Private Bank

Bond Market Monthly

June 2019

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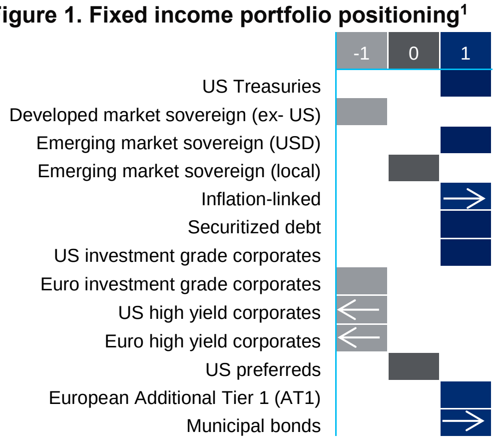
Buried Treasury

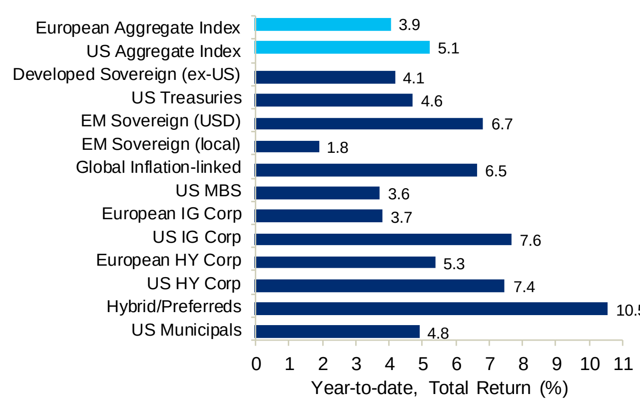
- Slowing global growth, declining inflation and rising trade uncertainty has induced a global bond market rally. Many countries have seen their long-term sovereign yield reach record lows, with many diving deeper into negative territory. Currently, over one-third of the entire developed bond universe trades with a yield less than 1%. This leaves the US Treasury market as one of the most attractive yield opportunities in the developed world.
- Despite the Federal Reserve turning considerably dovish last March, markets have priced a much more aggressive policy outcome. Currently, futures markets imply nearly 100bp of rate cuts by the end of 2020, with rising probabilities of one cut by this September. Despite the near-term uncertainties, we do not believe the Fed will cut rates over a deepening trade war alone. In our view, signs of an actual economic downturn will be necessary for the Fed to act.
- External emerging market (EM) bonds continue to present superior value over most global fixed income markets. Fundamentals have improved and technicals are supportive. Though EM markets tend to be more volatile, wider risk premiums have supported performance over longer holding periods. Indeed, EM debt has been one of the best performing global fixed income markets over the last 25 years, when adjusting for risk.
- In light of near-term uncertainties, we downgrade global high yield to underweight. Though low refinancing risks and modest gross supply are supportive, the coming months may still be challenging for risks assets. We continue to focus on higher quality and favor bank loans over bonds. At the same time, we are upgrading our view on US Treasury Inflation Protected Securities and US municipal bonds.

Figure 1. Fixed income portfolio positioning[1]



Source: Citi Private Bank as of June 5. -1=Underweight, 0=Neutral, 1=Overweight. 1) Views on positioning are to be used within a portfolio context and can be either short-term (1-3 months) or long-term (12-18 months). Overweight implies a positive view, while underweight implies a negative view. A neutral view implies our confidence is neither positive nor negative.

Figure 2. Market performance, year-to-date (local currency, %)



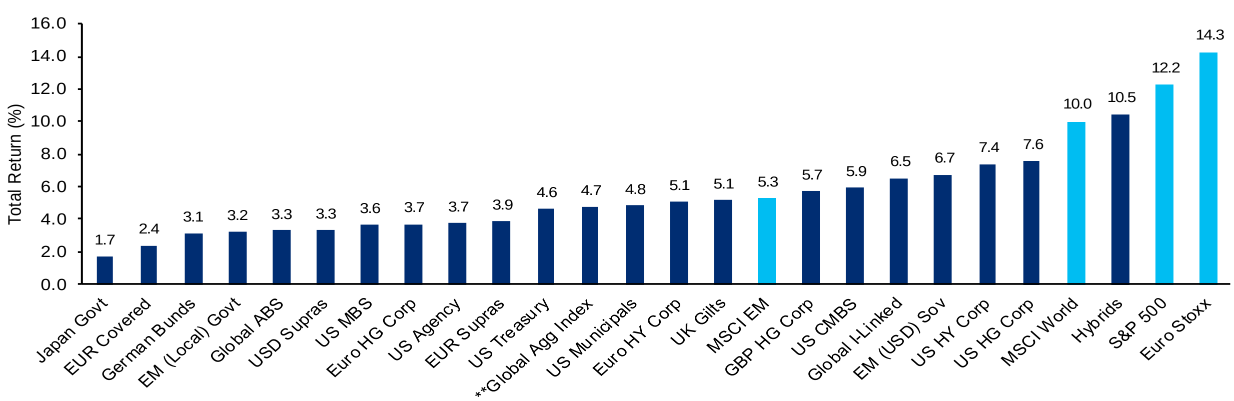
Source: Bloomberg Barclays Indices; Merrill Lynch as of June 5, 2019.
Light blue indicates total return on benchmark indices. Dark blue indicates total return on sub-indices. Past performance is no guarantee of future results. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only.

Market performance views and recommendations[1]

Sectors	Positioning[2]	Focus comments/recommendations
US Treasuries	Overweight	Treasury yields likely to remain constrained by trade uncertainty and slowing global growth; Fed unlikely to ease without an actual downturn in economy; Deepening yield curve inversion does imply rising recession risks, though not imminent; Stay overweight
Developed market sovereigns (ex-US)	Underweight	Eurozone yields expected to stay low, offering little value to fixed income investors; ECB likely to remain dovish to contend with weak macro and deflationary concerns; Italy fiscal issues to remain an overhang; Underweight
Emerging market debt	External – Overweight Local – Neutral	**External debt:** USD EM still offers some of the best relative value in global fixed income; Favor Latin America and Asia, though prefer globally diversification longer-term **Local bonds:** Yields have fallen to lowest levels since 2016 but are unlikely to move much lower. Seasonal volatility over the coming months could contribute to further US dollar strength, weighing on unhedged returns.
Inflation-linked debt	Overweight	Increase to overweight (from neutral); US TIPS breakevens have cheapened below long-term averages and offer an opportunity to hedge against trade wars and the longer term potential impact on consumer prices
Securitized debt	Overweight	**US agency MBS:** Spreads have widened and look attractive versus similarly rated US IG corporate bonds; Should also benefit from a low US rate environment **Non-agency RMBS/ABS:** Non-agency still offers above average yields with low correlations to other markets; Consumer ABS also offers low volatility and compelling yields when compared to similar rating/duration IG corporates
High grade corporates	US IG – Overweight Euro IG – Underweight	**US IG:** We continue to favor duration extension strategies; Best value in 5-7 year maturities; Tactically favor defensive sectors, as trade and growth concerns build **Euro IG:** Wider spreads and higher yields still do not present an attractive opportunity for income-oriented investors
High yield bonds/loans	US HY – Underweight Euro HY – Underweight	**US HY:** Reduce to underweight, as tight spreads may be susceptible to rising trade concerns and broader risk aversion; Favor loans over bonds **Euro HY:** Spreads have tightened, but growth concerns remain; BB-rated issuers have outperformed and we maintain our up in quality bias
Hybrid debt securities[3]	US preferreds – Neutral Euro AT1's – Overweight	Spreads in US fixed-to-floats have cheapened 75bp over the last month, though we remain neutral for now; European Additional Tier 1 securities (AT1) continue to offer more attractive valuations especially when compared to HY markets
Municipal bonds	Overweight	Ratios have cheapened with the rally in Treasuries, especially in shorter maturities; Demand is likely to continue to outstrip supply as taxable equivalent yields still favor munis; Best value in 10-15 year maturities; Spreads in low quality IG have compressed and favor diversifying credit qualities

Source: Citi Private Bank Global Fixed Income Strategy as of June 5, 2019. 1) Views are in the context of a fixed-income only portfolio; 2) Views on positioning are to be used within a portfolio context and can be either short-term (1-3 months) or long-term (12-18 months). Overweight implies a positive view, while underweight implies a negative view. A neutral view implies our confidence is neither positive nor negative; 3) Hybrids are securities that generally combine both debt and equity characteristics, and can include preferred stock, fixed-to-floating rate bonds or other convertible debt.

Figure 3. Global fixed income and select equity index returns, year-to-date (local currency, %)



Source: Bloomberg Barclays Indices, Merrill Lynch, MSCI as of June 5, 2019. Light blue indicates an equity index. Global returns shown in hedged USD terms. "**Global Agg Index" is benchmark global fixed income index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

Asset class update: US rates

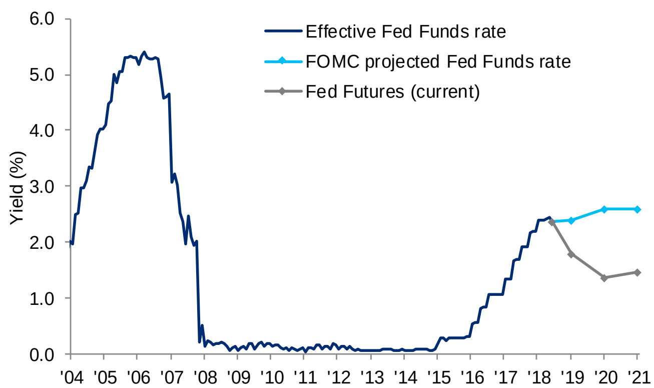
US rates

Figure 4. 10-year Treasury reaches lowest level since 2017

Source: FactSet as of June 4, 2019.

- Yields on 10-year US Treasury (UST) bonds have now fallen over 100 basis points (bp) since peaking last November. Currently around 2.1%, this is its lowest level since September 2017 **(Fig. 4)**. The most recent push lower has been contributed to the mounting uncertainties over a US/China trade deal. However, there are other meaningful factors involved as well.
- For instance, slowing global growth and fading inflation pressures has weighed on non-US bond markets. Australia and New Zealand 10-year yields have reached record lows. 10-year German Bund yields have moved deeper into negative territory. Today, nearly 20% of the entire developed investment grade bond universe trades with a negative yield. This leaves UST as one of the most attractive yield opportunities in the developed world.
- **Investment strategy:** As our recent global strategy bulletin suggests, the risk of a prolonged economic struggle could extend beyond US and China. Unless resolved, this will continue to weigh on investor sentiment and global yields. As such, we recently increased our overweight's to UST in our global asset allocation.

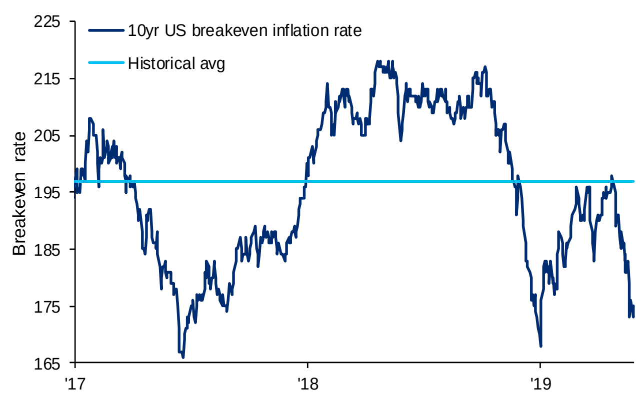
Figure 5. Futures imply nearly 100bp of cuts through 2020



Source: FactSet as of June 4, 2019.

- Despite the Federal Reserve turning considerably dovish in March, investors have priced a much more aggressive policy outcome. Currently, futures markets imply nearly 100bp of rate cuts by the end of 2020, with rising probabilities of one cut by this September **(Fig. 5)**. Escalating trade tensions and slowing global growth fears are largely responsible. To add, the yield difference between 3-month T-Bills and 10-year UST has inverted by 20bp, its deepest level since 2007. Though not a guarantee, this inversion has preceded the last three recessions.
- **Investment strategy:** Despite the near-term uncertainties, we do not believe the Fed will cuts rates over a deepening trade war alone. In our view, signs of an actual downturn will be necessary for the Fed to act. Elevated trade wars can certainly increase the likelihood of policy easing, but "insurance" cuts without signs of a worsening economic outlook are unlikely. That said, weakening financial conditions should be watched over the coming months. If the outlook deteriorates, policy makers may need to act. Unfortunately, the greater risk is that the Fed may be too late.

