Senior Secured Loans

Questions You Should Be Asking About Senior Secured Loans

Senior secured loans ("senior loans") have been receiving a lot of attention lately from investors seeking higher yields and protection against rising interest rates. The following Q&A is designed to answer some of the more pressing questions we have been receiving from investors regarding senior loans.

Q: What are Senior Secured Loans?

Senior loans, also known as bank loans or leveraged loans, are unregistered, non-investment grade debt obligations issued by public and private corporations. Senior loans have intermediate-term maturities from five to eight years and typically offer a fixed spread over LIBOR, making them "floating rate" instruments. They are normally secured by the assets of the borrower, which gives investors seniority and priority in the capital structure. Financial institutions have been making senior loans to companies for decades, with an active secondary market established for institutional investors in the mid-1990s. By year end 2010, there were more than $1.4 trillion in senior loans outstanding from US issuers, and €177 billion outstanding from European issuers. In the first quarter of 2011, more than $124 billion of senior loans traded in the US secondary market.¹

Q: Why should I consider senior loans as part of my overall portfolio?

Senior loans can provide investors with a number of key benefits:

Floating Rate Coupons: Among the most attractive attributes of senior loans is their floating rate coupon. Senior loans offer a fixed spread over a base rate that changes periodically based on economic and market conditions. The floating rate enables investors to earn higher current income in a rising interest rate environment.

Structural Protection: Senior loans typically rank at the top of the corporate capital structure and have other underlying structural protection features that significantly improve their recovery rate vs. high yield bonds in the event of a default.

Attractive Current Spreads and Coupons: Senior loans offer an attractive entry point in today's environment. Credit spreads are above their long-term averages while most new issue coupons are falling in a range of 4.5% to 5.5%.²

Diversification: Senior loans can help improve the risk/return profile of an overall fixed income portfolio.

¹) Source: Credit Suisse as of December 31, 2010.
²) Source: Credit Suisse as of March 31, 2011.
**Q: How have senior loans performed during periods of rising interest rates?**

Senior loans are among the best performing asset classes in a rising interest rate environment. Since loan coupons adjust periodically to a market interest rate, investors benefit from higher yields as short-term rates rise, without being exposed to the price volatility of longer-term fixed rate securities. As the chart below illustrates, the coupon of senior loans has historically tracked the directional changes of the Federal Funds rate.

**Senior Loan Coupons Move as Interest Rates Change**  
*January 1, 1992 to December 31, 2010*

During the Federal Reserve’s three major tightening periods over the last 20 years, senior loans handily outperformed most other US debt obligations, including US Treasury bonds, investment grade bonds, (as measured by the Barclays Aggregate Bond Index), and high yield bonds.

**Senior Loans Have Outperformed Other Fixed Income Securities as Interest Rates Rise**  
*Cumulative Returns for the Following Time Periods*

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Senior Secured Loans</th>
<th>Aggregate Bond Index</th>
<th>US Treasuries</th>
<th>High Yield Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 1994 - February 1995</td>
<td>10.38</td>
<td>0.01</td>
<td>1.55</td>
<td>-0.86</td>
</tr>
<tr>
<td>June 1999 - May 2000</td>
<td>3.93</td>
<td>2.11</td>
<td>3.36</td>
<td>-3.21</td>
</tr>
<tr>
<td>June 2004 - June 2006</td>
<td>12.64</td>
<td>6.54</td>
<td>5.69</td>
<td>17.85</td>
</tr>
</tbody>
</table>

**Change in Federal Funds Rate**  
- 3.0% to 6.0%  
- 4.75% to 6.5%  
- 1.0% to 5.25%

1) **Source:** Prudential Fixed Income, Credit Suisse, and Bloomberg. The secured loan coupon is represented by the Credit Suisse Leveraged Loan Index. Data is from January 1, 1992, the inception of the index. See Notes section for index descriptions.

