DDJ CAPITAL MANAGEMENT, LLC
SPECIALISTS IN HIGH YIELD AND LEVERAGED CREDIT INVESTMENTS

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CIO's Perspective
2018 Half-Time Leveraged Credit Review and Outlook

> Bifurcation in the high yield market disappears in the first half of 2018, as CCC rated bonds outperform while BB rated bonds generate negative returns

> An inflection point in the credit cycle appears unlikely in 2018, though upside is limited by valuations while downside is supported by fundamentals

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1st Half 2018 Review

During the first half of 2018, high yield bonds produced a modest gain of 0.08% (as measured by the ICE BofA Merrill Lynch U.S. High Yield Bond Index ("HYBI")), representing the worst first half performance by the asset class since the financial crisis of 2008. It is important to note that the disappointing performance was not driven by deteriorating fundamentals in the high yield market, but primarily due to rising interest rates, widening spreads in the upper tier (e.g., BB/B) segment of such market, and significant mutual fund outflows. In fact, the U.S. economy displayed signs of fundamental improvements – including with respect to high yield issuers – as pro-growth policies favored by the current presidential administration (e.g., tax reform passed at the end of 2017) were implemented. The improving growth outlook and tightening labor market drove the rise in interest rates as the Fed increased the number of interest rate hikes expected this year. Geopolitical tensions, particularly relating to North Korea, improved during the period; however, concerns by market participants about a trade war rose and contributed to periods of heightened volatility. Meanwhile, leveraged loans produced a gain of 2.33% during the first six months of 2018 (as measured by the J.P. Morgan Leveraged Loan Index ("LLI")). Leveraged loan mutual funds continued to experience significant inflows as the interest rate protection offered by the floating rate nature of most loans remains attractive to investors given expectations that interest rates will increase.

Exhibit 1: Performance and Characteristics of High Yield Bonds and Leveraged Loans[1]

	Dec 31, 2017	1H 2018	1H 2017	Change v. 1H 2017
High Yield Bonds (HYBI)				
Total Return YTD	7.48%	0.08%	4.91%	-4.83%
Yield to Worst (YTW)	5.84%	6.53%	5.68%	0.85%
Spread (OAS)	363 bps	371 bps	377 bps	-6 bps
Price	100.59	97.84	101.33	-3.49
Coupon	6.37%	6.36%	6.46%	-0.10%
Current Yield	6.33%	6.50%	6.38%	0.12%
Average Rating	B1	B1	B1	Unch
Effective Duration	4.04	4.19	4.04	0.15
Default Rate (Par)	1.45%	2.06%	2.02%	0.04%
Leveraged Loans (LLI)				
Total Return (YTD)	4.25%	2.33%	1.85%	0.48%
Yield (3-Year)	6.31%	6.84%	6.02%	0.82%
Spread (3-Year)	419 bps	404 bps	430 bps	-26 bps
Price	98.42	98.40	98.16	0.24
Default Rate (Par)	1.88%	2.04%	1.42%	0.62%

Source: ICE BofA Merrill Lynch and J.P. Morgan.
The ICE BofA Merrill Lynch U.S. High Yield Bond Index ("HYBI") and the J.P. Morgan Leveraged Loan Index ("LLI")
Past performance is not guarantee of future results. One cannot invest directly in an index.

Rating and Sector Performance

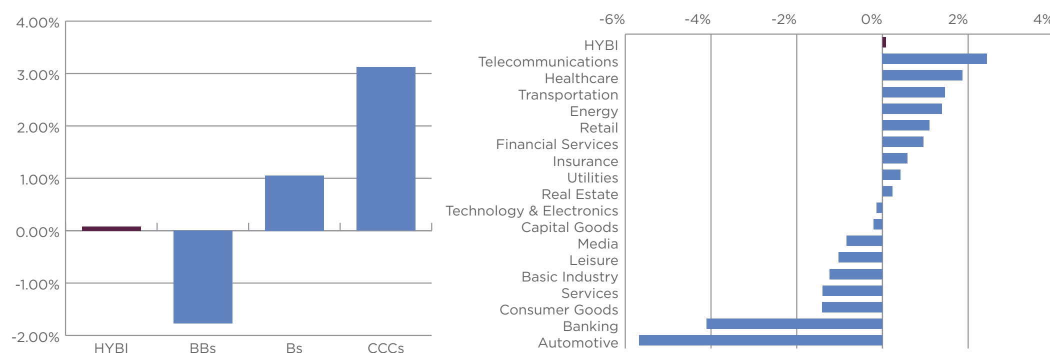
Within the broader high yield market, CCC rated high yield bonds were the top performing quality bucket during the first half of 2018, continuing the trend of the last two calendar years. I attribute the strong relative performance of the CCC rated segment to the disproportionate

