loan is trading below par, the discount margin will be greater than the reference margin (as the price will increase as the loan approaches maturity). If a loan is trading above par, the discount margin will be less than the reference margin.²⁰ Other factors considered in pricing are borrower credit quality, whether the loan has a LIBOR floor, and any loan covenants.

All else being equal, loans with higher yields and higher discount margins earn higher returns. As with all fixed income instruments, though, return potential must be balanced with associated risks. Relative valuation of senior secured loans versus core investment grade fixed income depends both on return potential in a flat rate environment, as well as an investor’s views of credit and liquidity risk (higher in loans), and interest risk (higher in core investment grade). Relative valuation of senior secured loans versus high yield bonds depends upon return potential, as well as credit risk and interest risk, which are both greater for high yield bonds. One way to compare the value of loans vs. high yield bonds is to examine the ratio of high yield option adjusted spread (OAS) to bank loan discount margin as shown in Exhibit 18.

Exhibit 18: High Yield OAS vs. Loan Discount Margin



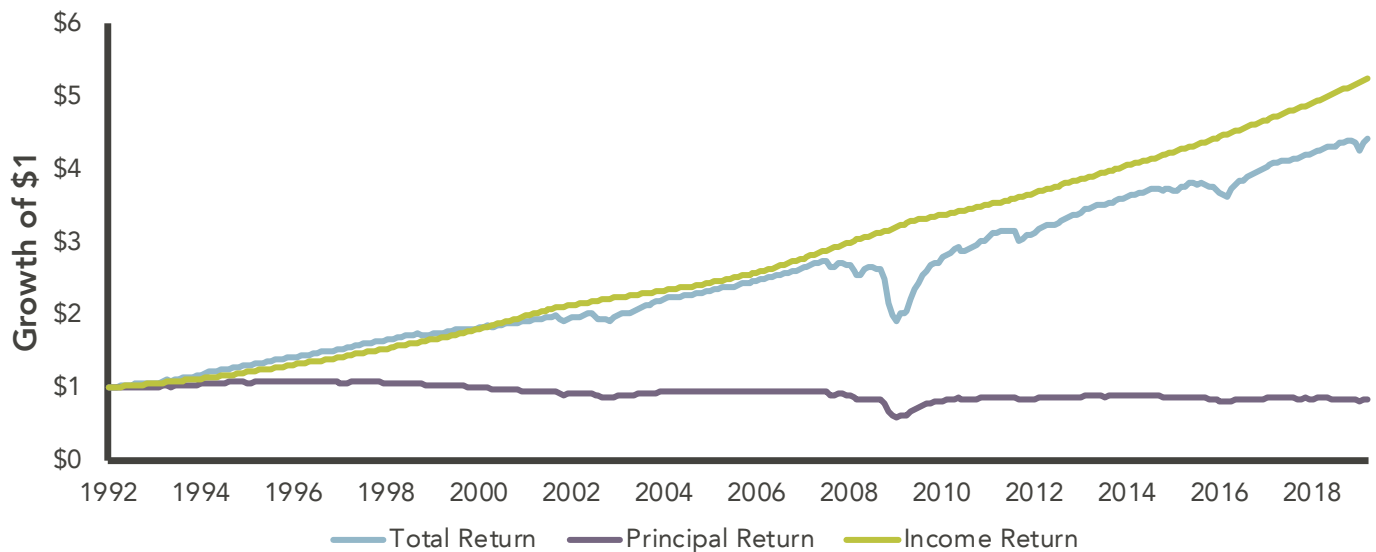
Sources: Credit Suisse, Barclays

Because high yield bonds have more credit risk and interest risk than bank loans this ratio should be greater than one, and indeed that has historically been the case. When this ratio is at or below one, investors receive a similar spread for loans as compared to high yield while taking on less risk. Especially in low interest rate environments where there is greater likelihood of an interest rate increase than decrease, loans can offer a compelling relative value.

In the past, bank loans appeared to offer a relatively safe (i.e. low) risk and return profile. Bank loans delivered a steady stream of floating rate payments virtually removing interest rate risk, while exposing investors to only modest levels of credit risk. In the aftermath of the credit crunch, it is clear that the returns of this asset class were partially smoothed by its illiquid nature, and that this illiquidity risk may have been underpriced. However, for investors willing to accept some liquidity and credit risk in order to decrease interest risk, bank loans remain an attractive asset class.

