PGIM FIXED INCOME

OCTOBER 2019

Policy Anxiety—Perfect for Bonds

Thoughts from our Chief Investment Strategist

Assessing the Two-Track Global Economy—Manufacturing vs. Services

Thoughts from our Chief Economist

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Fixed Income Overview

Positive total returns continued to accrue across the fixed income sectors in the third quarter, leading to some eye-popping double-digit gains thus far in 2019 (see Figure 1 on the following page). Yet, if bonds have managed to thrive in the current environment of economic and policy uncertainty, one only needs to recall a year earlier—Q4 2018—for a reminder of how quickly market sentiment can change.

- With the possibility of change in mind, Robert Tipp, CFA, Chief Investment Strategist, acknowledges that it is understandable to consider how things may go wrong for bonds from here. But in "Policy Anxiety—Perfect for Bonds," Tipp explains that the secular conditions that fueled the recent gains in fixed income haven't changed and, in fact, could intensify going forward.
- Part of the economic uncertainty is grounded in the divergent health of certain sectors. As a case in point, Nathan Sheets, PhD, Chief Economist and Head of Macroeconomic Research, looks at the divide between the global manufacturing and services sectors in "Assessing the Two-Track Global Economy—Manufacturing vs. Services."

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SECTOR VIEWS

Developed Market Rates | 9

Remaining tactical. We continue to see several opportunities in the U.S. as rates remain elevated on a global basis. QE should keep European rates rangebound, while the BoJ may continue its attempt to steepen the JGB yield curve.

Agency MBS | 10

Positive vs. rates. Nominal spreads and OAS have rebounded from distressed levels, and while prepayments have increased, they remain within expectations. The most recent 2018/2019 issues are expected to show the worst convexity.

Securitized Credit | 10

Securitized assets appear attractive on a relative-value basis and as a diversifier to other risk assets. Although fundamentals appear less strong going forward than they have been recently, the top of the capital structure remains attractive and this conservative positioning provides a more-than-adequate buffer.

Corporate Debt | 11

Positive near term on favorable fundamentals, healthy technicals, and potentially tighter spreads. Still favor U.S. money center banks.

Global Leveraged Finance | 12

Constructive on U.S. high yield, particularly in the belly of the curve, with a preference for Bs. Within U.S. leveraged loans, our preference is for the higher-rated portion of the market, with a focus on security selection going forward. In Europe, compression of lower-rated, performing credits may be a theme. We prefer European high yield vs. loans.

Emerging Market Debt | 13

Conditionally constructive. A "barbell" overweight of lower-quality, front-end sovereigns and higher-quality, back-end issues may capture the upside in a constructive environment and limit the downside in a volatile backdrop. The outlook for EM rates and FX is bifurcated with a focus on relative-value opportunities.

Municipal Bonds | 14

Positive. Strong technical framework and attractive valuations should lead to outperformance vs. Treasuries.

Policy Anxiety—Perfect for Bonds

So far, 2019 has been all but perfect for bonds.[1] There may not have been a lot of progress in terms of solving the world's problems, but in a way, that's part of the story behind the bond market's strong returns—not just in Q3, or year-to-date 2019, but over the last several years as well.