[1] Default statistics include distressed exchanges. The index data referenced herein is the property of ICE Data Indices, LLC, its affiliates ("ICE Data") and/or its Third Party Suppliers and has been licensed for use by DDJ Capital Management, LLC. ICE Data and its Third Party Suppliers accept no liability in connection with its use. Please contact DDJ for a full copy of the disclaimer.

The CCC rated segment typically has a shorter duration, and thus less interest rate exposure, than both the B rated and BB rated segments

improvement in fundamentals that such issuers are experiencing as a result of stronger economic growth when compared to the higher quality segment of the high yield market. Furthermore, the CCC rated segment typically has a shorter duration, and thus less interest rate exposure, than both the B rated and BB rated segments, which also contributed to CCC's outperformance given the increase in interest rates during the period. As illustrated in Exhibit 2 below, the dispersion in sector performance broadened significantly during the first half of 2018 relative to 2017, which indicates to me that market participants are now paying closer attention to the fundamentals of individual issuers, a trend that I expect will continue.

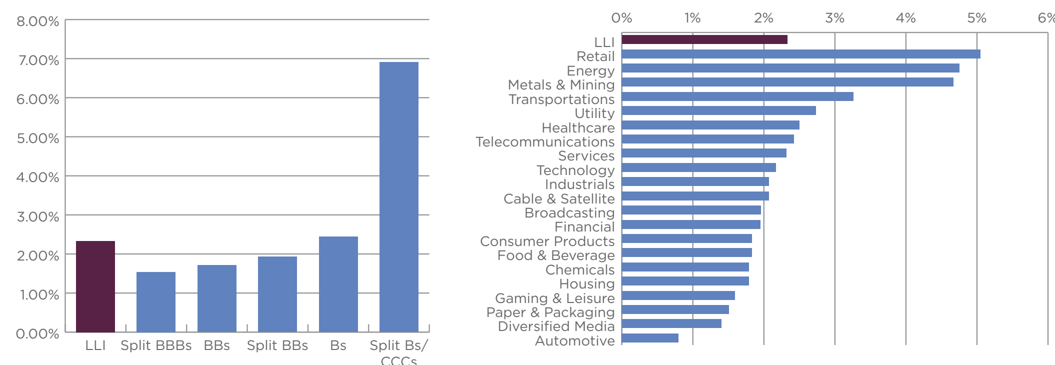
Exhibit 2: HYBI Rating and Sector Performance: 1/1/2018 - 6/30/2018



Source: Bloomberg, ICE BofA Merrill Lynch; The ICE BofA Merrill Lynch U.S. High Yield Index ("HYBI")
Past performance is no guarantee of future results. One cannot invest directly in an index.

With respect to leveraged loan performance, split B/CCC rated loans significantly outperformed all other quality buckets, mirroring performance trends in the high yield bond market. Furthermore, while sector performance was not as disperse as in the high yield market, there was a decent amount of overlap amongst the top and bottom performing sectors during the period, consistent with increased differentiation of issuers based on fundamentals, for both bonds and loans.

Exhibit 3: LLI Rating and Sector Performance: 1/1/2018 - 6/30/2018



Source: J.P. Morgan; The J.P. Morgan Leveraged Loan Index ("LLI")
Past performance is no guarantee of future results. One cannot invest directly in an index.

2nd Half 2018 Outlook

We entered 2018 after two calendar years in which the total return of the high yield market exceeded its start-of-the-year coupon, a feat that we saw as unlikely to be achieved for a third consecutive year. We also did not expect negative returns for the year, as we believed there were many positive factors supporting the market, essentially providing a floor against a significant drawdown. Looking ahead, many of these positive factors still exist today, which gives me comfort that there will not be a sustained drawdown in the high yield market for the balance of this year. However, given the underwhelming performance during the first six months of 2018, I certainly cannot rule out modestly negative returns for the full year, especially if the Fed follows its projected rate-hiking path, as I expect that it will. In this scenario, high yield still appears attractive relative to many other fixed income asset categories – investment grade credit, for example – and I would expect continued outperformance by high yield relative to such segments. When I think about the outlook for the leveraged credit markets for the remainder of 2018, there are a few factors amidst the noise that I believe will drive market performance, which I have highlighted below. Perhaps most importantly, while periods of increased volatility will likely remain, I do not expect an inflection point in the current credit cycle to occur in 2018.

