

Winter 2018

Not created equal: Surveying investments in non-investment grade U.S. corporate debt

Institutional investors searching for yield and current income opportunities have increased their allocations to non-investment grade corporate bonds and loans. The case for investing in these assets is clear with the 10-year Treasury under 3% and historically low rates across the yield curve. Non-investment grade U.S. corporate debt has historically produced yields in the 6-10% range or greater. And with default rates below their long-term averages, capital has poured into non-investment grade assets as investors expect low interest rates to persist.

But while delivering much-needed yield with manageable levels of risk, non-investment grade corporate debt is far from a monolithic asset class. Investors can choose from several categories that are markedly different from each other — in terms of market dynamics and the underlying risk-return profile of the investments. Furthermore, as credit markets shift with rising interest rates, central bank tightening and potential bouts of volatility, investors should

determine which non-investment grade debt strategies best match their long-term objectives.

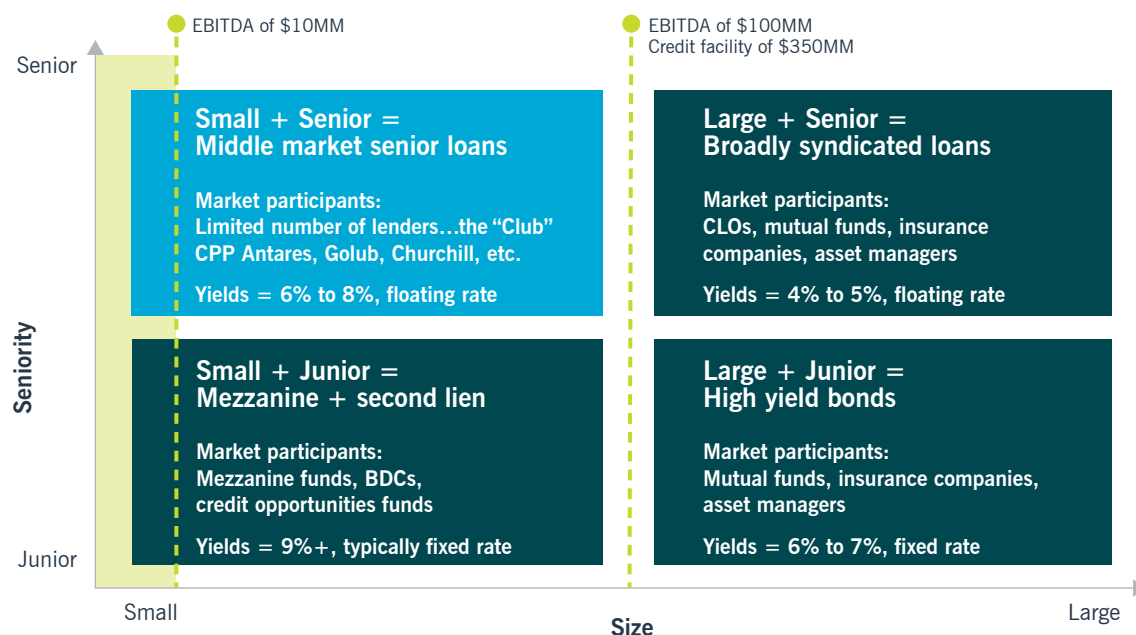
THE MANY FLAVORS OF LEVERAGED LENDING

We can illustrate the different risk-return attributes and drivers of performance by dividing the main asset classes of U.S. non-investment grade corporate debt in four distinct quadrants, based on company size and seniority.

As credit markets shift with rising interest rates, central bank tightening and potential bouts of volatility, investors should determine which non-investment grade debt strategies best match their long-term objectives.

Broadly speaking, investors can choose from four categories, which can be segmented by company size (large cap or middle market) and debt position in a company's capital structure (senior or junior). The categories in the quadrant also have clear differences in liquidity characteristics and market dynamics that drive returns and overall credit quality. Figure 1 below illustrates these four distinct categories.

