Private Bank

Bond Market Monthly

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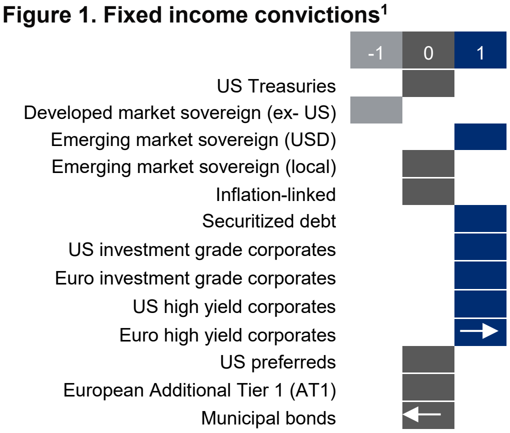
Staycation – Summer Edition

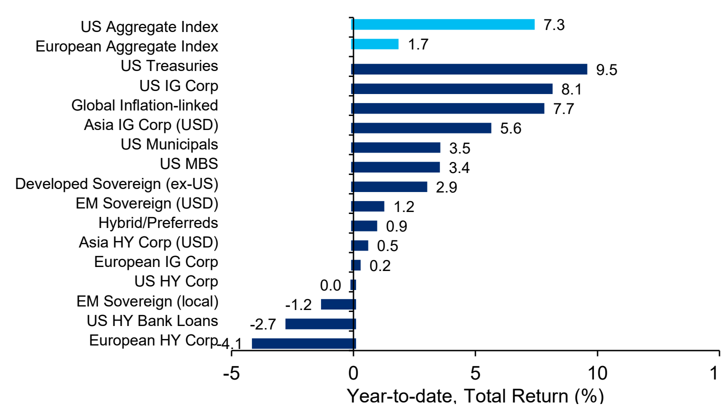
- The "staycation" has become somewhat familiar to many of us. Whether personal or based on travel limitations, vacations at home have become quite common. Following the fastest market correction in history, and the extraordinary policy response that quickly followed, US rates have also decided to take a long holiday. Indeed, yields on 10-year US Treasuries (UST) have traded sideways since April, averaging 0.65%. The steepening of the yield curve has also stalled, with the yield difference between 3-month T-Bills and 10-year UST flat-lined at 50bp. Though the UST market has gained a healthy 9.5% in 2020 (thru July 28), only 90bp of return has come over the last four months.
- Looking ahead, US rates are likely to face several obstacles. The path of COVID-19 will continue to weigh on investors' minds, with the acceleration of infections slowing reopening's and suppressing consumer demand in the effected cities. Additional fiscal stimulus faces uncertainties over timing and size, contributing to investor restraint. The US Presidential election may require markets to discount issues like higher corporate taxes or infrastructure spending. Of course, let's not forget Fed policy. Zero policy rates and purchases of Treasury and mortgage bonds have pushed real yields down sharply and has suppressed rate volatility.
- We continue to favor portfolio positioning down in quality. We believe it's where the value lies. This holds true whether its US municipals, high yield bonds or in structured credit. However, there is a big difference between moving down in quality and over-reaching for yield. We express caution on the latter. We advise being selective and utilizing an active approach. Our strongest convictions are in "Fallen Angels", non-agency residential mortgage bonds and lower-rated investment-grade. Preferred stock and parts of the emerging markets also offer good value.

Figure 1. Fixed income convictions[1]



Source: CPB as of July 29, 2020. -1=Low, 0=Neutral, 1=High. [1]Convictions are to be used within a fixed-income only context and can be either short-term (1-3 months) or long-term (12-18 months). High conviction implies a positive view, while low conviction implies a negative view. A neutral conviction implies our confidence is neither positive nor negative.

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



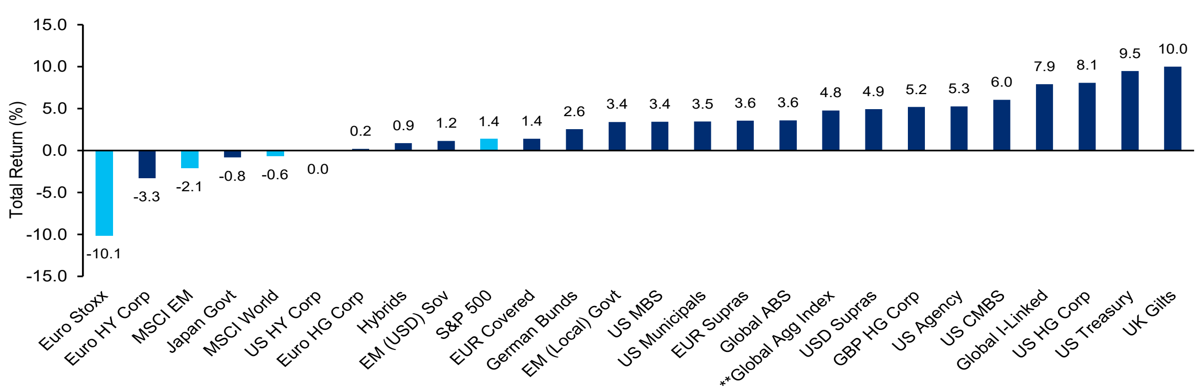
Source: Bloomberg Barclays Indices; Merrill Lynch as of July 29, 2020.
Light blue indicates total return on benchmark indices. Dark blue indicates total return on sub-indices. Past performance is no guarantee of future results. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only.

Market performance views and recommendations[1]

Sectors	Conviction[2]	Focus comments/recommendations
US Treasuries	Neutral	Short-term US Treasury yields are likely to stay low, with the Federal Reserve possibly on hold until 2023; Long-term yields may face some pressure when Covid-19 fears abate, but a meaningful move is unlikely; Favor steepeners
Developed market sovereigns (ex-US)	Low	The European Union Recovery Fund is unprecedented (See European Strategy bulletin); Along with ECB QE, yields are likely to remain low for longer, including the periphery; Still, an average yield of 0% isn't appealing; Remain underweight
Emerging market debt	External – High Local – Neutral	**External debt:** USD sovereign and corporate spreads remain wide when compared to pre-COVID levels; Fed policy should support additional spread tightening **Local bonds:** Yields have fallen to lowest levels on record; Future returns may be predicated on FX, though the recent drop in USD has supported recent performance
Inflation-linked debt	Neutral	Valuations remain attractive for inflation hawks, though we believe the fundamental outlook for inflation remains poor
Securitized debt	High	**US agency MBS:** Spreads to UST have tightened with the Fed creating strong technical support; Yields are attractive versus IG corporates but prepay risk is high **Non-agency RMBS/ABS/CMBS:** High quality non-agency CMBS offers HY-like valuations and poised to produce solid returns as the economy rebounds; Still favor opportunities in non-agency RMBS
High grade corporates	US IG – High Euro IG – High	**US IG:** The beginning of a new economic cycle and Fed support shifts our convictions towards lower quality, cyclical-oriented sectors **Euro IG:** Spreads and yields have recovered, supported by improving risk appetite and ECB purchases; Selective opportunities in lower quality IG and some cyclical sectors
High yield bonds/loans	US HY – High Euro HY – High	**US HY:** Expect spreads to be supported, as overall risk sentiment improves; Fallen Angels offers an interesting opportunity, given its higher quality and longer duration **Euro HY:** Spreads are cheap amid an improving macro outlook; EU policy and ECB purchases are likely to indirectly support prices
Hybrid debt securities[3]	US prefs. – Neutral Euro AT1's – Neutral	**US prefs:** Despite higher valuations, preferreds offer value versus high yield bonds; We would look to accumulate shares on periods of market weakness **Euro AT1's:** Similar to the US, valuations have improved but remain attractive versus high yield bond markets; Focus on highest quality issuers
Municipal bonds	Neutral	Muni valuations have nearly recovered to pre-Covid levels, with high quality yields at historical lows; Best opportunities have shifted down in quality, though requires a selective/active approach

Source: Citi Private Bank Global Fixed Income Strategy as of July 29, 2020. [1]Convictions are to be used within a fixed-income only context and can be either short-term (1-3 months) or long-term (12-18 months). [2]High conviction implies a positive view, while low conviction implies a negative view. A neutral conviction 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. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. For illustrative purposes only. Past performance is no guarantee of future results. Real results may vary.

