



Investment Insights

US Senior Loan Market: 2018 review and 2019 outlook

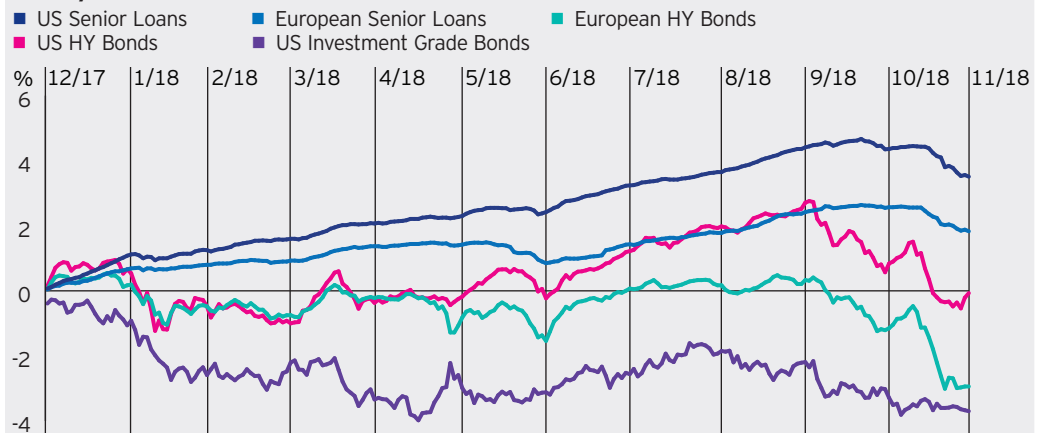
After a strong year of relative outperformance, in our view senior secured loans enter 2019 again poised to deliver steady returns.¹ Loans' short duration served investors well during 2018 as climbing short term interest rates bolstered loans' floating coupons, contributing to price stability in contrast to the volatility in fixed rate assets. More importantly, the defensive positioning of loans within issuers' capital structures underpinned price stability during the bouts of risk aversion which punctuated the year. We believe these defining features of the asset class can continue to benefit investors amid rising rates and intermittent volatility stemming from concerns over trade, politics, and economic cycle progression.

Moving into 2019, continued economic expansion, broad-based earnings growth, and healthy borrower balance sheets all establish a supportive fundamental credit backdrop for the loan asset class. While we expect the current economic cycle will further elongate in 2019, we recognize that market volatility may remain elevated at the later stages of the cycle, especially with monetary tightening underway and ongoing trade tensions. In this environment, the defensiveness that senior secured loans offer may insulate investors from volatility, a dynamic that enabled loans to decouple from riskier assets over the past year.



Scott Baskind
Head of Global Senior Loans, CIO

2018 year-to-date total returns

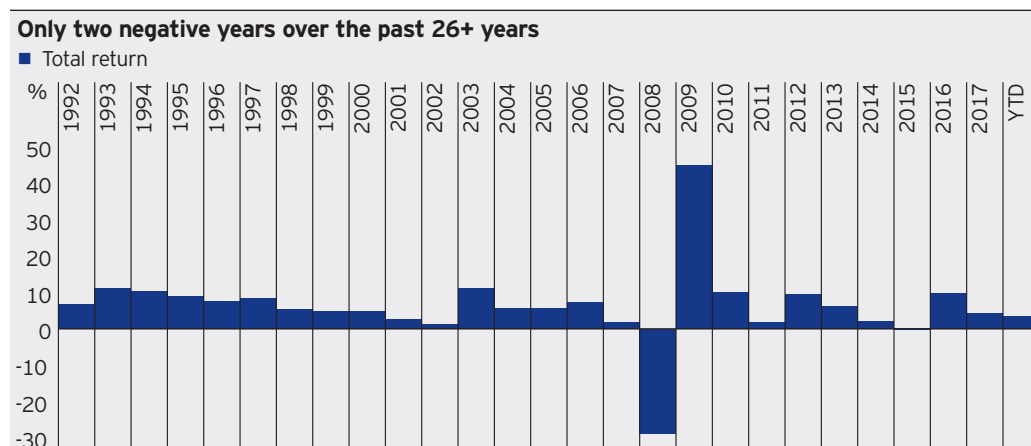


Source: Bloomberg L.P. as of Dec. 29, 2017 through Nov. 30, 2018. US Senior Loans represented by Credit Suisse Leveraged Loan Index; European Senior Loans by Credit Suisse Western European Leveraged Loan Index; US HY Bonds by BAML US High Yield Index; European High Yield Bonds by the Credit Suisse Western European High Yield Index; US Investment Grade Bonds by the BAML Investment Grade Index. **Past performance is not a guide to future returns.** An investment cannot be made in an index. Returns shown are total returns in USD.

