

Weekly Briefing

SKYView: Bonds vs. Loans

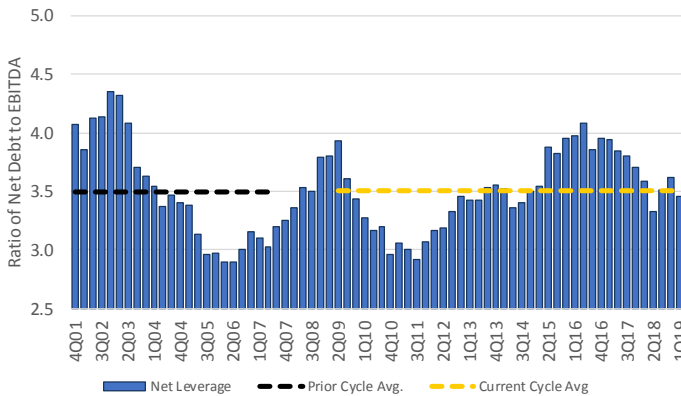
We are often asked to provide our thoughts on the trade-off between US high yield bonds and US leveraged loans, due largely to issuer overlap and a similar risk/return profile through various points in the business cycle. While such assessments are rarely clear-cut, we attempt to evaluate the merits and shortfalls of each in both a qualitative and quantitative framework. In this *Weekly Briefing* we present our thoughts on each asset class through our F.A.S.T. (Fundamentals, Asset valuations, Sentiment, and Technicals) construct.

Fundamentals

Strong y/y EBITDA growth in 2017 and 2018, followed by earnings stability in 2019, as well as robust free cash (by virtue of low interest rates), have served to bolster credit metrics for most corporate credit issuers in the non-investment-grade space. Average net leverage ratios for both US high yield bond and US leveraged loan constituents are below cycle peaks (Q3'16 and Q3'15, respectively), with net debt to EBITDA metrics falling more steeply on the bond side. Additionally, while we note that net leverage metrics through Q2'19 are below current cycle averages for both asset classes, leverage has trended higher on the loan side during this cycle relative to the previous cycle (see dotted average lines below).

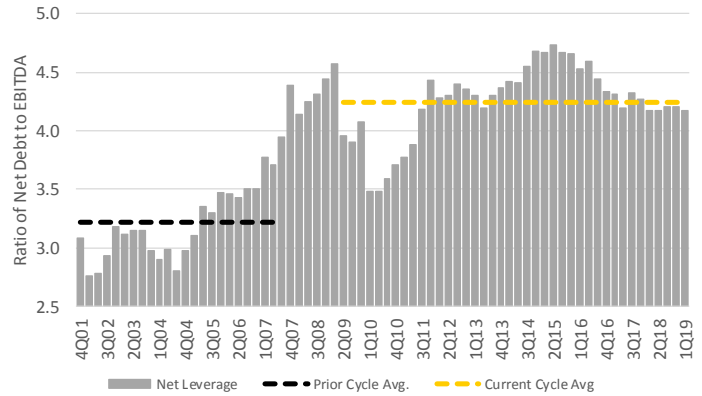
Leverage Ratio: US High Yield Bonds

quarterly data



Leverage Ratio: US Leveraged Loans

quarterly data

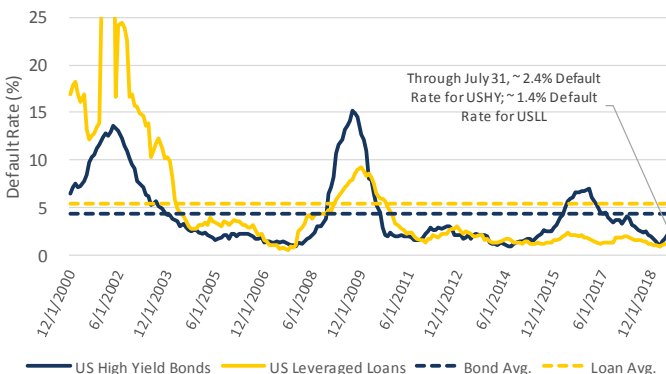


Note: We exclude the impact of operating leases in Q1 and Q2 2019
Source: SKY Harbor, BofA Merrill Lynch, Morgan Stanley, S&P LCD, Capital IQ, Bloomberg

Issuer-weighted default rates – for both high yield bond and leveraged loan issuers – have moderated since a spike in late 2016/early 2017. On an LTM basis through July 31, 2019, issuer-weighted default rates for both bond and loan indices had fallen to ~ 2.4% and 1.4%, respectively, well below long-run annual averages. Recoveries, however, have trended disparately. As seen in the chart below (right side), trailing-twelve-month recoveries for defaulted US high yield bonds were 52% at the end of July, well above the long-run average of 42%. In contrast, trailing-twelve-month recoveries for defaulted US loans were ~ 44% at the end of July, well below the long-run average of 61%. As such, losses following a default have been greater on the loan side despite the secured nature of the asset class.