Bifurcation a thing of the past…

At the beginning of the year, we observed a meaningful level of bifurcation in the high yield market, particularly between spreads of the BB rated and CCC rated segments of the HYBI. Such bifurcation has disappeared, as CCC rated issues generated strong performance in the first half of 2018, while BB rated issues experienced negative returns. As set forth in Exhibit 4 below, at the end of 2017, BB rated bonds appeared to be the most "expensive" of the quality buckets on a historical spread basis (14th percentile), while CCC rated bonds offered relatively attractive spreads from a historical perspective (36th percentile)[2]. In addition, the relatively tight BB spreads also made them more susceptible to interest rate movements. Six months later, the CCC rated segment now appears modestly expensive relative to the BB rated segment, again based solely on historical spread levels. These shifts in spreads amongst the quality tiers in the first half of 2018 make sense, as we believed BB rated bonds were slightly over-bought at the end of 2017, likely in part due to foreign investors' continued search for yield, but apparent unwillingness to target the lower tier of the high yield market, and thus resulting in their purchase of BB rated U.S. bonds. Conversely, the fundamentals of CCC rated issues in the aggregate further improved during the first half of 2018 along with the overall economy, with spreads tightening accordingly.

Exhibit 4: Option Adjusted Spread

Option Adjusted Spread ("OAS")	HYBI	HYBI BB	HYBI B	HYBI CCC
12/31/17 (bps)	363	218	369	841
Percentile Rank 12/31/2017	22%	14%	26%	36%
6/30/18 (bps)	371	260	386	733
Spread Change YTD (bps)	8	42	17	-108
Percentile Rank 6/30/2018	24%	29%	31%	20%

Source: ICE BofA Merrill Lynch and Bloomberg

2. Percentile ranking based on daily spreads during the period from 12/31/1996 through 6/30/2018. A higher percentile ranking indicates a wider, or "cheaper" spread level, based on the historical period covered, than does a lower percentile ranking.

Improvements in the macro economy have resulted in revenue and EBITDA growth at the individual issuer level

For the remainder of the year, I still believe that the lower quality segments (e.g., CCC rated) appear attractive relative to the higher quality segments (e.g., BB rated), but not by much. This view is based on expectations for relatively strong economic growth to endure, which should benefit the fundamental profile of lower quality issuers more than higher quality issuers, all else being equal. In addition, I expect interest rates to continue to increase, though not in a straight line. Such an outcome should have a disproportionately negative effect on the performance of BB rated bonds, given their typically higher duration and thus greater interest rate sensitivity compared with CCC rated bonds. However, while the CCC rated segment's large spread cushion caused it to be largely immune from the increase in interest rates that began in the second half of 2016, such trend should come to an end as such cushion has dwindled to the point that it will likely not offset any continued, meaningful increase in rates. That said, the higher yield on CCC rated bonds should absorb some price deterioration, moreso than BB rated bonds, which, as the highest quality bucket, typically have the lowest yield in the high yield market.

U.S. economy and high yield fundamentals in decent shape

While tight valuations together with expectations for rising rates will likely serve as headwinds for the performance of the high yield market going forward, decent economic growth, stable-to-improving issuer fundamentals, and a seemingly benign default environment are a few of the reasons why I do not believe an inflection point in the current credit cycle will occur this year. We believe that fundamental improvements in the U.S. economy – including with respect to high yield issuers – are likely to continue, driven by pro-growth policies favored by the current presidential administration (e.g., tax reform passed at the end of 2017). Furthermore, the overall fundamental picture for the leveraged credit market is stable and in some cases improving compared to this time last year. Leverage levels have shown modest improvement, but are still somewhat elevated relative to historical standards. Improvements in the macro economy have resulted in revenue and EBITDA[3] growth at the individual issuer level, which has also led to an enhancement in interest coverage ratios. In addition, the heightened level of refinancing activity over the past few years, as many issuers have taken advantage of the favorable interest rate environment to extend the maturity of their debt at lower rates, has resulted in the lack of a significant maturity "wall" for the next several years. As a result of the positive fundamental conditions described above and a favorable maturity profile for the high yield market as a whole, I expect that default rates will remain below longer-term averages, with a meaningful pick-up in defaults unlikely to occur during the second half of this year.