2018 review

Loans delivered year-to-date returns of 3.51% through November.² As expected, growing coupon income contributed to favorable absolute and relative performance. Three month LIBOR increased from 1.69% to 2.74% year to date,³ enhancing the floating rate component of coupon income even more than anticipated. The steep upward trajectory of LIBOR during the first 3 months of the year pulled forward the benefit of rising short-term rates relative to our initial expectations. Meanwhile, the rise in LIBOR was only slightly offset by marginal spread compression, as nominal spreads over LIBOR declined from 3.57% to 3.46%.⁴ Similar to our forecast, the pace of spread compression slowed markedly in 2018 as event driven deal flow accelerated and repricing activity became less prominent despite an overall issuer-friendly environment for new issuance. \$402 billion of repricing and refinancing volume through November paled in comparison to 2017's heightened activity.

Finally, mild loan price depreciation slightly underperformed our initial expectations of neutral price action during the year. The average loan price of \$96.80 at the end of November was down slightly from \$97.96 at the beginning of the year, with most of the decline resulting from technical market pressure in October and November.⁵ In sum, the market began the year with a 5.03% coupon;⁶ although coupon income grew over the course of 2018 driven by rising base rates, modest price declines resulted in total returns below the level of coupon income. Mild price declines are not uncommon for loans; as in 2018, coupon income often serves to mitigate the absence of price appreciation. This has resulted in the loan market only experiencing two years of negative total return in the last 26+ years.

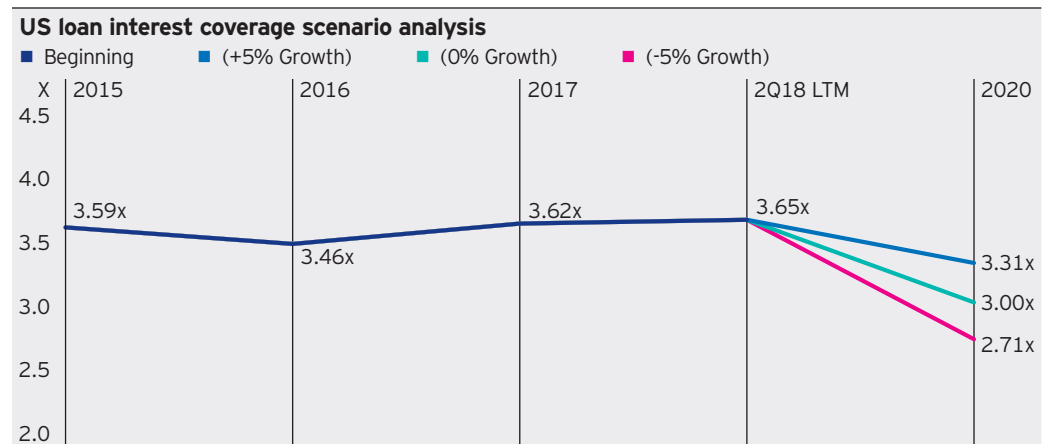


Source: Credit Suisse Leveraged Loan Index as of Dec. 31, 1992 through Nov. 30, 2018. Index returns do not reflect payment of any sales charges or fees. **Past performance is not a guarantee future results.** An investment cannot be made in an index. Returns shown are total returns in USD.