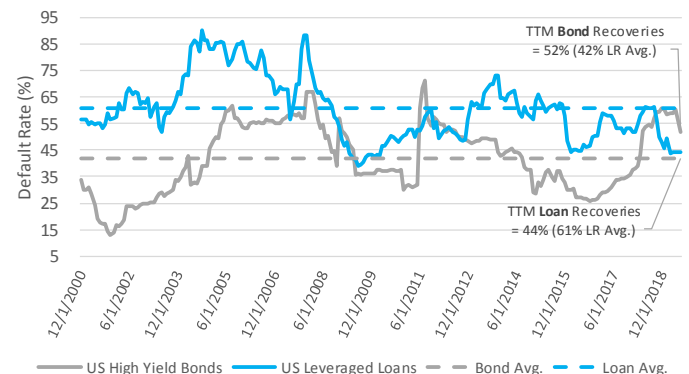
Issuer-Weighted Default Rates

monthly data



Recovery Rates

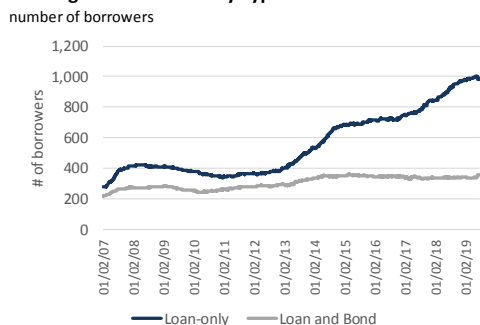
monthly data



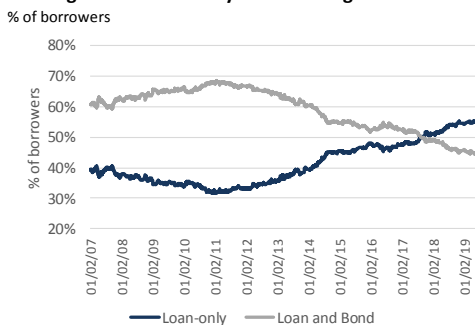
Source: SKY Harbor, BofA Merrill Lynch, Credit Suisse

This phenomenon – lower recoveries after default for secured loans vs. unsecured bonds – has occurred only sparingly over the last twenty years, and is, in our view, a function of the proliferation of loan-only and covenant-lite issuance. With regard to the former, loan-only issuance has risen steadily since 2011, and now represents over half of all leveraged loans by market weight. As for the latter, covenant-lite issuance has increased exponentially since 2012, and now represents ~ 83% of the market (vs. ~ 16% before the last recession).

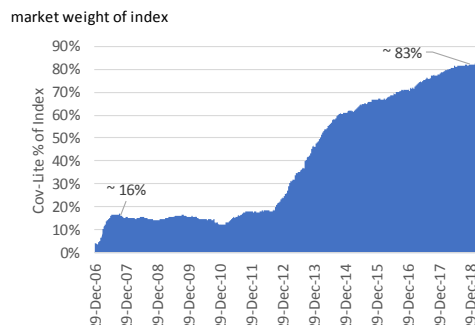
Leveraged Loan Issuers by Type



Leveraged Loan Issuers by Market Weight



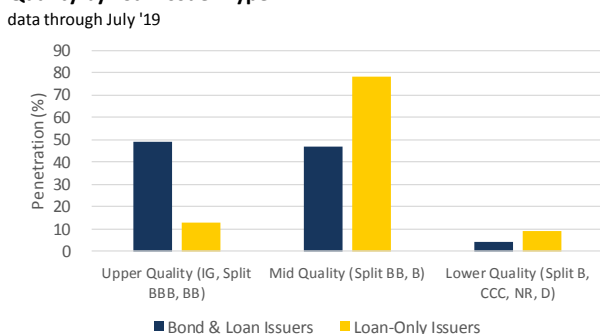
Cov-Lite Penetration



Source: JP Morgan

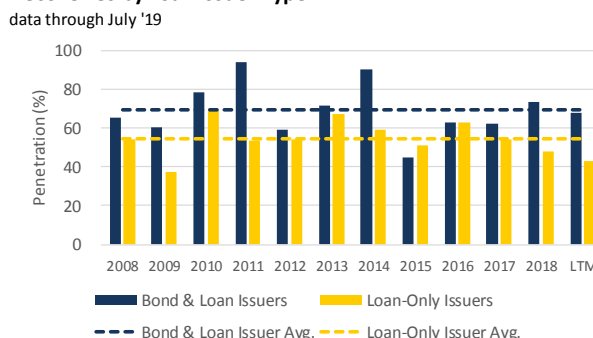
In our view, dilution of asset value and the elimination of junior debt with which to cushion credit deterioration is a major concern arising from the proliferation of loan-only issuance. Furthermore, the elimination of covenants has allowed loan issuers to operate without credit maintenance benchmarks historically put in place to curtail risky behavior and serve as an early warning signal to investors. While such loan-only and cov-lite deals are not necessarily fraught with risk, the situation has seemingly led to instances of adverse selection within the market. Furthermore, as demonstrated below, a recent analysis undertaken by JP Morgan found that loan-only issuers tended to be lower-rated and recover less in the event of default, potentially adding risk to the asset class not demonstrated in prior cycles.