Current credit cycle should continue into 2019...

In our *CIO Perspective* written last July, I described in some detail the broad indicators I watch that may signal an increased likelihood of an inflection point in the high yield market. One area I closely observe is the new issue market – in particular, trends in lending standards and the use of proceeds by issuers. In examining these trends, I want to understand first, whether it is becoming easier or more difficult for companies – particularly companies with an elevated risk profile – to access capital, and second, whether new capital is being deployed to engage in higher risk transactions (e.g., to finance an acquisition). The observations that I made last year at this time remain largely the same, as I do not see any broad-based alarming trends across the new issue market. For example, the percent of total debt issued by CCC rated issuers is within "normal" historical ranges, and refinancing/repricing remains the dominant use of new issue proceeds in

[3] EBITDA is an acronym for earnings before interest, taxes, depreciation and amortization.

both the leveraged loan and high yield bond markets. I am, however, continuing to see signs of an erosion in credit discipline at the margin in the new issue market, where in my view, some credits are not being priced in a manner that accurately reflects their risk profile, yet are still being met with robust demand. This outcome is especially true in the private lending market, which has experienced significant inflows of new capital in recent years. Broadly speaking, though, the overall credit market is functioning adequately.

Another positive trend in the current leveraged credit market is the harsh reaction by the secondary market when a company reports disappointing results or exhibits signs of fundamental deterioration. Such issuers have experienced significant price declines almost immediately following the public release of adverse information. This behavior indicates that investors are paying attention to issuer fundamentals, which is always a good thing. I attribute this outcome to the protracted length of the current credit cycle as well as the strong performance of the high yield market since the lows reached early in 2016. Investors have become increasingly skittish about a turn in the credit cycle and fear holding a deteriorating credit when such a turn occurs (and liquidity may dry up quickly). As a result, they are willing to sell out of a name completely at the first sign of potential red flags. While the pockets of excesses I am witnessing in the new issue market are likely a symptom of low net issuance and high levels of refinancing (in other words, more cash chasing fewer new deals), I am less concerned by this development given the secondary market activity that suggests investors are closely monitoring (and reacting to) the fundamentals of individual issuers, even if such monitoring can lead to overactions in the magnitude of price declines. Over the near term, I expect this type of behavior to remain and contribute to periods of heightened volatility in the high yield and leveraged loan markets.

An inflection point is almost always preceded by a period where rational behavior takes a back seat to so-called “animal spirits”. However, I am not yet observing this phenomenon in the current high yield market. Following large outflows in 2017, high yield mutual funds continued to experience significant outflows in the first half of 2018; new issuance trends are not yet alarming; and market participants appear focused on fundamentals. I will begin to worry when investors pile into risky assets driven by the fear of “missing out” on strong performance. Such investors, who oftentimes pay little attention to underlying issuer fundamentals, have high expectations and little tolerance for volatility or short-term underperformance, which, if it occurs, can result in a coordinated “rush for the exit”, thereby exacerbating the market correction. Meanwhile, in the event that spreads (or yields) begin to widen and high yield performance accordingly suffers, I believe that money presently sitting on the sidelines (a result of the significant recent outflows from high yield mutual funds) will flow back into the asset class, thereby serving to minimize any such underperformance.

Tail risks can become reality quickly

Outside of the high yield market, there are certainly risks that have the potential to negatively impact the global economy and capital markets broadly. For example, the Trump administration’s decision to impose tariffs on certain imports have increased the risks that such actions – and any ensuing retaliatory measures – could negatively affect economic growth. Furthermore, during the second quarter, market participants expressed increasing concern regarding the possibility of a trade war, which will likely be an important factor influencing performance for all markets (high yield included) in the second half of 2018. DDJ’s base case scenario assumes that the current administration will use tariffs as leverage in negotiations to achieve more favorable trade agreements for the United States. However, if this tactic backfires, a trade war remains DDJ’s

At this point in the cycle, it is difficult for one to make a case for outsized returns in the high yield market in either direction

worst case scenario. One potential offsetting factor, as it pertains to the high yield market specifically, is that any negative impact on economic growth resulting from the imposition of tariffs could slow the pace of interest rate hikes by the U.S. Federal Reserve, as well as temper the rise in U.S. Treasury rates in the near-term.