Overall, 2018 was characterized by positive credit conditions, including accelerating economic growth, improved corporate earnings growth, and an even lower default rate than our 2.0-2.5% forecast. Technical support for loans arose from robust new collateralized loan obligation (CLO) formation of \$125.6 billion,⁷ consistent with our expectations of over \$100 billion. Retail inflows contributed an additional \$12.7 billion of demand while institutional accounts provided approximately \$65 billion of new money.⁸ These sources of demand collectively absorbed an acquisition-driven uptick in new issuance that increased the size of the US loan market by \$148 billion to over \$1.2 trillion.⁹ Notably, loans demonstrated little correlation to fixed income credit during periods of volatility in 2018. This decoupling, a result of loans' unique combination of short duration and senior secured status, fueled lower volatility and material outperformance as depicted in the chart on page 1. Loan returns outpaced high yield and investment grade bonds by 3.58% and 7.21% for the year.¹⁰

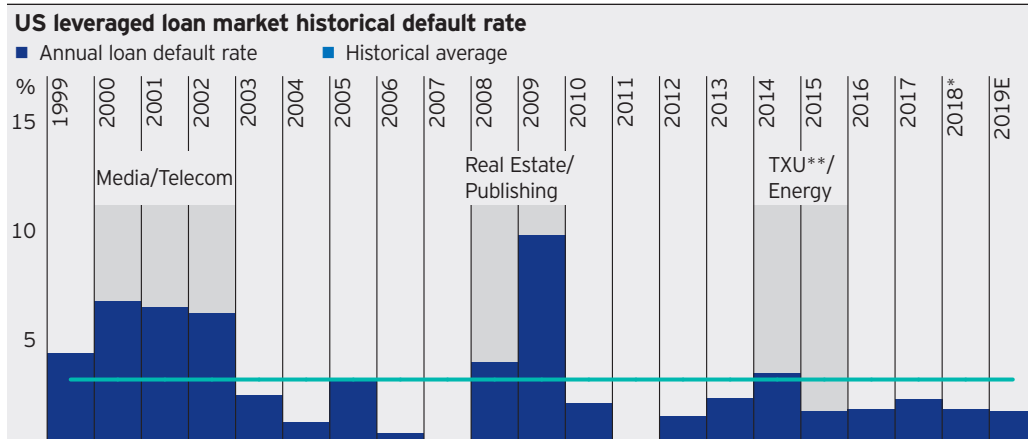
2019 outlook

Looking forward to 2019, we expect loans to generate approximately 5.25-5.75% total returns. Central to this forecast is the supportive fundamental credit environment which we believe will persist throughout the year and the recent market pullback. In our view, the recent loan market sell off in the closing months of 2018 was technically driven and provides a compelling opportunity. We anticipate both economic and corporate earnings growth will decelerate from 2018 levels as monetary tightening restrains borrowing, rising labor costs slow earnings expansion, and fiscal stimulus begins to fade late in the year. However, although peak growth is set to subside in the year ahead, we expect the prolonged economic cycle to continue through the end of 2019. Moreover, strong issuer balance sheets - improved in recent years through earnings growth and refinancing activity - indicate that the low current default rate of 1.61% will remain below the 3.1% historical average¹¹ in the coming year. We anticipate defaults of approximately 1.5-2.0% in 2019. As shown below, we believe borrowers' (as measured by portfolio holdings across our global senior loan platform) balance sheets are well positioned to weather a simultaneous rise in short term rates and a multi-year earnings recession.



Source: Invesco Senior Secured Management, Inc (ISSM). Figures represent portfolio holdings on ISSM's platform as of June 30, 2018. The LIBOR increase assumption was calculated using the forward LIBOR curve for the period ending Dec. 31, 2020. ISSM's analysis included the following scenarios for US borrowers, while assuming the 3 month forward LIBOR curve through the end of 2020: (1) 5% EBITDA growth each year, (2) 0% EBITDA growth each year, and (3) -5% EBITDA growth each year. Under -5% EBITDA growth scenario, interest coverage of borrowers on ISSM's platform falls to 2.71x after two straight years of -5% growth.

Issuer distress in the loan market is currently limited, with just 1.2% of the total market trading at prices below \$80.¹² This minor degree of stress is primarily isolated to retail and telecommunications, the only sectors where more than 10% of outstanding loans currently trade at distressed levels. With the long-awaited iHeart bankruptcy now reflected in the trailing 12 month default rate, the forward pipeline of large capital structures in distress has largely diminished. This informs our muted default expectations for 2019, which will likely be driven more by issuer specific challenges than by systemic or even sector specific weakness that has been the culprit driving higher default rates in past periods as shown below. This translates to another year of marginal expected credit losses for the overall market. Despite the supportive credit backdrop, we do expect modest loan price erosion to detract from total returns in 2019. With just 3.8%¹³ of loans trading above par following recent technical pressure, we expect the majority of loans - primarily mid and high quality - to appreciate in value in 2019. However, the riskier end of the market is likely to experience further weakness on late cycle concerns, resulting in bifurcated price performance and an overall price decline in the market.