Quality by Loan Issuer Type



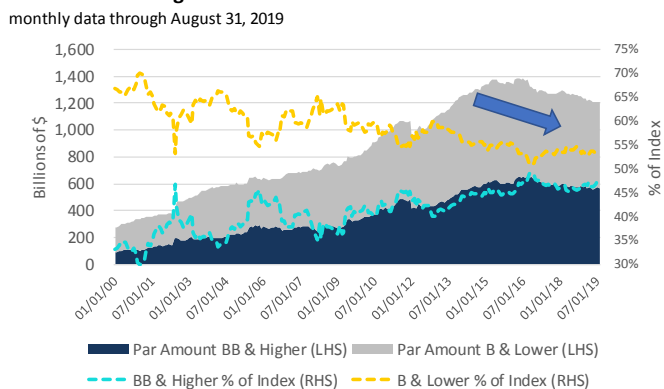
Source: JP Morgan

Recoveries by Loan Issuer Type



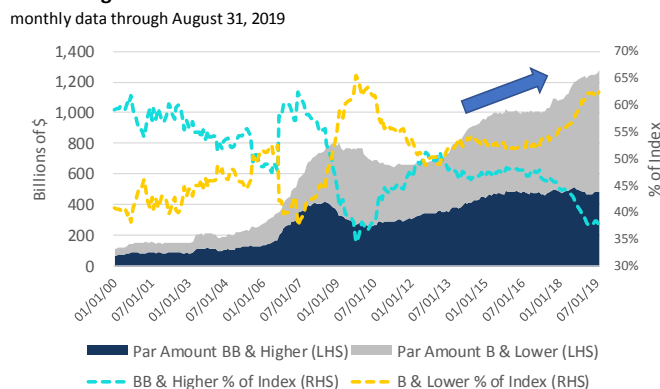
Concurrent with the dynamic outlined above, the US leveraged loan universe has become larger in size and lower in quality in recent years. Now modestly larger than the ICE BofAML US High Yield Index, the Credit Suisse Leverage Loan Index has grown in concentration of Single-B and lower rated securities (62%, up from 42% in 2007), while overall bond quality has improved (53% Single-B and lower-rated securities, down from 62% in 2007).

ICE BofAML US High Yield Index



Bonds	Period	Size (\$bn)	% BB & Higher	% B & Lower
	2000	276	33%	67%
	2007	695	38%	62%
	2019	1,204	47%	53%

CS Leveraged Loan Index



Loans	Period	Size (\$bn)	% BB & Higher	% B & Lower
	2000	109	59%	41%
	2007	682	58%	42%
	2019	1,277	38%	62%

Source: SKY Harbor, ICE BofAML Indices, Credit Suisse

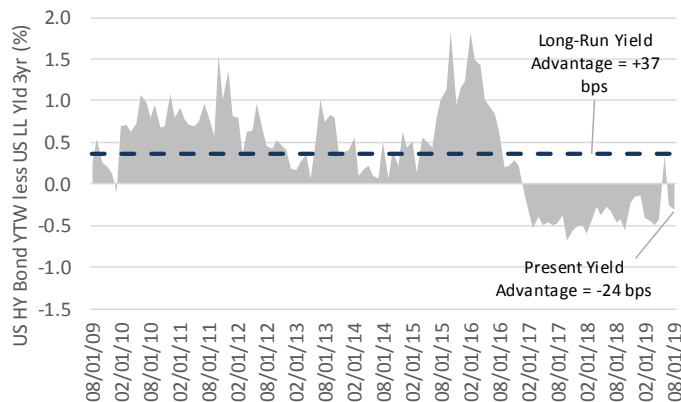
Differences in average leverage this cycle vs. prior cycle, weaker recovery rates (and the potential for this to persist given a spike in loan-only and cov-lite issuance), and shifting credit quality dynamics amidst a growing market dampen our perception of fundamentals within the loan space. As such, we give bonds the edge from a fundamental perspective in the current market environment. **Advantage: US High Yield Bonds.**

Asset Valuations

While there is no universally accepted method of comparing US high yield bond and US leveraged loan yields, we present a time series below in an effort to better frame relative value between the two asset classes. Comparing the yield-to-worst of the ICE BofAML US High Yield Index to the yield (3yr) of the Credit Suisse Leveraged Loan Index, we find that the cycle average premium for bonds (+ 37 bps) had turned into a deficit by December 2016, and is currently -24 bps (as of August 31, 2019). While we suspect the lack of call protection and abundance of securities trading above par likely played a role in this dynamic from 2017 through 2018, technical and fundamental drivers are likely impacting this relationship at present.

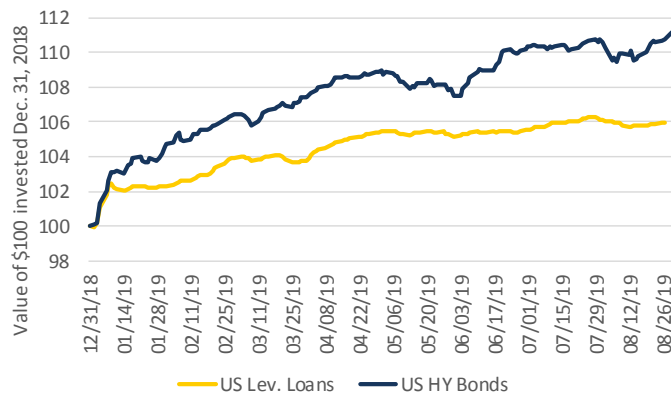
Differentials: US HY Bonds (YTW) less US Lev. Loans (Yld 3yr)

monthly data, current cycle (July '09 to August '19)



Year-to-Date Total Returns

daily data through August 31, 2019



Source: SKY Harbor, ICE BofAML Indices, Credit Suisse

Nevertheless, the relationship above tends to imply greater value for US loans (yields are higher than they are for bonds, in opposition with the long-run average relationship), all else being equal. A refresh of our macro regression models (key economic inputs differ between bonds and loans) indicates "Rich" valuations for both US high yield bond spreads and US leveraged loan discount margins (3yr) at present, although a brief selloff in early September moderated such signals. In general, generic market valuations imply credit picking will be key to generating returns in the near to intermediate term, typical of late-cycle periods.