Figure 1: Another Solid Quarter and Some Heady YTD Returns

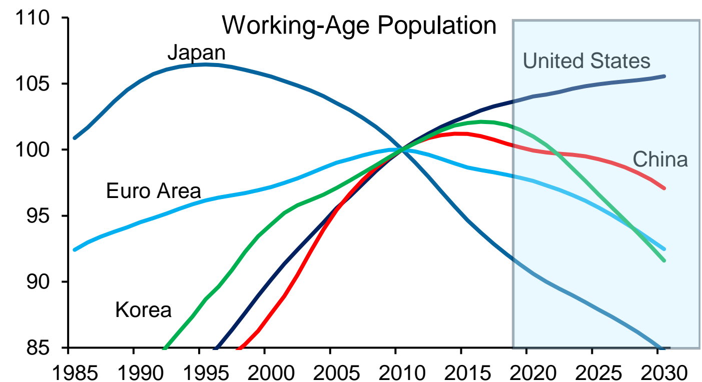
Multi-Sector	Q3 2019	YTD 2019	2018	2017	2016
U.S. Aggregate	2.27	8.52	0.01	3.54	2.7
Euro Aggregate	2.86	8.42	0.41	0.68	3.3
Yen Aggregate	0.52	2.86	0.93	0.18	3.0
Global Agg. Hedged	2.59	8.75	1.76	3.04	4.0
Global Aggregate (USD Unhedged)	0.71	6.32	-1.20	7.39	2.1
Individual FI Sectors	**Q3 2019**	**YTD 2019**	**2018**	**2017**	**2016**
U.S. Long IG Corporates	5.61	22.26	-7.24	12.09	11.0
EM Debt Hard Currency	1.50	12.99	-4.26	10.26	10.2
Long U.S. Treasuries	7.92	19.77	-1.84	8.53	1.3
U.S. High Yield Bonds	1.22	11.50	-2.26	7.48	17.5
U.S. IG Corporate Bonds	3.05	13.20	-2.51	6.42	6.1
European High Yield Bonds	1.33	9.11	-3.35	6.79	10.8
CMBS	1.89	8.64	0.78	3.35	3.3
European IG Corporate	1.29	6.79	-1.25	2.41	4.7
U.S. Leveraged Loans	0.92	6.39	1.14	4.09	9.9
EM Local (Hedged)	2.74	8.15	0.75	3.68	4.7
U.S. Treasuries	2.40	7.71	0.86	2.31	1.0
Municipal Bonds	1.58	6.75	1.28	5.45	0.3
Mortgage-Backed (Agency)	1.37	5.60	0.99	2.47	1.7
EM Currencies	-2.08	1.41	-3.33	11.54	3.5
European Leveraged Loans	1.09	3.81	1.25	3.72	7.0
Other Sectors	**Q3 2019**	**YTD 2019**	**2018**	**2017**	**2016**
S&P 500 Index	1.70	20.55	-4.40	21.26	10.6
3-month LIBOR	0.58	1.92	2.23	1.22	0.7
U.S. Dollar	2.20	1.92	4.90	-7.85	3.2

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), Bank Loans (Credit Suisse). Performance is for representative indices as of September 30, 2019. An investment cannot be made directly in an index.*

The world economy is slowing, and there may not be much anyone or any institution can do about it. It's not so much a typical downturn story about a cyclical turn that unwinds the excesses of a prior boom. *And that's because it's not a cyclical story.* It's more of an environment of central banks pouring accommodative monetary policy fuel on the embers, but not seeing much in terms of accelerating growth or inflation, while pointing fingers at governments and encouraging fiscal stimulus.

As we've hypothesized in our rates papers over the years**, the story appears to be mostly secular. Aging demographics, the end of the 50-year debt explosion with the resulting high debt levels, and other secular trends *have simply lowered growth rates and neutral interest rates around the world (see the Economics section for more on the slowdown).*** And Figure 2 shows that we're still in the early innings of this process.

Figure 2: Global Demographics Poised to Deteriorate Further



Source: Haver Analytics, United Nations. Data as of 2018. Indexed, 2010=100

The four-decade long trend of declining yields continues to dim the outlook for bond market returns. **With yields at historically low levels, below-average credit spreads on non-government products, and the business cycle growing quite long in the tooth, one could be excused for looking at how things might go wrong.**

Will growth reaccelerate and yields jump? Or could growth slow further, putting spread product on a secular widening trend? Or maybe a temper tantrum scenario emerges; a perfect storm of rising rates and widening credit spreads. With these scenarios in mind, could it be time to head for cash and gold before disaster strikes? Or, is the prudent course to remain invested and hope that the long-term results justify the risks? Our guardedly optimistic view is comprised of three parts.

Part I: The Low and Rangebound Rate Thesis Continues

Rather than heading off into uncharted waters, we see the current environment as a continuation of the pattern we've been in for several years where the investment results are dominated by the same fundamental economic and market trends (see "Countdown to Zero—The Final Chapters," and "Lower Range to Drive Stealth Bull Market in Bonds").