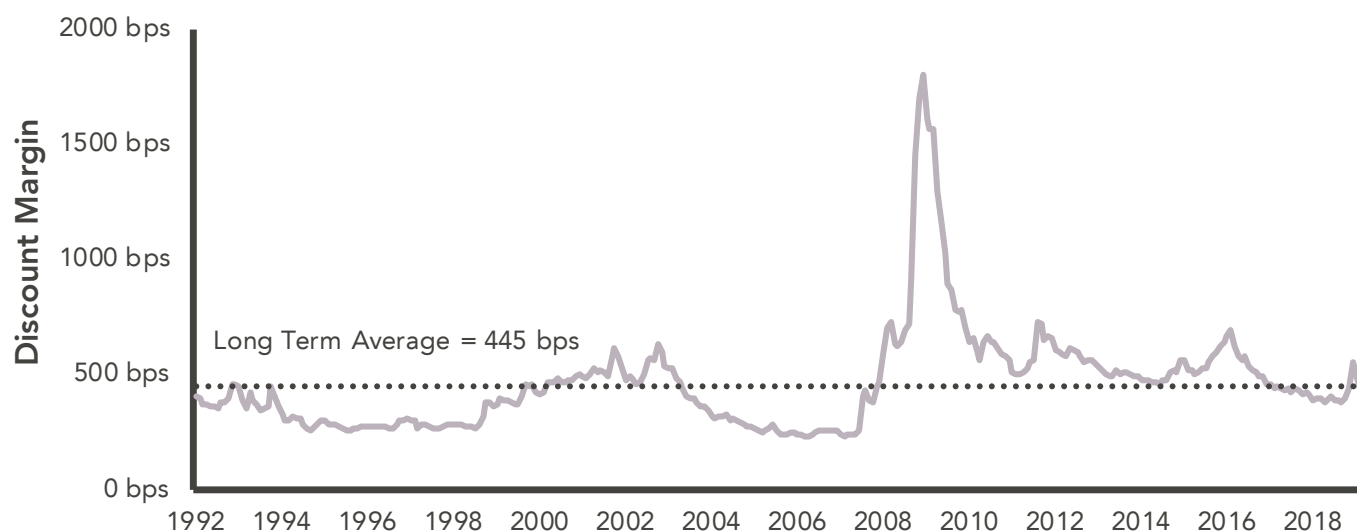
Longer term, the expected return and standard deviation characteristics of the asset class are unclear. As shown in Exhibit 19, historical returns have been driven by income, as defaults eat away at principal appreciation over time. The discount margin (spread over LIBOR) snapped back in 2009 and has been at average to above-average levels (see Exhibit 20, next page). Ultimately, whether long term expected returns of the asset class return to historical levels or settle at a higher level will be driven by potential income and capital appreciation. If loans continue to be issued at discounts (thus leading to potential for greater price appreciation), or if spreads over LIBOR settle to a long term average higher than the historical average, this should indicate higher potential returns for the asset class than historically experienced.

Exhibit 19: Historical Return Components



Source: Credit Suisse

Exhibit 20: Long Term Average Discount Margin (spread over LIBOR)



Source: Credit Suisse

INVESTING IN BANK LOANS

Allocations to bank loans can be made through separate accounts, commingled funds, and mutual funds. Due to the large size of individual investments, commingled funds are appropriate for most investors looking to achieve a diversified portfolio. Separate accounts are available, with a median minimum of \$50 million. Fees average 50bp, 10 bp lower than high yield funds.²¹ Currently, passive management is unavailable for bank loans, so active management is required. Investors should consider loan managers' track records and experience in the loan space. Active managers may be able to add value in several ways, including primary market deal flow that leads to attractive pricing, purchasing loans below fair value in the secondary market, and conducting credit analysis that minimizes default risk. Investors can approach an allocation to bank loans as a standalone allocation, trading portfolio interest risk for credit and liquidity risk, or as part of a high yield allocation.

Currently, for investors willing to accept higher credit and liquidity risk for lower interest risk, an allocation to bank loans makes sense given market fundamentals and the level of interest rates.²² A long-term strategic allocation may make sense in the future, but given the changes in the loan market, it is difficult to estimate long term expected return, standard deviation, and liquidity metrics. Because of the changing composition of the loan market, as the market normalizes investors should periodically evaluate risks and expected returns to see where loans fit into their portfolios. Finally, investors may also consider bank loans as part of a high yield allocation, by allocating to a high yield manager that opportunistically purchases bank loans. It is important to ensure that these managers have the experience and infrastructure necessary to invest in the loan market. Legal resources are necessary for dealing with loans in default, and an experienced back office is required for OTC settlement.

Since the financial crisis, now over 10 years ago, there have been several trends affecting the quality of the bank loan market that bear watching. First, use of proceeds towards acquisitions/LBOs from bank loan issuance, which rose to 65% in 2007 and peaked at 75% in 2008, dropped to a low of 33% in 2013, but has now risen to 66% as of March 2019. This shows that there is a renewed level of risk-taking and frothiness. However, it is offset by the fact that aggressive issuance in the form of 2nd lien bank loan issuance is still low: it reached a peak of 8% in 2007, dropped to the trough of 3% in 2011, peaked again at 10% in 2014 prior to the shale crisis, but has now subsided back down to 3% again as of March 2019. Finally, as mentioned earlier, the issuance of covenant-light loans has been ascending since the 2008 financial crisis in conjunction with the market's reach for yield. However, this has

primarily been due to the structural change of bank loans as an asset class going from more like private credit 10 years ago to more like high yield bonds today. The difference is that private credit has heavy covenants since they are privately negotiated and traded, while high yield bonds have little to no covenants since they are publicly negotiated and traded.