Figure 1: U.S. non-investment grade corporate debt market



Source: Nuveen and Churchill Asset Management

These categories represent the different asset classes available to investors within the non-investment corporate debt market in the U.S. On the horizontal axis in Figure 1, company size is depicted as cash flow or earnings before interest, taxes, depreciation and amortization (EBITDA).

Another way to view the asset class is based on the size of a company's senior credit facility. Both of these criteria focus on the ultimate liquidity of a company's debt securities. Seniority, shown on the vertical axis, is simply where the debt falls within a company's capital structure.

The dividing line between large and small issuers historically has been EBITDA of roughly \$100 million or a senior credit facility of approximately \$350 million — with investments above the line considered liquid and those below generally considered illiquid. Largely as a result of significant capital that has poured into the liquid segments of the market, the dividing line has moved down, from \$100 million to about \$50 million in EBITDA — with a corresponding reduction to \$250 million in the size of a senior credit facility considered to be liquid. It remains to be seen how structures in the newly-established middle ground, which have been

structured with large-market terms (including covenant-lite terms in many instances) will fare in a credit cycle. Despite these concerns, large market investors (primarily CLOs and mutual funds) have been willing to push lower in company size in search of yield.

The section below explains the differences in returns, liquidity and risk among various asset classes in the U.S. non-investment grade corporate debt market.

BROADLY SYNDICATED LOANS

Broadly syndicated loans are floating-rate loans made to corporate borrowers with generally greater than \$50 million in EBITDA and in most cases, at least \$100 million. They are senior in the capital structure and have a first claim on the assets of the borrower. Unlike middle market loans, which are typically made by a small number of co-lenders who know each other and cooperate closely in a club structure, broadly syndicated loans (BSL) may have 15 to more than 100 investors, the vast majority of whom are mutual funds or collateralized loan obligations (CLOs). Held by a large, diverse

Broadly syndicated loans — held by large investors and very liquid — have prices and terms that are often driven by technical factors, rather than fundamentals.

group of investors, broadly syndicated loans tend to be more liquid than middle market loans. As a result, pricing and terms in the BSL market are often driven by technical factors, rather than fundamentals. In addition, large investor groups are difficult to coordinate, so restructuring transactions in the BSL market are often much less effective than in the middle market.

In recent years, the broadly syndicated loan market has been marked by significant liquidity with substantial amounts of capital flowing into the market through loan mutual fund inflows and new CLO formation. In 2017, for example, U.S. CLO issuance reached about \$95 billion through October — close to the record-setting \$125 billion issued in 2014.¹ Overall, U.S. CLO assets under management totaled \$482 billion, as of October 30, 2017. In addition, loan mutual funds held \$157 billion of broadly syndicated loans.²

Differences in the distribution models between middle market and broadly syndicated loans have important implications for yield, credit quality and default protection. The BSL market is characterized by a two-step distribution model, with large banks underwriting and distributing loans to mutual funds and CLOs. Given the capital requirements associated with leveraged lending, large banks are incentivized to originate and distribute underlying loans in order to generate fee income, but they rarely hold much (if any) of the underlying loan on their balance sheets.

As a result, the credit decision at large distribution-focused banks is not driven by the fundamental credit quality of the loan or the strength of the business, but rather by what they are able to sell to yield-hungry buyers of large liquid loans.

The large supply of capital available to issuers means that loan terms are often heavily skewed in favor of borrowers — driving down yields significantly in the BSL market. Current all-in yields are approximately 4% to 5%, compared to 6% to 7% for middle market senior loans. This yield premium for middle market loans reflects the lack of liquidity and a better supply-demand balance. Additionally, covenant-lite loans — transactions containing no financial covenants — have become the norm in the BSL market. This development removes an important early warning system that allows lenders to respond to deteriorating conditions before they can only be addressed through the often difficult bankruptcy process. The absence of tests on the financial performance of the borrowers removes the opportunity for lenders to negotiate with business owners on ways to improve performance and to avoid distress. Without financial covenants, the first time the lender is directly involved is when the borrower is unable to pay the interest due on its loan and is on the verge of a free-fall restructuring or bankruptcy filing. This is a key reason why historical default rates tend to be higher and recoveries lower among large companies versus middle market ones.

