4th QUARTER OUTLOOK

PGIM FIXED INCOME

October 2018

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Standing Still: A Symptom of Less Synchronization and Giant Collisions

When investors recall the third quarter of 2018, many may cite the fractures that occurred in certain corners of the fixed income market. In PGIM Fixed Income's fourth-quarter outlook, we evaluate the extent of the damage, the factors that contributed to the periodic volatility, how these issues may unfold going forward, and the nature of the opportunities that lie ahead.

- In "Can You Make Money Standing Still?" (click title to read) Robert Tipp, CFA, Chief Investment Strategist and Head of Global Bonds, looks at conditions across several major asset classes. Given the current backdrop, Tipp indicates that maintaining a relative-value perspective may reveal opportunities from sector allocation, yield curve positioning as well as issuer and currency selection.
- "Global Growth: Less Synchronized, but Still Intact…", by Nathan Sheets, Chief Economist and Head of Macroeconomic Research, and PGIM Fixed Income's macroeconomics team, isolates two key factors—the persistent pressure across the emerging markets and the escalating trade war—that have contributed to the fraying of synchronized, global growth. The piece subsequently examines how these global issues might evolve as 2019 approaches.
- In "When Giants Collide: The U.S.-China Trade War," Sheets reviews the steps in the trade war thus far, the next potential moves that each side might take, and how each country's economic growth could be affected.

Register now for PGIM Fixed Income's upcoming webinar, "The Case for Global Bonds".

The webinar offers a concise review of the recent paper of the same title by authors Arvind Rajan, PhD, Managing Director and Head of Global and Macro, and Robert Tipp.

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Turkey's Central Bank Delivers a Substantial Down-Payment

Free Falling Turkish Lira—What's Next?

Sector Views

Developed Market Rates (page 10, click to view): Opportunistic. Long-duration positioning in the U.S. comes amid an expanded trading range given the multiple uncertainties in the background. Continue to favor modest widening in U.S. swap spreads and tighter spreads in Europe. See 10-year Bunds near the mid-point of our forecasted range and an expanded trading range for JGBs.

Agency MBS (page 10): Neutral vs. rates and underweight vs. other spread sectors. Remain up-in-coupon for carry. Prepayments should remain slow. Avoid TBAs. Favor seasoned pools for better convexity and Freddie Macs as we near Single Security implementation.

Structured Products (page 11): Long-term positive on top-of-the-capital structure structured products, especially CLOs and CMBS. Still content to earn carry at current spread levels. Negative on conduit CMBS and CLO mezzanine tranches. Increasingly looking at financing trades, rather than exposure to the underlying assets, as spreads are tight and the demand for leverage is high.

IG Corporate Debt (page 12): Cautious given increased downside risks and the potential for spreads to widen despite favorable fundamentals and earnings growth momentum. Still favor U.S. money center banks. U.S. tax reform remains supportive.

Global Leveraged Finance (page 13): Modestly positive on U.S. high yield in the near term, but cautious longer term with spreads at post-crisis tights and broader macro concerns. Due to their higher historical recovery values, we believe U.S. leveraged loans have less downside risk at this point in the cycle relative to U.S. high yield bonds. We are near-term positive on European high yield with expectations for spreads to tighten modestly from current levels amid supportive macro conditions, solid fundamentals, and earnings growth.

Emerging Market Debt (page 15): Cautiously optimistic based on valuations, a decent global growth outlook, and adjustments that have already occurred.

Municipal Bonds (page 16): Positive. Favorable technicals by year end should lead to outperformance vs. Treasuries.

Can You Make Money Standing Still?

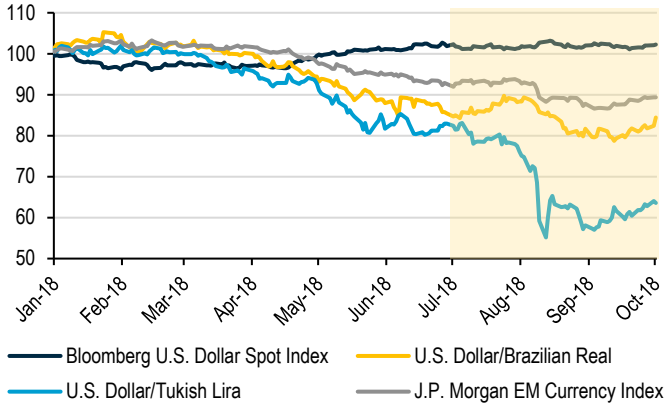
With the exception of global leveraged finance and U.S. stocks, many markets have encountered tough times in 2018 (see the following table of returns). Despite the Q3 bounce in the fixed income spread sectors, it wasn't enough to undo the damage from the first half of the year. On the rates side, yields either moved sideways or higher—significantly so in some cases. In currencies, the U.S. dollar has been the biggest beneficiary of the anxious market backdrop. And across markets, idiosyncratic fundamental vulnerabilities and policy missteps (see the economics section) brought on stiff punishment from the markets (see Figures 2-5).

Figure 1: A Tough Year, Except for Leveraged Finance

	Total Return (%)				
Multi-Sector	**Q3 2018**	**YTD 2018**	**2017**	**2016**	**2015**
Yen Aggregate	-0.98	-0.38	0.18	3.0	1.1
Global Agg. Hedged	-0.05	0.02	3.04	4.0	1.0
U.S. Aggregate	0.02	-1.60	3.54	2.7	0.6
Euro Aggregate	-0.70	-0.45	0.68	3.3	1.0
Global Aggregate	-0.92	-2.37	7.39	2.1	-3.2
Individual Sectors	**Q3 2018**	**YTD 2018**	**2017**	**2016**	**2015**
U.S. High Yield Bonds	2.44	2.52	7.48	17.5	-4.6
Municipal Bonds	-0.15	-0.40	5.45	0.3	3.3
U.S. Leveraged Loans	1.85	4.06	4.09	9.9	-0.4
Mortgage-Backed (Agency)	-0.12	-1.07	2.47	1.7	1.5
U.S. Treasuries	-0.93	-1.67	2.31	1.0	0.8
CMBS	0.46	-0.93	3.35	3.3	1.0
European Leveraged Loans	1.48	2.17	3.72	7.0	3.6
European IG Corporate	0.00	-0.64	2.41	4.7	-0.6
U.S. IG Corporate Bonds	0.97	-2.33	6.42	6.1	-0.7
European High Yield Bonds	1.62	0.10	6.79	10.8	1.3
U.S. Long IG Corporates	1.32	-5.54	12.09	11.0	-4.6
EM Local (Hedged)	-0.25	-1.54	3.68	4.7	-2.2
EM Debt Hard Currency	2.30	-3.04	10.26	10.2	1.2
EM Currencies	-1.11	-4.48	11.54	3.5	-7.6

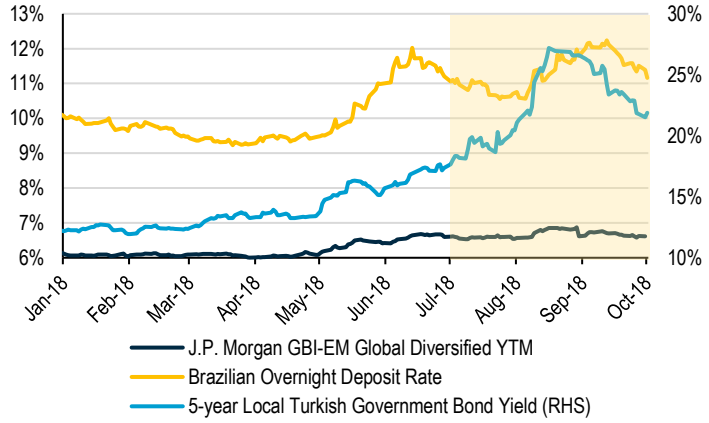
Past performance is not a guarantee or a reliable indicator of future results. See Notice for important disclosures and full index names. *All investments involve risk, including possible loss of capital. Sources: Bloomberg Barclays except EMD (J.P. Morgan), HY (Merrill Lynch), Senior Secured Loans (Credit Suisse). Performance is for representative indices as of September 30, 2018. An investment cannot be made directly in an index.*

Figure 2: The Lira, Real Were Among The Hardest Hit EM Currencies.



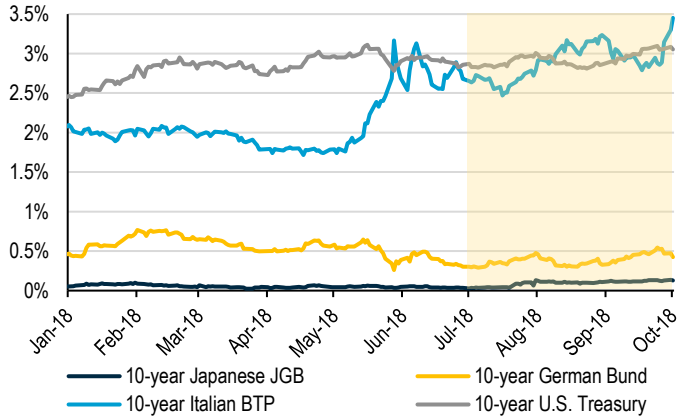
Source: Bloomberg as of October 2018

Figure 3: Despite Volatility in Some Local Rate Markets, e.g. Turkey and Brazil, Yields on the Local Benchmark Index Remained Comparatively Resilient.