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

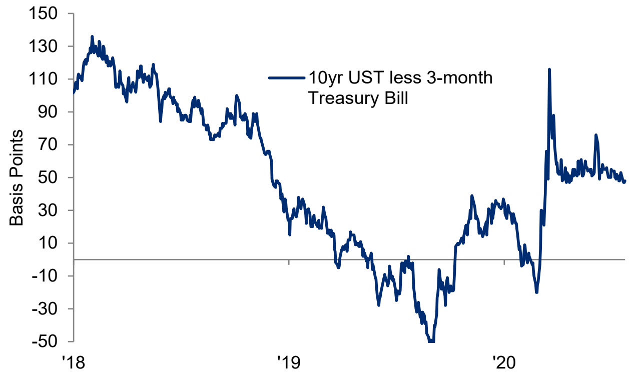


Source: Bloomberg Barclays Indices, Merrill Lynch, MSCI as of July 29, 2020. Light blue indicates an equity index. Global returns shown in hedged USD terms. "**Global Agg Index" is benchmark global fixed income index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown 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

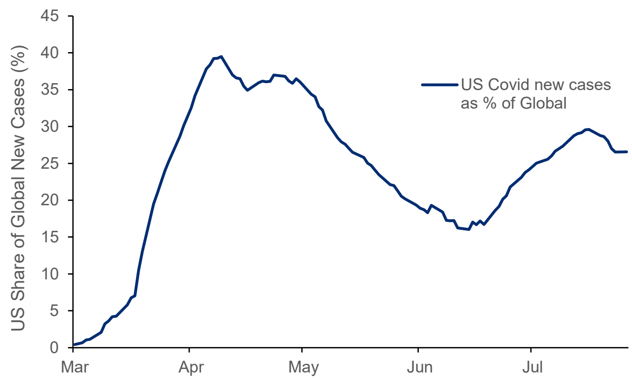
US Treasuries

Figure 4. The UST curve has flat-lined over last few months



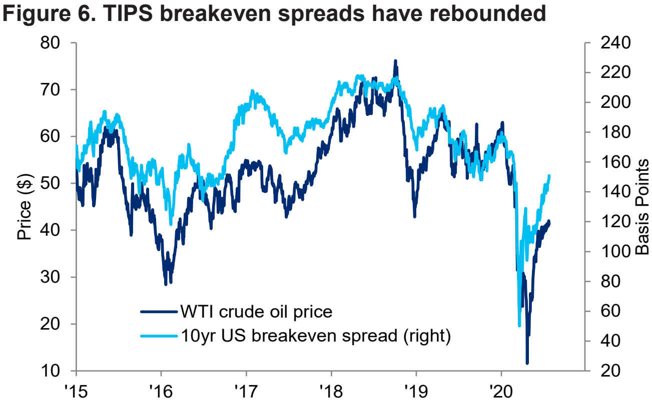
Source: Haver Analytics as of July 28, 2020.

Figure 5. US share of global new COVID cases has risen



Source: Haver Analytics as of July 28, 2020.

Figure 6. TIPS breakeven spreads have rebounded



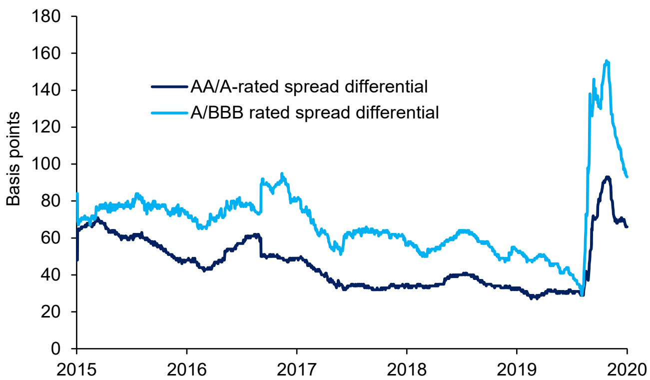
Source: Haver Analytics as of July 28, 2020.

- **Market performance:** Yields on 10-year US Treasuries (UST) have roughly traded sideways since early April, averaging 0.65%. Earlier steepening of the yield curve has stalled, with the yield difference between 3-month T-Bills and 10-year UST flat-lined at 50bp **(Fig. 4)**. Though the UST market has gained a healthy 9.5% in 2020 (thru July 28), only 90bp of return has come over the last four months. Long duration continues to outperform, with UST maturing 20 years or greater gaining 25% YTD.
- **Outlook:** US rates are likely to face several obstacles. First, the path of COVID-19 will continue to weigh on investors' minds. The acceleration of infections in the US has slowed reopening's and weakened consumer demand in the impacted cities **(Fig. 5)**. As highlighted in the July Quadrant, the strong economic rebound in May/June is now likely to slow somewhat earlier than anticipated. This can keep inflation low and long-term UST yields suppressed.
- The fiscal response is the second hurdle. Though the US government has provided $2.5 trillion in direct and indirect aid to businesses, governments and individuals, more is needed. Based on CPB's estimates, another $2 trillion is required for the US to get through the crisis. A recent Senate proposal for the next phase of support is closer to $1 trillion. With many previous benefits set to expire, a prolonged debate between Democrats and Republicans can keep risk aversion elevated. However, the passing of additional fiscal stimulus will likely be bearish for long-term UST.
- Third, the US Presidential election is around the corner (Nov. 3). Polling shows early signs pointing to a Joe Biden victory, with rising probabilities of a Democratic controlled Congress. While early to make conclusions, this outcome would have a mixed impact on rates. Though Biden would encourage a higher corporate tax rate from 21% to 28%, he is also in favor of large infrastructure plans. These two factors appear to be largely offsetting. Nonetheless, political discord and uncertainty can keep investors on their toes and the bid for UST strong.
- It's not necessarily an obstacle, though Fed policy should still receive an "honorable mention". The central bank is buying a minimum of $80 billion UST and $40 billion of agency mortgage backed securities (MBS) each month (with no timeline). In turn, this reduces net supply and keeps absolute (and real) yields low. With the Fed Funds rate likely to remain at the zero-bound for years to come, investors are encouraged to either extend duration or sit in cash and earn nothing.
- **Investment strategy:** The near-term outlook for US rates will likely remain well contained by the pandemic and the political environment. If all goes well, we should expect to see long-term UST yields rise later in the year. However, reaching 1.25% on 10-year UST seems optimistic. Curve steepeners still make sense in this environment, with the Fed anchoring policy rates for the foreseeable future. With LIBOR rates floored around 0.25%, adding modest amounts of leverage can also add value to portfolios.
- **US Treasury Inflation Protected Securities (TIPS):** Inflation breakevens (BEs) continue to widen, resolving the March dislocation. At 150bp, 10yr BEs remain below February levels and still imply a benign inflation outlook **(Fig. 6)**. As we published back in April, inflation fundamentals are expected to remain poor. Indeed, month-over-month core consumer prices contracted for three straight months (Mar-May) pushing some newly issued TIPS index ratios below 1.0. As we learned from the Global Financial Crisis, increasing money supply isn't necessarily the medicine for a sustainable rise in inflation. However, for inflation hawks, valuations would be considered attractive. That alone has CPB's Global Investment Committee maintaining a small overweight position.

Asset class update: US municipals & securitized debt

US Municipals

Figure 7. Better value is found down in quality

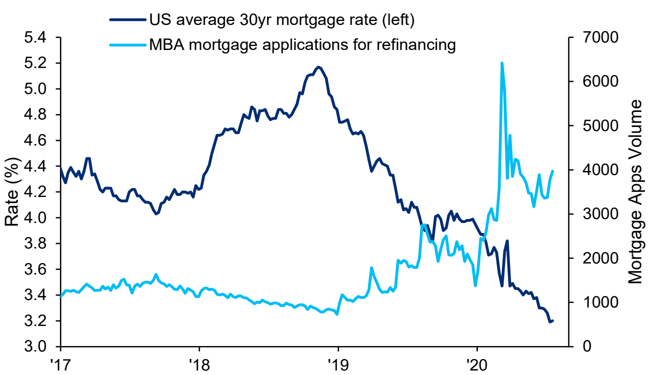


Source: Bank of America Merrill Lynch as of July 28, 2020.

- **Performance:** The US municipal bond market continues to grind higher, gaining 2.0% over the last two months. This places year-to-date returns at 3.5% (thru July 28), led by higher quality. AA-A rated bonds have returned between 3-4%, while BBBs have gained 50bp. However, there have been many gems under the surface. New York MTA bonds (rated BBB+) issued back in May have gained over 10%. While the State of Illinois (rated BBB-) have seen their recently issued general obligation bonds soar 18%, with yields falling 200bp.
- **Valuations:** The entire AAA muni index yield curve is now trading at, or near, historically low levels. Even on a taxable equivalent yield basis, high quality muni yields struggle to beat IG taxable corporates. However, better value can be found down in quality. On average, investors can pick up 70bp of spread moving from AA to A-rated bonds. Moving down to BBBs garners another 100bp **(Fig. 7)**.
- **Investment strategy:** While we favor a down in quality bias, we do not do this blindly. There is a difference between looking for value and reaching for yield. This is a "bond pickers" market and requires a selective approach. Despite lower yields, tax-free munis can offer some of the best high quality values in fixed income (for US investors). As highlighted last month, taxable munis also offer value as an alternative to US IG. Wider spreads and higher overall quality are two attributes that are likely to fuel relative outperformance.

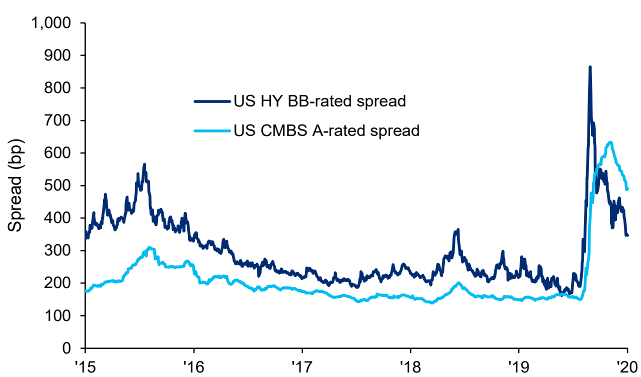
Securitized debt

Figure 8. Declining mortgage rates have fuelled refis



Source: Mortgage Bankers Association (MBA) July 28, 2020.

Figure 9. High quality CMBS still trade like HY



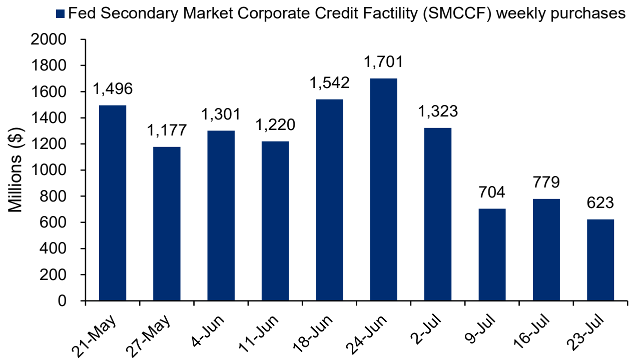
Source: Bloomberg Barclays Indices as of July 28, 2020.