Figure 6. US TIPS could benefit from extended trade wars



Source: Haver Analytics as of June 4, 2019.

- US Treasury Inflation Protected Securities (TIPS) are a type of Treasury bonds designed to protect against rising inflation. While coupon payments are fixed, the principal value for which coupons are based adjust with changes in the US Consumer Price Index (CPI). That said, US CPI has fallen from a peak of 3% one year ago, to 2% today. In turn, US TIPS valuations have cheapened. 10-year inflation breakeven spreads has fallen to 175bp, its lowest level on the year and below its long-term average **(Fig. 6)**.
- Despite last year's increase in tariffs on $250 billion worth of US imports from China, the impact on prices thus far has been minimal. However, if tariffs increase further, the impacts could become more meaningful. US growth could also be negatively affected, keeping US rates low. In a bearish scenario (25% tariffs on $325bn of China exports, fully passed through), Citi economists forecast a 0.3% drag on GDP growth and a 0.5% inflation impact. Tariffs on Mexican imports (or other regions) could worsen these projections.
- **Investment strategy:** With uncertainty surrounding trade and tariffs intensifying, we raise our view on US TIPS to outperform (from neutral). Cheaper breakeven spreads allow the opportunity to hedge against the potential for higher US consumer prices.

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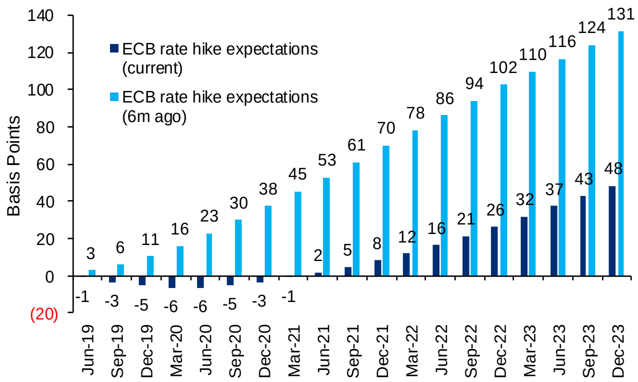
Asset class update: European rates & Securitized debt

European rates

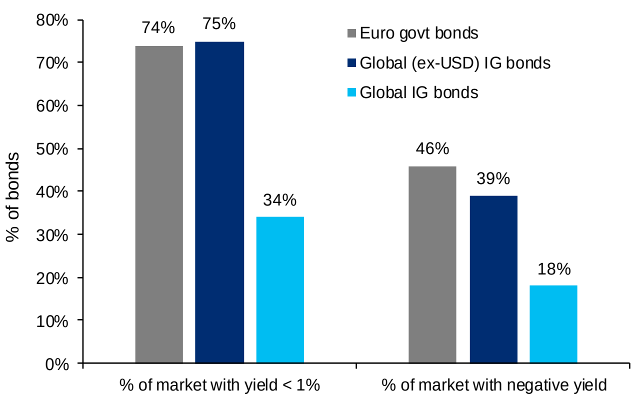
Figure 7. ECB policy expectations turn from hikes to cuts



Source: Bloomberg as of June 6, 2019.

- The European Union's economic linkages to the US and China have created macro challenges as the trade war expands. Manufacturing activity and GDP growth have already begun to fade, while deflation pressures are building. As our European strategy team points out, with supply chains shifting towards Europe, this could weigh on domestic prices and fuel an already problematic drop in inflation. Indeed, inflation expectations have fallen to historically low levels.
- As a result, expectations over ECB policy have turned sharply dovish. Earlier in the year, markets were still pricing in the potential for ECB rate *hikes* in 2020. Recent pricing has shifted and the probabilities of rate *cuts* has risen **(Fig. 7)**. That said, the ECB announced no policy change at their June meeting. However, forward guidance was adjusted where they now expect to keep rates on hold through the first half of 2020. For more details over the decision, see our latest strategy bulletin.

Figure 8. The world of negative yields keeps getting bigger

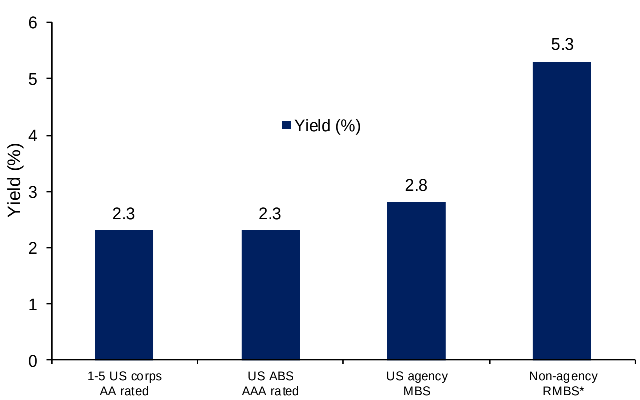


Source: The Yield Book as of June 4, 2019.

- The rally in global yields has not been discriminant. Regions where yields were already low (or negative), have dropped even further. This is most notable in Europe where 10-year German Bund yields have reached a historical low of -22bp. At the same time, most other countries in the Eurozone (EZ) are either testing new lows or have reached them (i.e., Spain, Portugal). Currently, 50% of the EZ now trades with a negative yield and 75% of the EZ market trades with yields less than 1.0% **(Fig. 8)**.
- **Investment strategy:** We remain underweight most European bond markets. Though negative yields can certainly move lower, we prefer to not treat our fixed income allocations like equity. Indeed, the Euro Stoxx 50 index has a dividend yield which is 20x greater than 10-year German Bunds. At the country level, our deepest underweight remains in Italy, which faces significant fiscal challenges. See our May Bond Market Monthly and European Strategy report for more in-depth comments over concerns within the 3rd largest bond market in the world.

Securitized debt

Figure 9. Securitized yields are competitive to IG corporates



Source: Bloomberg Barclays Indices, FTSE Russell, Bloomberg as of June 4, 2019. *Yield is an average of prime, subprime, Alt-A and adjustable-rate mortgages.

- June 3 marked the beginning of a new age of US agency mortgage-backed securities (MBS). In an effort to reshape the US mortgage market, the Federal Housing Finance Agency (FHFA) has helped to create a liquid, single security market for MBS bonds issued by US government-sponsored enterprises (GSE) Freddie Mac and Fannie Mae. This new security will be called "UMBS" or "Uniformed MBS". Instead of separate bonds being issued by each US GSE, UMBS will contain underlying mortgages from both entities in one security.
- In our view, this should have very little impact on the US agency MBS market. Spread differentials between UMBS and pre-existing Fannie/Freddie MBS are likely to be minimal. The question over who will eventually become the ultimate guarantor is the more important issue to watch. With the GSE's currently under conservatorship, the guarantor is the US government. As GSE reform continues to be debated among politicians, the issue of explicit government guarantees remains uncertain.
- **Investment strategy:** We remain overweight securitized markets, which include agency MBS, non-agency RMBS and other asset-backed securities. Correlations to traditional bonds are relatively low, while yields are competitive to similarly rated investment grade corporates **(Fig. 9)**. YTD performance may be lagging other global bonds, but this has come with much less price volatility and a better risk-adjusted profile.

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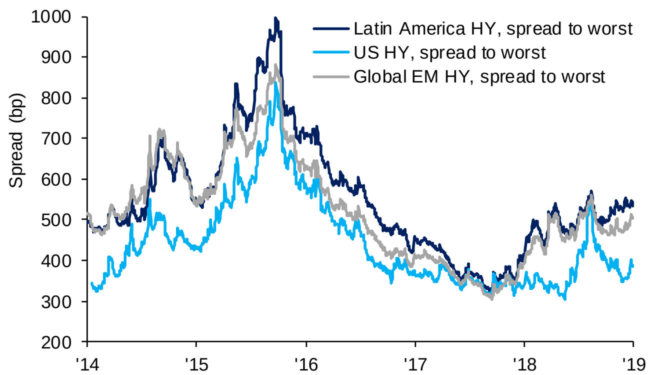
Asset class update: Emerging markets (EM)

Hard currency

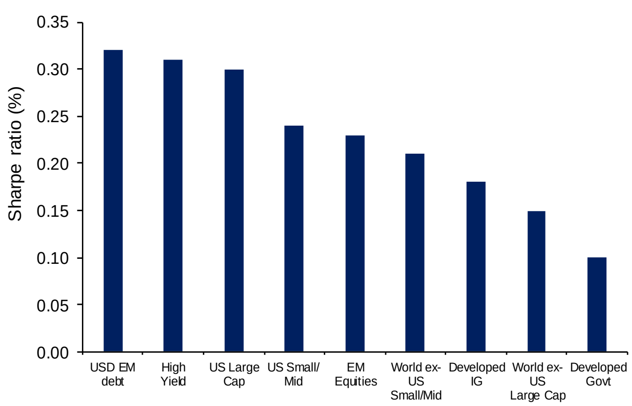
Figure 10. Relative value continues to favor EM bonds



Source: JP Morgan Indices, Bloomberg Barclays Indices as of June 4, 2019.

- Over the last month, external (US dollar denominated) EM sovereign bond markets added to their exceptional YTD performance. Despite wider spreads, the drop in US Treasury rates has helped push aggregate EM index yields slightly lower (currently 5.2%). Led by Asia and Latin America, the Bloomberg Barclays Global EM benchmark has now risen 6.8% on the year.
- In our view, external EM bonds continue to present superior value over most global fixed income markets. When compared to similarly rated US HY bonds, USD EM sovereigns offers a spread pick-up of 120bp. Even excluding volatile countries Turkey and Argentina, the spread advantage is still attractive. Technicals are also supportive, as net bond issuance is barely positive and the refinancing of existing debt has picked-up significantly.
- **Investment strategy:** Both Asia and Latin America remain our favored regions. Prices tend to be more volatile, but yields and spreads in Latin America (IG and HY) are much higher than both US corporates and other EM regions **(Fig. 10)**. That said, we prefer active and diversified strategies, which tends to produce attractive risk-adjusted returns over the long-term.

Figure 11. USD EM risk-adjusted return profile is attractive

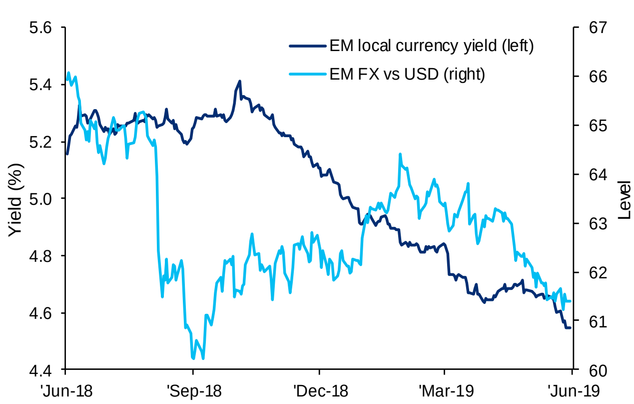


Source: JP Morgan Indices, Bloomberg Barclays Indices as of June 4, 2019.

- Over the last 25 years, USD EM debt has produced a compounded annual growth rate of 8.8%. This included a Mexican economic crisis, an Asian and Russian financial crisis, collapse of Long-term Capital Management, several Argentina defaults, a global financial crisis and a myriad of other negative market events. While these periods led to sharp drawdowns, recoveries were also fairly swift. As a result, EM debt has been one of the best performing global fixed income markets, when adjusting for risk **(Fig. 11)**.
- Considering that current EM yields are 300bp below the benchmark average, future annual returns may not be as robust. However, external debt burdens for many EM countries has improved significantly over the last 10 years, as countries show an increased preference to raise capital in domestic markets. This allows greater flexibility for countries and companies to manage liabilities, and also becomes less impacted by outside forces.
- **Investment strategy:** Even though EM yields are below historical averages, yields everywhere else are a lot lower. Considering the technical support and fundamental improvements, we think global EM debt will continue to provide attractive risk adjusted returns, over the long-term. These views are highlighted in the latest Latin America strategy and we remain overweight external EM.