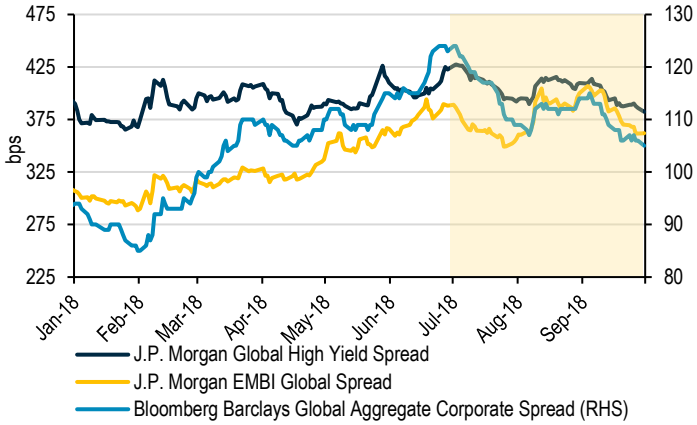
Source: Bloomberg as of October 2018

Figure 4: U.S. Treasury and Italian BTP Yields Rose, While JGB and Bund Yields Remained Low and Steady Despite the BoJ's Policy Adjustment and the ECB's Tapering Process.



Source: Bloomberg as of October 2018

Figure 5: Q3's Roller Coaster Resulted in a Net Gain for Most Spread Sectors, but Not Enough to Offset the Widening from the First Half.

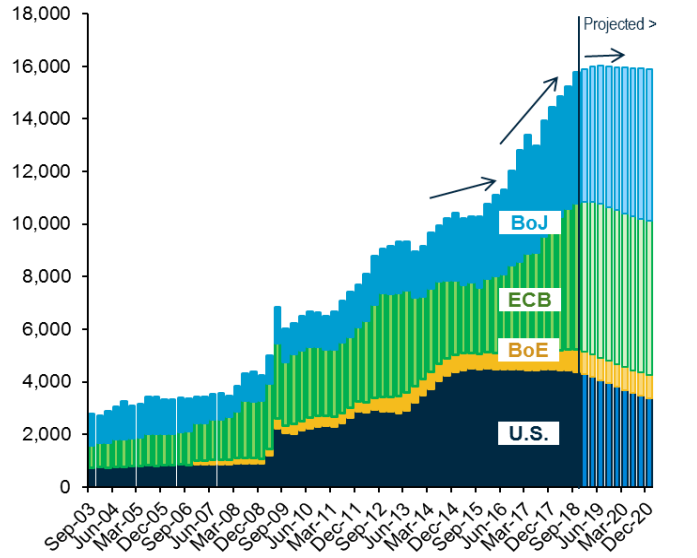


Source: Bloomberg as of October 2018

Plenty of Things for the Markets to Worry About...

While the markets have been volatile, the underlying causes have been more or less constant with minor variations. To set the stage: after a decade of balance sheet expansion, the G3 central banks are finally—at least in aggregate—turning off the liquidity spigot (Figure 6). The Fed is in the lead, hiking rates and implementing its balance sheet roll-off at an accelerating pace. The ECB is in the final months of its purchase program, which undoubtedly will be followed by rising anxiety surrounding the timing and pace of eventual rate hikes. Meanwhile, the BoJ is sending mixed messages. Realizing it is taking longer than initially expected to hit its 2% inflation target, the BoJ is trying to improve its long-term policy effectiveness. It has taken certain steps, such as reducing bond purchase amounts and widening the target range for the 10-year JGB yield, with the intent of reducing its stranglehold on the market and steepening the yield curve.

Figure 6: Central Bank Assets ($ Billions)

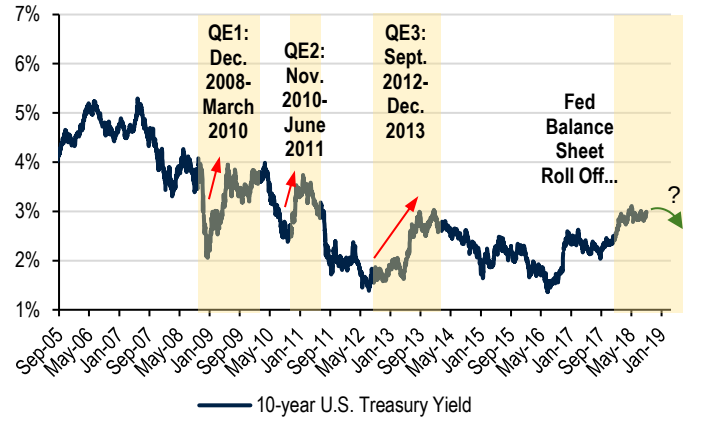


Source: Bloomberg and Haver Analytics as of June 2018. There is no guarantee that the projections shown will be achieved.

All said, these policy changes have tipped the scales, switching the G3 central bank balance sheets from aggressive growth to a path of stasis. The switch from "net buy" to "net hold" means that the market's primary source of steady capital injections over the last decade is more or less gone, leaving the open markets to adjust to supply and demand on their own. The U.S. dollar bond market may be most affected in the coming quarters as it's hit with the double barrel of the Fed's accelerating balance sheet roll-off and the rising Treasury issuance given the expanding deficit. While it's tempting to assume that these factors could push U.S. rates higher, history would suggest that the market adjustment will occur—or is occurring—*prior* to the policy shift, rather than in its midst.

Indeed, when looking at the three QE programs in the U.S., for example, we would observe that they were *preceded by falling long-term rates, but accompanied by bear steepenings* on the yield curve. Risk markets—not Treasuries—seemed to perform well during the QE periods, suggesting they benefitted from a combination of more optimistic economic growth expectations and the increase in liquidity (see Figure 7). As central banks' balance sheet expansion comes to an end, we now appear to be experiencing some of the effects in reverse: generally weaker equity and spread markets with spikes in volatility. Will Treasury and other DM yields turn lower as it becomes more apparent that the latter stages of the balance sheet expansions are upon us? (Click here to read about the Stealth Bull Bond Market.)

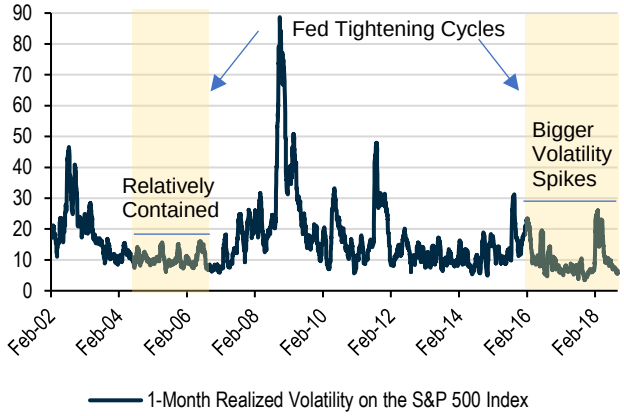
Figure 7: Will QE Provide Lessons About the New Regime of Static Central Bank Balance Sheets?



Source: Bloomberg as of October 2018

Previous Fed rate hike cycles have typically been accompanied by reasonably contained systemic risk, which translated into bumpy, but positive, performance for both fixed income spread sectors and equities. This cycle, however, has been accompanied by spikes in risk aversion, as seen in the S&P 500 Index's realized volatility in Figure 8. While we can't be sure, a few factors may be contributing to this phenomenon: 1) the shift from QE to central bank stasis; 2) anxiety about trade tensions; and 3) the challenging fundamentals and policy issues facing some key DM and EM countries (see economics section). As a result, this Fed tightening cycle has proven, at least so far, tougher in some respects for risk product than the last.

Figure 8: A Confluence of Factors Has Contributed to Higher Spikes in Market Volatility Relative to Previous Fed Rate Hiking Cycles.



Source: Bloomberg as of October 2018

Can We At Least Expect a Dash of Opportunity Along with the Potential Pain Ahead?

Going forward, we see opportunities in fixed income, but more so from a vantage point of relative value and less so from an absolute, raw-value perspective. With essentially the same set of threats from the first three quarters of 2018, the market backdrop is likely to stay choppy, yielding both risks and opportunities in yield curve positioning, sector allocation as well as issuer and currency selection.

The Bottom Line: Tightening liquidity, modest spreads and fundamental credit challenges—primarily for sovereign issuers—may continue to pose headwinds for the spread and currency markets. Long-term U.S. rates, however, may have risen to attractive levels from a long-term perspective.

Global Growth: Less Synchronized, but Still Intact…

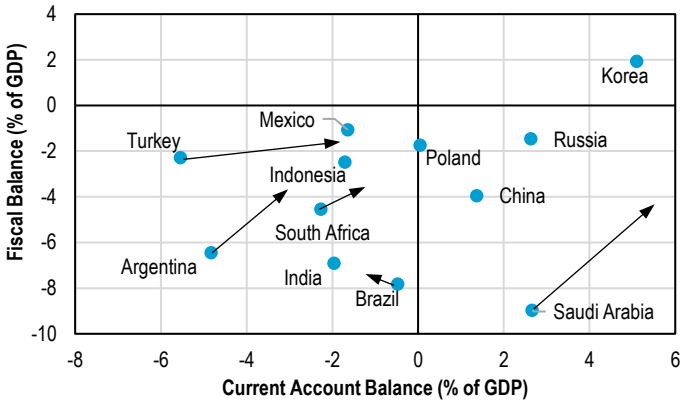
The synchronized global growth that characterized the second half of 2017 and early 2018 has now frayed. Recent performance can only be described as heterogeneous across countries and, in certain respects, even divergent. In line with this observation, aggregate growth has slowed a notch. However, looking through this cross-country heterogeneity, we expect the global economy to expand at a still-moderate pace. The global economic environment is more varied and complex than six or 12 months ago, but the expansion remains broadly intact.

This somewhat softer and more divergent global performance reflects two important factors. First, pressures in the emerging markets (EMs) have proved more persistent than we had anticipated. This reflects the adverse interaction between country-specific factors and several key global developments that have challenged the EMs.

On the **country-specific** side, a few of the emerging-market economies have large, well-known macroeconomic imbalances, e.g., the twin current account and budget deficits in Argentina and the gaping current account deficit in Turkey. The good news is that these countries are taking actions to fight macro imbalances and place growth on firmer footing. While the steps taken to date may—or may not—prove sufficient to stabilize conditions, policy is geared to move these economies to a more balanced position (see Figure 1). For Argentina, we are reassured by the recent announcement of an enhanced IMF program with additional financing. The observed EM stresses also reflect uncertainty about political outcomes, which is at a fever pitch in Brazil, for example, as the country prepares for a second round of presidential voting later this month.