- **US agency mortgage-backed securities (MBS):** The rally in high quality, alongside elevated Fed asset purchases has pushed agency MBS spreads to their tightest level since January 2015. Since the Fed restarted quantitative easing in March, they have added $575 billion to their MBS holdings, raising total mortgage assets held to just under $2 trillion. Partially due to the inherently lower average duration, the US agency MBS market has generated a modest 3.4% total return this year (thru July 28), trailing UST by 600bp (+9.5%).
- Fed policy and asset purchases have also dragged mortgage rates to historical low levels. According to Bankrate.com, the average 30-year fixed-rate home mortgage is now 3.15%. Along with better than expected new home sales, net issuance of agency MBS has surged over the last several months. Despite rising gross supply, net supply is expected to remain constrained. Indeed, the Fed makes up nearly 40% of monthly gross purchases.
- Average agency MBS index yields are currently 1.3%. This is a pick-up of nearly 85bp when compared to similar quality and duration US investment grade corporates. With rates likely to remain low, prepayment risks from refinancing may remain elevated **(Fig. 8)**. With average prices at a premium, receiving par on faster prepay can inhibit returns. Still, the Fed presence is likely to support the mortgage market and carry alone can generate positive return.
- **Mortgage credit:** Over the last three months, legacy non-agency residential mortgage-backed securities (RMBS) had gained 9.4%, recuperating 80% of what was lost in March. This brought returns through July back to -1.3%. In credit risk transfer (CRT) bonds, returns soared nearly 35% between April and June, exceeding what was lost in March by almost 10%. The non-agency commercial mortgage market has enjoyed some spread compression, but remains weak. Single-A rated CMBS spreads have tightened 140bp since May, but still trades like BB-rated HY bonds **(Fig. 9)**.
- US housing fundamentals remain supportive for residential mortgage credit. Despite the economic downturn, home prices have not been deeply impacted and fiscal expansion should provide additional support. While offering some of the best value in fixed income, CMBS also includes some of the largest risks. Rising delinquencies will remain an overhang. Be selective, keeping quality high.

Asset class update: Corporate credit

US investment grade (IG) corporates

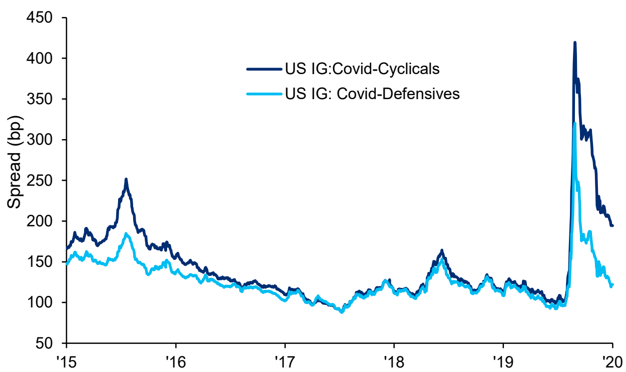
Figure 10. Fed IG purchases persist, but have slowed



Source: Federal Reserve as of July 28, 2020.

Figure 11. Selective opportunities in COVID impacted sectors

Source:

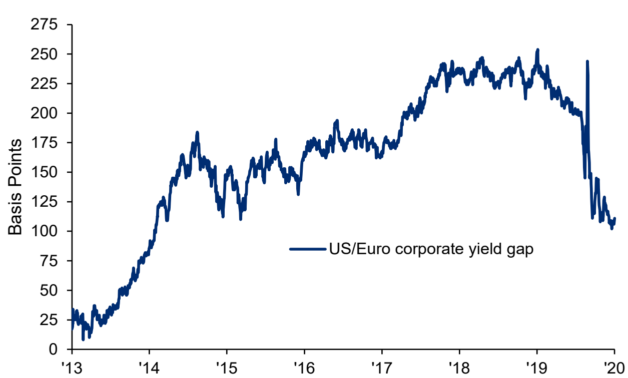


Bloomberg Barclays Indices as of July 28, 2020. Covid-Cyclicals: Banks, Basic Industry, Capital Goods, Airlines, Energy, REITS, Consumer Cyclicals. Covid-Defensives: Telecom, Technology, Utilities, Consumer-non cyclical

- **Performance:** US IG corporate bonds are up over 20% since the peak of the pandemic crisis in March, now posting gains in excess of 8% YTD. Index spreads (to UST) have tightened 250bps over the last 3 months, and are now back to 130bps. While A/AA-rated bonds have outperformed BBBs by roughly 275bps this year, BBBs have seen a more significant bounce off the March lows. Over the last four months, BBBs have gained nearly 25% compared to 18% for A-rated bonds. Not a surprise that longer duration bonds have outperformed alongside falling UST yields. Corporates maturing between 7-10 years have gained 2.5x more than shorter-dated bonds.
- **Fed support:** The Fed's Primary and Secondary Market Corporate Credit Facility (PMCCF and SMCCF), has had a meaningful impact on the market's normalization since March. While PMCCF has been left unused, its mere existence to step in to provide liquidity has calmed markets and encouraged investors to add risk. A more direct impact has been the Fed's SMCCF, which continues to buy corporates at a pace of $237 million/day.
- It is notable that the Fed has slowed down the pace of corporate purchases by nearly 65% since the end of June **(Fig. 10)**. In our view, this is consistent with the improvement in financial conditions and the pattern of softer trading volumes during the summer months. That said, we believe the Fed will remain engaged in credit markets until the global pandemic ends. If credit weakens on signs of an economic relapse, we would expect the Fed to increase purchases to stabilize markets and avoid a reoccurrence of events seen in March and April. As expected, these facilities have been extended through year-end (originally to end in September).
- **Investment strategy:** In our view, spreads are likely to stay firm alongside Fed support. However, with the Fed focused on maturities within 5 years, we favor extending duration for better opportunities. We also selectively look for opportunities in sectors that have been directly impacted by Covid, though where fundamentals remain intact **(Fig. 11)**. This includes looking at "best of breed" issuers within banks, materials, energy, travel/leisure and consumer cyclicals. To be sure, we would avoid building portfolios only in these sectors, and prefer a barbell approach with higher quality communications and utility issuers. See our US Credit Sector report for deeper insights.

European corporate bonds

Figure 12. Euro/USD IG yield differentials have narrowed



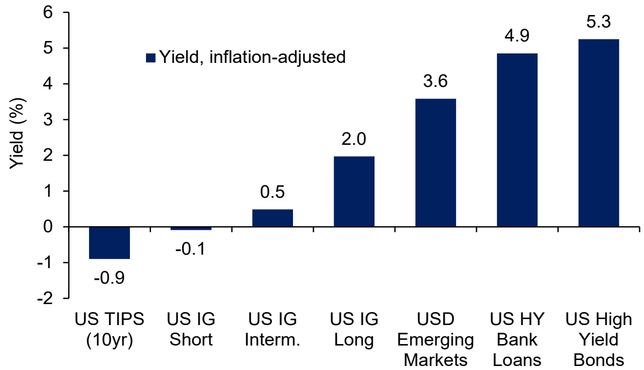
Source: Bloomberg Barclays Indices as of July 28, 2020.

- **Performance:** Euro IG corporates have fully recuperated the losses from the March sell-off. However, this only brings 2020 returns back to being flat (thru July 28), massively underperforming US IG by 800bp. To be fair, euro IG did not suffer nearly as much, falling 8% in March versus 15% for US corporates. Indeed, the European Central Bank (ECB) had been buying IG corporates for some time. Average yields are now back to 0.6%, however spreads (to Bunds) remain 30-40bp wider than pre-crisis levels.
- **Investment strategy:** With the ECB heavily engaged in QE, we think spreads can tighten further. Current purchases includes not only the Corporate Sector Purchase Program (CSPP) but also the Pandemic Emergency Purchase Program (PEPP), which was further extended by €600bn to a total of €1,350 billion back in June.
- Low yields can be a drag on relative total returns. That said, the yield gap versus US IG has narrowed to 70bp **(Fig. 12)**. This is the lowest yield differential since early 2014. Similar to our sector views in the US, we favor selective opportunities in cyclically oriented sectors. See our 3Q European credit sector report for our best ideas.

Asset class update: Global high yield bonds & loans

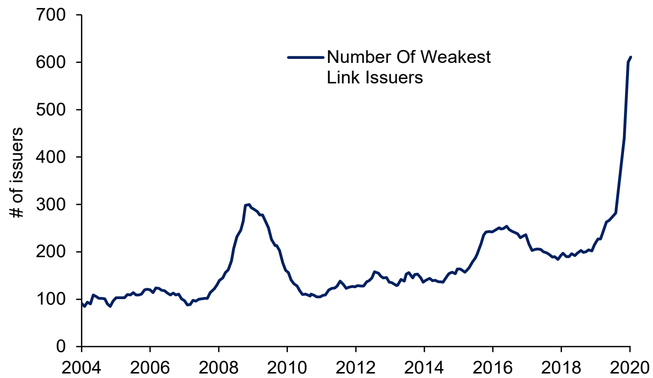
Global high yield (HY) bonds & loans

Figure 13. US HY bonds look attractive in real terms



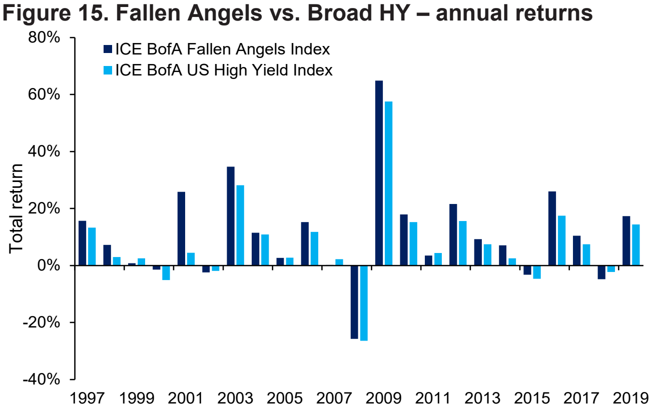
Source: Bloomberg Barclays as of July 28, 2020.