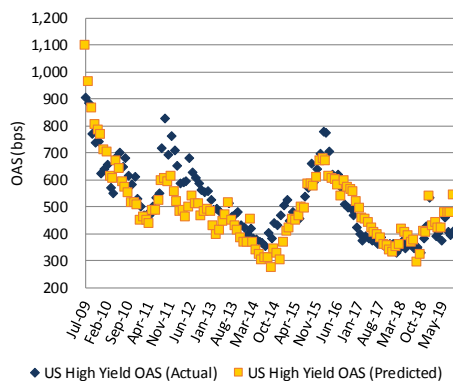
SKY Harbor US High Yield Spread Model

Index	Ticker	Aug 31, 2019		Relative Value
		Actual OAS/DM3yr	Predicted OAS/DM3yr	
ICE BofAML US High Yield Index	H0A0	413	534	Rich
CS Leveraged Loan Index	LEVLOAN	473	523	Rich

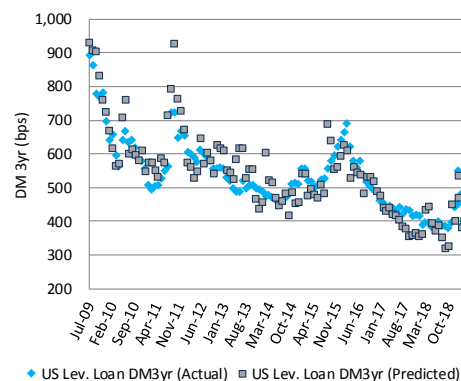
As of August 31, 2019. Ratings classes use the same factors as the HY Index regression. Source: SKY Harbor, ICE BofAML Indices, Credit Suisse, Federal Reserve and Bloomberg
1 Variable definitions available upon request

This multivariate linear regression analysis is for information purposes only. This analysis uses historical month-end data for the four factors shown and is not intended as the basis of a model portfolio or buy/sell decisions on any particular security. The analysis is one of many inputs in our investment decision-making process. High R² values are not intended to be taken as a guarantee of future results as differences in any of the four factors going forward can result in significant departures from predicted values. See additional disclaimers included with this presentation.

US High Yield Bond Regression Model



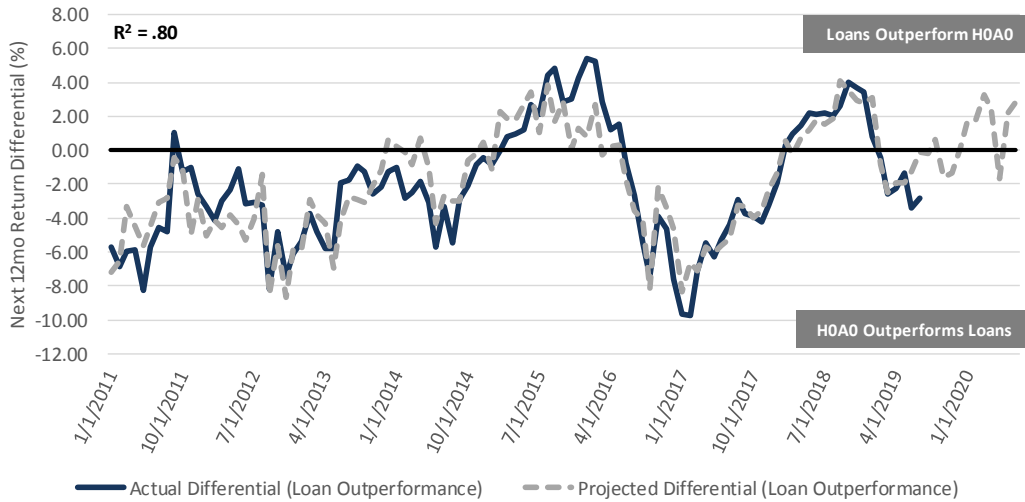
US Leveraged Loan Regression Model



Given an apparent stalemate with regard to our macro regression models, we compiled a data set to include asset class yield differentials, prevailing government bond yields, covenant-lite and loan-only index penetration, and differences between key loan and bond metrics (net leverage ratios, issuer-weighted default rates, unsecured vs. secured recovery rates, and fund flows), in addition to actual vs. projected loan discount margins. Utilizing all factors that proved to be statistically significant in the context of explaining future leveraged loan performance relative to high yield bonds, we generated the model provided below. This output – actual and projected LEVLOAN returns less H0A0 returns – projects that loans should outperform high yield bonds over the next 12 months (regression output, denoted by the dotted grey line, is now above 0 along the vertical axis).