Drivers of EM Stress
Country-Specific Factors
• Political uncertainties
• Well-known vulnerabilities in some countries
Global/Systemic Factors
• Fed rate hikes
• Stronger dollar
• Concerns about slowing Chinese economy
• Global trade tensions

Figure 1: EM Fiscal and External Balances



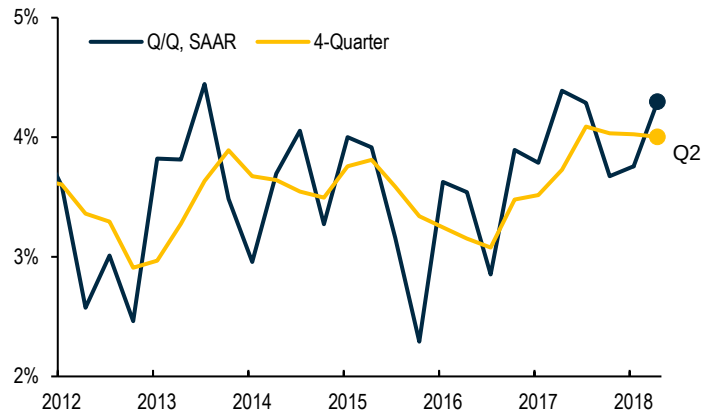
Source: IMF, Haver Analytics and PGIM Fixed Income. Arrows indicate projected performance for fiscal and current account balances in 2019 for selected countries. The projections shown may vary significantly. The projections are based on economic forecast models developed and maintained by PGIM Fixed Income. Past performance is not a reliable indicator of future results. Please see Notice for important disclosures.

As for **systemic factors**, ongoing Fed rate hikes and the stronger U.S. dollar have tightened the financial conditions facing emerging markets. Based on past episodes, investors view EMs more cautiously during periods when the Fed is hiking. In addition, growth in China has slowed so far this year; the accompanying decline in Chinese demand has hit EM exporters—particularly commodity producers—relatively hard. All of these factors have weighed on sentiment and growth in the emerging markets.

As a second factor weighing on global performance, the U.S. Administration has been more vigorous in prosecuting its trade war against China than we had anticipated. President Trump recently levied a 10% tariff on another $200 billion of Chinese goods, with threats of further tariffs going forward (see the accompanying box for more details). The tensions between the world's two largest economies have transmitted uncertainties through the global system and appear to have amplified stresses for some already vulnerable EMs. The one appreciable piece of good news on this front is that the U.S. trade war against partners other than China has moved off the boil, underscored by the recent completion of negotiations on a revised NAFTA deal.

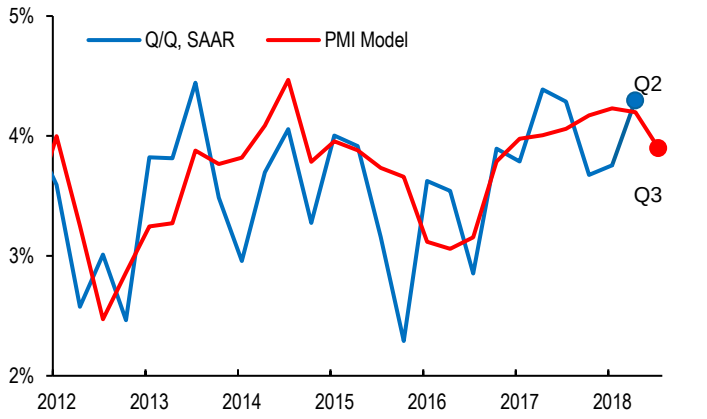
Despite these challenges, global growth in the aggregate held up well through the second quarter (see Figure 2). The pace of activity in the advanced economies accelerated, while EM growth moderated but did not collapse. As an indicator of more recent performance, global Purchasing Manager Indices (PMIs; available through August) have slowed, but they remain in solid territory. An econometric model that relates these to growth suggests that the third quarter saw growth ease by a few tenths of a percentage point (see Figure 3). The key question going forward is whether PMIs now stabilize or continue falling. On this score, we see several reasons for optimism.

Figure 2: Global Real GDP Growth



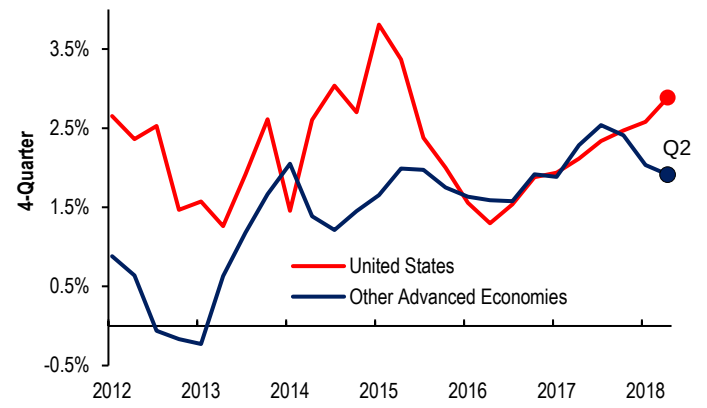
Source: Haver Analytics as of October 2018

Figure 3: Global Real GDP Growth



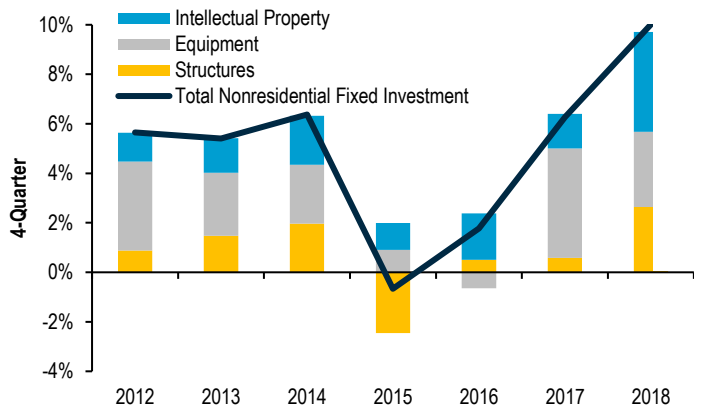
Source: Haver Analytics as of October 2018

Figure 4: Real GDP Growth



Source: Haver Analytics as of October 2018

Figure 5: Components of U.S. Business Investment



Source: Haver Analytics as of October 2018

First, the U.S. economy shows considerable momentum and is leading the global expansion (Figure 4). U.S. demand is supported by ongoing fiscal stimulus. But the underlying economy is also strong. The labor market continues to tighten, but with little sign of resulting inflationary pressures. The consumer sector is looking resilient and balanced, with rising wealth and—after recent revisions in the national income accounts—a surprisingly high saving rate. The corporate sector also looks strong, with record earnings and recent evidence of an acceleration in investment (Figure 5). In this environment, the Federal Reserve has underscored its commitment to continue to gradually normalize monetary policy.

Second, as noted above, Chinese growth this year has softened, mainly reflecting the imprint of the authorities' efforts to rein in credit and leverage. However, with the trade war now taking hold, the authorities are implementing steps to prevent growth from slipping further. We expect that these efforts will be felt more fully in the months ahead and that growth this year will ultimately come in at, or just a little below, the announced 6.5% target. As a related point, performance in the euro area and Japan, after cooling some during the first half of the year, should also stabilize at solid rates during the second half, with growth near estimated potential.

Going forward, the central question is how these differing country performances play through. Does the rapid momentum in the United States, and the solid growth in China, the euro area, and Japan that we project, eventually help bolster the struggling emerging-market economies? Or do the challenges facing the emerging markets signal more general problems ahead for the global economy? The afflicted EMs are probably not sufficient in mass themselves to pull down the rest of the world, but they may be a "canary in the coal mine" signaling more general imbalances and vulnerabilities. Still a third option is that

the observed divergences, which are notable but not unprecedented, persist and unwind only slowly.

On balance, we expect moderate growth to prevail through the year ahead, but the world remains a risky place. The biggest storm cloud at present is the possibility of a messy global trade war. But we are also monitoring Brexit risks and the concerning prospects for the Italian budget and, ultimately, the country's debt trajectory. As always, we are keenly focused on the long-term economic and financial implications of the deteriorating U.S. fiscal situation and, more generally, the effects of demographic transition in the advanced economies and some emerging markets, including China and South Korea.

The remainder of this essay discusses individual country developments in more detail.

United States. The U.S. economy continues to rocket along at a roughly 3% pace so far in the second half of 2018. Both households and businesses are participating in the growth acceleration this year, bolstered by tax cuts and fundamental strength in the private sector. Average monthly job gains reaccelerated this year to 207,000 from an already-strong 182,000 last year. Business investment has also picked up, growing a robust 10%, annualized, in the first half of 2018 and is on track for further solid gains in the second half, given surging profits and business confidence. While trade policy is dominating headlines, the aggregate economic effects on the U.S. economy have been minimal so far.

Almost 10 years after the financial crisis, imbalances in the private sector appear remarkably limited. The household savings rate, at 6.7% as of July 2018, remains uncharacteristically elevated for this point in the cycle. Household borrowing has lagged income growth for most of this expansion. Similarly, net corporate borrowing has also slowed this year, likely in reaction to new limits on the tax-advantages of debt financing. Thus, the private sector appears to be in good shape. More broadly, the federal budget deficit is a notable growing imbalance as it is expected to widen from its cycle low of 2.4% of GDP in 2015 to 3.9% in 2018 and to just over 5% within a few years.

Meanwhile, the core PCE deflator finally reached 2% in July 2018. Given the strength of the real economy, our base case anticipates the Fed will follow up its September rate hike with another in December and two more next year, bringing the Fed funds target rate to 2.9%—roughly in line with Fed officials' median estimate of the long-run neutral rate.