Broadly syndicated loans typically have higher leverage and looser structures, making them riskier than middle market loans with less leverage and traditional covenants.

Where does Churchill Asset Management fit in this landscape?

An affiliate of Nuveen, Churchill Asset Management operates in the upper left quadrant of Figure 1. Churchill's disciplined credit approach is designed to identify financing opportunities with companies that are not yet able to access the broadly syndicated loan (BSL) market, where higher leverage multiples, lower current yields and covenant-lite structures are the norm. Churchill's portfolio features high-quality, senior-secured loans, with more modest senior leverage, an average all-in yield of approximately 6% to 7% and traditional financial covenants. Churchill's senior loan investments always have a first-lien, senior-secured position in a company's capital structure.

When assessing a non-investment grade opportunity, investors should understand the segment of the market in which they are operating, and ultimately the risk they are taking. Loans offering similar yields might be attractive but could come with significantly different levels of risk. Understanding where potential investment opportunities lie in the U.S. non-investment grade debt market should assure that investors are fully compensated for the actual risk they are taking.

HIGH-YIELD BONDS

High-yield bonds are non-investment grade fixed-rate public debt securities that have many of the same market dynamics as broadly syndicated loans. The high-yield bond market is large, representing approximately 17% or \$1.5 trillion³ of the \$8.6 trillion⁴ public U.S. corporate debt market. High-yield bonds typically feature fixed-rate coupons, higher yields and greater liquidity than broadly syndicated loans. However, they are more junior in the capital structure and unsecured, meaning they rank behind broadly syndicated loans in priority of repayment.

Like the broadly syndicated loan market, investors are typically mutual funds, insurance companies and other institutional and individual

investors. Investors have poured significant capital into the high-yield market, causing yields to compress to about 6%. High-yield bonds are typically fixed rate, which exposes them to interest-rate risk and potential principal declines as rates rise. The high-yield market is also subject to periods of significant volatility, as seen in late 2015 and early 2016 when the market traded down about 6% in response to declining oil prices.⁵

Similar to the broadly syndicated loan market, the high-yield bond market has also migrated to covenant-lite structures. Investors should decide whether the small yield premium is enough to compensate them for subordination, higher leverage, higher market volatility and no covenant protection.

MEZZANINE DEBT AND SECOND-LIEN LOANS

Smaller companies unable to access the broadly syndicated market turn to privately-raised loans known as middle market junior capital. Capital is invested through several types of securities, primarily unsecured subordinated notes known as mezzanine debt, second-lien term loans and, to a lesser extent, holding company debt.

Middle market junior loans typically bear higher interest rates than middle market senior-secured loans, but are riskier because they have a lower priority for repayment than first-lien debt in a borrower's capital structure. Junior loans are often fixed-rate, which does not give investors protection in a rising interest-rate environment. There are several types of investors in this asset class, including independent junior capital funds, credit opportunities funds, captive investment programs run by diversified asset managers and insurance companies, and public business development corporations (BDCs). The amount of capital raised to pursue these higher-yielding debt opportunities has created a supply demand imbalance that also favors borrowers.

Historically, this asset class was dominated by private mezzanine debt carrying coupons of between 12% and 14%. Strong demand, however, has caused a shift in loan issuance and reduced

yields. At the high end of the middle market, mezzanine debt has been replaced by second-lien loans with all-in, floating-rate yields as low as high single-digits for similar positions on the balance sheet. Steady demand for mezzanine loans continues among value-oriented private equity sponsors and borrowers at the lower end of the market with EBITDA between \$10 million and \$25 million. With capital supplies exceeding demand from borrowers, total leverage levels have increased, pricing has compressed and investment structures have become more borrower-friendly. Mezzanine yields, for example, have fallen to between 10.5% and 12%.