Local currency

Figure 12. Local EM yields have dropped, but so has EM FX



Source: JP Morgan Indices, Bloomberg Barclays Indices as of June 4, 2019.

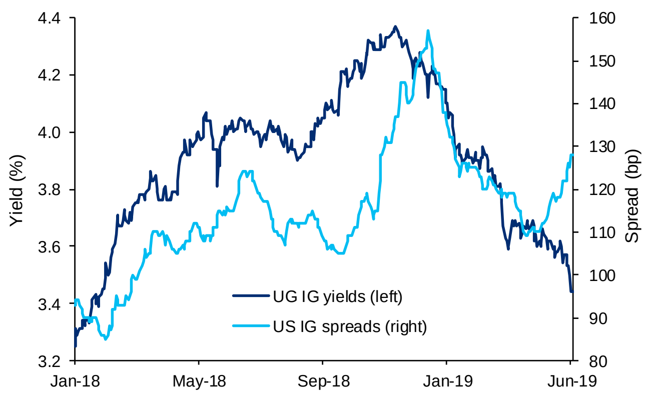
- Unhedged local EM returns have lagged most global fixed income markets, gaining only 2.0% year-to-date. Unfortunately, FX weakness has offset a tremendous rally in local yields. Local EM benchmark yields have fallen nearly 100bp since reaching a four year peak last October. Now at 4.5%, global EM local yields are at their lowest level since 2016 **(Fig. 12)**.
- **Investment strategy:** Last month we downgraded our view on local EM from overweight to neutral. While we remain broadly constructive on EM fundamentals, local yields have already fallen a lot. Of course, if the global yield environment drops even further, yields in local EM markets could have more room to fall. However, we think that the near-term environment remains more susceptible to further US dollar strength. So even if yields fall, unhedged returns may still suffer.

Past performance is no guarantee of future results. Real results may vary.

Asset class update: Corporate credit

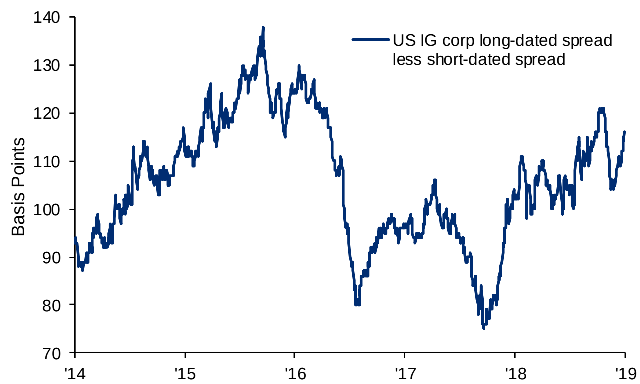
Global investment grade (IG) corporates

Figure 13. Despite spread widening, yields are falling



Source: Bloomberg Barclays Indices as of June 4, 2019.

Figure 14. US IG spread curves remain steep

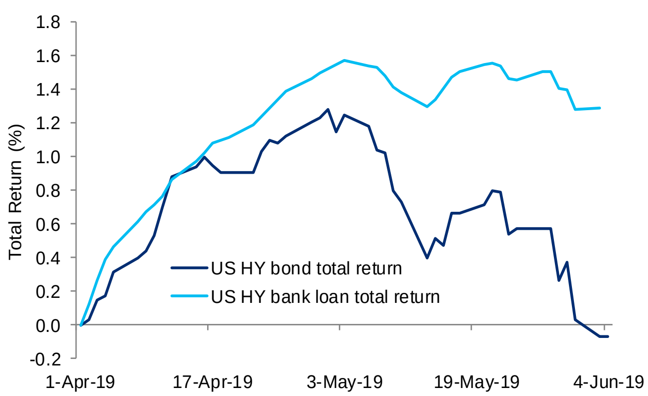


Source: Bloomberg Barclays Indices as of June 4, 2019.

- Over the last month, global IG corporate spreads have reacted negatively to escalating trade risks. US dollar benchmark has widened 20bp to 130bp, its widest level since January. However, declining Treasury rates have also dragged down index yields. Now at 3.45%, yields on US credit have reached their lowest levels since early 2018 **(Fig. 13),** boosting YTD returns to 7.3%.
- Recent performance has been led by longer-duration tenors and defensive sectors. Over the last 3 months, 7-10 year maturities have gained 5.0%, versus 1.8% returns for 1-3 year bonds. At the same time, REITs and Utilities have gained 5.2% and 6.6%, outperforming the broader market. Meanwhile, energy has lagged from the decline in crude oil prices, gaining a more modest 4.7%.
- In Euro markets, credit spreads have also moved wider, though yields have not followed core rates lower. As markets reprice weakening EZ growth, Italian fiscal concerns and uncertainties over trade (and tariffs) index yields have risen 10bp to 0.8%. This brings YTD returns to 3.7%, underperforming US corporates by 380bp.
- **Investment Strategy:** We remain overweight US IG corporates, and favor extending duration. Though yield curves have flattened, spread curves are back near their widest levels since 2016 **(Fig. 14)**. Best values are in 5-7 year maturities. Similar to our latest global equity strategy views, we favor defensive over cyclical sectors. We stay underweight euro IG bonds as low absolute rates and a weakening growth outlook keeps spreads susceptible to further widening.

Global high yield (HY) corporate bonds & loans

Figure 15. HY bank loans continue to remain resilient



Source: Bloomberg Barclays Indices, S&P as of June 3, 2019.

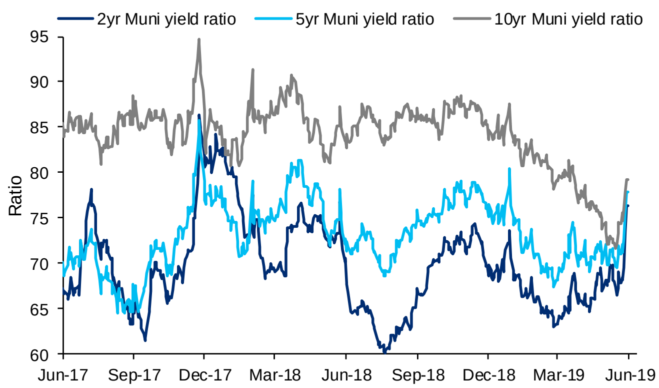
- Along with broader risk aversion around trade, HY bond spreads have widened 90bps to 430bp. Benchmarks have fallen 1.0% since April, bringing YTD gains down to +7.8%. As we discussed last month, low quality HY has underperformed, with CCC-rated bonds losing 2.6%. BB-rated issuers have fallen 0.5%.
- On the other hand, prices in US HY bank loans have held up much better **(Fig. 15)**. Over the last month BB/B-rated HY bonds have lost 75bps, while similarly rated bank loans have dropped a mere 11bps. As we have previously witnessed during periods of market stress, senior secured loans tend to exhibit lower price sensitivity, than what's observed in HY bonds.
- **Investment Strategy:** In light of rising trade uncertainty, we downgrade our view on Global HY from neutral to underweight. Though fundamentals (low default rates) and technicals remain supportive, the coming months may be challenging for risks assets. We continue to focus on higher quality and favor loans over bonds. Indeed, bank loans carry higher yields, are senior in capital structure and have a lower duration. If volatility remains elevated, we would be expect loans to outperform. In Europe, HY bonds still offer value for local investors amid low defaults. Though valuations may still suffer if trade uncertainty builds.

Past performance is no guarantee of future results. Real results may vary.

Asset class update: US municipals

US municipals

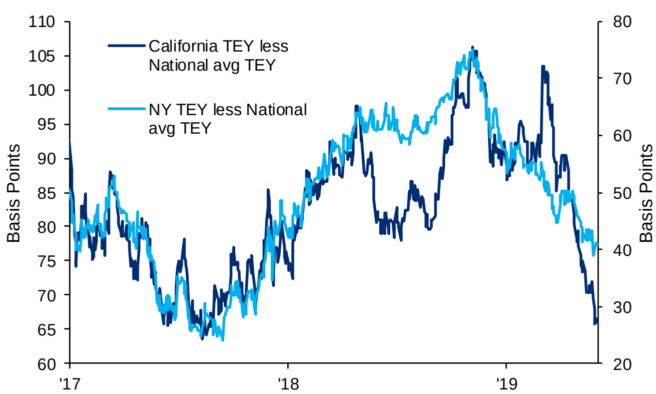
Figure 16. The UST rally improves munis relative value



Source: Bloomberg as of June 4, 2019.

- Yield ratios in US municipal bonds have improved, though largely from the sharp rally in US Treasuries. 10-year AAA muni yield ratios (as a % of UST) are now back to 77%, after reaching a historical low of 71% in May. The more notable improvement has been in shorter maturities, where 2-year ratios have risen to their highest level in 12-months **(Fig. 16)**. Still, absolute muni yields have fallen sharply. 10-year yields at 1.6% is now only 30bp away from historical lows.
- Despite higher ratios, demand has remained exceptionally strong. Total bond fund inflows has reached $25 billion, averaging slightly above $1bn per week. The coming weeks are likely to remain technically supportive for munis, as net cash flowing to muni investors is projected to be higher than average. New supply has not necessarily been weak, however, issuance just has not been able to match the extraordinary rise in demand.
- **Investment strategy:** We increase our view to overweight (from neutral). Though absolute yields are low, the rise in in yield ratios has increased the value proposition for munis. Tactically, we find 3-5 year maturities attractive. However, when building muni portfolios for the long-term, best values can be found between 10-15 years.

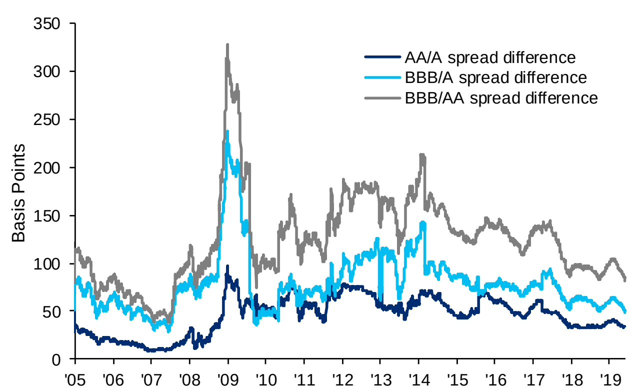
Figure 17. Spreads in NY and California have tightened



Source: Bloomberg Barclays Indices as of June 4, 2019.

- Since the Tax Cuts and Jobs Act (TCJA) was signed into law in 2017, the importance of tax-free income has grown profoundly. This has been especially true in high tax-states like California and New York, where effective tax-rates for high income earners moved meaningfully higher. In turn, this has kept spreads tight and driven yields in both states to their lowest levels in nearly 2 years.
- More important for New York and California residents, taxable-equivalent yields on in-state bonds have fallen relative to the national average **(Fig. 17)**. While the yield proposition still favors investing in-state, the rise in valuations does introduce the idea of diversifying portfolios on a national level. Please see the latest Muni Watch for additional insights.
- **Investment strategy:** Despite rising valuations and declining yields, US municipals are still hard to beat (for US investors) when compared to other taxable fixed income assets. Longer durations and specific local issuers can further enhance the value proposition.