Inflation presents another area of concern. Current low unemployment levels should eventually lead to labor cost inflation, which, combined with an uptick in economic growth, could cause inflation to increase faster and/or by a larger amount than currently expected. Such an outcome would likely put further upward pressure on interest rates, forcing the Fed to hike faster than they would otherwise prefer.

Finally, excesses in the private lending market, as I referenced earlier, present another potential risk. Private lending funds have experienced significant inflows in recent years, raising two concerns. First, private lenders may increasingly relax their credit underwriting standards in order to invest these inflows. Second, given that many private lending funds provide capital for private equity sponsored leveraged buyouts, the abundance of such capital may drive private equity firms to undertake riskier deals at higher valuations than warranted. Given the illiquid nature of both the private lending and private equity markets, any ensuing turmoil in either asset class resulting from investments in higher risk private loans could spillover and have negative ramifications for the more liquid public high yield markets.

Summary

At this point in the cycle, it is difficult for one to make a case for outsized returns in the high yield market in either direction. On the one hand, tight spreads and a likely continued rise in interest rates are headwinds; on the other, a strong economy and decent high yield issuer fundamentals combined with a lack of the types of excesses one typically witnesses late in a cycle should limit the magnitude of any potential drawdown. I believe that the heightened periods of volatility that the high yield market experienced this year, particularly in the first quarter, will persist, driven primarily by the latest developments on trade negotiations, market participants continuing to punish firms for poor quarterly performance, and volatility in U.S. Treasury rates as investors assess the latest economic and inflation related data. However, if the global economy does slip into a global trade war, my favorable outlook for the high yield market (and virtually all capital markets globally) would become much more cautious, as such an event would likely result in a significant slowdown in global growth. At DDJ, we believe that, regardless of where we are in the current credit cycle, the key to successfully investing and generating outperformance in the high yield market is superior credit selection. Accordingly, with respect to each investment opportunity, we will continue to perform exhaustive, bottom-up due diligence to understand the fundamental health of the issuer's business together with the risks to that business and its industry as we seek to identify attractive-yielding credits issued by companies that can weather a market and/or economic correction and ultimately repay their fixed income obligations at maturity.

Appendix

Bifurcation: In the context of this paper, bifurcation refers to the analysis or evaluation of market conditions. A market can be said to be bifurcated when various areas of the market that often move in a correlated fashion move in different directions.

BPS: Stands for basis points. A basis point is one one-hundredth of one percent (0.0001).

Coupon: The stated interest rate paid on a bond. Coupon payments for high yield bonds are typically made semi-annually.

Duration: Duration is a measure of the sensitivity of the price - the value of principal - of a fixed-income investment to a change in interest rates. Duration is expressed as a number of years. Effective duration is such calculation for bonds with embedded options.

High Yield Bond: A high yield bond is a debt security issued by a corporate entity where the debt has lower than investment grade ratings. It is a major component – along with leveraged loans – of the leveraged credit market.

Investment Grade: investment grade are those securities rated Baa3/BBB-/BBB- or above by Moody's, S&P, and/or Fitch, respectively.

Spread: The yield of a bond minus the yield of the government bond that matches the maturity (or appropriate call date) of the bond.

10 yr. Treasury: Treasury yield is the return on investment, expressed as a percentage, on the U.S. government's debt obligations. Looked at another way, the Treasury yield is the interest rate that the U.S. government pays to borrow money for different lengths of time, in this case, 10 years.

Yield: The yield is the income return on an investment, such as the interest or dividends received from holding a particular security.

Yield to Worst: Yield to Worst ("YTW") is the lower of the yield to call or yield to maturity.

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The ICE BofA Merrill Lynch U.S. High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Please note that one cannot invest in the index.

The J.P. Morgan Leveraged Loan Index is designed to mirror the investable universe of USD institutional leveraged loans, including U.S. and international borrowers. Please note that one cannot invest in the index.

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ABOUT DDJ CAPITAL MANAGEMENT

DDJ Capital Management's goal is to consistently produce attractive long-term investment returns, while minimizing downside risk for our investors, which include:

- Corporate pension accounts and public retirement plans
- Foundations
- Taft-Hartley Plans
- Other institutional clients

The underpinning of DDJ — a disciplined investment philosophy, coupled with a commitment to exhaustive credit research — has remained constant since our founding in 1996. Our highly skilled team is steadfast and focused on executing our strategy to identify strong risk-adjusted investment opportunities in the leveraged credit markets.

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