Euro Area. In the euro area, sentiment indicators suggest a further moderate deceleration of activity in the third quarter. Underlying this performance is an apparent dichotomy—the more domestically driven service sectors are holding up well, while manufacturing order books, especially export orders, are beginning to sag. Declining demand for investment goods seems to be driving this softness. One possibility is that uncertainties related to global trade are beginning to seep into the data, although transatlantic trade relations have so far remained largely intact.

The wranglings about potential U.S. tariffs on cars have served as a timely reminder that the risks to the euro area's growth outlook remain skewed to the downside. Whether it is slowing trade flows, the apparent fallout from the U.S. trade war, or emerging market strain, we judge that Europe faces limited scope for upside surprises. The European Central Bank, however, continues to see the risks to the outlook as balanced. The unwinding of QE purchases is proceeding, and the ECB is on track to end its asset purchases by year-end.

On the fiscal front, recent announcements signal some backsliding. The French draft 2019 budget targets a deficit of 2.8% of GDP in 2019, up 0.4 percentage points from the government's Stability Program in April. More important, the new government in Italy published its draft budget, targeting a deficit of 2.4% of GDP. Although the market was prepared for a fiscal loosening, this overshot expectations and is a significant widening from the 0.8% deficit target to which the previous government had agreed.

Japan. The quarterly pattern of Japanese GDP growth this year has been uneven, but our projection for 2018 growth of just over 1% is still intact. Domestic demand remains fairly solid, although global trade tensions pose downside risks. Our base case calls for similarly solid growth next year.

With Abe's LDP presidential win now out of the way, focus is turning to his agenda for the next three years, including plans for labor market and social security reforms, the planned consumption tax hike in October 2019, and constitutional reform. The BoJ, meanwhile, appears to be quietly engineering more flexibility in the implementation of its policies, allowing for a modest steepening of the yield curve to mitigate the negative impact of its low-rate policies on banks. While headline inflation has accelerated to 1.3% year-over-year as of August 2018, underlying inflation pressures remain only modestly positive. The BoJ thus appears likely to continue its current policies at least well into next year.

Emerging Markets. Despite the ongoing stresses in Argentina and Turkey, emerging-market growth in aggregate has held up reasonably well to date, but with some notable shifts in underlying regional trends. Specifically, growth performance in Latin America has come in below our expectations. In contrast, growth in Asia has surprised on the upside, as China has stepped back from its deleveraging campaign to fortify its economy for the trade war. In both regions, countries have responded to the challenging environment by adjusting the stance of their policies; such adjustments have ranged from monetary policy tightening across many countries to the tightening of fiscal stances, shoring up capital controls, and enlisting the help of the IMF.

For Latin America, given the challenging external environment, as well as the policy adjustment in train, we now expect another recession in Argentina and a softer recovery in Brazil. In the former, an initially too optimistic—though very large—IMF program proved insufficient to calm markets and has been redesigned with more ambitious fiscal targets and a clear nominal anchor, which in the near term will likely slow domestic demand beyond the existing drag from a severe drought.

In Brazil, a highly disruptive truckers' strike has compounded the underlying weakness of the recovery. At the same time, the tradables sector is feeling a pinch from Argentina's descent into recession, and electoral uncertainties are constraining private spending. With the elections later this month, concerns about the ability and willingness of the next administration to address the country's pressing policy challenges is running high.

Our higher growth forecasts for EM Asia are largely driven by outperformance in India, as well as the change in China's policy stance. While the former is welcome, it has come at the cost of a sharp widening of the current account deficit, which in turn has renewed investor concerns about the country's large gross external financing needs. As such, we see limited further upside for Indian growth, unless the external environment turns much more favorable.

For China, we see the authorities' recent retreat from ambitious deleveraging as revealing less tolerance for slowing growth than we had assessed. Moreover, given the escalation of trade tensions with the United States, the authorities have implemented a range of new easing measures. While these steps are likely to bolster growth going forward, the renewed reliance on debt and stimulus threatens to amplify economic imbalances that—even before these steps—were a major concern for Chinese authorities. As a related point, the additional stimulus is slated to come mainly as tax cuts, designed to raise household disposable income and corporate profits, rather than as stimulus to infrastructure and the property sector. Thus, investor expectations that Chinese stimulus will usher in one more commodity up-cycle could easily be disappointed.

When Giants Collide: The U.S.-China Trade War

The Trump Administration is significantly scaling up its trade confrontation with China. To date, the United States has imposed two rounds of tariffs: first, 25% tariffs on $50 billion of imported Chinese goods; and second, as of late September, 10% tariffs on another $200 billion. The Administration has vowed that the tariff rate on this second round of imports will rise to 25% on January 1, 2019 if an acceptable agreement has not been reached. Given that the two countries remain far apart on the issues, a deal by year-end seems unlikely. Accordingly, we expect that the tariff rate will, in fact, click up to 25% as threatened.

China has responded to U.S. tariffs by imposing measures of its own—25% tariffs on $50 billion of imports from the United States following the first round of U.S. actions and graduated tariffs, averaging 18%, on $60 billion of imports following the second round. Notably, China exports over $520 billion of goods to the United States annually but purchases just $135 billion. Thus, China has now tariffed the lion's share of its purchases. This raises the question of how China will respond to further U.S. tariffs. Such responses, which we think are likely, could come by raising non-tariff barriers (including by restricting its exports of critical and hard to replace products), limiting the prerogatives of U.S. firms operating in China, allowing further exchange rate depreciation, or offering less cooperation on geopolitical issues, such as North Korea. President Trump indicated that China's decision to retaliate on the second round of U.S. tariffs would prompt the administration to move forward with tariffs (of unspecified size) on all remaining U.S. imports from China. The possibility that the Administration follows through on this threat is a looming risk to growth during the coming year.

To date, the U.S. economy has continued to perform extraordinarily well, with the trade war leaving no discernible imprint. As the tariffs increasingly take hold, however, they are likely to create some headwinds. *We estimate that the tariffs currently in place will trim U.S. growth over the next year by up to 20 basis points*, reflecting higher prices (and lower real incomes) for U.S. consumers, reduced U.S. competitiveness in Chinese markets, disrupted supply chains, and headwinds on the hiring and investment of affected U.S. businesses. *If the second-round tariffs click up to 25% on January 1, 2019 as signaled, the total drag on U.S. growth during the coming year would rise to more than 30 basis points and perhaps even higher, depending on China's response*. The fact that the trade war comes during a period when the U.S. economy is growing rapidly is softening the blow. *Finally, as a rough rule of thumb, we judge that the effects of the trade war on China's growth will be roughly twice as large as those on the United States*, given its greater reliance on trade as an engine of growth. That said, the Chinese authorities are likely to take steps, particularly including further stimulus measures, aimed at offsetting the adverse effects on their economy.

Developed Market Rates

After Q3's uptick in DM rates, we continue to see long-term fundamentals that support constructive duration positioning. Yet, we also remain tactical around the quickly moving rates landscape.

At the start of Q3, we projected rangebound conditions given credible Fed guidance, steady economic growth, and seasonal summer slowness. Our 2.75%-3.00% 10-year range proved prescient until late summer when a jump in the August's average hourly earnings pushed rates higher with 10-year Treasuries reaching a Q3 high of 3.10%.

We believe the backup in yields paired with post-peak economic growth offers an opportunity to buy duration in the U.S. However, we have slightly widened our near-term projected trading range on the 10-year yield to 2.75-3.25% amid some notable uncertainties. With the FOMC meeting in mid-December deemed to be a "live" meeting with a high probability for another 25 bps rate increase, the potential for an increase in the 2020 or 2021 "dots" or the projected long-term neutral rate of interest (R star) could contribute to temporarily higher rates. In addition, the outcome of the U.S. mid-term elections remains far from certain, and an outcome where Republicans maintain control of the House of Representatives and the Senate brings the potential for another round of fiscal stimulus, which could also temporarily lift rates. However, our long-term central tendency for the 10-year U.S. Treasury yield is 2.50% as indicated in "Lower Range to Drive Stealth Bull Market in Bonds."

Elsewhere in the U.S., we expected Treasuries to richen versus overnight index swap derivatives in Q3, and while two-year swaps were 7 bps tighter during the quarter, 10-year and 30-year swap spreads were 3 bps and 8 bps wider, respectively. Although we have slightly less conviction around the trade, we continue to expect Treasuries to richen vs. OIS derivatives (wider swap spreads).

In Europe, we expected the 5-to-30 year Bunds curve to flatten in Q3, which proved correct as the spread flattened by 8 bps during the quarter. We believe the Bund curve could flatten further, but are cognizant that any subsequent move will likely be modest in comparison. The 10-year Bund ended the quarter at just over 50 bps, which sets the mid-point of our expected trading range of 25-75 bps going forward. We find euro swap spread tighteners attractive as European cash bonds trade rich to derivatives.

In Q3, the 10-year JGB traded in a range of 2-14 bps, slightly wider than our projections of 0-10 bps, as the BoJ widened its yield curve control band from 10 bps to 20 bps during the quarter. With the adjusted band, we expect the 10-year JBG to trade in a range of 5-20 bps going forward.

OUTLOOK: Opportunistic. Our long-duration positioning in the U.S. comes amid an expanded trading range given the multiple uncertainties in the background. Continue to favor modest widening in U.S. swap spreads and tighter spreads in Europe. See 10-year Bunds near the mid-point of our forecasted range and an expanded trading range for JGBs.

Agency MBS

Mortgages were about unchanged versus rates in Q3 but lagged the performance of other spread sectors in the Bloomberg Barclays Aggregate Index. Libor OAS were slightly wider given the modest tightening of swap spreads. As expected, prepayment speeds remained benign given the broad year-to-date increase in primary mortgage rates. The Federal Reserve's MBS reinvestment cap increased to $16 billion per month in Q3, which sharply reduced purchase operations. Convexity hedging was limited despite the 0.25 percentage point increase in the mortgage rate. Higher yields encouraged outright buyers to carefully approach the market as they hit their rate bogeys.