2) **Source:** Source of illustration, Prudential Fixed Income. Underlying data from Credit Suisse and Barclays Capital. Data represents the Credit Suisse Leveraged Loan Index and Barclays Capital Aggregate Bond Index, US Treasury Index, and High Yield Index. Past performance is not a guarantee or reliable indicator of future results. The timeframes shown represent the three largest increases in the Federal Funds rate from April 1, 1991 to March 31, 2011. See Notes section for index descriptions.
Q: How can senior loans complement my existing portfolio?

Senior loans can provide important diversification benefits and improve the risk/reward profile of broader fixed income and multi-sector portfolios. Given their unique characteristics, senior loans have historically demonstrated a low to negative correlation to nearly all major asset classes.

Not surprisingly, loans have a negative correlation to US Treasuries, which are highly sensitive to interest rate movements. Their correlation to investment grade bonds (as measured by the Barclays Aggregate Index) and gold is close to zero, and to US equities is relatively low. Conversely, high yield bonds have the highest correlation to loans given that both sectors are comprised of the debt of below investment grade companies.

**Senior Loans Have Low to Negative Correlation to Most Other Asset Classes**

*January 1, 1992 to December 31, 2010*

<table>
<thead>
<tr>
<th>Term</th>
<th>US Treasuries</th>
<th>Aggregate Bond</th>
<th>Gold</th>
<th>TIPS*</th>
<th>CPI</th>
<th>S&amp;P 500</th>
<th>High Yield Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Loans</td>
<td>(0.29)</td>
<td>(0.02)</td>
<td>0.04</td>
<td>0.15</td>
<td>0.34</td>
<td>0.40</td>
<td>0.74</td>
</tr>
</tbody>
</table>

The diversification benefit of adding senior loans to an investment grade bond portfolio is illustrated in the example below. The graphic shows the historical returns and volatility of the Barclays Aggregate Index, a common portfolio benchmark for many plan sponsors. The Index delivered an annualized total return of 6.43% with 3.79% volatility from January 1992 to December 2010.

**Senior Loans Can Improve Risk/Reward Profile**

*January 1, 1992 to December 31, 2010*

By adding a 30% senior loan allocation to a portfolio bench-marked to the Barclays Aggregate Index, investors could have achieved nearly 20% less annualized volatility (from 3.79% to 3.10%), while reducing the expected return of the portfolio by only 5 bps (from 6.43% to 6.38%).

In addition to the diversification benefits shown in this example, it is important to note the annualized excess returns of senior loans vs. the Barclays Aggregate Index for the same time period from January 1, 1991 to December 31, 2010. The excess return viewpoint is useful as it removes the impact of interest rate changes when evaluating the performance of different fixed income sectors.

Projected performance does not represent actual performance results for the specific period. All projections have significant inherent shortcomings and do not represent the impact that actual trading and real world frictions might have if actual client funds were being managed during the specified periods. In addition, these projected returns do not reflect the deduction of investment advisory fees or other costs and expenses; a client’s return will be reduced by such fees and expenses. Example above is for illustrative purposes only.

Source: Illustration source is Prudential Fixed Income. Underlying data from Credit Suisse and Barclays Capital. Senior loans are represented by the Credit Suisse Leveraged Loan Index. Data is from Jan 1, 1992, the inception of the index. Additional fixed income data is represented by the Barclays US Treasury, Aggregate Bond, TIPS, and High Yield Bond indices. Source for Gold, TIPS, and CPI is Bloomberg. Data for the TIPS index is from Jan 1, 1997, the inception of the index. Past performance is not a guarantee or a reliable indicator of future results. See the Notes section for index descriptions. Volatility is defined as actual historical volatility over a specified period derived from a time series of past market prices.
The result shows that senior loans delivered +206 bps in gross excess return on an annualized basis vs. just +21 bps for the Barclays Aggregate Index.¹ This suggests a large component of the historical, absolute return of the Barclays Aggregate Index over the past 19 years can be attributed to price appreciation as interest rates fell to near historic lows. With interest rates unlikely to trend much lower from today’s levels, it is not realistic to expect a similar level of price appreciation going forward. Therefore, we believe it is important for investors to also consider historical excess return when evaluating different fixed income sectors.