Next 12mo Returns: US Leveraged Loans less US High Yield Bonds (H0A0)

actual and projected data

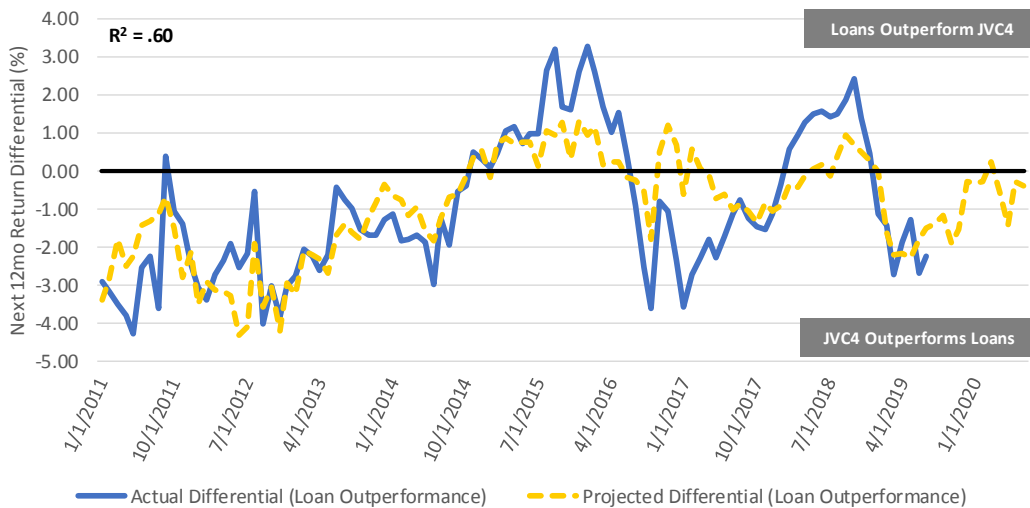


Source: SKY Harbor, ICE BofAML Indices, Credit Suisse Index Workbench, BofA Merrill Lynch, Bloomberg, JP Morgan, Capital IQ

Applying the same framework to project leveraged loan (LEVLOAN) performance relative to the ICE BofAML 1-5yr BB-B US Cash Pay High Yield Constrained Index (JVC4, our proxy for short duration high yield risk), our output differs. Considering actual vs. projected loan discount margins (this time driven by the historical relationship between LEVLOAN and JVC4), and controlling for the same fundamental and technical items outlined previously, our regression output projects JVC4 will outperform LEVLOAN over the next twelve months (denoted by the dotted gold line, which remains below 0 along the vertical axis).

Next 12mo Returns: US Leveraged Loans less Short Duration HY Bonds (JVC4)

actual and projected data



Source: SKY Harbor, ICE BofAML Indices, Credit Suisse Index Workbench, BofA Merrill Lynch, Bloomberg, JP Morgan, Capital IQ, Barclays

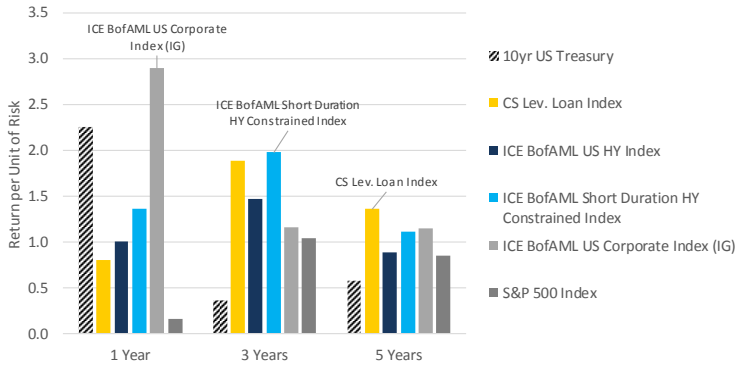
Changes in asset class constituencies, technical pressures and the dislocation of fundamentals between bonds and loans have, in our view, caused loan underperformance relative to bonds, although the differential may be more than is justified. As such, and based on our model output, we give loans the edge over the full high yield bond asset class from an asset valuation perspective in the current market environment. However, short duration high yield screens better than both full high yield and leveraged loans. **Advantage: US Short Duration High Yield Bonds.**

Sentiment

As the cycle ages and investor conviction wanes, increased attention is paid to total returns on a risk-adjusted basis. Over the long run (5+ years), leveraged loans have achieved superior Sharpe ratios relative to bonds, although US high yield and investment grade corporate bonds have generated stronger risk-adjusted returns over the trailing 1-year and 3-year periods. One relevant concern, however, is the impact the prevailing interest rate environment has on the loan asset class, given its floating-rate nature.