Agency prepayment speeds remain subdued, with aggregate Fannie Mae and Freddie Mac speeds remaining below an 11 conditional prepayment rate (CPR), while aggregate GNMA speeds remained below a 13 CPR. The MBA Refinancing Index fell to the lowest of the year, achieving a level not seen since 2000. The MBA Purchase Index also declined from Q2 as higher mortgage rates and tight housing inventories limited activity. We continue to anticipate limited prepayment activity unless we see a material decline in primary mortgage rates. Our base case is that turnover is expected to remain about 6% in lower coupons, but may be slightly impacted as we head into the fall/winter seasonal.

Higher coupons generally outperformed within the coupon stack, given better carry. However, newer production pools generally have worse characteristics than older issues. For example, higher maximum loan sizes and weighted average coupons (WACs) have richened TBA valuations, which has led to a strong interest in older pools. The MBS Index market price declined to $99-16 (a level not seen since 2008), which caused a change in sentiment from call protection to extension protection found in seasoned pools.

The dollar roll market traded cheaper in Q3 as Fed settlements have declined while net supply has increased, leading to broad availability in most coupons. We continue to favor seasoned pools relative to TBAs for better convexity and fundamental value.

Freddie Mac outperformed relative to Fannie Mae across most coupons as the IRS finally released guidance that exchanges for Single Security will be considered tax-free. With the target date for the Single Security launch set for June 3rd, 2019 the market is more focused on improving readiness for implementation. Despite guidance from FHFA for Freddie Mac and Fannie Mae to align operations, modest differences in market behavior remain between the two agencies, so we anticipate some price movement over the next few months until the swaps move closer to fundamental value.

GNMAs performed in line with conventionals, except in higher coupons, which continued to see price improvement due to actions taken by GNMA to address unusually brisk prepayment speeds by certain non-bank originators. Although there is potentially more upside for GNMA higher coupons, we have reduced exposure into the better year-to-date performance. With Single Security on the horizon and amid higher mortgage rates, GNMA production has remained robust,

which will necessitate solid demand to absorb higher net supply without Federal Reserve support. In addition, our model shows GNMAs appear rich on fundamental value, making them less appealing.

Going forward, we continue to recommend an up-in-coupon bias for better carry versus rates. We continue to favor seasoned pools versus TBA for better convexity and fundamental value. We favor Freddie Macs as we move closer to Single Security implementation. Prepayment speeds should stay contained as primary mortgage rates remain elevated in a narrow range.

Although we expect Q4 origination to be impacted by fall/winter seasonals, the Fed's MBS reinvestment cap will be fully implemented at $20 billion per month, creating headwinds for MBS spread performance. However, the fourth quarter has generally seen better support for Agency MBS and at current spreads, and we continue to favor a neutral position as carry remains attractive vs. rates.

OUTLOOK: Neutral vs. rates and underweight vs. other spread sectors. Remain up-in-coupon for carry. Prepayments should remain slow. Avoid TBA. Favor seasoned pools for better convexity and Freddie Macs as we near Single Security implementation.

Structured Products

Spread performance was mixed in Q3 with CMBS tighter, CLOs wider, and non-agencies and ABS rangebound. Going forward, we are constructive on structured product spreads, though more for carry than capital appreciation, and we view spread widening as a buying opportunity. Fundamentals, broadly speaking, are solid and supported by a strong economic backdrop. AAA CLO and CMBS are still our favorite positions within the sector.

Non-Agency RMBS: Valuations for non-agency mortgage bonds remain fair, with spreads on senior bonds rangebound at LIBOR +75-100 bps. We typically find better value in CLOs, CMBS, and ABS as these other sectors offer similar value without the valuation challenges posed by non-agencies (e.g., realization on default and recovery assumptions for legacy bonds and prepay speeds on newly issued re-performing loan bonds). Despite middling valuations, credit fundamentals are sound. Accumulated house price appreciation since the 2012 nadir—nationally, house price values are now above the 2006 peak—and loan modifications have led to steady mortgage payments. That said, affordability is becoming an issue with the combined rise in home prices and interest rates. But millennial demand is coming on-line, and mortgage credit availability is generally trending in a more liberal direction. Putting it together, we expect house price appreciation in the 3-4% range in 2019. A notable development on GSE reform was a bill released in the House that indicates consensus forming around a "private credit enhancer" model with competition among several private entities and extensive use of credit risk transfer (CRT) to distribute credit risk to capital markets, notably REITs. We view this as mildly positive for CRT markets. In European markets, UK RMBS spreads were wider due to a worsening technical landscape—partly due to the cessation of the BOE Term Funding Scheme (which funded mortgages) and to European CLO spread widening. This widening presents opportunity, and we are more constructive on seasoned UK RMBS non-conforming seniors assets at spreads of 3m £L+100 bps. We are generally neutral/negative on mezzanine tranches due to the cooling UK housing market, Brexit-related uncertainty, and extension risk afforded to issuers in deal structures.

CMBS: We maintain our bias in super senior conduit tranches, especially with their low beta to real estate values, and our negative position on mezzanine conduit tranches, but we find value in select single asset/single borrower subordinated tranches where there are compelling real estate fundamentals. AAA fixed-rate spreads did well in Q3, tightening 15 bps to swaps+75 bps, and agency tightened 2 bps to swaps+53. Conversely, AAA single asset/single borrower floating-rate demand waned in the wake of heavier supply, and spreads widened 15 bps to L+95. Looking forward, we think senior spreads will be rangebound. Supply is manageable— CMBS conduit loan origination is being crimped by other lenders (e.g., regional banks, private equity funds, and REITS)—and higher interest rates bring out yield buyers. Our up-in-capital structure bias has underperformed year-to-date as the credit curve has flattened (AAA vs BBB- spreads has tightened from 285 bps to 210 bps year-to-date). We are turning slightly cautious on commercial real estate values as cap-rate premia is slightly inside its long-term average with the recent back-up in rates.

CLOs: We remain very constructive on AAA and AA CLO tranches and believe that recent spread widening is providing an attractive opportunity to take advantage of improved economics and better CLO debt covenants. U.S. AAA and AA spreads traded between 3L+ 115-130 and 165-195, respectively, about 10-15 bps wider over the quarter. In Europe, AAA spreads traded at 3m EURIBOR+107-122 bps (including the coupon floor). We also remain cautious further down the capital structure as we believe current valuations do not consider downside performance should economic conditions turn negative, especially when considering our expectation of lower senior secured loan recovery rates due to increased leverage and weaker loan covenants. We do, however, believe we will remain in a benign default environment due to strong corporate earnings and expect these mezzanine securities to likely earn their carry in the near term. Turning back to spreads, we expect AAA/AA spreads to widen early in Q4 on supply—we expect net outstanding amounts to increase by at least $60 billion by the end of the year, notching a record breaking year in gross issuance. We believe widening will be marginal as it is tempering equity investors to create new CLOs. Thus, we believe that late in Q4, spreads will stabilize with some potential for tightening. We remain focused on the impacts of cross-currency basis as many global investors may alter the demand for certain bonds amid changes in the costs or benefits of hedging.

ABS: Consumer and commercial ABS collateral performance remains strong across a broad array of asset types. We expect this to continue given the solid economy and concomitant low unemployment. Spreads for generic AAA ABS stabilized in Q3, and trading was

characterized by better two-way flow at levels 5-10 bps wider than the year-to-date tights hit in Q1. Three-year credit cards are now L + 20 bps and two-year autos L +18. Consumer loan and AAA-rated private refi student loans offer better value at L+60-65 bps. We expect rangebound spreads in Q4. Spread compression has also been a theme in in 2018—marked by historically tight spread differential from AAA to subordinate tranches and from on-the-run to off-the-run issuers. We expect spread compression to continue as investors reach for yield in this generally short-duration asset class. We continue to have a fundamentally-driven, up-in quality focus, favoring select securitizations from originators of unsecured consumer loans, subprime autos, and private refinance student loans with strong underwriting and robust structural features.

OUTLOOK: Long-term positive on top-of-the-capital structure structured products, especially CLOs and CMBS. We remain content to earn carry at current spread levels. Negative on conduit CMBS and CLO mezzanine tranches. Increasingly looking at financing trades rather than exposure to the underlying assets as spreads are tight and the demand for leverage is high.

U.S. and European Corporate Bonds

Investment grade corporate bonds delivered a positive return in Q3 as spreads narrowed by 17 bps to +106 bps over similar-maturity U.S. Treasuries. Market sentiment remained mixed with solid economic growth, healthy corporate earnings, and strong technicals more than offsetting the Federal Reserve's drive to raise interest rates and the concerns over global trade wars. For the three months, corporate bonds posted an excess return of +169 bps to similar-maturity U.S. Treasuries; long-maturity corporates outperformed the broader corporate bond market with an excess return of +328 bps.

European corporate bond spreads also narrowed against a backdrop of solid, but unspectacular, European economic data, reasonably strong credit fundamentals, and, for now, support from the European Central Bank's bond buying program. Political uncertainty continued to spur market volatility.

	Total Return (%)		Spread Change (bps)		OAS (bps)
	Q3	YTD	Q3	YTD	9/30/2018
U.S. Corps.	+0.97	-2.33	-17	+13	106
European Corps	0.00	-0.64	-8	+26	114

Past performance is not a guarantee or a reliable indicator of future results. See Notice for important disclosures. *All investments involve risk, including possible loss of capital. Represents data for the Bloomberg Barclays U.S. Corporate Bond Index and the Bloomberg Barclays European Corporate Bond Index (unhedged). Source: Bloomberg Barclays as of September 30, 2018. An investment cannot be made directly in an index.*

U.S. Corporate Bonds

Despite increased volatility across the global markets in 2018, the economic climate still supports U.S. corporate bonds. Revenue and earnings growth in Q2 continued to power forward in response to tax reform and improving growth. Third quarter revenue and earnings estimates remain strong at 6.9% and 19.3%, respectively, a slight decrease from the prior quarter due, in part, to the strength of the U.S. dollar. Overall leverage remained elevated, but improved slightly based on Q2 earnings, amid the support of a slowdown in debt growth and an increase in free cash flow and year-over-year profit margins.