Source: S&P LCD default rate as of Nov. 30, 2018, historical average of US market covers the periods Jan. 31, 2000 - Nov. 30, 2018. Default Rates based on principal amount. 2018* represents Lagging 12-Month Loan Default Rate. 2019E denotes estimated default rate of 1.50% for US market in 2019, source JPM. **TXU Corp. was roughly 82% of 2014 defaults (par value).

As in 2018, we expect coupon will remain the primary driver for loan returns. Currently, loans' average nominal spread is 346 bps and 3 month LIBOR is 274 bps, which contribute to a current coupon of approximately 6%.¹⁴ We expect LIBOR will continue to rise as the sturdy economic environment and tightening labor markets provide cover for the US Federal Reserve (Fed) to substantiate further policy rate increases, driving short term rates higher. Currently, the Fed is guiding for three additional policy rate increases in 2019 and is scheduled to reduce its balance sheet by over \$470 billion¹⁵ during the coming year. These anticipated steps towards policy normalization could send 3 month LIBOR north of 3% by the end of 2019, incrementally padding loan investors' coupon income.

Meanwhile, we do not expect meaningful changes to nominal spreads during 2019 as our outlook for technical conditions does not indicate a disproportionately issuer-friendly or lender-friendly environment. From a demand perspective, we expect the market to remain reasonably well bid due to continued CLO issuance and further allocations from large institutional investors. CLOs have represented 50-60% of the loan buyer base in recent years, and a 2018 court ruling that CLOs will no longer have to comply with risk retention rules added a tailwind to an already robust environment for issuance. We anticipate that CLO creation will again approach \$100 billion in 2019. Retail flows, a far less consequential contributor to overall loan demand, will likely correlate to interest rate expectations as is typical. On the supply side, we expect new issuance volumes to be approximately in line with 2018 levels. M&A and LBO financing, the primary drivers of new issuance, should be supported by the recent pullback in equity valuations. Private equity sponsors have raised significant capital that has yet to be deployed into new investments, and loans have increasingly become the financing vehicle of choice for LBO transactions. Overall, we foresee balanced supply and demand in 2019, a relatively stable trading environment, and thus no sustained pressure for new issue spreads to go substantially wider or tighter.

Topics in loans

The senior secured loan market has received heightened scrutiny from the press in recent months. The concerns are generally focused on the weakening of deal terms (i.e. covenants), diminishing subordination levels, rapid growth of the market, and the potential for loans to pose “systemic risk” akin to other forms of lending in the period leading up to the Global Financial Crisis. While we do believe that risk in the loan market has increased relative to prior years, we think it is important to place these concerns in perspective as some trends are likely to continue into 2019.

■ **Covenants and subordination:** Since 2017, the erosion of traditional creditor protections in new issue loan documentation has been a consistent theme. We often find that investors conflate this development with the now prevalent “covenant-lite” issuance, a standard that developed in the years following the Global Financial Crisis. Covenant-lite loans - or those that lack a requirement for the issuer to pass regular ‘maintenance’ leverage or interest coverage tests - comprise the vast majority of new deals and have for many years. The term “covenant-lite” strictly refers to the lack of maintenance covenants in loan documentation. While such covenants offer structural protection, they have not historically been a significant factor in preventing credit deterioration, nor have lenders typically used them to accelerate their loans and push companies into default. Instead, lenders have used covenant defaults primarily as an economic tool to extract additional spread and/or fees and to favorably amend loan agreements. A covenant default is distinctly different from a payment default which can induce a restructuring or bankruptcy.