The future for bank loans holds some key uncertainties. First, LIBOR, the base rate on which bank loan total coupons are determined, is set to sunset by 2021, with central banking and regulatory authorities globally working together to introduce an alternative base rate. While this will be a major change mechanically, the financial structure and features of bank loans are not expected to materially change. Bank loans would then be based on this new base rate and continue to be senior secured and benefit from a floating rate. Second, Dodd-Frank reforms continue to be repealed, with the latest set of roll-backs in 2018 allowing small and medium banks to avoid “stress tests.” However, this will primarily and gradually affect private credit, not syndicated bank loans, as these small and medium banks would reintroduce competition in the private credit arena, not the syndicated bank loan arena. Third, CLO ownership of bank loans continues to be elevated. This has been driven, at least in part, by the low — and even negative in the case of Germany and Japan — yields for short-term bonds in many of the developed global economies. Their pensions and insurance companies, starved for yield, have been reaching to U.S. high-quality CLO tranches to add yield to their portfolios. This, in turn, has driven high CLO ownership in U.S. bank loans. We would expect, as Europe and Japan reduce their Quantitative Easing eventually and begin to raise their interest rates, that this international demand for U.S. CLOs would decline, thereby reducing the level of CLO ownership in U.S. bank loans. Finally, as the ETF trend rose over the last two decades, the ownership of bank loans by bank loan ETFs has also risen. ETFs, by nature owned by retail investors, are introducing more volatility into the asset class and this dynamic bears watching.

CONCLUSION

Given the higher-yielding environment now than ever before post-Great Recession, senior secured loans offer a medium-term opportunity to earn a higher rate of return than has historically been possible in the asset class. Over the long term, it remains to be seen how the market evolves as it grows more mature. Based on historical return and standard deviation, the asset class performs roughly in line with investment grade credit while increasing credit risk and liquidity risk and decreasing interest rate risk; though again we caution that standard deviation can be a misleading measure of risk for asset classes that exhibit a highly non-normal distribution of returns. For investors willing to accept increased credit and liquidity risk in exchange for decreasing interest risk, adding loans to an investment grade fixed income portfolio can potentially improve expected returns through diversification. ■

NOTES

- ¹ Senior secured loans are often referenced using many different names. Some of these names include Leveraged Loans, Bank Loans, Syndicated Loans, High Yield Bank Loans, or Sub-Investment Grade Bank Debt. This paper will use the name Senior Secured Loans, bank loans, and loans interchangeably.
- ² Examples of covenants include: Requirements to maintain liquidity, requirements to maintain profitability, and limits on additional leverage.
- ³ These are loans with less restrictions on the borrower. For example, they may not require the maintenance of balance sheet ratios, or they may not impose restrictions on additional debt.
- ⁴ Finke, Thomas M. Oct 2004. "Beyond the Bard – The Investment Attraction of Bank Loans," *The Babson Staff Letter*.
- ⁵ McCarthy, Donald and Glenn Yago. Oct 2004. "The U.S. Leveraged Loan Market: A Primer," *Milken Institute Research Report*.
- ⁶ Gadanez, Blaise. Dec 2004. "The syndicated loan market: structure, development, and implications," *BIS Quarterly Review*.
- ⁷ Default loss rate is defined as $default\ rate \times (1 - recovery\ rate)$
- ⁸ Based on the fullest available data
- ⁹ Barclays, Jan 1989–Mar 2019
- ¹⁰ Bank loan floating rates reset each quarter
- ¹¹ Barclays, Dec 1995–Mar 2019
- ¹² Moody's, 1997–2018
- ¹³ $Recovery\ rate = 1 - (default\ loss\ rate/default\ rate)$
- ¹⁴ $Default\ loss\ rate = default\ rate \times (1 - recovery\ rate)$
- ¹⁵ Indices: Credit Suisse Leveraged Loan, BarCap Aggregate, BarCap Corporate High Yield, S&P 500, Russell 2000, MSCI EAFE. All summary statistics calculated on monthly return data since inception.
- ¹⁶ The default loss rate is equal to $default\ rate \times (1 - recovery\ rate)$
- ¹⁷ Moody's, 1997–2018
- ¹⁸ *The Deal Magazine*. 3 July 2008. "The New CLO Math."
- ¹⁹ On average from 2014 to 2019, approximately 80% of the loans in the Credit Suisse Leveraged Loan Index have a LIBOR floor
- ²⁰ Fabozzi, Frank J. 1986. "Floating Rate Instruments: Characteristics, Valuation, and Portfolio Strategies," Probus Publishing Company.
- ²¹ eVestment Alliance
- ²² As of April 2019

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