On the technical side, demand for new issues remained strong with most deals 3.0 to 3.5 times oversubscribed. As in Q2, new supply of 20- to 30-year bonds rose amid a flatter yield curve and was met by renewed investor interest, particularly from investors based in Asia. While equity buybacks and M&A activity continued, there was a noticeable decline in large-scale M&A announcements. This could portend a slowdown in issuance over the next several quarters. Increased contributions to underfunded corporate pension plans (which were tax deductible at 2017 tax rates until September 30), should also support long-duration corporates as pension plans gradually rotate their allocations from stocks to bonds.

Against this backdrop, we look for individual security selection across regions, industries, credit quality, and maturities to be a key driver of returns going forward. We continue to favor better-quality financials and electric utilities over industrials that may be subject to event risk. We are reducing exposure to lower-rated financial companies in favor of higher-quality U.S. money center banks that are relatively immune to event risk, remain well capitalized, and offer ample liquidity.

We continue to find value in select pharmaceuticals, energy, and "U.S.-centric" issuers, as well as in select post-event issues. Since 2015, M&A transactions have accounted for nearly 30% of non-financial issuance. Leverage for companies pursuing acquisitions rose from 2.4x to 4.0x, on average, while deleveraging post issuance was generally less than indicated despite a strong economic backdrop. While we remain wary of most M&A deals, select post-event issues have performed well, especially in the first month or so after issuance.

We are also looking to add select European banks due to stabilizing fundamentals and wider spread levels, and we still favor taxable municipal bonds and BBB-rated corporates with stable-to-improving fundamentals.

European Corporate Bonds

European corporate bonds had a flat return in Q3 as Brexit negotiations and political uncertainty in Italy and Turkey rumbled in the background. Uncertainty over global trade and the ECB's tapering policy also weighed on the market. In mid-September though, the ECB guided as expected regarding its Asset Purchase Program and, by implication, its corporate bond buying program, indicating a conclusion to net purchases by year end as long as economic data remain sound.

As in the U.S., credit fundamentals remained solid overall, providing a healthy backdrop when combined with positive, albeit modest, regional economic growth. Technicals varied day-by-day depending on the headlines but, overall, were strong in July, weak in August, and more balanced in September. New issuance in September was particularly strong following a lull in August, and the majority of new

issues performed well. In all, it appears that politics and technicals are driving the market more than fundamentals.

In European portfolios, we have been looking to add attractively-priced new issues and selectively add back risk when volatility rises and spreads widen. Earlier in September, for example, banks caught a solid bid after the market realized spreads widened too far in the preceding weeks. We remain overweight banks, insurance, and non-core REITS. We continue to hold an overweight in non-euro and non-ECB eligible issuers, although on a smaller scale given the significant spread compression in these segments.

In global corporate portfolios, we hold a balanced view of EUR and USD exposure, although the euro market underperformed the U.S. dollar and sterling markets as spreads widened in August. We are reducing exposure to issues with potential tail risks that we believe are prime candidates for spread widening. Similar to European portfolios, we hold an overweight in U.S. money center banks and insurers and favor strong and "post-event" BBBs over single-A rated corporates that are potential large M&A candidates and/or have more shareholder-friendly boards. We continue to take advantage of price dislocations and yield discrepancies between EUR and USD bonds of the same and/or similar issuers.

We hold a cautious view in both the U.S. and Europe. While short-term technical momentum may drive spreads tighter in the near term, we expect this momentum to ebb by year end and spreads to finish wider. Downside risks include diminishing central bank support, a flattening/inverted U.S. yield curve, uncertainties over global trade policies, regional and global geopolitical risks, and China's contribution to global growth.

OUTLOOK: Cautious given increased downside risks and the potential for spreads to widen despite favorable fundamentals and earnings growth momentum. Still favor U.S. money center banks. U.S. tax reform remains supportive.

Global Leveraged Finance

The U.S. high yield market got off to a fast start in Q3 and remained generally insulated from the weakness that gripped other areas of the fixed income market. By the end of the quarter, U.S. high yield spreads tightened by 43 bps. Despite some choppiness, the European high yield market eventually found its footing and ended the period with 25 bps of spread tightening.

	Total Return (%)		Spread Change (bps)		OAS/DM (bps)
	Q3	YTD	Q3	YTD	9/30/2018
U.S. High Yield	2.44	2.52	-43	-35	328
Euro High Yield	1.62	0.10	-25	+73	367
U.S. Leveraged Loans	1.85	4.06	-19	-34	381
Euro Leveraged Loans	1.48	2.17	-19	+13	405

Past performance is not a guarantee or a reliable indicator of future results. See Notice for important disclosures. *All investments involve risk, including possible loss of capital. Sources: ICE BofAML and Credit Suisse as of September 30, 2018. An investment cannot be made directly in an index. European returns are euro hedged.*

U.S. Leveraged Finance

With several factors lending support to the market—strong corporate earnings, low default activity, subdued new issuance, improving fund flows, and record high equity prices—the U.S. high yield market turned in a solid Q3, posting excess returns of +243 bps vs. swaps. Despite some weeks in which the higher-quality segments of the market outperformed, CCCs once again outperformed as the renewed risk-on sentiment that emerged late in the Q3 boosted lower-rated credits. For the quarter, CCCs posted excess returns of +270 bps vs. swaps, compared to +241 bps for BBs and +235 bps for Bs. CCCs have now outperformed BBs in 10 of the last 11 quarters.

All U.S. high yield sectors posted positive returns in Q3, with cable, healthcare, telecom, and consumer products leading the way. Cable was lifted by DISH bonds, which bounced by several points after reporting better-than-expected earnings and subscriber metrics. Performance within the healthcare sector was bolstered by the continued rally in several lower-quality names, particularly Community Health and Endo Pharmaceuticals.

Meanwhile, retail was the weakest performing sector, dragged down by Sears and JC Penney. Sears bonds lost half of their value on news of a potential restructuring to avoid bankruptcy, and JC Penney bonds fell after announcing that its CFO was resigning.

In general, global default activity continued to slow. Moody's 12-month U.S. speculative grade default rate ended August at 3.4%, down from 3.6% at the end of Q2. So far this year, the speculative-grade corporate market has seen 51 defaults. This compares to 65 defaults over the same period in 2017. Looking ahead, Moody's expects favorable credit conditions to continue, which should keep default rates low over the next 12 months. Specifically, their Credit Transition Model predicts the U.S. default rate to end 2018 at 2.6%.

High yield bond fund flows turned positive in Q3 with net inflows of $800 million. While only modestly positive, the third quarter's net flow activity represents a significant turnaround from the sizable outflows of $4.7 billion and $20 billion reported in Q2 and Q1, respectively. We'd note that of this year's heavy withdrawal activity, active managers have accounted for 85% of the outflows.

Despite the prospects for an uptick in post-summer supply, the U.S. high yield primary calendar generally remained sluggish throughout Q3 with the market pricing $41 billion of gross supply. This brings

year-to-date gross supply to $167 billion, which represents a 33% decline from last year. The energy sector continued to dominate new issuance, accounting for 25% of the volume in Q3—compared to 19% of the activity in Q2 and 27% in Q1. High yield energy has led issuance in six of the last seven years.

A combination of solid fundamentals (strong earnings and low defaults) and favorable technicals (limited net supply and persistent institutional demand from Asia) leaves us with a modestly positive view on U.S. high yield in the near term. However, concerns over current valuations (with spreads at post-crisis tights), risk appetite on recent lower-quality M&A transactions that is reminiscent of 2007 as well as broader concerns about trade wars and the timing of the next recession leave us cautious longer term.

In general, we expect defaults to remain low for the remainder of 2018 and into 2019. In terms of quality, following the risk rally within lower-rated credits, we have opportunistically reduced our exposure to various CCC overweights that have outperformed recently. On a sector basis, we remain cautious on commodities and are maintaining an overweight to independent power producers and U.S. consumer-related issuers.

On the back of strong CLO formation and heavy retail inflows, S&P/LSTA Leveraged Loan Index continued to produce solid, steady performance in Q3, generating excess returns of +135 bps vs. swaps. For the year, the loan market has generated +286 bps of excess returns vs. swaps. Lower-rated loans, although only about 5% of the index, also outperformed.

Flows into loan funds continued in Q3, highlighted by positive flows in 34 of 36 weeks. In 2018, $15.5 billion has moved into the asset class, adding to the $13.1 billion of inflows reported in 2017. We'd note that the total AUM for loan mutual funds now stands at $152 billion, just shy of the all-time high of $154 billion that was reached in April 2014.

Gross new issue volume in the loan space slowed considerably in Q3 as repricing activity slowed. However, net new issuance held steady quarter-over-quarter at roughly $50 billion. The technology sector once again led the way in terms of issuance, accounting for 18% of this year's volume. Healthcare and gaming/lodging/leisure were the next biggest contributors, each at 10%. Energy, which is a much smaller component of the loan market, comprised only 3% of this year's new supply.

Looking ahead, given the year-to-date excess return underperformance relative to U.S. high yield and their higher historical recovery values, U.S. leveraged loans appear to have less downside risk at this point in the cycle relative to U.S. high yield bonds. This is based on our view that U.S. high yield is approaching full value and our concerns about macro risks—such as trade wars—that could have a more meaningful impact on U.S. high yield vs. U.S. loans.