Figure 14. Rising "weak links" imply higher default rates



Source: S&P as of July 28, 2020.

Figure 15. Fallen Angels vs. Broad HY – annual returns



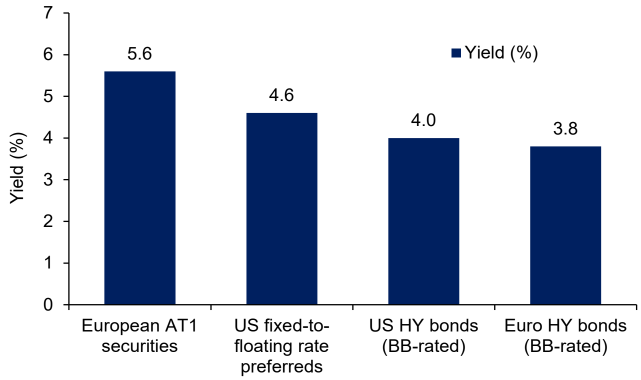
Source: ICE Bank of America Merrill Lynch as of July 28, 2020.

- **Performance:** Global high yield bonds continue to be one of the best performing fixed income markets over the last several months. Though spread compression has slowed, attractive yields in both US and European markets has fueled total returns of 24% and 19.5%, respectively, since the lows in March. In the US, broader HY benchmark returns are now back to being flat YTD, with BB-rated issuers outperforming (+4.1%). High quality is also leading European HY returns. However, broad market performance has lagged the US this year and remains down -3.3% (thru July 28).
- **Valuations:** In the US, average HY spreads above 500 basis points and yields around 5.5% still look attractive, both in absolute and real terms **(Fig. 13)**. Along with Fed policy support, we believe there is scope for spreads to tighten further. Nevertheless, we think it's important to highlight that the US HY market has become somewhat bifurcated between issuers/sectors more deeply affected by COVID, and others that are not. Spreads among "COVID cyclicals" and "COVID defensives" can range between 300-1000bp, with the entire HY market nearly equally distributed between the two.
- Though lower than US HY markets, average index spreads in euro HY of 470bp and an average yield of 4.5% looks appealing in absolute terms, in our view. Especially in a region where the average yield is a measly 0.2%. ECB asset purchases and a refreshing focus on fiscal unity can produce further upside, in our view.
- **Outlook:** At this stage of a new economic cycle, we prefer to add exposure to risk assets. This is displayed in CPB's Global Asset Allocation overweight to global equity markets, and underweight to global bonds. However, within "fixed income only" portfolios, we tend to favor credit risk over interest rate risk. This is expressed with an overweight in both US and European high yield bonds.
- We still advise some caution. Default rates have been rising and are now at 5.3%, above its historical average. With over 600 different issuers rated B- (or less) *and* on negative outlook or credit watch, default rates may rise even more **(Fig. 14)**. These "weak links" are not protected by Fed policy and are largely found in the sectors most impacted by COVID-19 (i.e., entertainment, energy, transportation).
- To be sure, rising default rates are a lagging indicator and we've already seen a sharp reduction in the number of bonds trading at distressed levels. Historically, peaks in distressed ratios leads peaks in default rates by an average of 10 months. The speed at which markets are moving, and central banks are reacting, the lead-time in this cycle may be shorter.
- **Fallen Angels**: In the June 7 CIO Strategy Bulletin titled, "A Call to Portfolio Action", we introduced an opportunity in Fallen Angels (FA). What makes FA's unique is the somewhat mechanical nature of how bond prices are discounted prior to a rating downgrade. In anticipation, active IG managers become sellers to protect portfolio returns. Index-based managers then become forced sellers upon the actual downgrade to speculative-grade. This tends to leave bond prices of FA's depressed or oversold.
- So far in 2020, FA's have shined. Since the March 23 low, FA's have managed to return 30%, outperforming the broader HY market by 600bp thru July 28th. Indeed, FA's have outperformed the broader HY market 15 of the last 20 years by an average of 300bp **(Fig. 15)**.
- One thing to consider is concentration risks. Each downturn in the credit cycle can impact some sectors more than others. In this cycle, the majority of downgrades have come from energy and cyclicals. While there is little evidence to suggest that concentrations can create a drag on FA performance, it's best not to ignore. This is why we prefer to use FA's as a complement to diversified HY strategies.

Asset class update: Preferred securities and emerging markets

Preferreds (US & European)

Figure 16. US & European preferreds offer value vs. HY

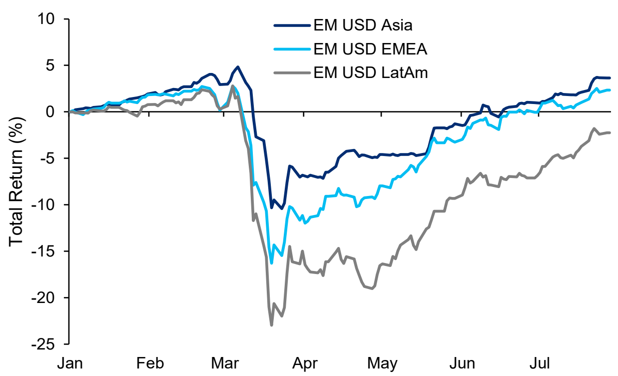


Source: Bloomberg as of July 28, 2020.

- **Performance:** Following suit with many other fixed income assets, US preferred and capital securities have come back from the Q1 sell-off. Since bottoming on March 23, US preferreds have gained 30% YTD, bringing performance back to flat on the year. Actual returns do vary by structure, with fixed-to-floating rate securities with shorter call dates lagging behind bonds with longer call protection. European Additional Tier 1 (AT1) securities have also continued to grind higher, but remain negative through July, down 3.8%.
- **Investment strategy:** After gaining 25% in April, we tempered our view on US and European preferreds. Though we remain constructive, valuations had become more of a relative value proposition **(Fig. 16)**. US stress tests confirmed that bank balance sheets have come into the current crisis from a position of strength. Though suspending buybacks and capping common dividends hurts equity investors, we view this as positive for preferred shareholders.
- For income-oriented investors, we recommend an allocation to US and European preferreds. We would be buyers on pullbacks and look to take advantage of new issues that tend to be cheap to the secondary market.

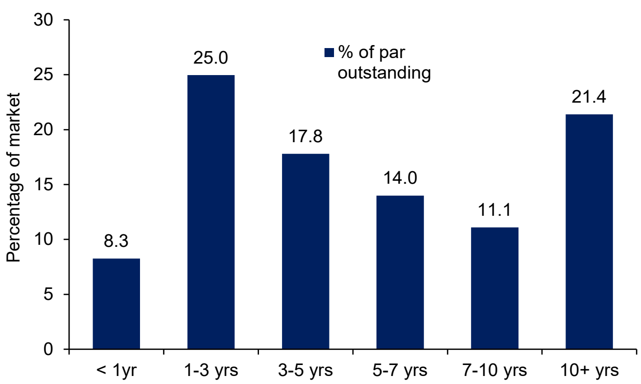
Emerging markets (EM)

Figure 17. LatAm has bounced but remains depressed YTD



Source: Bloomberg Barclays Indices as of July 28, 2020.

Figure 18. One-third of USD EM to mature over next 3 years



Source: Bloomberg as of July 28, 2020.

- **Performance:** Despite weakening fundamentals amid a global pandemic, EM debt has staged an impressive rebound. Since markets turned in late March, external US dollar (USD) denominated EM sovereign benchmarks have gained 22.5%, with corporates rising 16.5%. The lower beta Asia region has underperformed on the bounce, but significantly outperformed on the year. Conversely, Latin America has gained 20% over the last 3 months, though remains the only region to produce negative YTD returns **(Fig. 17)**.
- **Valuations:** EM sov spreads have narrowed 250bp since March, but at +400bp still remain 100bp wide to pre-crisis levels. Average yields at 4.8% are back to early 2020 levels, but with real US interest rates deeply negative, the EM yield proposition appears compelling. As has been the case for some time, LatAm valuations are the most attractive, though presents greater risks. For context, LatAm sov spreads are 2x wider than Asia (500bp vs. 230bp, respectively).
- **Investment strategy:** Though we could see some improvement to EM growth as developed economies recover, pandemic persistence is expected to remain a fundamental drag. While weak for all regions, the contraction to GDP growth will be deeper in Latin America than in Asia. See our colleague, Jorge Amato's, July LatAm Investment Strategy update for deeper views within the region.
- That said, optimism over the recovery, along with an abundant amount of monetary and fiscal support is expected to support risk appetites. With global rates back in decline, EM offers attractive yields in both absolute and real terms. As such, we believe there is still scope for some additional spread tightening.
- Like most other risk assets, the current environment requires a more selective approach. While global EM defaults have remained subdued, this may change over the next few years. According to S&P, the 12-month trailing EM default rate is 2.7% versus 5.3% for US HY corporates. However, over 30% of the external EM market (~$300 billion) is set to mature over the next 3 years **(Fig. 18)**. In our view, COVID impacted business may struggle to refinance.
- As highlighted in our 3Q Chartpack, we find selective opportunities in China HY corporates, where average index spreads of +800bp are 300bp wider than US HY. With nearly 75% of the market concentrated in real estate, attractive financing from low rates and favorable policy should fuel further spread compression. We favor a portfolio strategy of pairing with Asia IG, which offers decent yields and lower beta. Indeed, during the sell-off in March, Asia IG lost 7.4%, which was 50% less than the drop in US IG.