Q: How do Senior Loans compare to High Yield Bonds?

Senior loans and high yield bonds share some similar traits in that both are issued by non-investment grade corporations and are subject to credit risk as well as changes in market sentiment. In fact, many non-investment grade companies will often have both senior loans and high yield bonds outstanding. Beyond these similarities, secured loans and high yield bonds have meaningful structural differences and distinct risk/return profiles, as outlined below.

### How Senior Loans Differ From High Yield Bonds

**Comparison of Characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Senior Loans</th>
<th>High Yield Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coupon</td>
<td>Floating (fixed spread over LIBOR)</td>
<td>Fixed</td>
</tr>
<tr>
<td>Typical Maturity</td>
<td>5 - 8 years</td>
<td>7 - 10 years</td>
</tr>
<tr>
<td>Callability</td>
<td>Anytime (with some limited protection)</td>
<td>Usually callable after 3 - 4 years</td>
</tr>
<tr>
<td>Effective Duration</td>
<td>Short</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>Most senior</td>
<td>Below senior loans</td>
</tr>
<tr>
<td>Security</td>
<td>Typically secured by lien on assets or stock in subsidiary companies</td>
<td>Typically unsecured</td>
</tr>
<tr>
<td>Ratings</td>
<td>Usually one or more notches above high yield bonds of same issuer</td>
<td>BB+ or lower</td>
</tr>
<tr>
<td>Covenants</td>
<td>Yes (some limited exceptions)</td>
<td>Minimal</td>
</tr>
<tr>
<td>Long-Term Default Rate²³</td>
<td>3.6%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Long-Term Recovery Rate²⁴</td>
<td>70.1%</td>
<td>39.9%</td>
</tr>
</tbody>
</table>

¹) Sources: Prudential Fixed Income is the source for the calculation, data sources are Credit Suisse, and Barclays Capital. Excess returns for senior loans were calculated by subtracting 3-month LIBOR from the total return of the Credit Suisse Leveraged Loan Index. Excess returns for the Barclays Aggregate Index were calculated by Barclays Capital. Past performance is not a guarantee or a reliable indicator of future results. See the Notes section for index descriptions.


³) Represents weighted average US dollar default rates for senior loans and high yield bonds.

⁴) Based on recovery rates for senior loans and high yield bonds 30-days after default.
Let’s take a look at some of the key differences between the sectors:

- The performance of senior loans and high yield bonds can vary greatly in response to interest rate changes. As noted earlier, senior loan coupons float with a market base rate. Therefore, loan prices generally have limited price volatility. Conversely, high yield bond returns will vary depending on the quality and maturity of the issue, and the spread or yield advantage the bond offers over US Treasuries at that time. Typically, higher quality, BB-rated bonds and longer-maturity bonds are more sensitive to interest rate changes than shorter-term high yield bonds.

- Senior loans are typically secured by assets of the borrowing company, which improves their recovery prospects in the event of a default. In fact, while senior loans and high yield bonds have similar long-term default rates (3.6% and 3.5%, respectively), the recovery rate for loans is significantly higher: 70.1% vs. 39.9%.

- Most loans have restrictive covenants that limit the ability of the issuer to incur additional leverage or take other action that could hurt creditors. If a covenant is breached, loan investors often have the opportunity to have the loan agreement amended to receive more favorable terms.

- Some loans have prepayment schedules that require the borrower to pay a portion of principal on a regular basis, as well as use some amount of excess cash flow to pay down debt. This has the effect of enhancing return should the loan be purchased below par.

**Q: Is this the right time to invest in senior loans?**

We believe senior loans offer good value in today’s market for several reasons. First, current senior loan spreads are attractive relative to long-term averages. As illustrated below, the spread as of March 31, 2011, was 478 bps, which compares favorably with the long-term average of 343 bps. In addition, we currently find the new issue market to be especially attractive from a relative value standpoint. Most new loans include an original issue discount of about one-half percentage point and contain LIBOR floors that are 75 to 125 basis points above current base rates. The floor serves to enhance loan yields in extremely low interest rate environments, while still allowing the loan’s floating rate to adjust higher once rates move above the floor level.