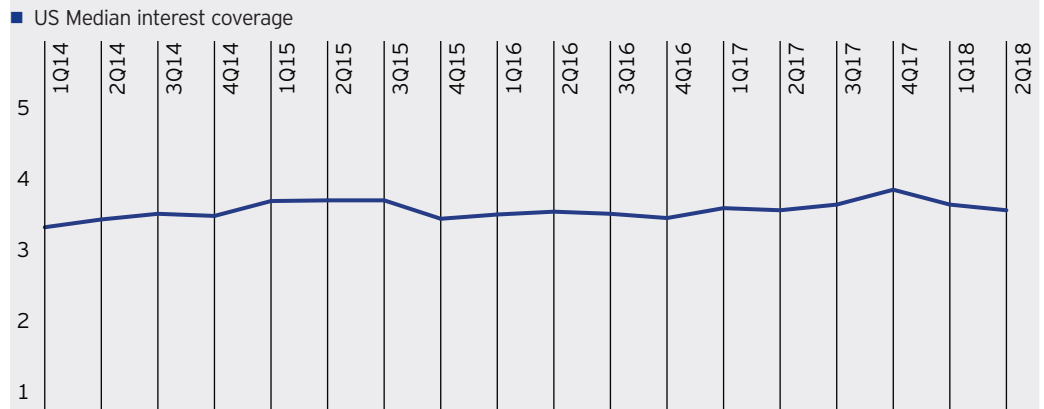
Meanwhile, all loan agreements continue to include ‘negative’ covenants, or those which restrict issuers from undertaking actions that could negatively impact lenders without their consent. Rather than testing on a regular quarterly basis, these covenant tests are only performed upon specified events, such as when a company seeks to incur incremental debt or pay a dividend. The ability of lenders to negotiate negative covenant parameters during new issue syndication varies deal by deal and is impacted by the overall strength of the market at the time of issuance. Amid a well bid loan market in 2018, issuers generally retained the upper hand in these negotiations, and so negative covenants have become more permissive than in prior years.

Concurrently there has been a steady decline of subordinated debt within capital structures that include loans. Since 2011, issuers have increasingly opted to raise a higher proportion of senior secured debt. Less subordination, taken together with weaker covenants, implies that loans may experience lower overall recoveries in future bankruptcies than has been observed historically. However, because loan agreements increasingly give issuers flexibility to forestall events of default, we also expect annual default rates to be lower. Thus, lower expected recoveries combined with muted default expectations results in similar expectations for credit loss in coming years relative to prior default cycles.

The keys to mitigating the effect of both documentation erosion and diminishing subordination on loan portfolios are avoidance and a focus on risk adjusted return. Our rigorous credit selection process places significant emphasis on documentation review as well as capital structure considerations. We reflect weaker loan agreement protections and lower degrees of subordination in our recovery analysis, which informs our view of expected credit loss, and thus the yield we require to approve new deals for our portfolios. In accordance with this approach, we have maintained our characteristically high primary deal turndown rate in order to preserve the integrity of our portfolios, which we will endeavor to continue in 2019.

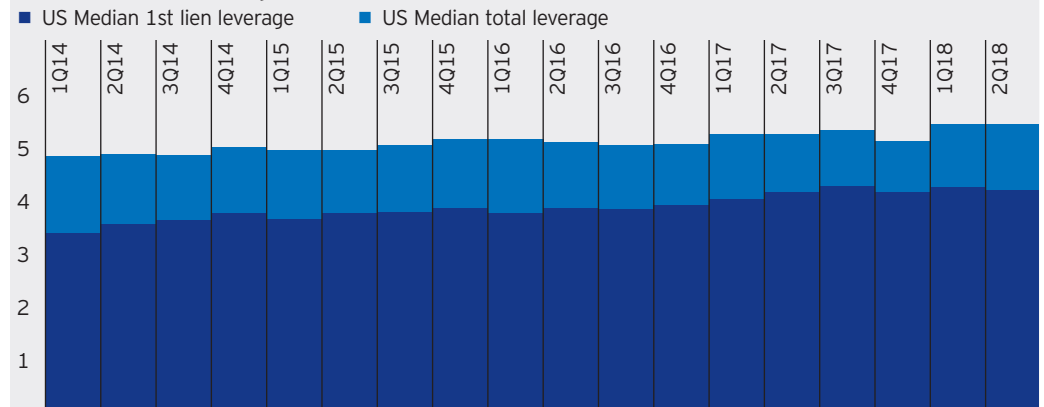
■ **Loan market growth:** The size of the loan market has roughly doubled since the Global Financial Crisis, from \$600 billion to \$1.2 trillion,⁹ evoking fears of irresponsible lending. However, we do not believe the market growth equates to increased risk; in fact, the growing size and number of transactions have created a more diversified and liquid investment opportunity set. Since 2008, the number of loan issuers has decreased from a high of 1,740 to 1,655 today.⁹ In combination with the growth in market size, this reflects an evolution of the loan issuer composition towards larger, more mature companies. While the face value of debt outstanding has increased significantly, the rise in debt as multiple of cash flows has been gradual, reflecting an adherence to sound credit underwriting standards in the market. As evidenced in the charts below, interest coverage (EBITDA / Interest Expense) and leverage levels (Debt / EBITDA) of our global senior loan platform’s portfolio holdings have remained relatively stable despite growth in the underlying market.