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Corporate sector views – US and European markets

Figure 19. US Investment Grade and High Yield Corporates – Summary of sector views
See our Q320 US Credit Sector Views report for further details

	Investment Grade	High Yield
▪ Basic Industries	🟢	🟢
▪ Capital Goods	🟢	🟡
▪ Communications	🟢	🟢
▪ Consumer - Cyclical	🟢	🟢
▪ Consumer - Non-Cyclical	🟡	🟡
▪ Energy	🟢	🟡
▪ Financial sector	🟢	🟢
▪ Technology	🟡	🟡
▪ Transportation	🟡	🔴
▪ Utilities	🟡	🟡

Colors imply our expectations of sector performance versus the Bloomberg Barclays US Intermediate Corporate Bond Index
Green = outperform, yellow = market perform, red = underperform

Source: Citi Private Bank Global Fixed Income Strategy, Bloomberg Barclays US Corporate Bond Index as of July 28, 2020.

Figure 20. EMEA Investment Grade and High Yield Corporates – Summary of sector views
See our Q320 EMEA Credit Sector Views report for further details

	Investment Grade	High Yield
▪ Basic Industries	🟢	🟢
▪ Capital Goods	🟡	🟢
▪ Communications	🟢	🟡
▪ Consumer - Cyclical	🟢	🟢
▪ Consumer - Non-Cyclical	🟡	🟡
▪ Energy	🟡	🟡
▪ Financial sector	🟢	🟢
▪ Technology	🟡	🟡
▪ Transportation	🟢	🟢
▪ Utilities	🔴	🔴

Colors imply our expectations of sector performance versus the Bloomberg Barclays US Intermediate Corporate Bond Index
Green = outperform, yellow = market perform, red = underperform

Source: Citi Private Bank Global Fixed Income Strategy, Bloomberg Barclays Euro-Aggregate Corporate Statistics Index as of July 28, 2020.

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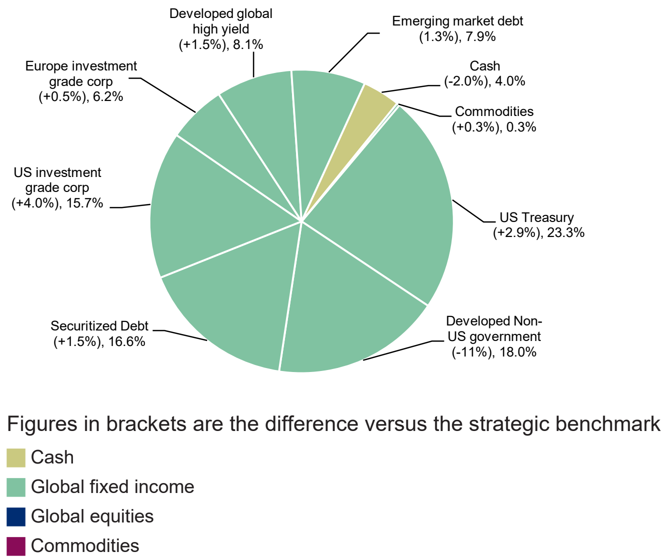
Global Investment Committee (GIC) Fixed Income Tactical Asset Allocation

Figure 21. GIC fixed income allocation – Risk Level 1*



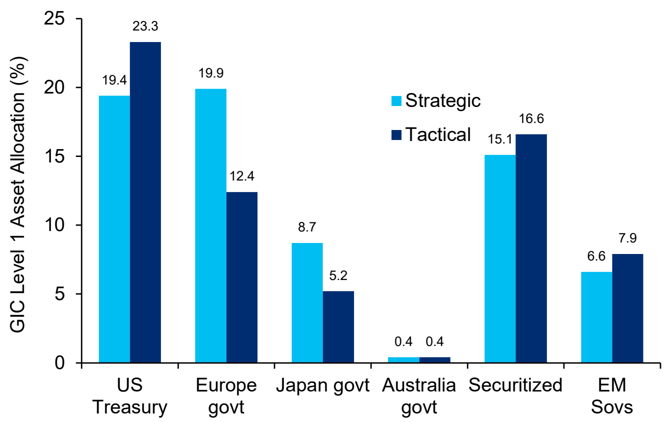
Source: Citi Private Bank Global Investment Committee, July 22, 2020.

Core Positions

- Our largest overweight is in US investment grade corporate bonds (+4.0%), followed by US Treasury (+2.9%). We also have modest overweights in high quality securitized debt (1.5%) and non-US investment grade corporates. We maintain our deepest underweight in non-US sovereigns (-11%), particularly in the Eurozone and Japan.
- Global high yield has modest +1.5% overweight position. Emerging market debt has an overweight positon of +1.3% with overweight in Asia and LatAm.
- In Level 1 portfolios, the committee also maintains a small overweight position in gold.

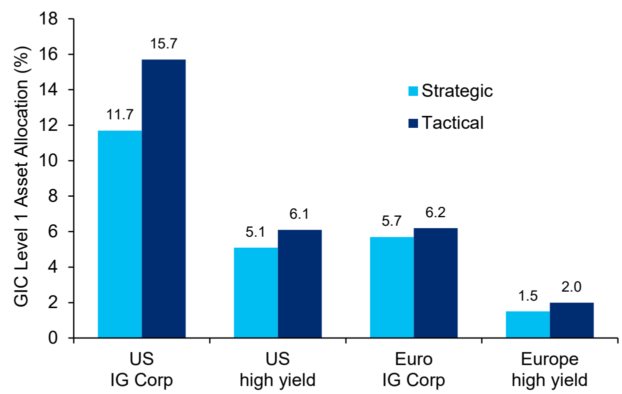
Strategic = benchmark; tactical = the Citi Private Bank Global Investment Committee's current view; and active = the difference between strategic and tactical.

Figure 22. Fixed income sovereign tactical allocation (Level 1)



Source: Citi Private Bank Global Investment Committee, July 22, 2020.

Figure 23. Fixed income credit tactical allocation (Level 1)



Source: Citi Private Bank Global Investment Committee, July 22, 2020.

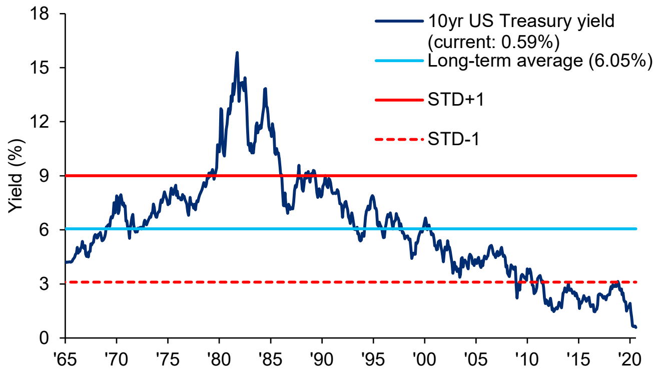
* Risk level 1 is designed for investors who have a preference for capital preservation and relative safety over the potential for a return on investment. These investors prefer to hold some cash, time deposits along with fixed income instruments.

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.

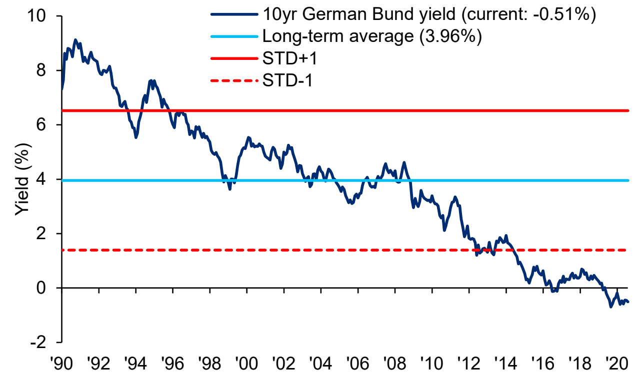
Long-term historical government bond yields

Figure 24. US government bond yield



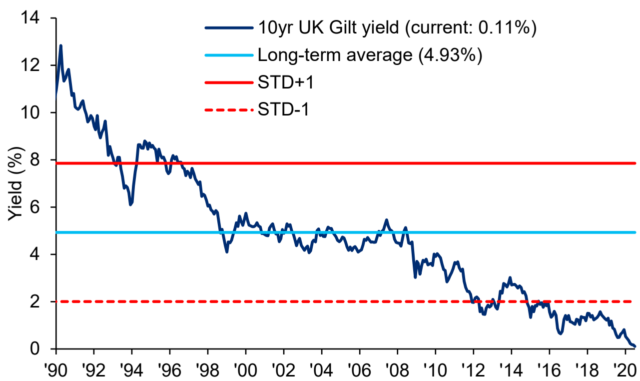
Source: Bloomberg.

Figure 25. German government bond yield



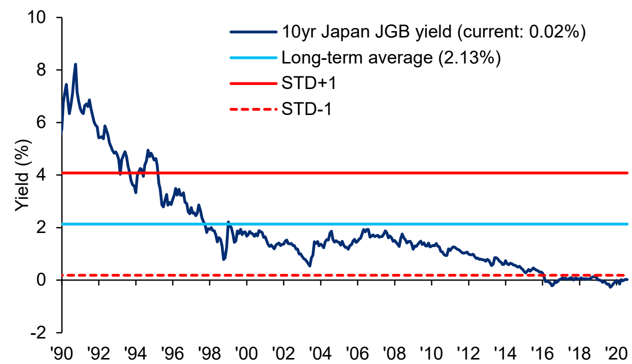
Source: Bloomberg.