**Current Senior Loan Spreads are Attractive Relative to Long-Term Median**

*January 1, 1992 – March 31, 2011*

1) Source: JP Morgan.
2) Sources: Prudential Fixed Income for source of calculation, data source is Credit Suisse. Past performance is not a guarantee or a reliable indicator of future results. See Notes section for index descriptions. Spread levels are calculated internally and represent the senior loan discount margin, a rate of interest paid on current below-par market prices rather than the coupon at par; based on loans with a four-year average life, the historical average life of senior loans.
Second, senior loans are currently well supported from both a fundamental and technical perspective. Fundamentally, the financial health of most loan issuers has improved steadily over the past two years and should remain on strong footing as the economic recovery continues to take hold. In addition, defaults are expected to remain at very low levels—currently about 1%—for the foreseeable future. On a technical level, we continue to see strong demand from both institutional and retail investors while new loan issuance has been easily absorbed by the marketplace.

For the balance of 2011, we look for the majority of loan returns to come from coupon income rather than from price appreciation, as most loan indices are currently priced at a slight discount to par value. We also expect relatively low volatility under current market conditions. It is important to note that the volatility experienced by the loan market from mid-2008 to early 2009, during the financial crisis, was largely a technically-driven sell-off caused by excessive new issuance and forced selling from levered vehicles with market value triggers, factors that largely do not exist today.

**Q: How do I invest in Senior Loans?**

Institutional investors can gain exposure to senior loans through a wide range of investment vehicles across the risk spectrum.

On one end of the spectrum, investors interested in traditional, unleveraged loan portfolios may consider a mutual fund, institutional commingled account, or institutional separate account, depending on the size of their investment. These portfolios currently pay coupon rates of about 4.5% to 5.5% as of March 31, 2011.1 Mutual funds and commingled accounts generally have fixed investment guidelines while separate accounts allow for a more tailored approach with exposure limits and risk budgets based on the investors’ specific objectives, guidelines, and risk appetite.

Investors seeking higher potential returns may choose to invest in leveraged loan vehicles and instruments. These range from closed-end mutual funds (up to 2-3X leverage), to low-to-medium leveraged institutional accounts (with 1-5X leverage), to collateralized loan obligation (CLO) equity notes (with 7-10X leverage.)

**Q: Aren’t CLOs risky?**

CLOs have often been confused with other structured products, including mortgage-backed and ABS collateralized debt obligations (CDOs), that have been labeled as risky. In fact, the experience of CLOs has been quite different from other types of structured products. Unlike CDOs, the underlying senior loans in CLOs did not experience fraudulent underwriting and regulatory issues, and therefore did not see the same magnitude of credit losses during the financial crisis. CLOs did indeed receive credit rating downgrades and suffered in terms of market value volatility during the depths of the crisis but have since recovered to a large extent. CLOs have self-repairing mechanisms that are designed to reduce leverage and conserve value in times of stress, primarily by turning off cash flows to equity holders. However, that shutdown mechanism is reversed as the CLO “repairs” itself. During the financial crisis, the number of CLO debt classes that failed to pay full principal and interest to debt holders when due was exceedingly small, and at this point virtually all CLO equity holders are receiving distributions, as well.2 CLO equity in many CLOs is performing as originally anticipated when the CLOs were priced pre-crisis, with returns often in the low double digits.3

1) Source: Credit Suisse
2) Source: Moody’s Investor Services and Citi as of March 31, 2011.
3) Source: Citi as of January 31, 2011.
Q: What are the major risks involved in investing in Senior Loans?

As with any type of investment, senior loans bear certain risks, risks that can largely be effectively managed by an experienced senior loan investment manager. Two of the key risks are:

- **Credit Risk**: Although senior loans have strong structural credit protections and seniority over other creditors, they are still non-investment grade instruments that are subject to the financial stability of the issuing company. Therefore, fundamental research is essential. Each senior loan requires ongoing analysis of the issuer’s fundamentals, how it compares with other issuers in the same industry, and its expected performance under various stress scenarios.