US loans median interest coverage



Source: Invesco Senior Secured Management, Inc (ISSM). Figures represent portfolio holdings on ISSM's platform as of June 30, 2018.

US loan median leverage



Source: Invesco Senior Secured Management, Inc (ISSM). Figures represent portfolio holdings on ISSM's platform as of June 30, 2018.

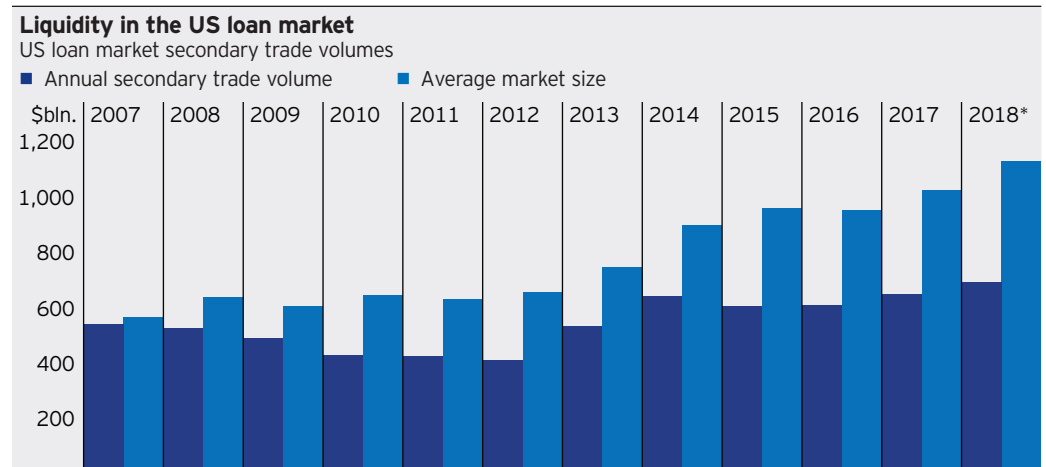
■ **Systemic risk:** It is true that certain types of securitization-driven loan issuance, such as residential mortgages, did contribute to the Global Financial Crisis in 2008. However, broadly syndicated senior secured loans, and in turn CLOs, were not culprits. For decades, CLOs have been a significant driver of demand for loans, but there are few similarities between the behavior of CLOs (and the underlying loans pooled to create them) and the Mortgage Backed Securities (MBS) that fueled irresponsible mortgage lending in the lead up to the Global Financial Crisis. A CLO is a securitized pool of senior secured loans to corporations, each with its own idiosyncratic or company specific risks. CLO managers perform diligence on each underlying issuer, weighing the probability of the company defaulting, expectations for recovery given the secured status, as well as the diversity of the underlying portfolio. Regular company reporting packages provide transparency into the performance of the underlying constituents. In contrast, other structured products like MBS consist of relatively opaque pools of loans such as mortgages that do not provide similar transparency and offer less diversification.

Rating agency data shows that very few rated CLO tranches have ever defaulted despite weathering one, and in some cases, two recessions. CLOs over the 1994-2013 period experienced a cumulative default rate of just 0.41% and total loss rate of just 0.04%.¹⁶ This was because, despite the sharp price correction in 2008, senior secured loans continued to pay highly stable cash flows. Since the drawdown in loan prices was driven by a wave of risk aversion more than by corporate fundamentals, the mispricing was promptly corrected during the following year. This was achieved despite senior secured loan default rates reaching a record high during this period. Critically, recovery rates of loans that defaulted during the crisis were in line with historical averages, indicating that the downturn was not caused by deterioration in credit underwriting standards.