Figure 18. Spreads across quality buckets have narrowed



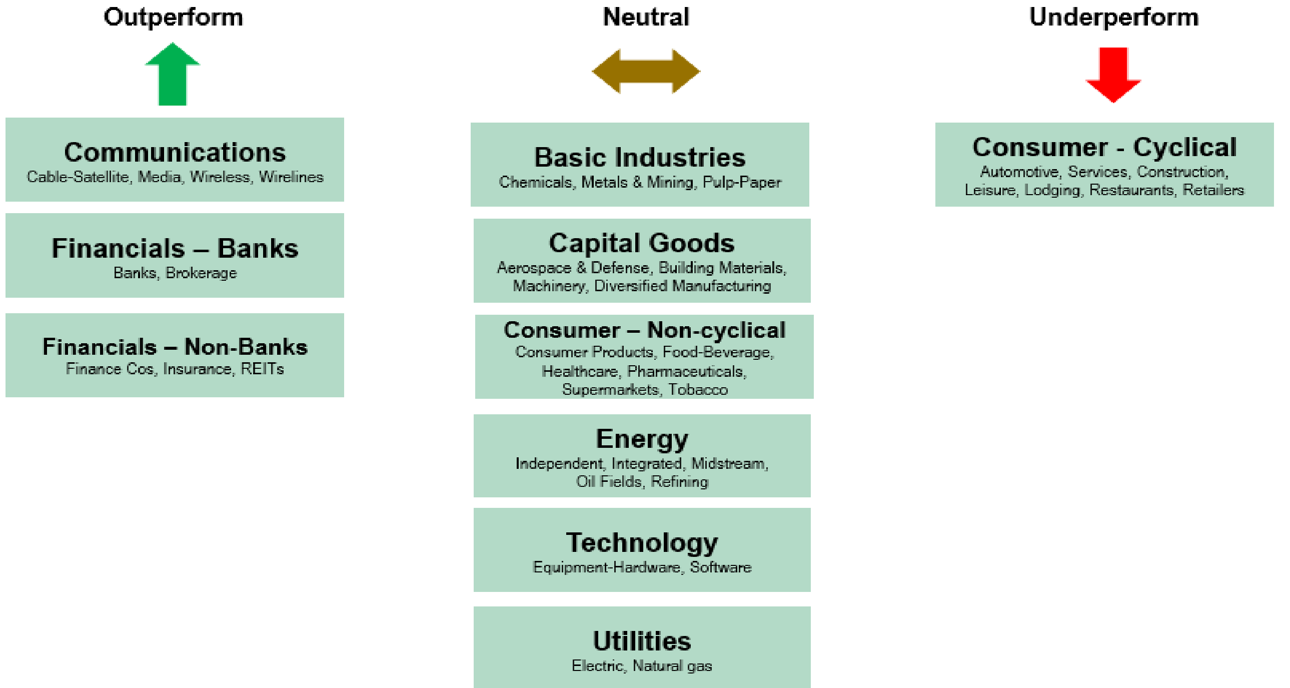
Source: Bank of America/Merrill Lynch Indices as of June 4, 2019.

- For some time, we have favored moving down in credit quality in US municipals. While taking on additional credit risk requires more selectivity, the value proposition had been compelling. Today, BBB's have outperformed AA's by 175bp YTD (6.25% vs. 4.5%, respectively) and 200bp over the last 12 months.
- However, the spread relationship between BBB and AA munis has narrowed significantly. Currently, the BBB/AA muni spread differential is 80bp, its tightest relationship since 2008 **(Fig. 18)**. The outperformance in Illinois (Baa3/BBB-) is largely responsible. Despite large pension short-falls and being one-notch above junk status, Illinois has been the 2nd best performing state, generating a 6.1% total return YTD. The rising likelihood that the state will move towards a progressive tax system has been the catalyst for increased in-state demand.
- **Investment strategy:** While spread compression across credit ratings may be a signal to move up-in-quality, we believe that persistent demand will keep these relationships narrow. That said, the market does allow investors to diversify credit qualities without giving up too much yield. At the same time, we would avoid reaching for yield in high yield muni issuers.

Past performance is no guarantee of future results. Real results may vary.

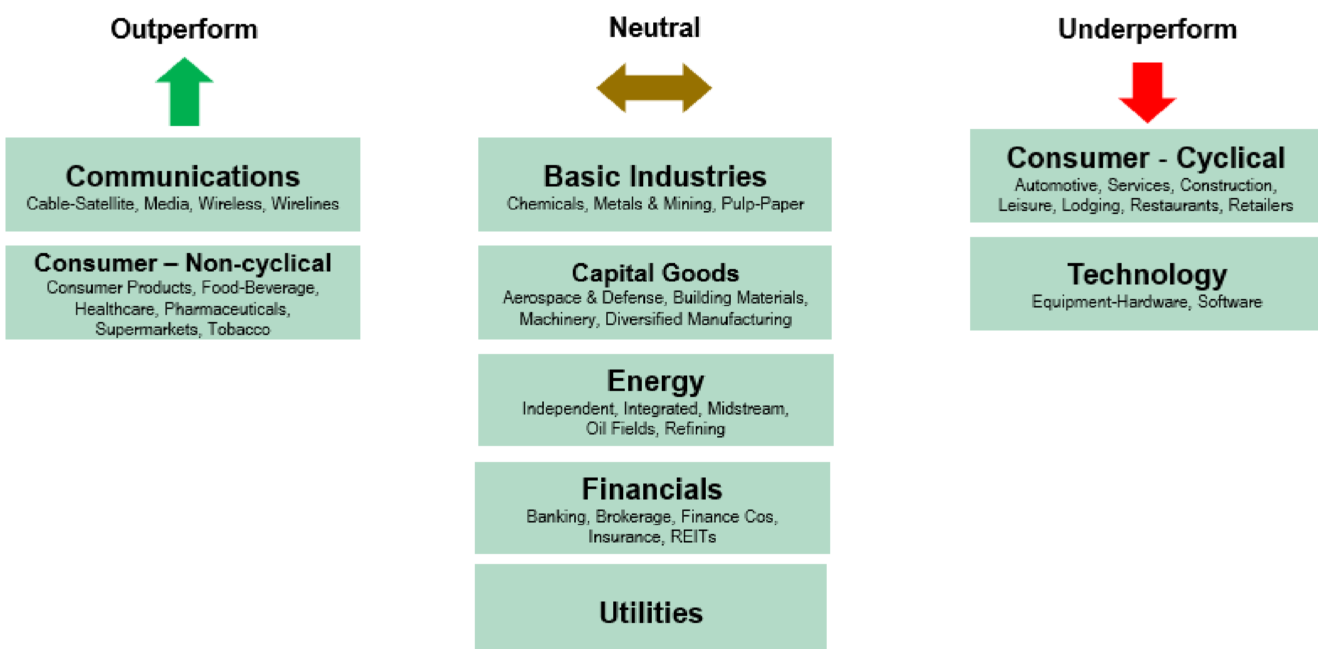
Corporate sector views – US markets

Figure 19. US Investment Grade Corporates – Summary of sector views



Source: Citi Private Bank Global Fixed Income Strategy, Bloomberg Barclays US Intermediate Corporate Bond Index as of April 11, 2019. The expressions of opinion are not intended to be a forecast of future events or a guarantee of future results. Arrows imply our expectations of sector performance versus the Bloomberg Barclays US Intermediate Corporate Bond Index. Up arrow = outperform, Sideways arrow = market perform, Down arrow = underperform

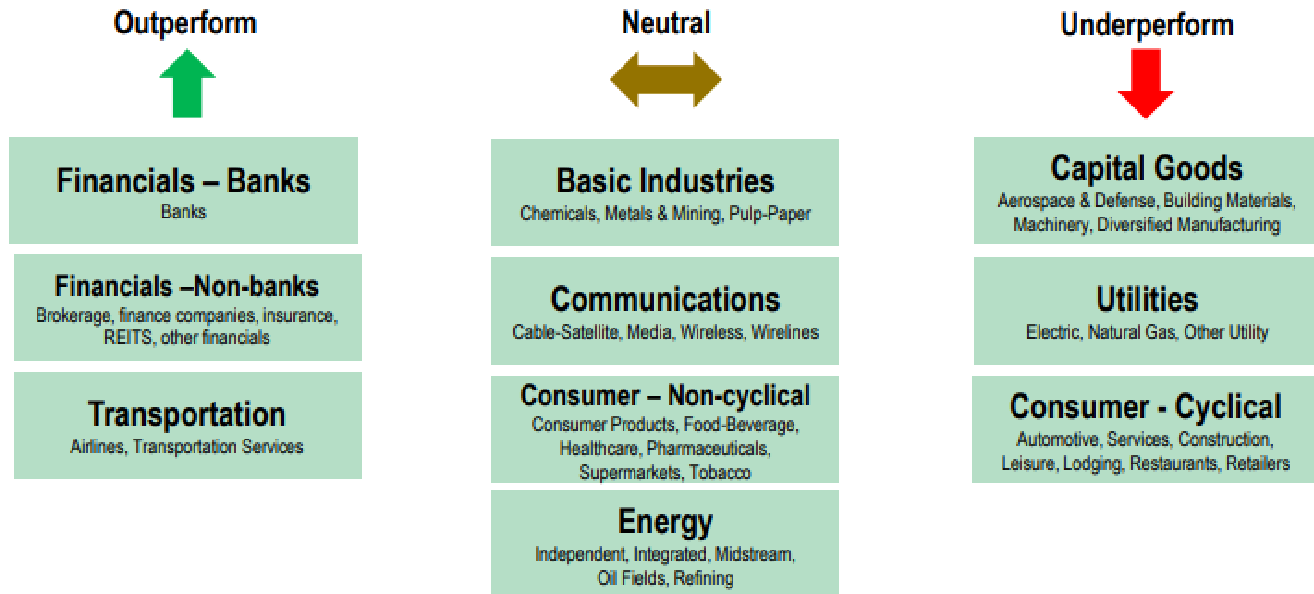
Figure 20. US High Yield Corporates – Summary of sector views



Source: Citi Private Bank Global Fixed Income Strategy, Bloomberg Barclays US Corporate High Yield Bond Index as of April 11, 2019. The expressions of opinion are not intended to be a forecast of future events or a guarantee of future results. Arrows imply our expectations of sector performance versus the Bloomberg Barclays US Corporate High Yield Bond Index. Up arrow = outperform, Sideways arrow = market perform, Down arrow = underperform

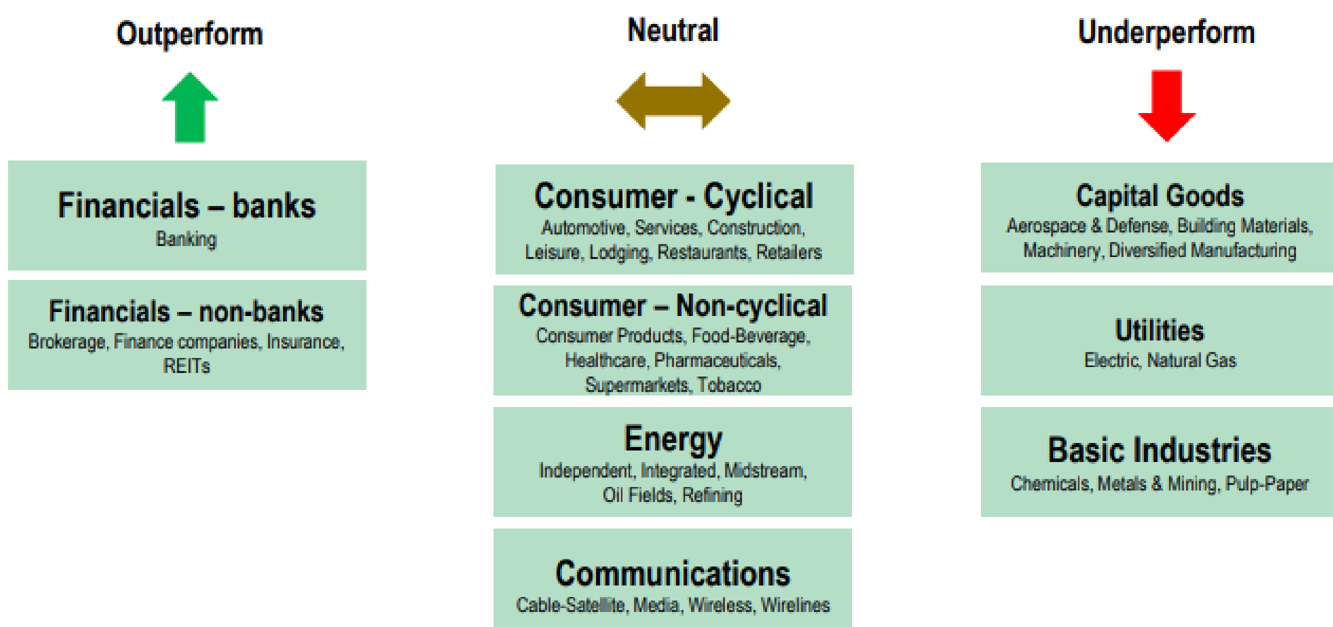
Corporate sector views – European markets