Figure 26. UK government bond yield



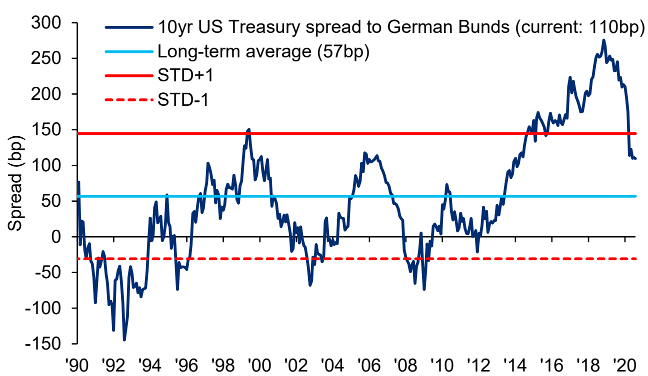
Source: Bloomberg.

Figure 27. Japan government bond yield



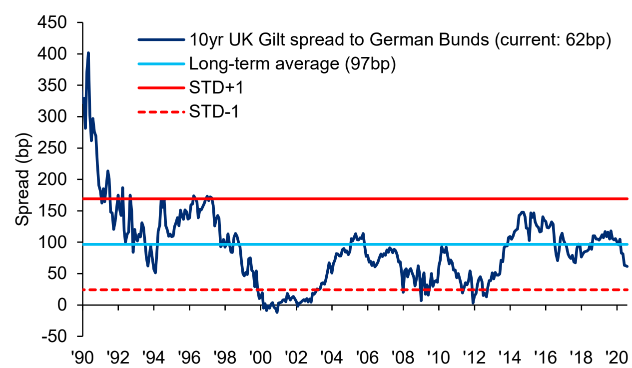
Source: Bloomberg.

Figure 28. 10yr US Treasury spread to German Bunds



Source: Bloomberg.

Figure 29. 10yr UK Gilt spread to German Bunds

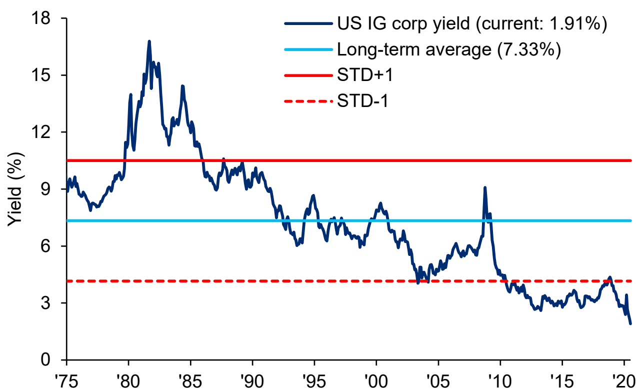


Source: Bloomberg.

Figures as of July 28, 2020. 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. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only.

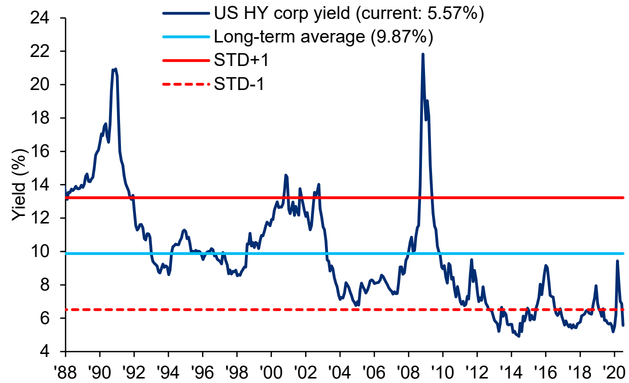
Long-term historical corporate bond yields

Figure 30. US investment grade corporate yield



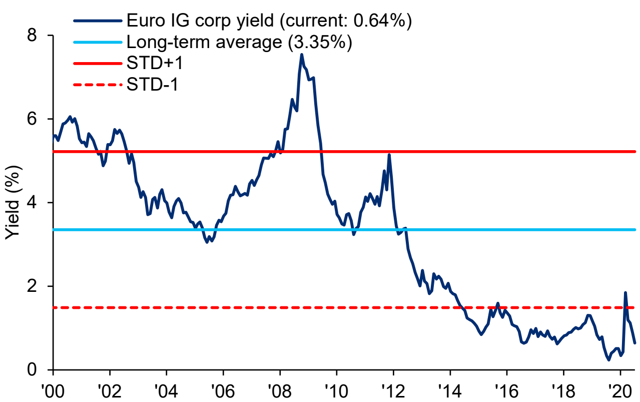
Source: Bloomberg Barclays Indices.

Figure 31. US high yield corporate yield



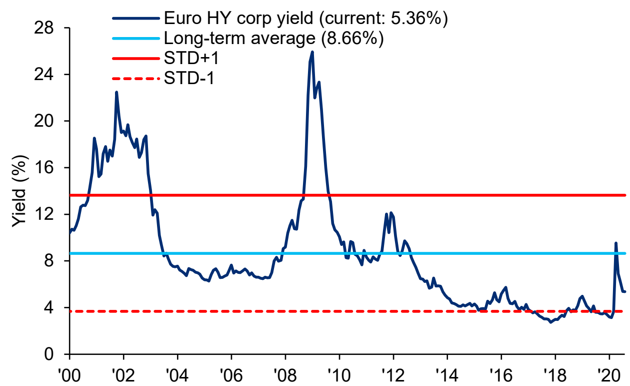
Source: Bloomberg Barclays Indices.

Figure 32. European investment grade corporate yield



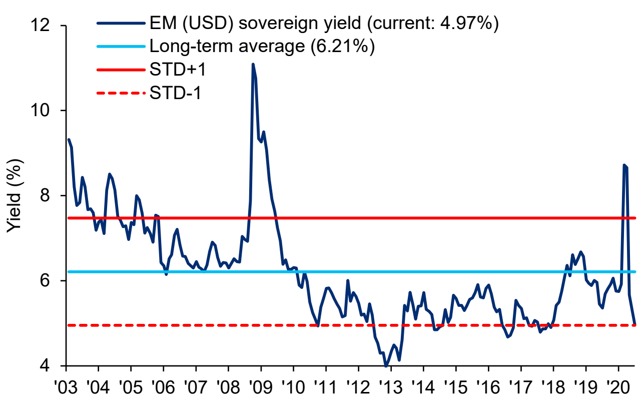
Source: Bloomberg Barclays Indices.

Figure 33. European high yield corporate yield



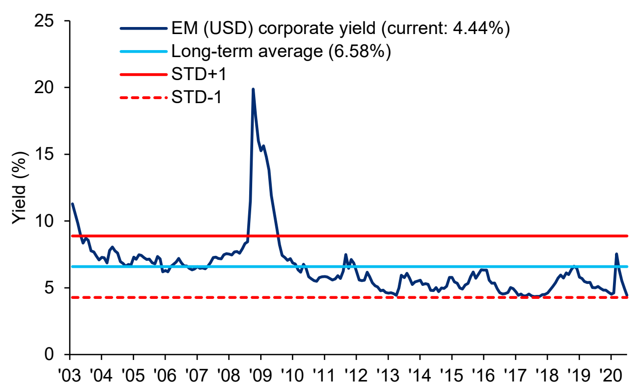
Source: Bloomberg Barclays Indices.

Figure 34. EM (USD) sovereign yield



Source: Bloomberg Barclays Indices.

Figure 35. EM (USD) corporate yield



Source: Bloomberg Barclays Indices.

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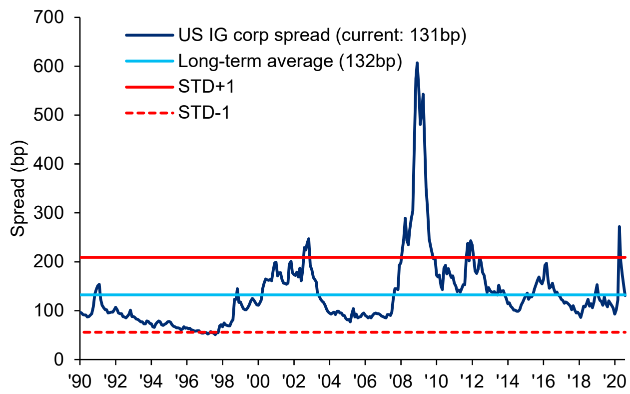
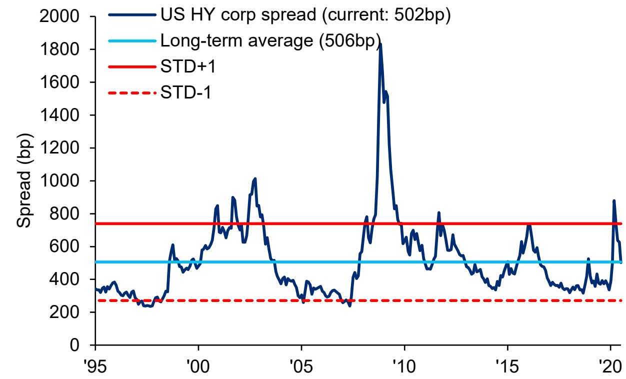
Long-term historical corporate bond spreads

Figure 36. US investment grade corporate spread



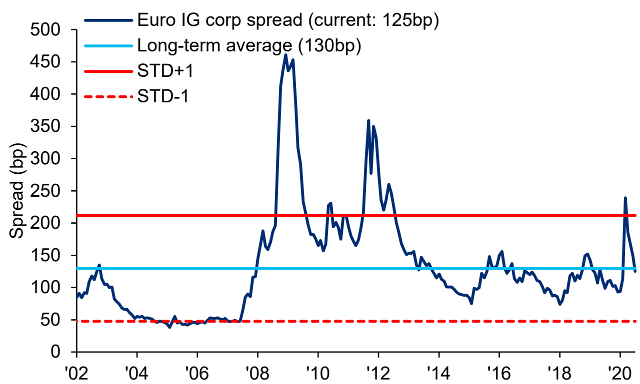
Source: Bloomberg Barclays Indices.