We believe a clear picture emerges from this data: CLOs are a robust product that has withstood significant levels of economic stress. Apart from the act of securitization, which by no means is unique to loans and CLOs, the inclusion of covenant-lite loans in CLO collateral pools does not compare to the lax underwriting standards and rampant speculation in the housing market during the early 2000s that ultimately precipitated the Global Financial Crisis. We believe that classifying growing CLO issuance and the loosening of loan agreement covenants within the loan collateral pool as systemically risky is overstated and misguided.

Away from these perceived issues facing the loan market, another key consideration for loan investors is the upcoming transition from LIBOR to SOFR. With LIBOR being phased out as a base rate in global financial markets by 2021, loan market participants are beginning to coalesce around a modified version of SOFR - Secured Overnight Funding Rate - as a replacement. The Loans Syndication & Trading Association is working with stakeholders to develop a new standard base rate that adjusts SOFR for its key dissimilarities from LIBOR, namely tenor and unsecured credit risk. These adjustments will aim to ensure that loan investors do not lose coupon income as a result of the transition. Meanwhile, issuers have been methodically seeking amendments to their loan agreements that add a consensual mechanism for replacing LIBOR once the rate is no longer available.

With respect to secondary trading in the loan market, we remain confident that markets will continue to offer robust liquidity in 2019. Despite regulatory changes in recent years intended to curtail risk taking at large banks / dealers, liquidity in the loan market has not been substantially impacted. In 2018, the loan turnover rate, or secondary trading volume as a percentage of the overall market size, was 63.3%.¹⁷ This is in line with the annual average of 65.5% since 2010¹⁷ and illustrates the healthy secondary liquidity environment for loans.



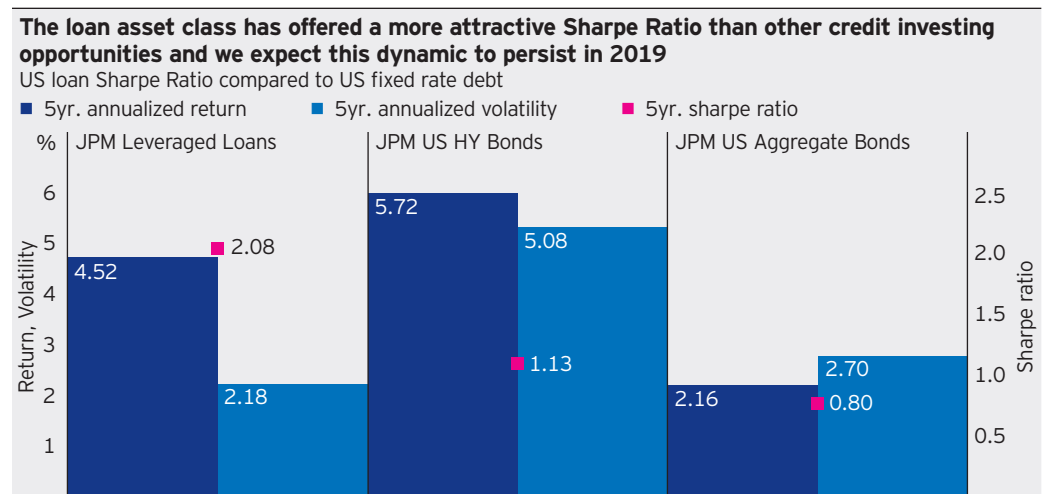
Source: LSTA Secondary Market Trade Data Study as of Sept. 30, 2018. Credit Suisse Leveraged Loan Market Statistics as of Sept. 30, 2018. *Figures are annualized.

Key risks to 2019 return expectations

Our 2019 return forecast is the outcome we believe to be most probable for the loan market; however, we acknowledge that key variables could cause actual performance to differ from our base case, either positively or negatively. Important swing factors include, but may not be limited to:

- **Central bank policy:** Our view that the Fed is likely to raise the fed funds rate another 0.25-0.50% from December 2018 through 2019 may overestimate the impact to short term rates if inflation and economic growth underperform. Conversely, if the Fed unexpectedly perceives a need to increase rates faster, this could hasten an economic slowdown sooner than we anticipate, disrupting loan prices.
- **Geopolitical tensions:** If left unresolved, ongoing trade disputes with China and Europe may prove to be more impactful to overall growth and the trajectory of corporate earnings growth. Additionally, failure by the UK to achieve an orderly Brexit and the ongoing threat posed by Italy's fiscal situation to the stability of the European Union create additional risks to global credit markets.
- **Impact of secular shifts on default rate:** Unfolding technological advances (i.e., robotics, machine learning, 3-D printing, autonomous and electric vehicles) and consumer behavioral changes (i.e., online shopping) will impact the operating environment for several industries over time. To the extent these developments accelerate unexpectedly, certain vulnerable issuers will have less time to adapt and may become financially distressed more quickly than expected.
- **Contagion from troubled sectors:** In 2015/2016, the collapse of energy prices helped generate a sector-specific uptick in defaults and also weighed on the broader loan market. The impact was more pronounced in the high yield bond market due to its higher market weighting of energy issuers compared to the loan market; however, contagion affected both markets materially. While we do not expect a repeat of this commodity-led downturn in 2019, there is a risk that sectors currently experiencing varying levels of stress - retail, telecommunications, and healthcare - could deteriorate further and undermine investor appetite for credit risk.

Notwithstanding these uncertainties, we expect 2019 will be another solid year for senior secured loan investors due to supportive fundamental credit conditions, strong current income, and limited near term default risk. As we progress towards a potential end to both the Fed's rate hiking cycle and the current economic cycle in the coming years, we believe loans continue to warrant a key role in investors' portfolios. Loans merit an allocation even when interest rates are not rising, as their defensive positioning in issuer's capital structures reduce their risk profile. As noted above, loans have only produced negative total returns in two years - the 2008 crisis, and 2015 when returns were roughly flat. This track record illustrates loans' high level of income and low volatility even in weak environments for risk assets, and reinforces our view that loans should remain a mainstay of investors' portfolios.



Source: JPM Leveraged Loan Index, JPM US HY Bond Index and JPM US Aggregate Bond Index as of Sept. 30, 2018. An investment cannot be made in an index. Sharpe Ratio updated on a quarterly basis as of Sept 30, 2018. **Past performance is not a guide to future returns.**

Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. Past performance is no guarantee of future returns.

Most senior loans are made to corporations with the below investment-grade credit ratings and are subject to significant credit, valuation and liquidity risk. The value of the collateral securing a loan may not be sufficient to cover the amount owed, may be found invalid or may be used to pay other outstanding obligations of the borrower under applicable law. There is also the risk that the collateral may be difficult to liquidate, or that a majority of the collateral may be illiquid. Compared to investment grade bonds, junk bonds involve greater risk of default or price changes due to changes in the issuer's credit quality. Diversification does not guarantee of profit or eliminate the risk of loss.

- 1 There is no guarantee these views will come to pass.
- 2 Credit Suisse Leveraged Loan Index as of Nov. 30, 2018. Return is total return.
- 3 Bloomberg as of Jan. 1, 2018 through Nov. 30, 2018.
- 4 Credit Suisse Leveraged Loan Index as of Jan. 1, 2018 through Nov. 30, 2018.
- 5 S&P LCD and Invesco as of Nov. 30, 2018 in USD.
- 6 Credit Suisse Leveraged Loan Index as of Dec. 31, 2017.
- 7 JP Morgan as of Nov. 30, 2018.
- 8 This figure is estimated based on the growth of the market, CLO new issuance, CLO redemptions, and retail inflows.
- 9 Credit Suisse Leveraged Loan Index as of Nov. 30, 2018.
- 10 S&P/LSTA Leveraged Loan Index and Bloomberg L.P. as of Nov. 30, 2018. High yield represented by the BAML US High Yield Index; investment grade by the BAML Investment Grade Index.
- 11 S&P LCD Default Rate as of Nov. 30, 2018 based on principal amount.
- 12 JP Morgan as of Nov. 28, 2018.
- 13 JP Morgan as of Nov. 30, 2018.
- 14 Credit Suisse Leveraged Loan Index as of Nov. 30, 2018. Some issuers elect to use 1 month LIBOR; hence why the spread + LIBOR shown do not add to the actual coupon.
- 15 BAML Research.
- 16 S&P Publication: Twenty Years Strong: A Look Back At US CLO Ratings Performance from 1994 Through 2013.
- 17 LSTA data as of Sept. 30, 2018; annualized figure.

Important information

All data provided by Invesco unless otherwise noted. All data is US dollar and as of Nov. 30, 2018, unless otherwise noted.

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