Figure 21. EMEA Investment Grade Corporates – Summary of sector views



Source: Citi Private Bank Global Fixed Income Strategy, Bloomberg Barclays Euro-Aggregate Corporate Statistics Index as of April 11, 2019. The expressions of opinion are not intended to be a forecast of future events or a guarantee of future results. Arrows imply our expectations of sector performance versus the Bloomberg Barclays Euro-Aggregate Corporate Statistics Index. Up arrow = outperform, Sideways arrow = market perform, Down arrow = underperform

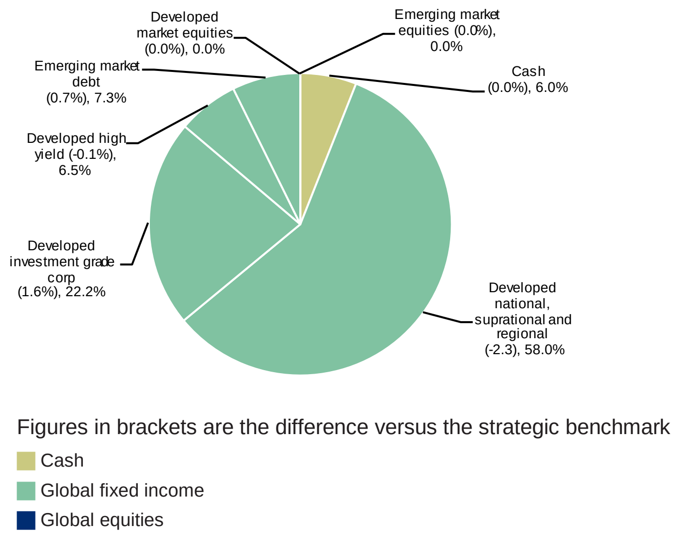
Figure 22. EMEA High Yield Corporates – Summary of sector views



Source: Citi Private Bank Global Fixed Income Strategy, Bloomberg Barclays Euro High Yield Corporate Bond Index as of April 11, 2019. The expressions of opinion are not intended to be a forecast of future events or a guarantee of future results. Arrows imply our expectations of sector performance versus the Bloomberg Barclays Euro High Yield Corporate Bond Index. Up arrow = outperform, Sideways arrow = market perform, Down arrow = underperform

Fixed income tactical asset allocations

Figure 23. Fixed income allocation – Risk Level 1*



Source: Citi Private Bank Global Investment Committee, June 3, 2019.

Core Positions

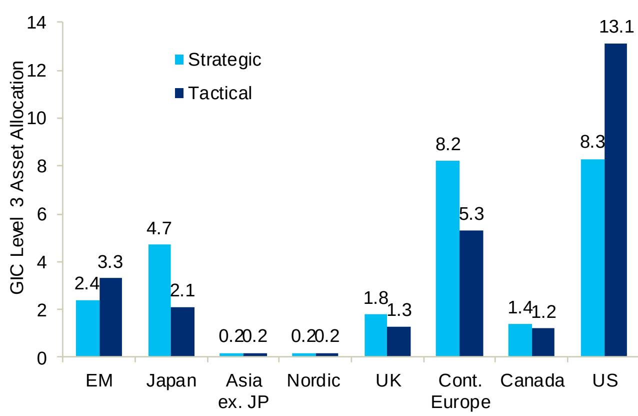
Developed government debt has a large underweight postion at -2.3%, with an overweight in US government fixed income. Developed corporate investment grade fixed income has an overweight at +1.6% driven by an overweight in US corporate investment grade fixed income.

Emerging market debt has an overweight position of +0.7% with both Asia and LatAm debt at overweight positions.

* Risk level 1 is designed for investors who have a preference for capital preservation and relative safety over the potential for a return on investment. These investors prefer to hold cash, time deposits and/or lower risk fixed income instruments.

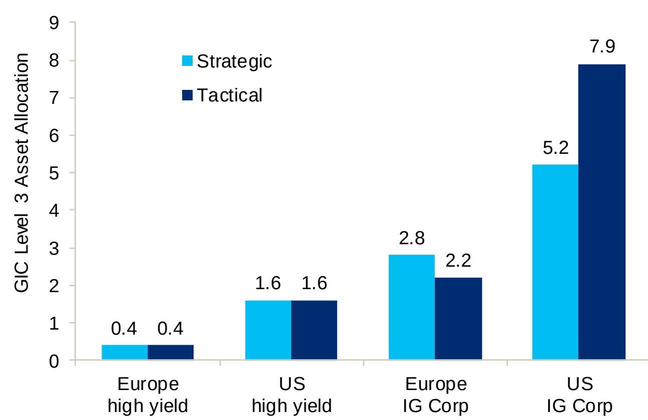
Strategic = benchmark; tactical = the Citi Private Bank Global Investment Committee's current view; and active = the difference between strategic and tactical.

Figure 24. Fixed income sovereign tactical allocation (Level 3)**



Source: Citi Private Bank Global Investment Committee, June 3, 2019.

Figure 25. Fixed income credit tactical allocation (Level 3)**



Source: Citi Private Bank Global Investment Committee, June 3, 2019.

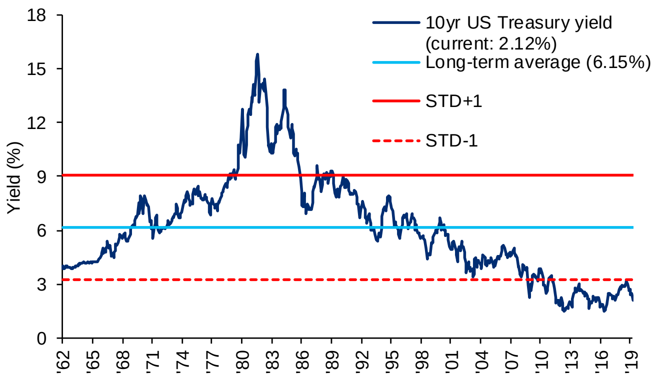
**Risk Level 3 is designed for investors with a blended objective who require a mix of assets and seek a balance between investments that offer income and those positioned for a potentially higher return on investment. Risk Level 3 may be appropriate for investors willing to subject their portfolio to additional risk for potential growth in addition to a level of income reflective of his/her stated risk tolerance.

Strategic = benchmark; tactical = the Citi Private Bank Global Investment Committee's current view; and active = the difference between strategic and tactical.

Opinions expressed herein may differ from the opinions expressed by other businesses or affiliates of Citigroup, Inc., and are not intended to be a forecast of future events, a guarantee of future results or investment advice, and are subject to change based on market and other conditions. In any case, past performance is no guarantee of future results, and future results may not meet our expectations due to a variety of economic, market and other factors. Further, any projections of potential risk or return are illustrative and should not be taken as limitations of the maximum possible loss or gain.

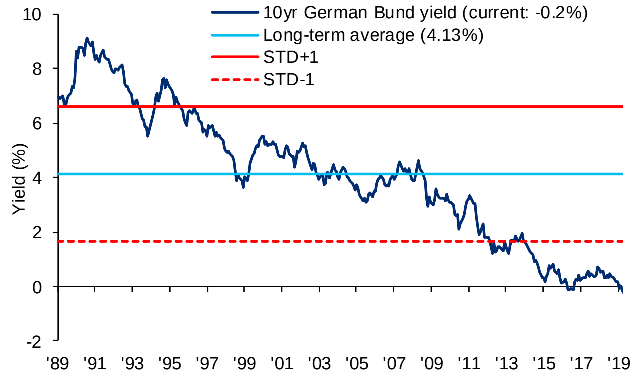
Long-term historical government bond yields

Figure 26. US government bond yield



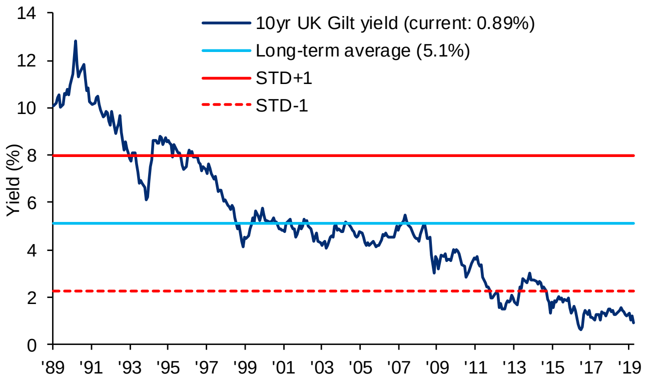
Source: Bloomberg.

Figure 27. German government bond yield



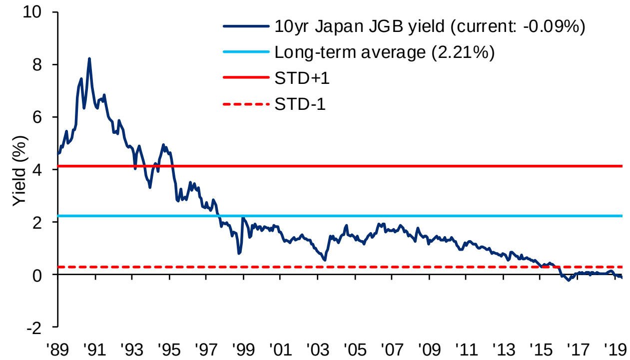
Source: Bloomberg.

Figure 28. UK government bond yield



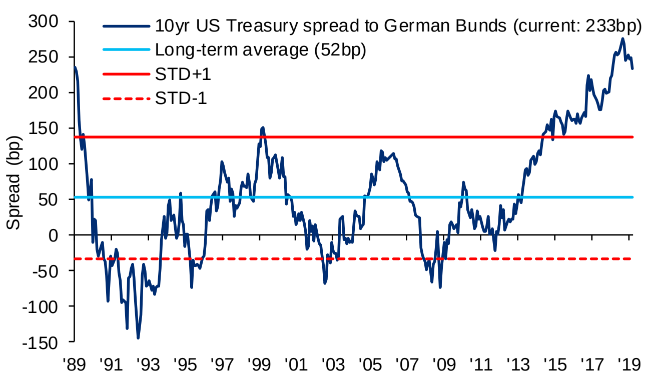
Source: Bloomberg.

Figure 29. Japan government bond yield



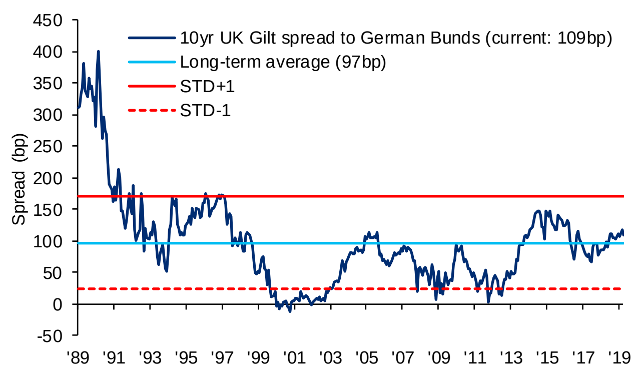
Source: Bloomberg.

Figure 30. 10yr US Treasury spread to German Bunds



Source: Bloomberg.

Figure 31. 10yr UK Gilt spread to German Bunds

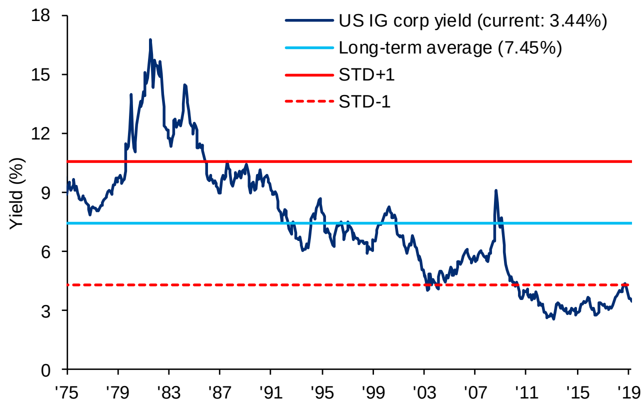


Source: Bloomberg.

Figures as of June 1, 2019. Note: STD+1= Plus one standard deviation from the average, STD-1= Minus one standard deviation from the average. Past performance is no guarantee of future returns. Real results may vary.