European Leveraged Finance

In the face of ongoing Italian political developments, a resurgence of Brexit headlines, and a fair amount of high yield bond supply, European high yield spreads began Q3 at their year-to-date wides of 399 bps. A near-term stabilization of the Italian political situation combined with a relatively positive tone to risk markets sent spreads tighter, with solid momentum extending into August. Despite a backup in spreads to start September (which proved to be short lived), European high yield spreads tightened by 25 bps in Q3 and are 120 bps wider than post-crisis tights reached in November 2017 (+247 bps).

On the quarter, the broad European currency high yield index posted an excess return of +189 bps vs. swaps, bringing the year-to-date excess return to +4 bps. Single Bs were the top performer in Q3 (with an excess return of +210 bps), outpacing BBs and CCCs by +13 and +281 bps, respectively.

The new issue pipeline was generally quiet in Q3 with €8.3 billion of supply pricing. As a result, new issue volume is now trailing last year's pace by 18%—€51.5 billion year-to-date, compared to €63.1 billion over the same period last year. Refinancing activities have continued to dominate issuance, however M&A-related activity has increased significantly compared to last year.

Moody's default rate improved in Q3, dropping from 2.5% at the end of June to 2.2%. Looking ahead, default rates in Europe should remain low—eventually declining to 1.3%— over the next 12 months given that the European and global economy should see gradual growth.

Despite trailing European high yield bonds on an excess return basis in Q3, European leveraged loans posted a +244 bps excess return vs. swaps year-to-date, outperforming high yield bonds by +240 bps in 2018. After preferring loans for much of the year, we expect loan and bond performance to converge into the latter part of the year as bond spreads "catch-up" to leveraged loans. That said, investor demand for floating rate product remains strong, supported by continued CLO formation and expectations for future rate hikes. However, the increased demand for leveraged finance products could lead to some deterioration of underwriting standards, requiring a degree of caution moving forward.

Loan issuance in Q3 kept pace with last year's levels, albeit with a slight decline. For the quarter, the market priced €20.3 billion of new issuance, versus the €27 billion during the same period last year. In general, the European leveraged loan primary market has been dominated by M&A related activity, rather than opportunistic financings (refis, repricings, etc.).

We expect spreads to continue to tighten modestly from current levels in the short to medium term on support from a decent macro backdrop, solid credit fundamentals, and reasonable earnings growth. Our near-term outlook is also bolstered by a lack of material near-term recession risk in Europe as well as expectations for the ECB to likely take a balanced approach with the pace and intensity of its policy normalization. The impact on global growth from trade wars, European political uncertainty (particularly in Italy and the UK), and the potential for deteriorating underwriting standards leaves us cautious over the long term.

In terms of positioning, we continue to favor B-rated issuers and to tactically increase our BB allocation through the primary market. We continue to seek attractive relative-value opportunities—created by the uncertain BREXIT outlook for the UK economy—between sterling-denominated and euro-denominated bonds. Additionally, we're

maintaining a cautious to negative view on European retail and construction companies in the periphery.

OUTLOOK: Modestly positive on U.S. high yield in the near term, but cautious longer term with spreads at post-crisis tights and broader macro concerns. Due to their higher historical recovery values, we believe U.S. leveraged loans have less downside risk at this point in the cycle relative to U.S. high yield bonds. We are near-term positive on European high yield with expectations for spreads to tighten modestly from current levels amid supportive macro conditions, solid fundamentals, and earnings growth.

Emerging Market Debt

After a tough Q2, the emerging markets debt sector rebounded with hard currency sovereigns leading the way. There was significant monthly variability throughout the quarter, particularly within Argentina, Turkey and Ecuador, amid concerns about vulnerability to tighter global financial conditions and idiosyncratic, issuer-specific factors. Macro developments in Q3 included periods of dollar resilience and escalating trade war rhetoric. The expectations of strong U.S. growth relative to other developed markets and EM has posed a headwind for EMFX and similarly limited the performance in hedged local bonds.

	Total Return (%)		Spread / Yield Change (bps)		OAS (bps)/Yield %
	Q3	YTD	Q3	YTD	9/30/18
EM Hard Currency	2.30	-3.04	-34	+50	335
EM Local (hedged)	-0.25	-1.54	+3	+48	6.62%
EMFX	-1.11	-4.48	+42	+183	5.37%
EM Corps.	1.30	-1.60	-15	+63	286

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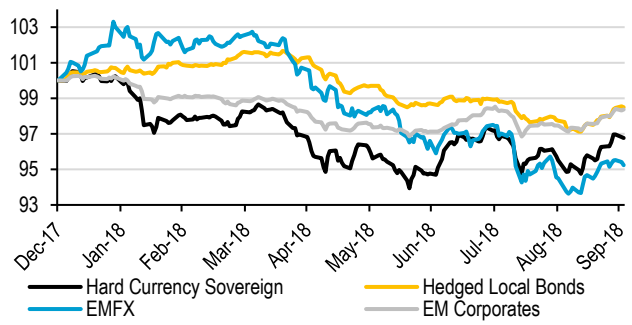
Figure 1: EMD Found Some Footing By the End of Q3



Source: Bloomberg as of October 2018. See Notice for Index descriptions. Indexed to 100.

Interestingly, when we examine year-to-date returns for the array of countries within the hard currency universe, many countries performed similarly or better than the Bloomberg Barclays 10-20 year U.S. Treasury Index, which posted a year-to-date return of -4.14% through Q3. Therefore, a few outliers significantly underperformed in Q3, including Turkey (-9.39%), Argentina (-16.25%), Lebanon (-9.06%), and Zambia (-28.87%). Why mention these idiosyncratic cases? Because given the challenges facing the sector, along with persistent headlines concerning risks in Argentina and Turkey (click here for more on Argentina and Turkey), it's easy to "throw the baby out with the bath water." Indeed, although some of the more troubled issuers have attempted orthodox steps to address concerns (e.g. Argentina tightened fiscal policy even more than anticipated and received increased and front-loaded IMF funding), EM has underperformed other fixed income with spreads widening by +50 bps on the year. That said, some countries have exhibited relative resilience that has been justified by fundamentals, or by expectations of access to bilateral or multilateral funding. This includes larger issuers, such as Mexico, which has outperformed the hard currency index year-to-date even with the election of a left leaning, populist government, and smaller countries that are considered NexGem (frontier credits). Countries including as Angola, Pakistan, and Mongolia have posted positive year-to-date returns. Country performance was the dominant explanation of returns for EM corporates.

Similar themes are apparent in local hedged bonds, where there were significant outliers in performance. Here again, Turkey and Argentina had negative double-digit year-to-date returns and have had to hike rates significantly given severe currency weakness and elevated inflation. Argentina hiked rates more than 3,275 bps and Turkey hiked rates 625 bps. Policy credibility remains an issue in both countries. Given some of the headwinds from EMFX, other central banks have also hiked, including Indonesia, the Philippines, and Russia. Additional central banks could follow suit, but given that inflation, with a few exceptions, is contained, the hikes should be modest.

In EMFX, Q3 started with a backdrop of U.S. growth outperformance on the back of fiscal stimulus and lower growth forecasts for the euro zone and several EM countries, notably in Latin America. Trade policy uncertainty was also high throughout Q3. These factors, along with the market pricing in a more aggressive Fed hiking path relative to the rest of G10 central banks, facilitated USD strengthening over the past two quarters.

What We are Watching…

Developments regarding escalating trade tensions will be important to monitor as they can impact the trajectory of EM growth. Arguably, some of this may be priced into EM assets already. Going forward, we expect China to use fiscal policy to mitigate the impact of additional increases in trade tariffs imposed by the U.S. Likewise, China is lowering tariffs on imports from countries other than the U.S.

In addition to large macro themes, idiosyncratic developments will impact select country performance and broader EM sentiment. Developments in countries, such as Brazil where the presidential election remains very polarized, require continued monitoring. Indeed,

whomever wins the election will be challenged with "governance" issues and will have to deal with Brazil's fragmented political system and slim coalitions.

In large part, the concerns in Brazil relate to domestic debt dynamics given the large structural fiscal deficits. Reform of the public sector, including social security reform, needs to take place. While the immediate market reaction will differ depending on who wins, in the medium term, several factors mitigate the concerns about the trajectory of public sector debt dynamics:

1) the local bond market is primarily owned by domestic constituents; non-residents only own about 15% of the local market, so there is little risk that the domestic debt does not get rolled over;
2) public sector external debt levels are low at around 5% of GDP;
3) the current account is very manageable at close to -1—2% of GDP and is more than covered by foreign direct investment;
4) the BRL is floating and is used as an adjustment/absorption mechanism; and
5) foreign exchange reserves are large at close to $380 billion.

The local markets have priced in a lot of premium reflecting the uncertainty of the election outcome. Sovereign and quasi-sovereign external debt levels are manageable and long dated and should experience less volatility. While the political backdrop might make it appear difficult for any candidate to be successful in passing and implementing meaningful fiscal reform, it should be recognized that the public sector benefits from the current regime. This, and the existence of a social safety net, should make some reform achievable.

In Argentina, the recently increased IMF program—from $50 billion to $57 billion, and the announced front-loading of disbursements, along with commitments from the Macri government to further tighten fiscal policy and change the monetary policy regime—helps stabilize the concerns on external debt. More recently, the Argentine peso has posted positive returns. There will be a large correction in the current account this year and in 2019. Local market roll overs have been more successful. While uncertainty will persist given the October 2019 elections, we expect hard currency bonds will continue to rebound given their attractive valuations.

In Turkey, we will monitor policy actions, particularly from the central bank, along with fiscal performance. The government just announced some fiscal tightening, but its program is short on specifics. We are also monitoring private sector external roll overs in the corporate and banking sectors. Public sector external liabilities largely fall on public sector banks, and the debt dynamics of the sovereign, considered in isolation, remain manageable.