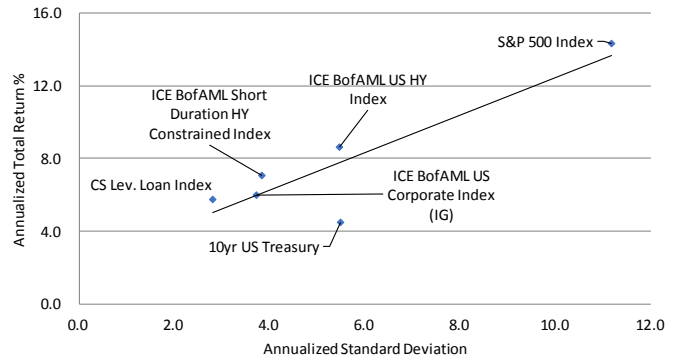
Annualized Return per Unit of Risk

data through August 31, 2019



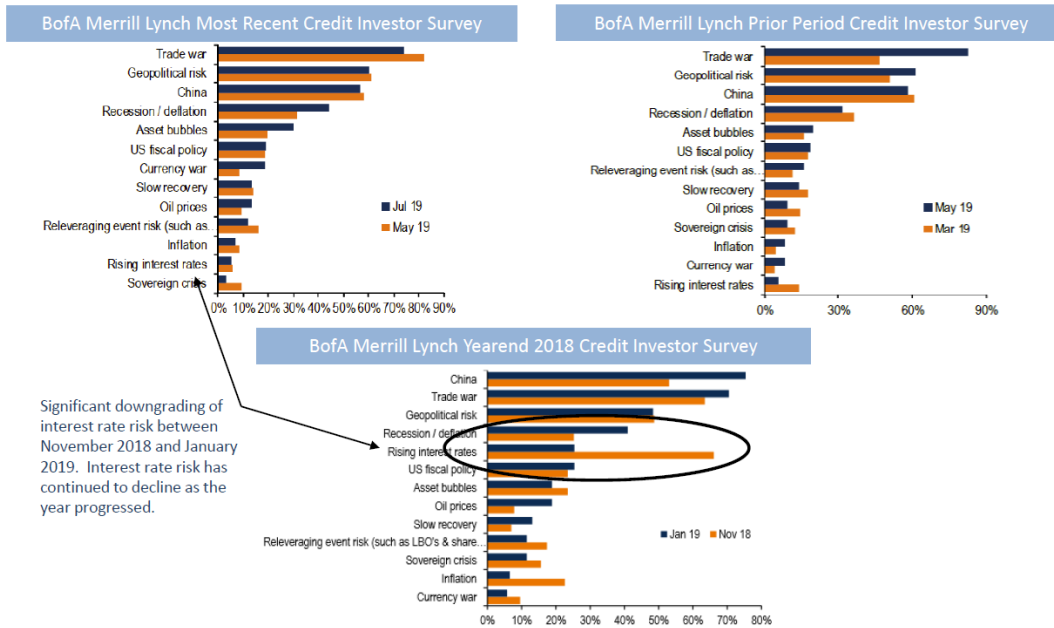
Trailing 10 Year Return per Unit of Risk Profile

data through August 31, 2019



Source: SKY Harbor, ICE BofAML Indices, Credit Suisse, Bloomberg
The Short Duration HY index used is the ICE BofAML 1-5 Yr BB-B US Cash Pay High Yield Constrained Index

As demonstrated in the last several BofA Merrill Lynch Credit Investor Surveys, the fear of rising interest rates has substantially diminished, with the topic barely registering in the top 12 by the time July 2019 results were released. Furthermore, a Fed Funds rate cut now appears likely in the near term, with nearly no chance of a hike over the next twelve months based on current implied probabilities.

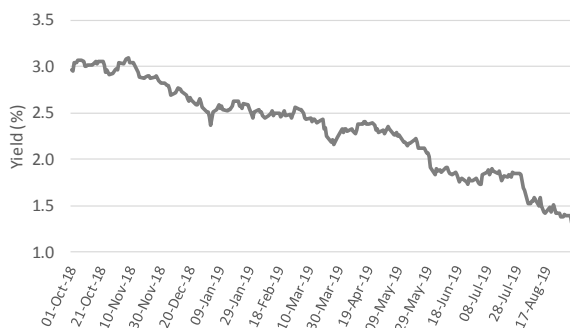


Source: SKY Harbor, BofA Merrill Lynch Global Research, Federal Reserve. The BofA ML survey queries a range of institutional investors, including money managers, hedge funds insurance companies, banks and pension funds.

With Treasury yields on the decline and little to suggest a near-term departure from the trend, we calculated average monthly returns for US high yield bonds (full market and short duration) and US leveraged loans in both rising and falling rate periods. As suspected, loan returns fall off precipitously in falling rate environments.

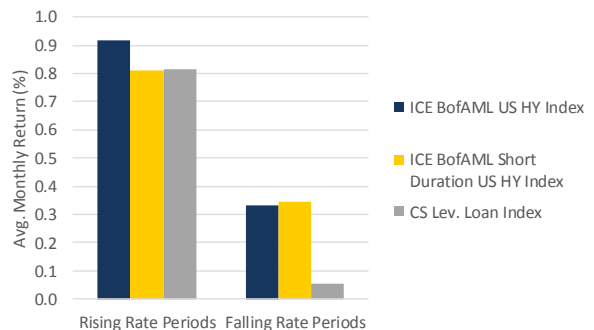
5yr US Treasury Yields

daily data



Average Monthly Returns

monthly data since 2000



Source: SKY Harbor, BofA Merrill Lynch, ICE BofAML Indices, Credit Suisse, Bloomberg

Comparing sector concentrations between the ICE BofAML US High Yield Index and the Credit Suisse Leveraged Loan Index, disparities (3% or greater) emerge, which we highlight below and compare to our prevailing sector-based preferences. In general, we find that risks associated with the HY bond market's overweight to Energy (volatile, issuers often outspend earnings, geopolitical threats) is partially offset by an underweight to Retail (brick and mortar secular declines). Additionally, the potential benefits associated with the loan market's overweight in Services (strong consumer, less earnings volatility) appear offset by an overweight to Technology (foreign exposure, tariff concerns).