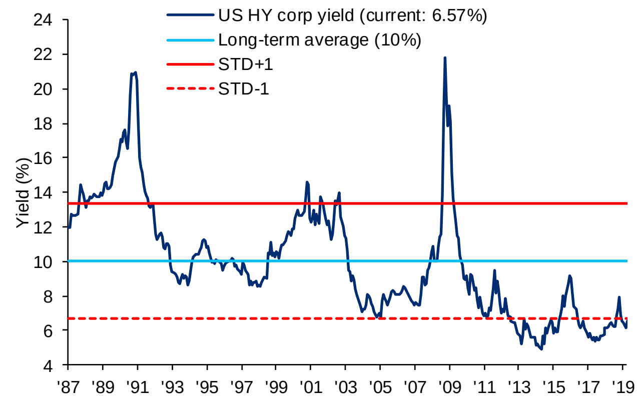
Long-term historical corporate bond yields

Figure 32. US investment grade corporate yield



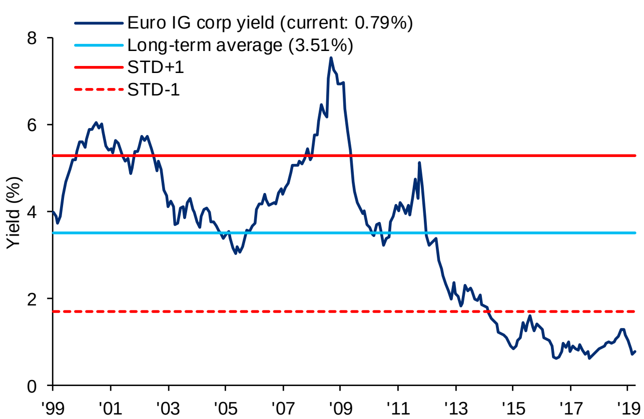
Source: Bloomberg Barclays Indices.

Figure 33. US high yield corporate yield



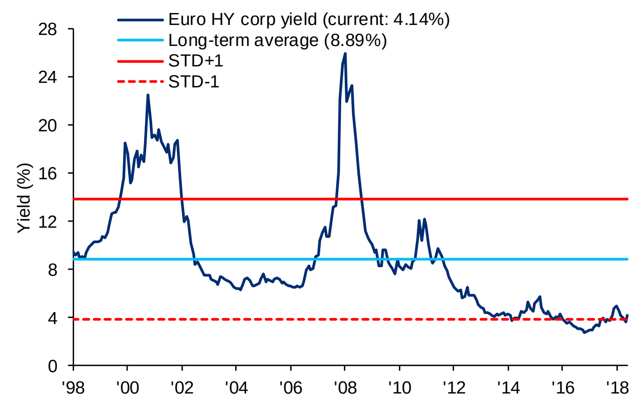
Source: Bloomberg Barclays Indices.

Figure 34. European investment grade corporate yield



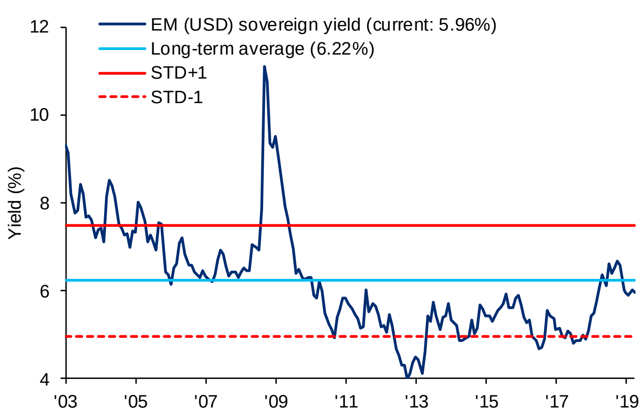
Source: Bloomberg Barclays Indices.

Figure 35. European high yield corporate yield



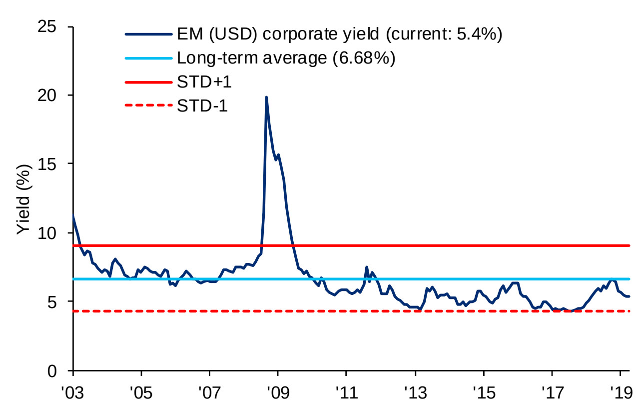
Source: Bloomberg Barclays Indices.

Figure 36. EM (USD) sovereign yield



Source: Bloomberg Barclays Indices.

Figure 37. EM (USD) corporate yield

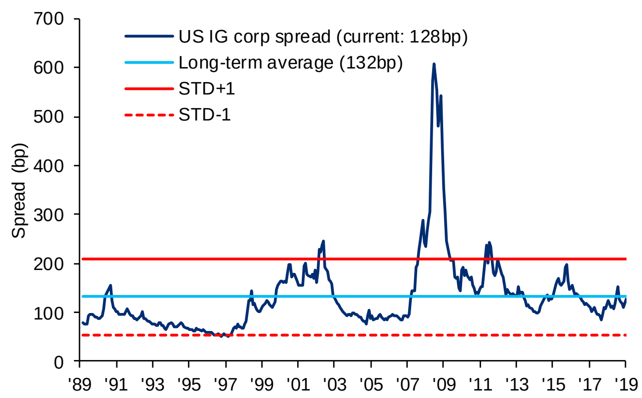


Source: Bloomberg Barclays Indices.

Figures as of June 1, 2019. Note: STD+1= Plus one standard deviation from the average, STD-1= Minus one standard deviation from the average. Past performance is no guarantee of future returns. Real results may vary.

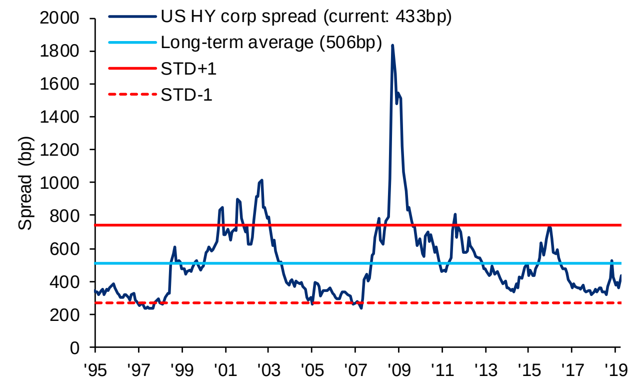
Long-term historical corporate bond spreads

Figure 38. US investment grade corporate spread



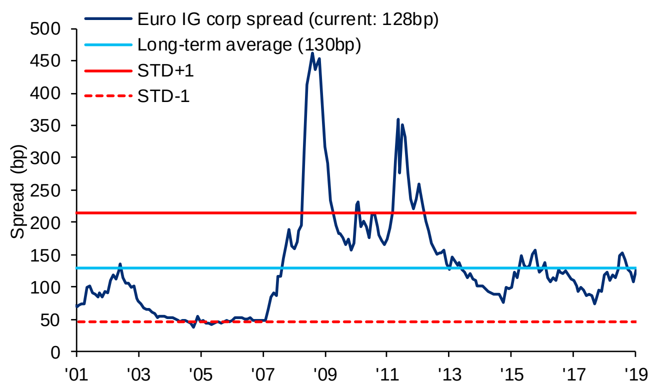
Source: Bloomberg Barclays Indices.

Figure 39. US high yield corporate spread



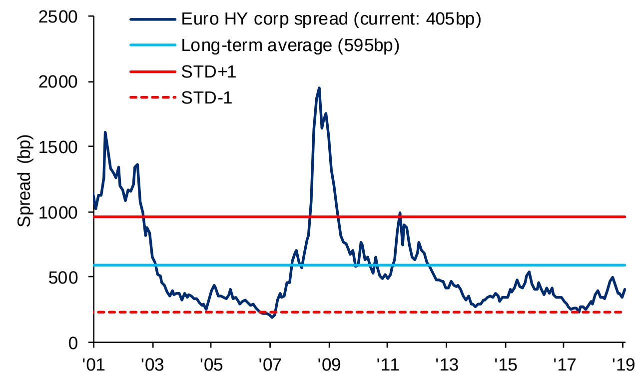
Source: Bloomberg Barclays Indices.

Figure 40. European investment grade corporate spread



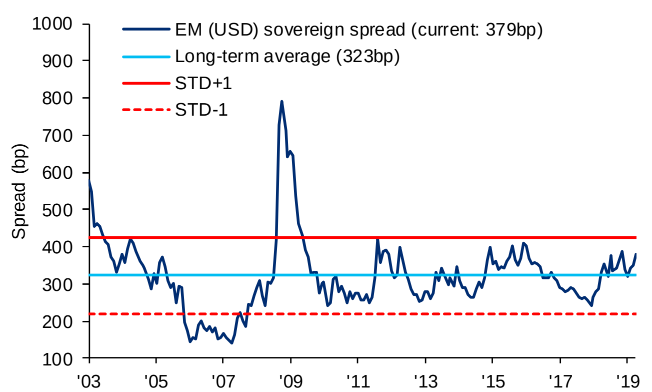
Source: Bloomberg Barclays Indices.

Figure 41. European high yield corporate spread



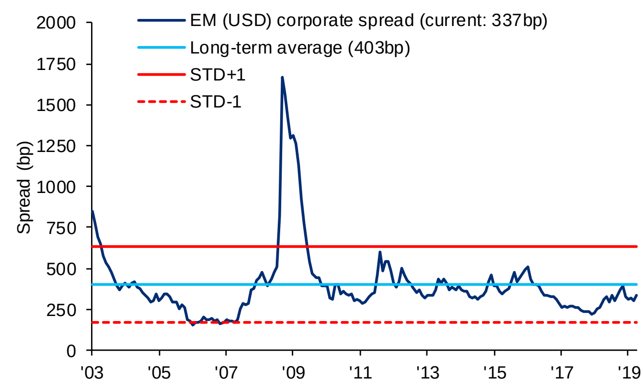
Source: Bloomberg Barclays Indices.

Figure 42. EM (USD) sovereign spread



Source: Bloomberg Barclays Indices.

Figure 43. EM (USD) corporate spread

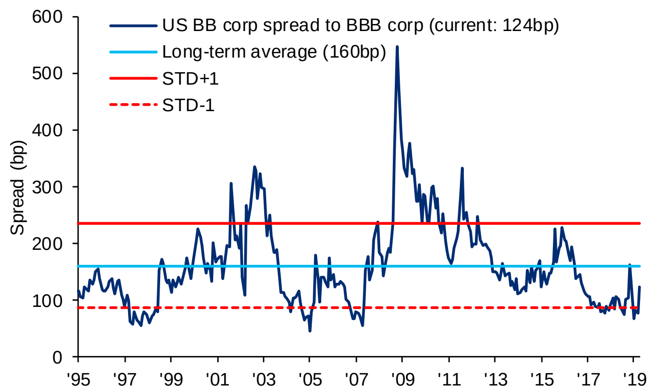


Source: Bloomberg Barclays Indices.

Figures as of June 1, 2019. Note: STD+1= Plus one standard deviation from the average, STD-1= Minus one standard deviation from the average. Past performance is no guarantee of future returns. Real results may vary.