MIDDLE MARKET SENIOR LOANS

Middle market senior-secured loans represent the one segment of the U.S. non-investment grade credit market where supply and demand remain relatively balanced. There is projected demand of more than \$1.7 trillion in loan financing in this segment over the next five to seven years. This estimate includes two components: 1) about \$950 billion⁶ of private equity capital commitments waiting to be invested, driving the need for about \$1.4 trillion in debt financing; and 2) \$550 billion⁷ of middle market loans requiring refinancing between 2018 and 2022. The vast majority of this projected demand will be for senior debt capital as typical middle market debt structures consist of 80% senior-secured debt. Many middle market companies do not employ any junior debt.

This significant demand comes during a period of declining supply as many traditional lenders to middle market companies have significantly reduced lending activity or exited the business entirely, a trend that accelerated after the credit crisis. The first driver of the shift away from traditional lenders was the consolidation that occurred in the U.S. banking sector over the past 20 years. As the largest banks (principally JP Morgan, Citibank, Wells Fargo, and Bank of America) consolidated, they left the middle market, moving up-market to focus on capital markets activities. The second, more recent

phenomenon is the imposition of stricter regulatory burdens and capital charges on large banks, keeping them firmly out of the middle market. Non-traditional lenders have filled the void, raising capital from pension funds and other institutional investors seeking yield in an attractive and relatively safe asset-class.

Despite increased interest in traditional middle market senior loans, there are still only a limited number of market participants, helping to balance supply and demand. These lenders form clubs, or small groups of generally less than ten lenders who work together to combine investor capital and structure financing packages for a single borrower. In addition, unlike the broadly syndicated loan market, the middle market is buy-and-hold. This means that lenders originating traditional senior loans in the middle market expect to hold the loans until repaid. As a result, it is critical for middle market lenders to maintain discipline in underwriting standards and credit quality. This produces structures that are more conservative than the broadly syndicated loan market, with generally lower leverage and traditional covenants. The measured pace of the private market allows lenders to perform thorough due diligence, including gaining access to a private equity sponsor's full industry research, quality of earnings report, customer calls and insurance diligence background. Most importantly, senior middle market loans are much more likely to contain traditional financial covenants. These agreements enable lenders to negotiate with borrowers when financial performance deteriorates — before the borrower is in distress. The middle market is substantially differentiated from the larger broadly syndicated loan market, where originators ultimately hold little of a loan, investors buy what is available on the market with little review and positions are traded in an active and public secondary market.

DEFINING CHARACTERISTICS OF MIDDLE MARKET LOANS

Middle market loans hold first-lien secured status in a company's capital structure — meaning that loans are backed by a range of corporate assets and would not be impaired unless there is a significant loss event. Leverage remains more reasonable with typical deals having a debt-to EBITDA ratio between 4 and 4.5 times, while providing a significant cushion of between 50% and 60% of the capital structure in the form of junior debt and equity. Many middle market borrowers benefit from the ownership of a middle market private equity sponsor, who typically invests significant equity capital (35%+), and conducts substantial due diligence on the borrower. This private equity sponsor typically controls the borrower and serves as a source of capital and operational and strategic expertise as the company grows. Additionally, while other markets have abandoned covenants, middle market senior loans still require borrowers to meet and report on certain financial covenants on a quarterly basis. These covenants might include a leverage test (measured by the debt-to-EBITDA ratio), a fixed charge coverage test or a minimum EBITDA test. Through quarterly reviews of a covenant compliance certificate provided by the company, lenders can keep close tabs on whether problems are arising, allowing for early discussions with the borrower and its owners on potential remedies before a default. Finally, middle market loans typically feature floating interest rates, which are set at 400-600 basis points over the LIBOR rate, with a LIBOR floor of 100 basis points. The rates adjust higher or lower based on market movements, providing a significant benefit in rising-rate environments. The current market

environment for middle market loans, combined with structural and pricing trends, offers attractive risk-adjusted return opportunities.