Sector / Industry	US High Yield	US Leveraged	Notes	Advantage
	Bond Index	Loan Index		
Basic Industry	11%	10%		
Capital Goods / Autos	8%	8%		
Consumer Goods	3%	3%		
Energy	15%	3%	Weak YTD performer; volatile / unpredictable commodity	Loans
Fin. Svcs. / Insurance / Real Est. / Banking	9%	6%	Significant stress last downturn; little history below IG	Loans
Healthcare	10%	11%		
Leisure	5%	5%		
Media / Telecom	21%	15%	Historically defensive, but now undergoing secular challenges	Even
Retail / Food	5%	9%	Significant challenges for brick & mortar retailers, rising defaults	Bonds
Services	6%	12%	Very diverse and varied group, no real discernible themes	Even
Technology & Electronics	5%	12%	Significant foreign exposure, particularly China; tariff implications	Bonds
Transportation	1%	3%		
Utility	2%	3%		

More High Yield Bond Exposure
 More Leveraged Loan Exposure

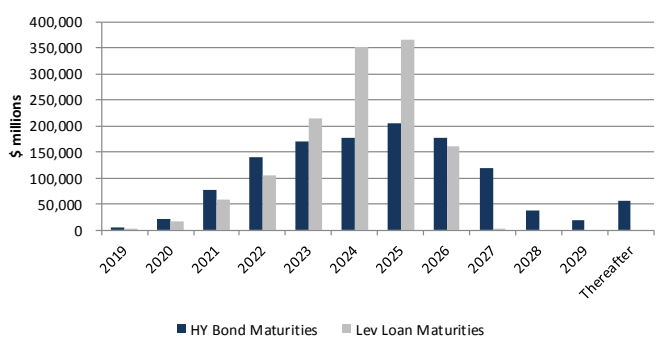
Source: SKY Harbor, BofA Merrill Lynch, ICE BofAML Indices, Credit Suisse

In general, superior long-run risk-adjusted returns for loans are somewhat counteracted by historical underperformance in falling rate periods (which appears more likely than not over the next twelve months). Additionally, sector disparities seem balanced, with puts and takes on both sides. As such, we give neither side an edge from a sentiment perspective in the current market environment. **Advantage: Even.**

Technicals

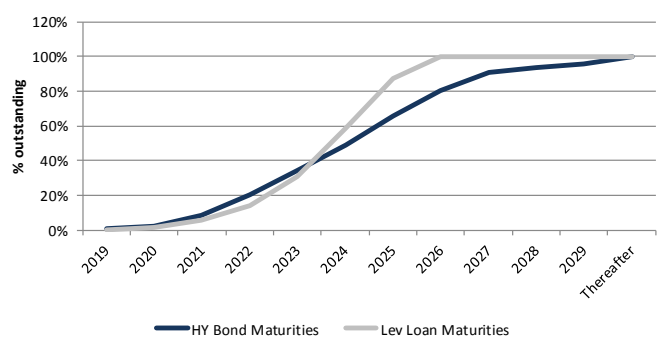
A relatively healthy new issue market over the past several quarters has allowed management teams to address near-term maturities. As of August 31, 2019, we estimate that only 11% (by face value) of the ICE BofAML US High Yield Index (H0A0) has a maturity date between now and the end of 2021, while only 7% of the CS Leveraged Loan Index (LEVLOAN) has a maturity over the same timeframe. In general, refinancing risk has moderated considerably, and we do not expect a looming maturity wall to pressure issuers in either market over the intermediate term.

Maturities by Year - US High Yield Bonds vs. US Leveraged Loans
 Data as of August '19



Source: SKY Harbor, ICE BofAML Indices, BofA Merrill Lynch, Credit Suisse

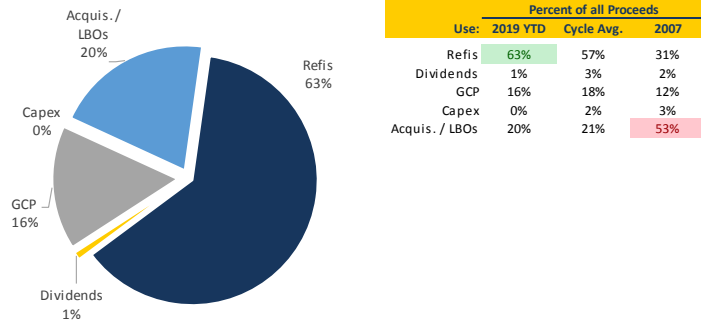
Cumulative Maturities - US High Yield Bonds vs. US Leveraged Loans
 Data as of April '19



As highlighted in our April 22, 2019 *Weekly Briefing* entitled "Balancing Fundamental Strength with Stretched Valuations," management teams of US high yield bond issuers have not taken advantage of favorable lending conditions to support aggressive activity, as the vast majority of new issuance has been directed toward the refinancing of debt (the leading use of proceeds for 31 consecutive months through August 2019). Note that aggressive issuance of bonds, which we would define as proceeds used to pay equity dividends or complete acquisitions/LBOs (21% of bond proceeds YTD 2019) is well below what the market experienced in the prior late-cycle period (55% of proceeds in 2007), and below cycle averages (24%). Among US leveraged loan issuers, new issuance has been more aggressive. Refinancing (22% of proceeds YTD) is below cycle averages (34%), while issuance of loans to pay dividends or complete acquisitions/LBOs (70% YTD) is well above cycle averages (59%) and close to 2007 levels (75%).