In addition to these examples, many EM countries have demonstrated a willingness to adjust to the more challenging global context with appropriate policy responses. These include hiking rates, allowing their currencies to adjust, and engaging with multilaterals and bilateral entities to cover potential funding shortfalls. This helps avoid a credit event in those countries where external debt levels may be high and/or rollovers may be challenging.

Investment Implications

As the final quarter of 2018 progresses, we are mindful of headwinds in the sector, yet remain comfortable adding risk—particularly in EM hard currency sovereign and quasi-sovereign bonds where valuations are compelling—after we reduced risk earlier in the year.

Notable premiums have been built into spreads in countries where significant selloffs occurred. While there are distinct vulnerabilities, the risk of a credit event in sovereign and quasi-sovereign issuers in Argentina, Turkey, and other lower-rated countries is contained over the near term, and we remain overweight spread product in 3-7 year sovereign and quasi-sovereign issuers. Given the uncertainty of the future extent of Fed tightening, we are more cautious in our longer-dated positioning, choosing to only be positioned in higher-rated sovereigns and quasi-sovereigns in the long end. We are positioned in select EM corporates. After a slowdown in supply in Q2 and Q3, some supply is picking up, and we aim to focus on attractively priced corporate and quasi-sovereign issues. We are also focusing on Middle Eastern sovereign debt that will be added to the J.P. Morgan indices in January 2019.

We are cautious in our EMFX positioning given the strength of the U.S. economy and the relative growth outlook for EM vs. the U.S. The one positive for currencies, particularly in EM, is that valuations are very appealing with the average real effective exchange rate back down to 2016 lows, while real interest rates are quite high in a number of countries, such as Mexico, Brazil, Russia, Indonesia and India. The potential triggers for a reversal in USD strength are easing trade tensions or a more cautious tone from the Fed. Yet, these triggers seem unlikely in the very near term, and the USD is likely to continue to see strength. Select EM local bonds look attractive given the hedged yield and premium priced into certain curves, which already reflect possible rate hikes.

OUTLOOK: Cautiously optimistic based on valuations, a decent global growth outlook, and adjustments that have already occurred.

Municipal Bonds

In Q3 2018, AAA-rated municipal bonds outperformed U.S. Treasuries in 10-year maturities but underperformed along the rest of the curve. Lack of sponsorship on the long end drove the 30-year municipal/Treasury yield ratio to 102% in Q3 before dropping to 99.8% by quarter end; the ratio was 98.5% at the start of Q3. Year-to-date total issuance totaled $249 billion, a 15% decline vs. prior year. Mutual fund flows were largely positive in Q3, bringing year-to-date net inflows to $11 billion.

AAA municipal yields were higher across the curve, and the municipal yield curve steepened modestly with the 5-to-30 year curve at 99 bps, 4 bps steeper in Q3 and 13 bps steeper year-to-date. Total returns for Q3 were -0.15% and +0.76% for the high grade and high yield indices, respectively, bringing year-to-date returns to -0.40% and +4.45% for the high grade and high yield indices, respectively. Year-to-date high yield returns continue to be boosted by strong performance from

PRASA as the authority and creditors move closer to a negotiated restructuring agreement. Additionally, the Federal Oversight Board, the Commonwealth and COFINA bondholders reached an agreement to restructure the COFINA debt; bonds moved higher on the news. The Federal Oversight Board also announced that it will significantly raise the long-term surplus forecast in their fiscal plan based on improved results as the island rebuilds post-hurricane. The release of the revised fiscal plan is expected early in Q4; GO bonds were higher on the news.

Long taxable municipal total returns were -0.69% in Q3 and -3.00% year-to-date, resulting in underperformance vs. the long corporate index (+1.32%) in the quarter, but outperformance year-to-date (-5.54%). Year-to-date excess returns for long taxable municipals of 111 bps outpaced those of the long corporate index (-84 bps).

Our positive outlook for Q4 is based on the relative attractiveness of tax-exempts given the recent underperformance, as well as higher yields that municipals could provide a better entry point for investors. In addition, the expectation is that technicals will turn more favorable by year end. A relatively stable rate environment should be supportive of continued mutual fund inflows. Lack of sponsorship on the long end has weighed on the market year-to-date, and the potential for additional selling of tax-exempt bonds from bank portfolios could impact performance in Q4. Dealer inventories have declined from elevated levels earlier in the year, which could lead to a more supportive tone. On the Puerto Rico front, investors await the release of the revised fiscal plan from the Federal Oversight Board. The judge overseeing the Puerto Rico bankruptcy is also expected to rule on restructuring plans for COFINA bonds and GDB debt in Q4. We expect taxable municipals to perform in line with corporate bonds, with potential for outperformance should corporate M&A activity persist.

OUTLOOK: Positive. Favorable technicals by year end should lead to outperformance vs. Treasuries.

NOTES

Source of data (unless otherwise noted): PGIM Fixed Income and Bloomberg as of October 2018

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- U.S. Investment Grade Corporate Bonds: Bloomberg Barclays U.S. Corporate Bond Index: The Bloomberg Barclays U.S. Investment Grade Corporate Bond Index covers USD-denominated, investment-grade, fixed-rate or step up, taxable securities sold by industrial, utility and financial issuers. It includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.
- European Investment Grade Corporate Bonds: Bloomberg Barclays European Corporate Bond Index (unhedged): The Bloomberg Barclays Euro-Aggregate: Corporates bond index is a rules based benchmark measuring investment grade, EUR denominated, fixed rate, and corporate only. Only bonds with a maturity of 1 year and above are eligible.
- U.S. High Yield Bonds: ICE BofAML U.S. High Yield Index: Bloomberg Barclays U.S. Corporate High Yield Bond Index covers the USD-denominated, non-investment grade, fixed-rate or step ups, taxable corporate bond market. The index excludes Emerging Markets debt. Securities must be rated below investment-grade (Ba1/BB+/BB+ or below) using the middle rating of Moody's, S&P, and Fitch, respectively and have at least 1 year until final maturity.
- European High Yield Bonds: ICE BofAML European Currency High Yield Index: This data represents the ICE BofAML Euro High Yield Index value, which tracks the performance of Euro denominated below investment grade corporate debt publicly issued in the euro domestic or eurobond markets. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P, and Fitch). Qualifying securities must have at least one year remaining term to maturity, a fixed coupon schedule, and a minimum amount outstanding of €100 million.
- U.S. Senior Secured Loans: Credit Suisse Leveraged Loan Index: The Credit Suisse Leveraged Loan Index is a representative, unmanaged index of tradable, US dollar denominated floating rate senior secured loans and is designed to mirror the investable universe of the US dollar denominated leveraged loan market. The Index return does not reflect the impact of principal repayments in the current month.
- European Senior Secured Loans: Credit Suisse Western European Leveraged Loan Index: All Denominations Unhedged: Credit Suisse Western European Leveraged Loan Index: All Denominations Euro Hedged. The Index is a representative, unmanaged index of tradable, floating rate senior secured loans designed to mirror the investable universe of the European leveraged loan market. The index is hedged to EUR. The Index return does not reflect the impact of principal repayments in the current month.
- Emerging Markets USD Sovereign Debt: JP Morgan Emerging Markets Bond Index Global Diversified: The Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for USD-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, and Eurobonds. It limits the weights of those index countries with larger debt stocks by only including specified portions of these countries' eligible current face amounts of debt outstanding. To be deemed an emerging market by the EMBI Global Diversified Index, a country must be rated Baa1/BBB+ or below by Moody's/S&P rating agencies.
- Emerging Markets Local Debt (unhedged): JPMorgan Government Bond Index-Emerging Markets Global Diversified Index: The Government Bond Index-Emerging Markets Global Diversified Index (GBI-EM Global) tracks total returns for local currency bonds issued by emerging market governments.
- Emerging Markets Corporate Bonds: JP Morgan Corporate Emerging Markets Bond Index Broad Diversified: The CEMBI tracks total returns of US dollar-denominated debt instruments issued by corporate entities in Emerging Markets countries.
- Emerging Markets Currencies: JP Morgan Emerging Local Markets Index Plus: The JP Morgan Emerging Local Markets Index Plus (JPM ELMI+) tracks total returns for local currency–denominated money market instruments.
- Municipal Bonds: Bloomberg Barclays Municipal Bond Indices: The index covers the USD-denominated long term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds. The bonds must be fixed-rate or step ups, have a dated date after Dec. 13, 1990, and must be at least 1 year from their maturity date. Non-credit enhanced bonds (municipal debt without a guarantee) must be rated investment grade (Baa3/BBB-/BBB- or better) by the middle rating of Moody's, S&P, and Fitch.
- U.S. Treasury Bonds: Bloomberg Barclays U.S. Treasury Bond Index: The Bloomberg Barclays US Treasury Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index.
- Mortgage Backed Securities: Bloomberg Barclays U.S. MBS - Agency Fixed Rate Index: The Bloomberg Barclays US Mortgage Backed Securities (MBS) Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC). The index is constructed by grouping individual TBA-deliverable MBS pools into aggregates or generics based on program, coupon and vintage.
- Commercial Mortgage-Backed Securities: Bloomberg Barclays CMBS: ERISA Eligible Index: The index measures the performance of investment-grade commercial mortgage-backed securities, which are classes of securities that represent interests in pools of commercial mortgages. The index includes only CMBS that are Employee Retirement Income Security Act of 1974, which will deem ERISA eligible the certificates with the first priority of principal repayment, as long as certain conditions are met, including the requirement that the certificates be rated in one of the three highest rating categories by Fitch, Inc., Moody's Investors Services or Standard & Poor's.
- U.S. Aggregate Bond Index: Bloomberg Barclays U.S. Aggregate Bond Index: The Bloomberg Barclays US Aggregate Index covers the USD-denominated, investment-grade, fixed-rate or step up, taxable bond market of SEC-registered securities and includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS sectors. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/ BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.
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