The current market environment for middle market loans offers attractive risk-adjusted return opportunities.

WHY MIDDLE MARKET LOANS ARE THE SWEET SPOT FOR NON-INVESTMENT GRADE CREDIT

Private middle market loans offer institutional investors compelling yield opportunities, while helping them avoid or minimize some of the risks inherent in other non-investment grade debt. For starters, middle market loans are structured as long-term buy-and-hold investments. Lenders are generally like-minded investors — not traders — who are committed to working closely with borrowers to resolve potential problems directly with the buyers. Buy-and-hold, however, also means the loans are relatively illiquid. To compensate for this illiquidity, investors receive better credit protection and favorable yields for middle market loans versus some other non-investment grade asset classes. The yield premium is typically between 100 and 200 basis points over broadly syndicated loans, and at relative parity with high-yield bonds. And middle market loans are senior-secured and floating-rate — offering an element of protection against rising rates, compared to high-yield bonds. The tables below compares the yields for middle market loans with broadly syndicated loans and high-yield bonds.

Middle market loans typically feature floating rates, which are set at 400-600 basis points over LIBOR, with a LIBOR floor of 100 basis points. The rates also adjust higher or lower based on market movements, providing a significant benefit in rising rate environments.

Figure 2: Middle market loan yield premium vs. broadly syndicated loans

Investment/Index	Historical average 4Q2012 - 3Q2017 Yield ¹
Middle market loans ²	6.52%
Broadly syndicated loans ³	5.30%
Yield premium	1.22%

Sources: S&P Capital IQ LCD.

1 Middle market loan yield is 3 month average new-issue yield from 10/1/2012 through 9/30/2017.

2 EBITDA of \$50 mm or less.

3 Large corporate loans (EBITDA of more than \$50 mm).

The sector performance described above does not reflect portfolio or product performance, and does not consider transactions costs or investment management fees.

Figure 3: Middle market loan yield premium vs. high-yield bonds

Investment/Index	Historical average 4Q2012 - 3Q2017 Yield ⁴
Middle market loans ⁵	6.52%
High-yield bonds ⁶	6.43%
Yield premium	0.09%

Source: S&P Capital IQ LCD; BofA Merrill Lynch US High Yield Effective Yield[®] [BAMLH0A0HYM2EY], retrieved from FRED, Federal Reserve Bank of St. Louis.

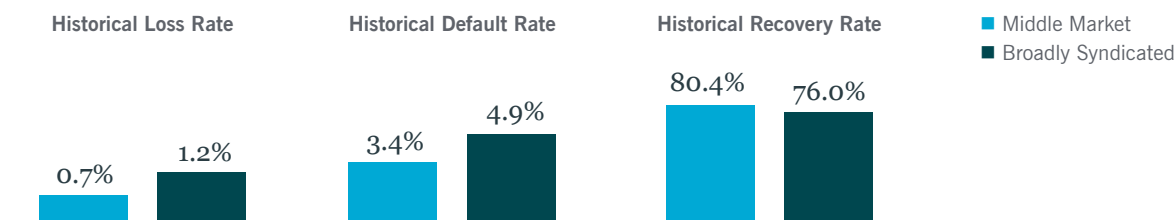
4 3-month average new-issue yield from 10/1/2012 through 9/30/2017.

5 EBITDA of \$50 mm or less

6 Effective yield of the BofA Merrill Lynch US High Yield Master II Index, which tracks the performance of USD denominated below investment grade rated corporate debt publicly issued in the US domestic market.)