Figure 37. US high yield corporate spread



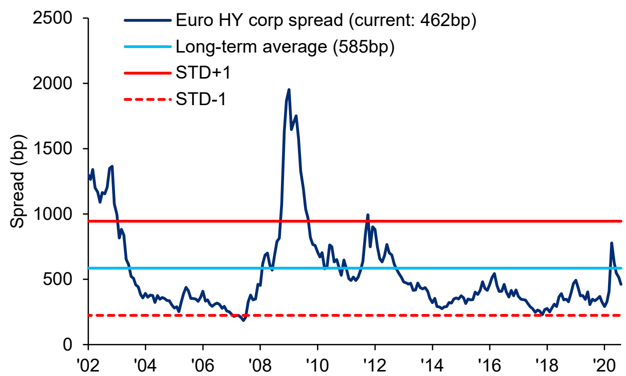
Source: Bloomberg Barclays Indices.

Figure 38. European investment grade corporate spread



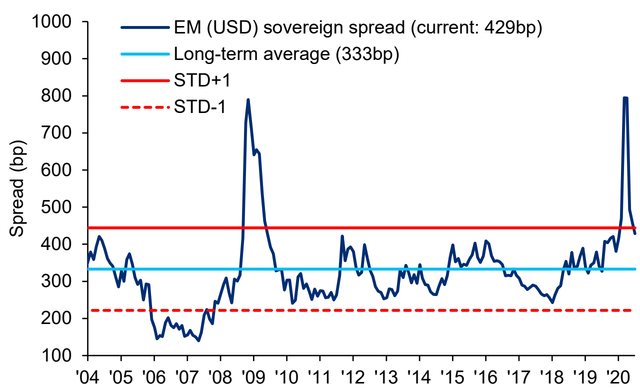
Source: Bloomberg Barclays Indices.

Figure 39. European high yield corporate spread



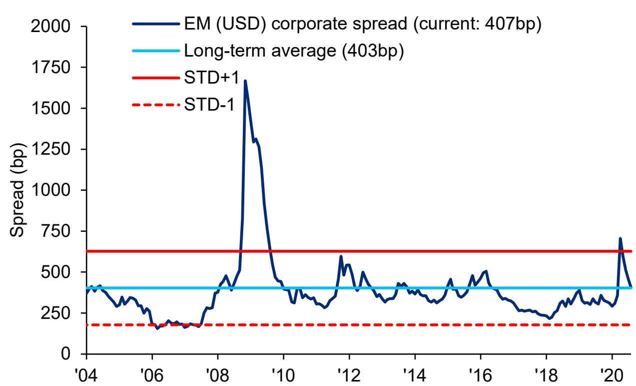
Source: Bloomberg Barclays Indices.

Figure 40. EM (USD) sovereign spread



Source: Bloomberg Barclays Indices.

Figure 41. EM (USD) corporate spread



Source: Bloomberg Barclays Indices.

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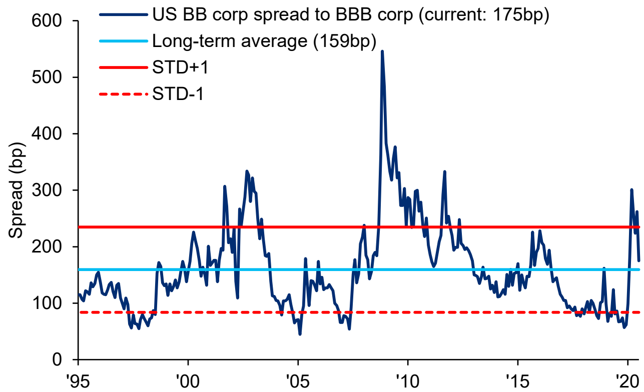
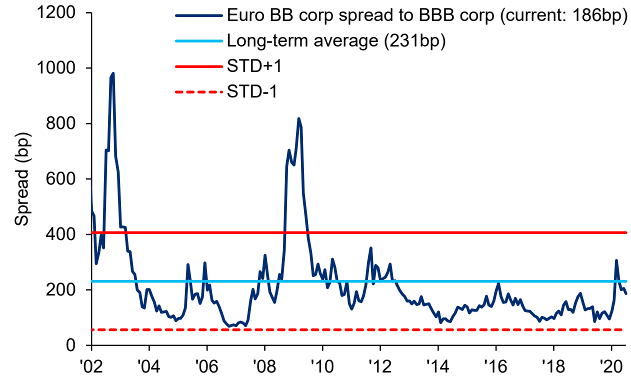
Long-term historical corporate bond spread comparisons

Figure 42. US BB corp spread to BBB corp



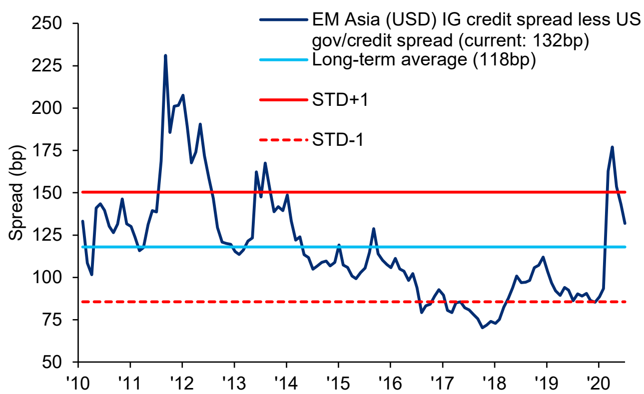
Source: Bloomberg Barclays Indices.

Figure 43. Euro BB corp spread to BBB corp



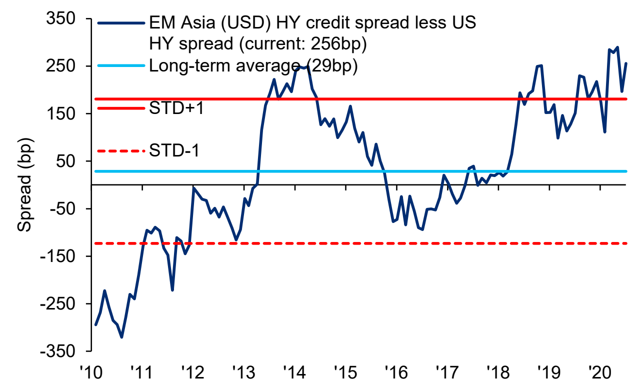
Source: Bloomberg Barclays Indices.

Figure 44. EM Asia (USD) IG credit spread to US Gov/Credit



Source: Bloomberg Barclays Indices.

Figure 45. EM Asia (USD) HY credit spread to US HY

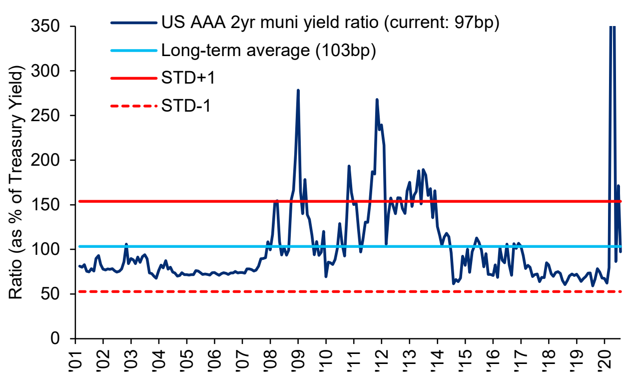


Source: Bloomberg Barclays Indices.

Figures as of July 28, 2020. 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. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only.

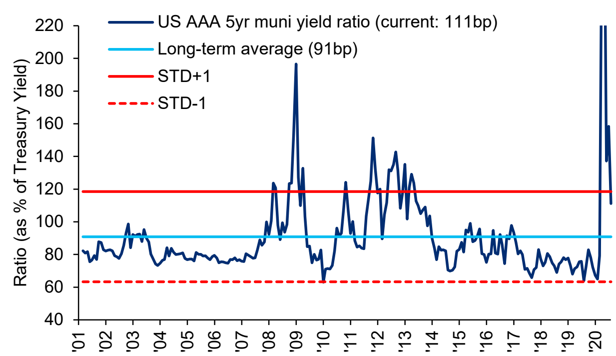
Long-term historical municipal bond yield ratios vs US Treasuries

Figure 46. US AAA-rated 2yr muni yield ratio



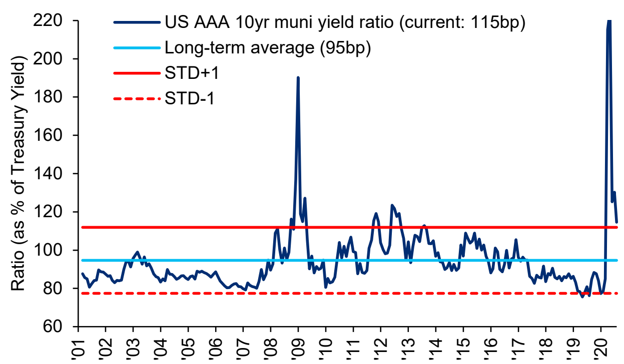
Source: Bloomberg.