- **Call Risk**: If market spreads decline or credit quality improves, a senior loan will likely be called by the issuer and refinanced at a lower spread over LIBOR, limiting returns when purchased near par. Today, most loans being issued provide a 1% call premium if the loan is prepaid within one year of issuance.

Q: Are you concerned about the maturity wall in 2014?

Not at this time. As a result of the record new senior loan issuance in 2007, the maturity profile of the market still shows a refinancing peak in 2014 with $136 billion coming due.¹ We note that since the beginning of 2010, however, the 2014 maturity bucket has declined by about 40%, as borrowers have successfully refinanced, extended or repaid their loans in an improving credit environment. At this point, we believe this refinancing wall is more issuer specific in nature and does not pose a significant overall risk to the senior loan marketplace.

Outstanding Senior Loan Maturity Schedules

*December 2009, 2010 and April 2011¹*

![Outstanding Senior Loan Maturity Schedules Graph]

1) Source: S&P LCD, May 4, 2011
Q: What should I look for in an Investment Manager if I am interested in Senior Loans?

It's important to look for investment managers that specialize in the leveraged finance asset class and have significant experience managing senior loans. Critical capabilities include:

- Experience managing dedicated loan portfolios, established broker-dealer relationships, and ready access to both the new issue and secondary markets;
- A dedicated credit research staff with experience analyzing both public and private loans across an issuer’s capital structure, as well as US and non-US issuers;
- Resources and experience analyzing loan covenants and agreements to identify downside risks;
- Clear risk budgeting and risk management processes; and
- Dedicated loan administration and settlement personnel to support the unique processing and custody/recordkeeping requirements for loans. Senior loans do not trade on an exchange and are settled physically. They are document-intensive and require additional communication and operational processes with the trading counterparty and custodian bank responsible for recordkeeping the loan.
Notes

Credit Suisse Leveraged Loan Index The CSFB Leveraged Loan Index is designed to mirror the investable universe of the $US-denominated leveraged loan market. As of 30 March 2001, the index included $148 billion in tradable term loans. Average values are computed over the index for coupon, current yield, initial spread and price. The average coupon, current yield and initial spread are weighted by market value (amount outstanding x price) at the end of the measurement period for each loan currently paying interest in the index. Total return is computed for each loan, which is the per cent change in the value of each loan during the measurement period. Total return is the sum of three components: principal, interest, and reinvestment return.

Barclays Capital US Aggregate Bond Index The Barclays Capital US Aggregate Index covers the USD-denominated, investment-grade, fixed-rate or step up, taxable bond market of SEC-registered securities and includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM pass throughs), ABS, and CMBS sectors. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/BBB-/BBB-) or better using the middle rating of Moody’s, S&P, and Fitch.

Barclays Capital US Corporate Index The Barclays Capital US Corporate Index covers USD-denominated, investment-grade, fixed-rate or step up, taxable securities sold by industrial, utility and financial issuers. It includes publicly issued US corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/BBB-/BBB-) or better using the middle rating of Moody’s, S&P, and Fitch.

Barclays Capital US Corporate High Yield Bond Index The Barclays Capital US Corporate High-Yield Index covers the USD-denominated, non-investment-grade, fixed-rate or step up, taxable corporate bond market. The index excludes Emerging Markets debt. Securities must be rated below investment-grade (Ba1/BB+/BB+ or below) using the middle rating of Moody’s, S&P, and Fitch, and have at least 1 year until final maturity.

Barclays Capital US Treasury: The Barclays Capital US Treasury Index is an index that includes all Treasuries in the Barclays Capital U.S. Aggregate Index that mature in 10 years or more.

Barclays Capital Global Inflation-Linked: US TIPS Index The US Government Inflation-Linked Bond Index measures the performance of the US Treasury Inflation Protected Securities (“TIPS”) market. The index includes TIPS with one or more years remaining to maturity.

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