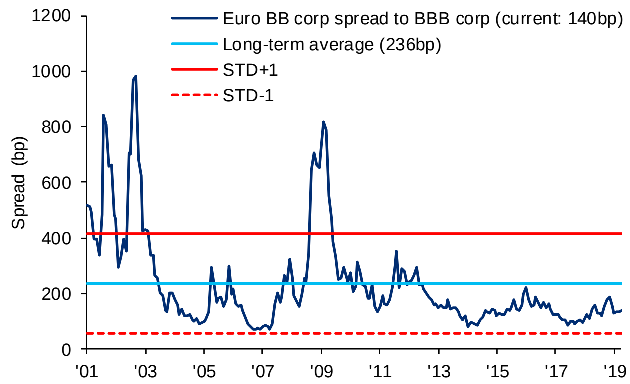
Long-term historical corporate bond spread comparisons

Figure 44. US BB corp spread to BBB corp



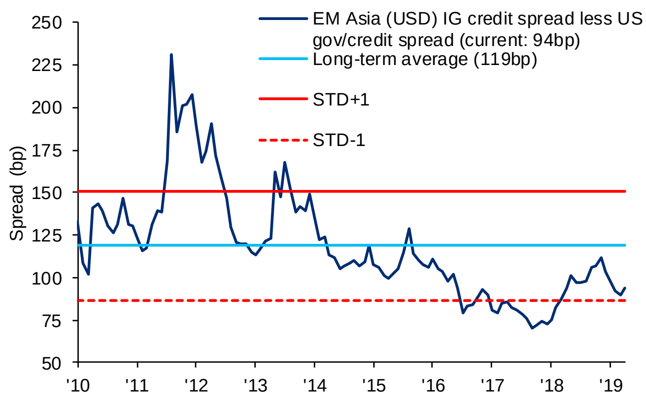
Source: Bloomberg Barclays Indices.

Figure 45. Euro BB corp spread to BBB corp



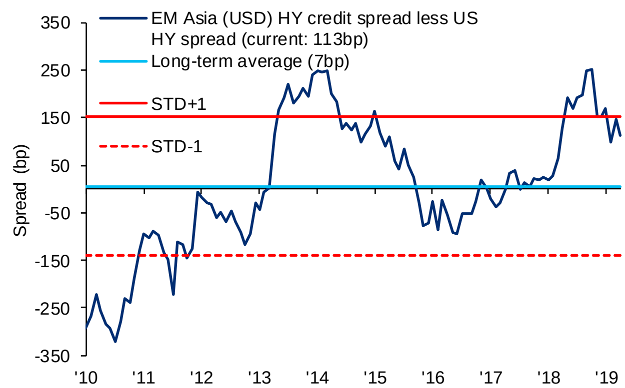
Source: Bloomberg Barclays Indices.

Figure 46. EM Asia (USD) IG credit spread to US Gov/Credit



Source: Bloomberg Barclays Indices.

Figure 47. EM Asia (USD) HY credit spread to US HY

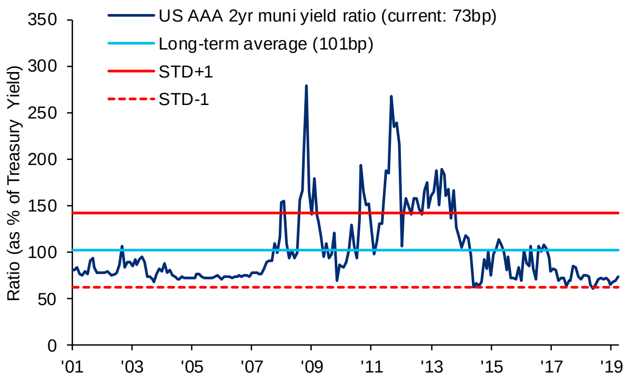


Source: Bloomberg Barclays Indices.

Figures as of June 1, 2019. Note: STD+1= Plus one standard deviation from the average, STD-1= Minus one standard deviation from the average. Past performance is no guarantee of future returns. Real results may vary.

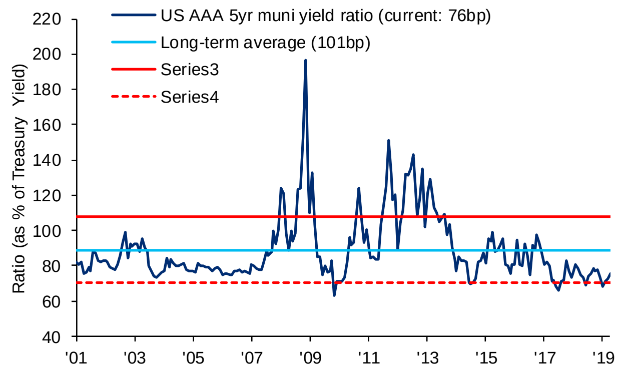
Long-term historical municipal bond yield ratios vs US Treasuries

Figure 48. US AAA-rated 2yr muni yield ratio



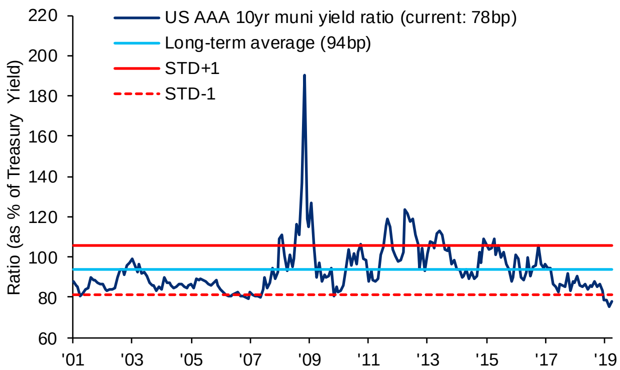
Source: Bloomberg.

Figure 49. US AAA-rated 5yr muni yield ratio



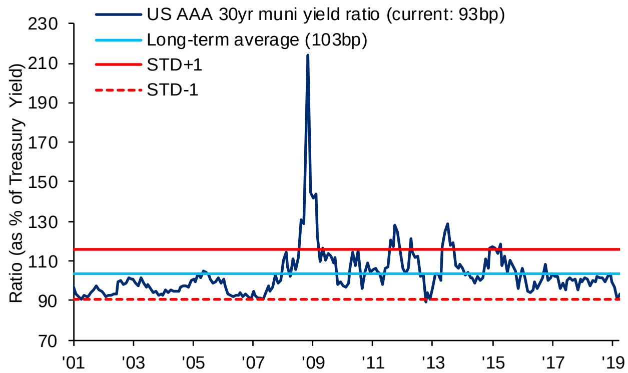
Source: Bloomberg.

Figure 50. US AAA-rated 10yr muni yield ratio



Source: Bloomberg.

Figure 51. US AAA-rated 30yr muni yield ratio



Source: Bloomberg.

Figures as June 1, 2019. Note: STD+1= Plus one standard deviation from the average, STD-1= Minus one standard deviation from the average. Past performance is no guarantee of future returns. Real results may vary.

Fixed income market returns

Figure 52. Fixed Income index returns (local currency, %)

Index	YTD	Last 12m	Last 3m	Last 1m	Yield	Duration
Broad Aggregate Indices						
Global Agg (local currency)	4.3	5.7	3.4	1.6		
US Agg Bond	5.1	7.3	4.1	2.2	2.62	5.76
European Agg	3.6	4.1	2.6	0.9	0.44	6.97
Developed Sovereign Debt						
Global (local currency)	3.9	5.5	3.4	1.9	1.19	8.22
US Treasury	4.6	7.3	4.5	2.8	2.09	6.33
US Agency	3.7	6.0	3.3	1.9	2.16	4.12
German Bunds	3.1	4.7	2.6	1.6	-0.34	8.01
UK Gilts	5.6	5.8	4.8	4.0	1.09	13.46
Japan JGBs	2.1	2.7	1.6	0.8	0.03	11.19
Portugal	6.5	7.4	4.0	1.9	7.46	2.87
Italy	2.2	3.0	2.0	-0.1	2.01	6.81
Ireland	4.0	4.5	2.7	0.9	0.23	8.80
Spain	5.9	6.0	4.3	2.0	0.46	7.92
Inflation-linked Sovereign Debt						
Global I-Linked (local currency)	6.5	7.0	5.2	3.0	-0.92	12.51
US I-Linked	5.7	5.3	4.4	2.5	2.21	1.15
US Municipals						
US Municipals	4.8	6.6	3.5	1.4	2.06	5.41
Emerging Markets						
EM (Hard Currency) Sovereign	**6.7**	**7.1**	**2.2**	**0.4**	**5.96**	**7.39**
EM LatAm	7.8	6.4	2.2	0.6	7.28	8.13
EM Asia	7.8	10.4	4.1	1.1	4.07	7.62
EM EMEA	6.1	7.7	1.9	0.0	5.43	7.00
EM (Local) Govt, hedged USD	**3.2**	**6.3**	**2.1**	**1.3**	**4.50**	**6.38**
EM LatAm	3.9	6.9	2.0	1.1	7.34	4.13
EM Asia	2.3	7.0	1.7	1.4	3.90	7.13
EM EMEA	2.8	2.7	1.1	1.4	6.49	5.25
Securitized debt						
US MBS	3.6	6.2	3.0	1.4	2.80	3.32
US CMBS	5.9	8.7	4.4	2.6	2.62	5.28
US ABS	2.9	4.9	2.1	1.2	2.24	2.16
High Grade Corporate Debt						
USD Corporates	7.6	8.4	4.8	1.9	3.39	7.54
EUR Corporates	3.7	3.1	1.7	-0.3	0.81	5.12
GBP Corporates	5.7	4.9	3.3	1.4	2.54	8.25
High Yield Corporate Debt						
USD High Yield	7.4	5.2	1.0	-1.3	6.62	3.51
EUR High Yield	5.1	1.7	0.7	-1.3	4.23	4.13
Asia (USD)High Yield	8.0	8.0	2.7	-0.1	7.46	2.87
S&P/LSTA Leveraged Loan	5.5	3.8	1.2	-0.3		
Hybrid debt						
S&P US Variable Rate Preferred Index (F2F)	9.2	5.9	2.0	0.2		
S&P US Fixed Rate Preferred Index	9.6	5.0	1.7	0.0		

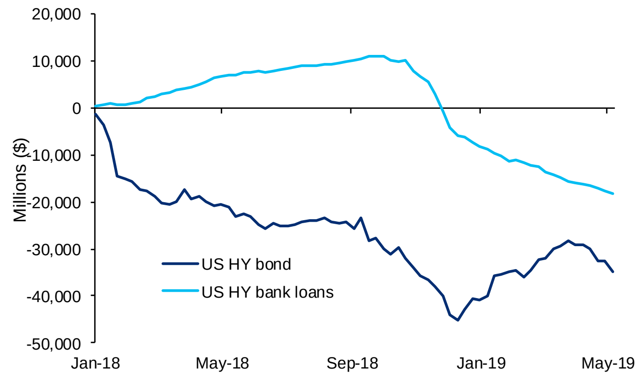
Source: The Yield Book, Bloomberg Barclays Indices, S&P as of June 4, 2019. Past performance is no guarantee of future results. Real results may vary.

Bond fund cumulative weekly flows

Figure 53. Cumulative fund flows – US IG corp

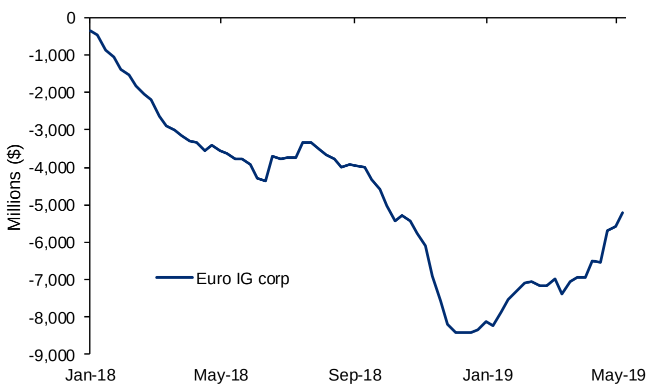
Source: EPFR.

Figure 54. Cumulative fund flows – US HY bond vs loans



Source: EPFR.

Figure 55. Cumulative fund flows – Euro IG corp

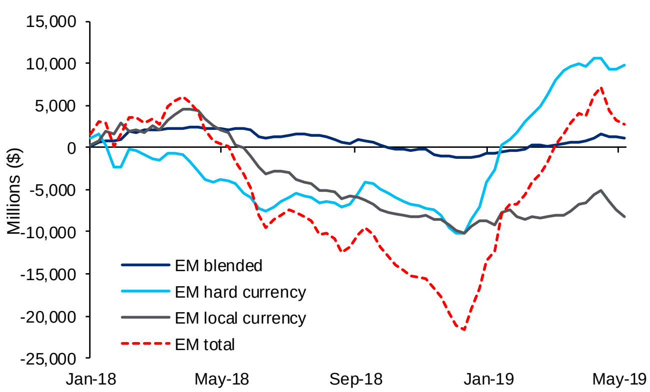


Source: EPFR.