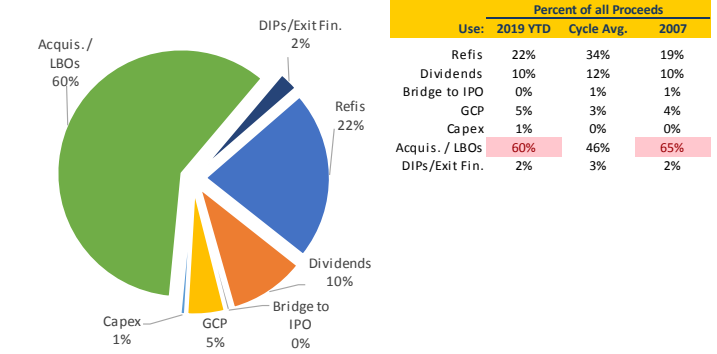
New Issue Use of Proceeds (US High Yield Bonds)

YTD data through August 2019



New Issue Use of Proceeds (US Loans)

YTD data through August 2019

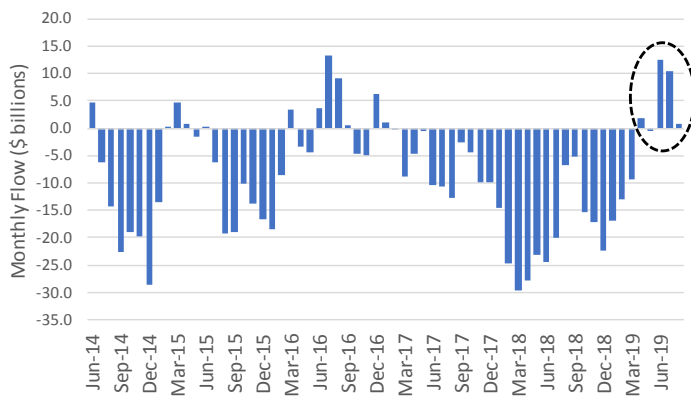


Source: SKY Harbor, BofA Merrill Lynch

Fund flows have improved the technical picture for the US high yield bond market thus far in 2019, largely at the expense of US leveraged loans. As demonstrated below, retail flows into the US high yield bond market have been positive YTD, potentially driven by the reduced threat of rising interest rates. Those same factors have likely contributed to outflows in the US loan space.

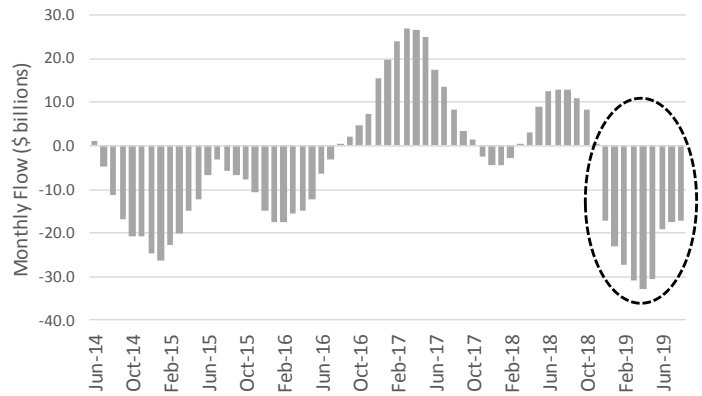
US High Yield Mutual Fund Flows

rolling 6 month data



US Leveraged Loan Mutual Fund Flows

rolling 6 month data



Source: JP Morgan, Lipper

A more aggressive use of new issue proceeds, coupled with diminishing fears of rising rates, has led to deterioration in the overall supply / demand dynamic within the loan space. As such, we give bonds the edge from a technical perspective in the current market environment. **Advantage: US High Yield Bonds.**

In conclusion, our comparison of US high yield bonds and US leveraged loans leaves us biased toward bonds at present. In our view, bonds maintain both a fundamental and technical advantage in the current market environment, although asset valuations are admittedly closer to even. While security selection will be paramount in both markets, general tailwinds appear to favor US high yield bonds in the near term, particularly short duration bond strategies.

On the Calendar

Occurred					
Event	Release Date	Period	Survey	Actual	Prior
PPI Final Demand MoM	11-Sep-19	Aug	0.0%	0.1%	0.2%
CPI MoM	12-Sep-19	Aug	0.1%	0.1%	0.3%
Retail Sales Advance MoM	13-Sep-19	Aug	0.2%	0.4%	0.7%

Upcoming					
Event	Release Date	Period	Survey	Actual	Prior
Empire Manufacturing	16-Sep-19	Sep	4.0		4.8
Industrial Production MoM	17-Sep-19	Aug	0.2%		-0.2%
Housing Starts	18-Sep-19	Aug	1247k%		1191k%

Source: SKY Harbor, Bloomberg

Recommended Reading

Shepherd, Christian and Mitchell, Tom (2019, September 11). China Suspends Import Tariffs on Some US Goods. *Financial Times* (subs. req.), Retrieved from <https://www.ft.com/content/fa5fe7d0-d45a-11e9-8367-807ebd53ab77>

Greene, Megan (2019, September 11). Consumers Cannot Carry the US Economy Forever. *Financial Times* (subs. req.), Retrieved from <https://www.ft.com/content/b95b2d46-d3ef-11e9-8d46-8def889b4137>

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