The sector performance described above does not reflect portfolio or product performance, and does not consider transactions costs or investment management fees.

Figure 4: Middle market and broadly syndicated loan performance through the downturn, 1998-2015



Source: S&P LCD, S&P Credit Pro.; Middle market loans include total facility sizes of less than \$200 million and broadly syndicated loans denote total facility sizes of greater than or equal to \$200 million

Middle market loans are also more conservatively structured with lower leverage multiples, higher interest coverage and tighter covenant packages than broadly syndicated loans. This can be seen in the historical credit performance of middle market loans compared to broadly syndicated loans (Figure 4).

And finally, with interest rates gradually increasing as the Fed tightens monetary policy, the floating-rate structure of middle market loans provides more protection against principal losses.

Figure 5: Average credit statistics, 2001-2016

Investment	Senior debt/ EBITDA	Total debt/ EBITDA	EBITDA/ Cash int.
Middle market LBO	3.68x	4.33x	3.43x
Large LBO	4.42x	5.05x	2.96x

Source: S&P LCD, period from 1/1/01 to 12/31/16; represents unadjusted EBITDA

CONCLUSION

Partnering with an experienced middle market credit manager

There are nearly 200,000 private middle market companies in the U.S. today, accounting for about 48 million jobs, or about a third of U.S. employment. If this sector were a standalone country, it would be the third-largest economy in the world. The sheer size of the market results in significant deal flow and investment opportunities. However, because the middle market is vast and complex, there can be wide performance dispersion among asset managers. There is also a high degree of inefficiency in this asset class, providing opportunities for managers to outperform or underperform their category peers.

Nuveen believes that an experienced investment team can generate strong risk-adjusted returns by lending to middle market companies in the current environment. A diversified portfolio of senior loans made to high-quality middle market companies currently has the potential to generate a 6% to 7% asset-level yield, representing a significant premium over public-market alternatives. Using modest leverage in a well-structured senior credit facility, this strategy has the potential to generate a 10% to 12% net yield — a compelling investment option for institutional investors looking for solid current yield, without going deeper in the capital structure and taking on significantly more risk.

ABOUT NUVEEN AND CHURCHILL ASSET MANAGEMENT

Drawing on over 40 years of investment experience in private markets, Nuveen has developed a robust platform with proprietary sourcing capabilities and cycle-tested investment teams.

An active middle market investor, Nuveen manages a large, well-established and diversified portfolio comprising private equity fund commitments, direct equity co-investments, mezzanine and senior loans. Senior middle market debt investing is conducted through majority-owned affiliate Churchill Asset Management, which drives unique deal flow and is a key partner for private equity sponsors, providing investors with differentiated market access. Together, Nuveen and Churchill Asset Management offer middle market investment opportunities not easily replicated by traditional asset classes and that may offer diversification benefits.

For more information, contact your Advisory Services representative, or visit nuveen.com.

About Nuveen

Nuveen, the investment manager of TIAA, offers a comprehensive range of outcome-focused investment solutions designed to secure the long-term financial goals of institutional and individual investors. Nuveen has \$948 billion in assets under management as of 9/30/17 and operations in 16 countries. Its affiliates offer deep expertise across a comprehensive range of traditional and alternative investments through a wide array of vehicles and customized strategies.

Endnotes

- 1 Thomson Reuters LPC, Leveraged loan Monthly, October 2017.
- 2 Ibid, as of October 31, 2017.
- 3 S&P US HY Corporate Bond Index, as of 9/30/2017.
- 4 SIFMA, Outstanding U.S. Bond Market Debt, as of 6/30/2017.
- 5 Based on Barclays High Yield Index between 9/30/2015 and 2/12/2016.
- 6 Preqin Quarterly Update: Private Equity & Venture Capital, Q3 2017.
- 7 ThomsonReuters LPC, Middle market non-sponsored and sponsored estimated maturities, Middle Market Review, 3Q 2017.

Risks and other important considerations

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