Figure 56. Cumulative fund flows – Euro HY corp

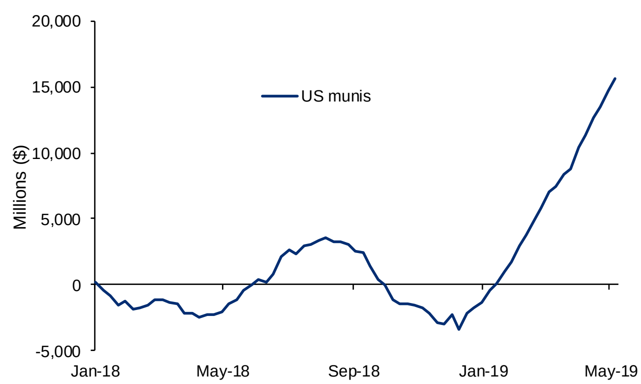
Source: EPFR.

Figure 57. Cumulative fund flows – EM, by currency



Source: EPFR.

Figure 58. Cumulative fund flows – US munis



Source: EPFR.

Figures as of May 29, 2019.

Market definitions

Asset classes	Benchmarked against
Global equities	MSCI All Country World Index, which represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.
Global bonds	Bloomberg Barclays Multiverse (Hedged) Index, which contains the government -related portion of the Multiverse Index, and accounts for approximately 14% of the larger index.
Hedge funds	HFRX Global Hedge Fund Index, which is designed to be representative of the overall composition of the hedge fund universe. It comprises all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage and relative value arbitrage. The strategies are asset-weighted based on the distribution of assets in the hedge fund industry.
Commodities	Dow Jones-UBS Commodity Index, which is composed of futures contracts on physical commodities traded on US exchanges, with the exception of aluminium, nickel and zinc, which trade on the London Metal Exchange (LME). The major commodity sectors are represented including energy, petroleum, precious metals, industrial metals, grains, livestock, softs, agriculture and ex-energy.

Equities	
Developed market large cap	MSCI World Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the equity market performance of the large cap stocks in 23 developed markets. Large cap is defined as stocks representing roughly 70% of each market's capitalization.
US	Standard & Poor's 500 Index, which is a capitalization -weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.
Europe ex UK	MSCI Europe ex UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in each of Europe's developed markets, except for the UK.
UK	MSCI UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in the UK.
Japan	MSCI Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in Japan.
Asia Pacific ex Japan	MSCI Asia Pacific ex Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the performance of large cap stocks in Australia, Hong Kong, New Zealand and Singapore.
Developed market small and mid-cap	MSCI World Small Cap Index, which is a capitalization-weighted index that measures small cap stock performance in 23 developed equity markets.
Emerging market	MSCI Emerging Markets Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure equity market performance of 22 emerging markets.

Bonds	
Global Aggregate Index	Bloomberg Barclays Global Aggregate Index is a flagship measure of global investment grade debt from twenty-four local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers.
US Aggregate Bond Index	Bloomberg Barclays US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).
Pan-European Aggregate Index	Bloomberg Barclays Pan-European Aggregate Index tracks fixed-rate, investment-grade securities issued in the following European currencies: Euro, British pounds, Norwegian krone, Danish krone, Swedish krona, Czech koruna, Hungarian forint, Polish zloty, and Slovakian koruna. Inclusion is based on the currency of the issue, and not the domicile of the issuer. The principal asset classes in the index are Treasuries, Government-Related, Corporate and Securitised, which include Pfandbriefe, other covered bonds and asset-backed securities.
Developed sovereign	Citi World Government Bond Index (WGBI), which consists of the major global investment grade government bond markets and is composed of sovereign debt, denominated in the domestic currency. To join the WGBI, the market must satisfy size, credit and barriers-to-entry requirements. In order to ensure that the WGBI remains an investment grade benchmark, a minimum credit quality of BBB–/Baa3 by either S&P or Moody's is imposed. The index is rebalanced monthly.
Emerging sovereign	Citi Emerging Market Sovereign Bond Index (ESBI), which includes Brady bonds and US dollar -denominated emerging market sovereign debt issued in the global, Yankee and Eurodollar markets, excluding loans. It is composed of debt in Africa, Asia, Europe and Latin America. We classify an emerging market as a sovereign with a maximum foreign debt rating of BBB+/Baa1 by S&P or Moody's. Defaulted issues are excluded.
Inflation-Linked	Citi World Inflation-Linked Securities Index (WorldILSI) coverage includes the United States, Japan, France, Germany, Greece, Italy, Sweden, and the United Kingdom. It measures the returns of the inflation-linked bonds with fixed-rate coupon payments that are linked to an inflation index.
Supranationals	Citi World Broad Investment Grade Index (WBIG)—Government Related, which is a subsector of the WBIG. The index includes fixed rate investment grade agency, supranational and regional government debt, denominated in the domestic currency. The index is rebalanced monthly.

Securitized	Citi World Broad Investment Grade Index (WBIG)—Securitized, which is a subsector of the WBIG. The index includes global investment grade collateralized debt denominated in the domestic currency, including mortgage -backed securities, covered bonds (Pfandbriefe) and asset -backed securities. The index is rebalanced monthly.
Corporate investment grade	Citi World Broad Investment Grade Index (WBIG)—Corporate, which is a subsector of the WBIG. The index includes fixed rate global investment grade corporate debt within the finance, industrial and utility sectors, denominated in the domestic currency. The index is rebalanced monthly.
Mortgage Backed Security	Mortgage Backed Security (MBS) is a type of asset-backed security that is secured by a mortgage or collection of mortgages. The mortgages are sold to a group of individuals (a government agency or investment bank) that securitizes, or packages, the loans together into a security that investors can buy
Corporate high yield	Bloomberg Barclays Global High Yield Index is a multi-currency flagship measure of the global high yield debt market. The index represents the union of the US High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices.
Municipal	Bloomberg Barclays Municipal Bond Index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed tax-exempt bond market. The index includes state and local general obligation, revenue, insured, and pre-refunded bonds
Preferred/Hybrid	Bank of America (BofA) Merrill Lynch Fixed Rate Preferred Securities Index tracks the performance of fixed rate US dollar denominated preferred securities issued in the US domestic market.
European Contingent Convertible	Credit Suisse European Contingent Convertible Index tracks bonds known as “CoCos”. The term CoCo is used to describe a new type of convertible bond that is automatically converted into a predetermined amount of shares when a predefined trigger is breached. Since this type of bond is transformed into equity upon conversion, it would be available for further loss absorption and therefore satisfies regulatory requirements of hybrid capital instruments.

CDS

CDX North America Inv Grade	Markit CDX North American Investment Grade Index consists of CDS levels for the most liquid north American entities with investment grade credit ratings.
CDX North America High Yield	Markit CDX North American High Yield Index consists of CDS levels for the most liquid north American entities with high yield credit ratings.
CDX North America High Vol	Markit CDX North American Investment Grade High Volatility Index consists of CDS levels for the most liquid north American entities with investment grade credit ratings and higher volatility.
Markit MCDX Municipal Index	The Markit MCDX index is a credit index consisting of municipal single name CDS.
iTraxx Europe Index Inv Grade	The benchmark Markit iTraxx Europe index comprises CDS levels of 125 equally-weighted European names.
iTraxx Europe Crossover Index	The Markit iTraxx Crossover index comprises CDS levels for the 75 most liquid sub-investment grade entities.
iTraxx Europe Senior Financial	The Markit iTraxx Europe Senior Financials Index consists of twenty-five (25) financial entities from the Markit iTraxx Europe index referencing senior debt.
iTraxx SOVX Western Europe	The Markit iTRaxx SovX Western Europe index consists of 15 equally weighted Western European sovereign CDS constituents.
iTraxx Japan Inv Grade	The Markit iTraxx Japan Investment Grade Index consists of fifty (50) of the most liquid Japanese entities with investment grade credit ratings as published by Markit
iTraxx Asia ex-Japan Inv Grade	The Markit iTraxx Asia ex-Japan Investment Grade Index consists of forty (40) of the most liquid Asian entities with investment grade credit ratings as published by Markit
CDX Emerging Markets	The Markit CDX Emerging Markets Index is composed of 14 sovereign CDS issuers. All entities are domiciled in three regions: (i) Latin America, (ii) Eastern Europe, the Middle East and Africa, and (iii) Asia.

Other miscellaneous definitions

Citi Economic Surprise Index	The Citigroup Economic Surprise Index are objective and quantitative measures of economic news, covering all G10 economies. They are defined as weighted historical standard deviations of data surprises (actual releases vs Bloomberg survey median).
S&P/LSTA Leveraged Loan Index	The S&P/LSTA (Loan Syndication and Trading Association) Leveraged Loan Index is a rules based index that tracks the investable senior loan market.
European Additional Tier 1	European Additional Tier 1 capital (or Contingent Convertibles or CoCo's) are subordinated securities that qualify as Tier 1 capital under Basel III capital requirements.
LIBOR	The London Interbank Offered Rate (LIBOR is the average of interest rates estimated by each of the leading banks in London that it would be charged were it to borrow from other banks. Libor rates are calculated for 5 currencies, including Euros, and 7 borrowing periods ranging from overnight to one year and are published each business day
Barbell strategies	Barbell strategies incorporate weighing two distinctively different investments in order to mitigate potential market risk
AMT Bond	Alternative Minimum Tax (AMT) bond is a private activity municipal bond whose interest is treated as a preference item for purposes of computing the alternative minimum tax imposed on individuals and corporations.
Variable rate demand note (VRDN)	Longer-term municipal securities that feature both a periodic coupon reset and a demand feature that allows an investor to periodically tender, or put, the securities at par plus accrued interest.

Covenant-Lite loan	Loan agreement that has fewer covenants to protect the lender and fewer restrictions on the borrower regarding payment terms, income requirements and collateral. Conversely a covenant heavy loan has more covenants.
Fixed to Float Preferred (F2F) securities	Are junior subordinated structures that carry a fixed coupon for a specified period of time. If not redeemed by the issuer at that time, coupon payments would then float at a spread, determined at issuance, over a specified benchmark — typically three-month LIBOR.
Bond Connect	Bond Connect is a new mutual market access scheme that allows investors from mainland China and overseas to trade in each other's respective bond market
Runoff Cap	According to the US Federal Reserve, holdings of Treasuries, agency debt and agency mortgage-backed securities will be allowed to mature (or run-off) up to a pre-determined amount. This amount is considered a "cap". Any amount of matured debt that exceeds this cap, will be reinvested back into their respective market.
G7	Group of 7 (G7) is a group consisting of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
EuroCOIN	Is a coincident indicator of the euro area business cycle that provides an estimate of monthly growth of euro area GDP after the removal of measurement errors, seasonal, and other short run fluctuations.
Merrill Lynch Option Volatility Expectations	Merrill Lynch Option Volatility Expectations or MOVE is an index measure of Treasury yield volatility.
Asset Backed Security (ABS)	A security whose income payments and hence value are derived from and collateralized (or "backed") by a specified pool of underlying assets such as consumer credit card debt or auto loans.
Investment Grade Corporate bonds (IG)	Investment grade corporate bonds are bonds with a credit rating equal to or above BBB- (S&P) or Baa3 (Moody's), and are debt securities issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations.
High Yield Corporate Bonds (HY)	High yield corporate bonds are bonds with a credit rating less than BBB- (S&P) or Baa3 (Moody's), and are debt securities issued by a corporation and sold to investors. The backing for the bond is usually the payment ability of the company, which is typically money to be earned from future operations.
Commercial Mortgage Backed Securities	Commercial mortgage-backed securities (CMBS) are a type of mortgage-backed security that is secured by mortgages on commercial properties, instead of residential real estate.

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Bond rating equivalence

Alpha and/or numeric symbols used to give indications of relative credit quality. In the municipal market, these designations are published by the rating services. Internal ratings are also used by other market participants to indicate credit quality.

Bond credit quality ratings	Rating agencies		
Credit risk	**Moody's[1]**	**Standard and Poor's[2]**	**Fitch Ratings[2]**
Investment Grade			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (Strong)	A	A	A
Medium grade	Baa	BBB	BBB
Not Investment Grade			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	D	C
In default	C	D	D

1 The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.

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Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

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