Figure 47. US AAA-rated 5yr muni yield ratio



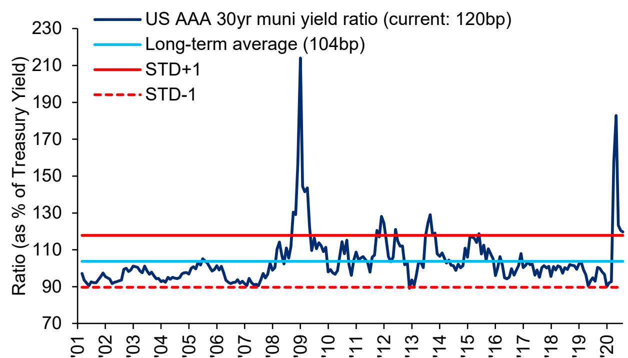
Source: Bloomberg.

Figure 48. US AAA-rated 10yr muni yield ratio



Source: Bloomberg.

Figure 49. US AAA-rated 30yr muni yield ratio



Source: Bloomberg.

Figures as July 28, 2020. 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. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only.

Fixed income market returns

Figure 50. Fixed Income index returns (local currency, %)

Index	YTD	Last 12m	Last 3m	Last 1m	Yield	Duration
Broad Aggregate Indices						
Global Agg (local currency)	5.0	6.2	2.1	0.9		
US Agg Bond	7.3	10.0	2.3	1.1	1.15	6.14
European Agg	2.2	1.6	2.8	0.9	0.08	7.52
Developed Sovereign Debt						
Global (local currency)	5.4	5.9	1.0	0.6	0.32	8.86
US Treasury	9.5	11.6	0.4	0.6	0.50	7.11
US Agency	5.3	7.2	0.6	0.2	0.52	3.72
German Bunds	2.6	1.0	0.2	0.2	-0.52	8.40
UK Gilts	11.0	11.2	0.5	0.2	0.35	14.84
Japan JGBs	-1.1	-1.9	-1.0	0.0	0.14	11.78
Portugal	1.9	1.7	4.4	0.8	7.90	2.75
Italy	3.6	5.6	5.6	2.2	0.95	7.34
Ireland	3.3	3.5	3.3	1.1	-0.11	9.10
Spain	2.0	1.6	4.3	0.9	0.25	8.33
Inflation-linked Sovereign Debt						
Global I-Linked (local currency)	7.9	8.1	4.2	1.4	-1.54	12.54
US I-Linked	7.6	9.9	2.3	1.4	0.69	5.05
US Municipals						
US Municipals	3.5	5.1	5.1	1.4	1.26	5.21
Emerging Markets						
EM (Hard Currency) Sovereign	**1.2**	**2.4**	**14.3**	**3.1**	**4.97**	**8.51**
EM LatAm	-2.0	-3.4	19.6	5.3	5.97	9.46
EM Asia	3.6	7.1	8.9	2.6	3.24	8.27
EM EMEA	2.3	5.7	12.9	2.2	4.37	8.17
EM (Local) Govt, hedged USD	**3.4**	**5.4**	**1.1**	**0.5**	**3.07**	**7.16**
EM LatAm	6.7	8.9	5.4	1.3	4.70	4.94
EM Asia	4.1	5.5	0.4	0.6	3.22	7.74
EM EMEA	3.6	7.3	3.1	0.3	4.50	5.36
Securitized debt						
US MBS	3.4	5.3	0.2	0.0	1.29	1.97
US CMBS	6.0	7.6	3.6	1.0	1.58	5.32
US ABS	3.6	4.9	2.6	0.3	0.77	2.13
High Grade Corporate Debt						
USD Corporates	8.1	12.4	6.6	3.0	1.91	8.77
EUR Corporates	0.2	-0.3	3.5	1.3	0.64	5.34
GBP Corporates	5.2	6.8	5.2	1.8	1.75	8.67
High Yield Corporate Debt						
USD High Yield	0.0	3.4	10.4	3.5	5.57	3.57
EUR High Yield	-3.3	-1.1	7.0	2.0	5.36	4.11
Asia (USD)High Yield	0.5	2.6	9.1	1.6	7.90	2.75
S&P/LSTA Leveraged Loan	-2.7	-0.7	7.3	1.7		
Hybrid debt						
S&P US Variable Rate Preferred Index (F2F)	-5.7	-1.9	5.3	3.4		
S&P US Fixed Rate Preferred Index	-0.2	3.4	5.8	3.7		

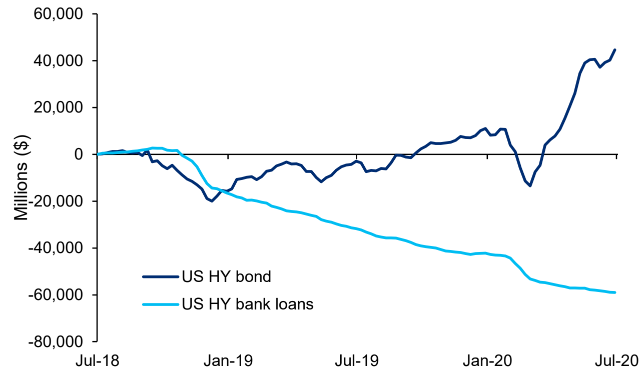
Source: The Yield Book, Bloomberg Barclays Indices, S&P as of July 28, 2020. Past performance is no guarantee of future results. Real results may vary. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only.

Bond fund cumulative weekly flows

Figure 51. Cumulative fund flows – US IG corp

Source: EPFR.

Figure 52. Cumulative fund flows – US HY bond vs loans

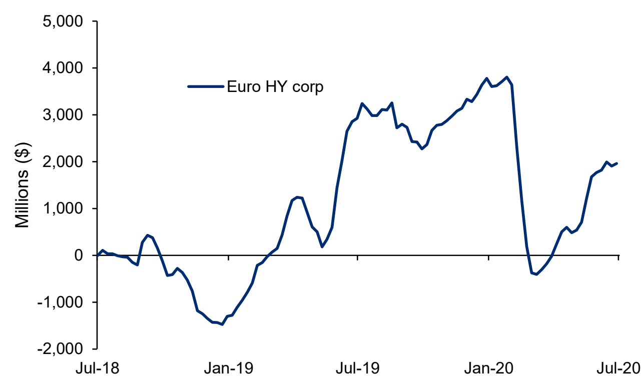


Source: EPFR.

Figure 53. Cumulative fund flows – Euro IG corp

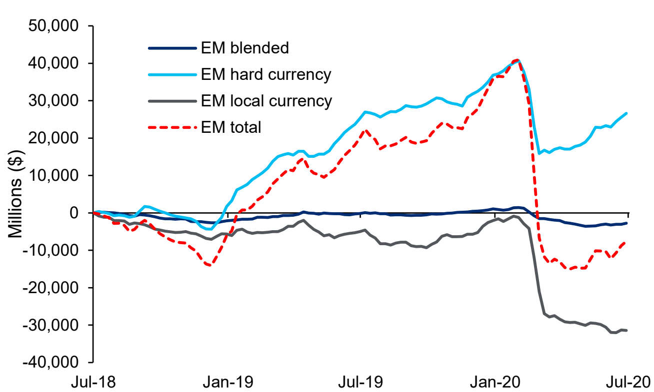
Source: EPFR.

Figure 54. Cumulative fund flows – Euro HY corp



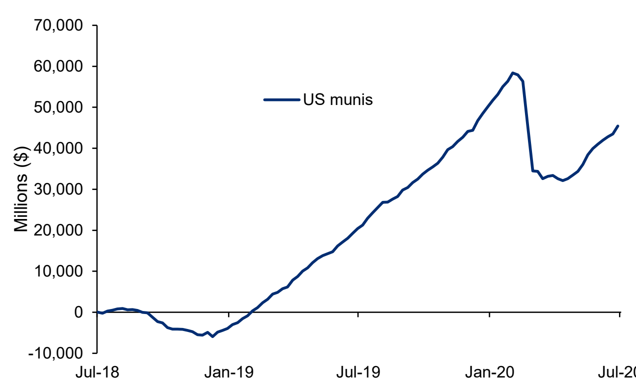
Source: EPFR.

Figure 55. Cumulative fund flows – EM, by currency



Source: EPFR.

Figure 56. Cumulative fund flows – US munis



Source: EPFR.

Figures as of July 22, 2020.

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.
Collateralized loan obligation (CLO)	A form of securitization where payments from multiple middle sized and large business loans are pooled together and passed on to different classes of owners in various tranches. A CLO is a type of collateralized debt obligation.

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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.

Alternative investments referenced in this report are speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in the fund, potential lack of diversification, absence of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds and advisor risk.

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Hong Kong
852–2868–8688

INDIA
Bangalore
91–80–4144–6389
Mumbai
91–22–4001–5282
New Delhi
91–124–418–6695

SINGAPORE
Singapore
65–6227–9188

Europe & Middle East

CHANNEL ISLANDS
St. Helier, Jersey
44–1534–608–010

ISRAEL
Tel Aviv
972–3–684–2522

MONACO
Monte Carlo
377–9797–5010

SPAIN
Madrid
34–91–538–4400

SWITZERLAND
Geneva
41–58–750–5000
Zurich
41–58–750–5000

UNITED ARAB EMIRATES
Abu Dhabi
971–2–494–3200
Dubai
971–4–604–4644

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44–207–508–8000

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55–11–4009–5848

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Dallas, TX
214–880–7200
Denver, CO
303–296–5800
Greenville, DE
302–298–3720
Greenwich, CT
800–279–7158
Houston, TX
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Miami, FL
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New York, NY
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Asia
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Latin America
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Orange County, CA
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Palm Beach, FL
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Palo Alto, CA
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Philadelphia, PA
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Phoenix, AZ
602–667–8920
San Francisco, CA
415–627–6330
Seattle, WA
888–409–6232
Short Hills, NJ
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Washington, DC
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203–293–1922

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