[1] *All but perfect because there's still nearly a quarter to go in 2019. And as 2018 proved, a lot can change in the fourth quarter.*

In some ways, we see the secular drivers of low rates— particularly the aging demographics—on the verge of intensifying. As a result, the move to lower rates is likely to give way to either a very low and rangebound rate environment, or even lower rates. As support for our thesis, even the recent steep drop in rates has not boosted growth, inflation, or credit demand. We see that as a litmus test—i.e., do these rates stimulate growth or not?—the lack of an uptick in growth suggests that, if anything, rates are still above equilibrium rather than below. **As a result, market forces and central bankers are likely to remain aligned in their push for lower rates, setting the stage for long-term bonds to continue outperforming cash, but by presumably smaller margins than in the past.**

Part II: Defensive Anxiety vs. Irrational Exuberance

What about non-government spread product at this point in the economic cycle? While it's tempting to assume that an economic expansion more than a decade old must be coming to an end, it begs the questions: what usually causes an economic slowdown that crushes spread product, and do those conditions exist now?

Typically, an economic slowdown would be preceded by some combination of: 1) a boom in asset prices and/or profit expectations that leads to; 2) aggressive borrowing, which is then followed by; 3) overly aggressive central bank rate hikes that pop the bubble of over-levered optimism. By contrast, the current environment is perhaps better characterized by defensive anxiety rather than irrational exuberance and central banks not blithely raising rates to further propagate disinflation, but rather driven to support the economic expansion through rate cuts and QE. **In short, the proximate causes for a downturn appear to be absent. So, our base case envisions an environment over the next few years that will mirror the last several years: ongoing moderate growth and, hence, a general search for yield over the intermediate to long term that should drive the outperformance in spread product.**

Part III: With the Caveat—Buckle Up

As we've noted (in previous Quarterly Outlooks **and** papers**), what stands to be a productive investment environment may also be one punctuated by bouts of fierce volatility.** This might belie the understated nature of the economic backdrop of slow growth and subdued markets. But alas, the markets have repeatedly swung between bouts of low-volatility risk seeking (despite economic fluctuations and geopolitical tensions) and high-volatility risk aversion amid economic and geopolitical developments. Why is there seemingly more market fuss and fluctuation per incident of disturbance than in years past?

Deadline Brexit—Still a Moving Target?

More than three years after the referendum, the Brexit issue remains as uncertain and divisive as ever. As the October 31 Brexit deadline approaches, markets are still looking for a clear path to the UK's divorce from Europe. While the recently approved "anti-no deal legislation," the so-called Benn Act, may avoid a near-term crash-out Brexit, the next stage of the process may open other alternatives and keep markets on edge about the ultimate result. Under the Benn Act, the government must ask the EU for an extension of the Article 50 negotiating period by October 19, unless the Parliament has approved a deal or a no-deal Brexit. Assuming the EU agrees to the extension, the country will then head into a general election in November or early December. However, current political and diplomatic dynamics suggest that neither the British request for, nor the EU agreement to, the Article 50 extension are guaranteed.[1]

A general election would likely be viewed by the electorate as a referendum on whether—and under what terms—the UK should leave the EU. Given that the UK political parties remain divided between and within themselves, the respective electoral campaigns will likely focus on flipping voters across party lines, amplifying already existing political hostilities and making the election result somewhat harder to predict. Current polls show that the Conservatives lead the main opposition Labour party by a margin of about 10 percentage points.

The Conservative (Tory) party hopes that an election could provide it with a stronger mandate to take the UK out of the EU—with or without a deal—thus a Tory majority win would likely increase the probability of a Brexit. However, Tory electoral success is not guaranteed given the threat from the Brexit party, which favors a clean break from the EU.

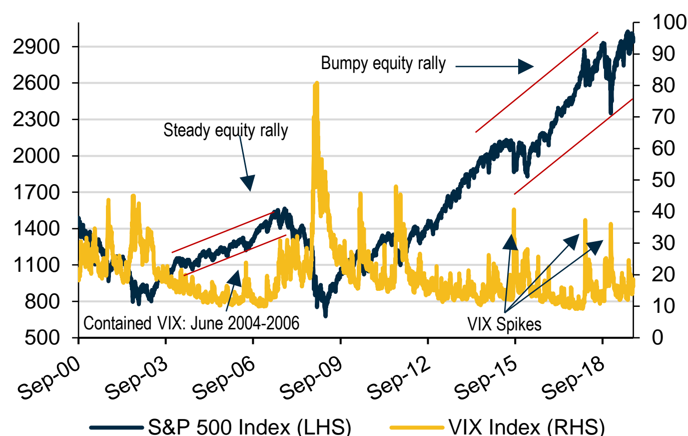
On the other hand, a Labour majority win would likely result in a customs-union type of Brexit deal, accompanied by a confirmatory referendum with an option to vote to remain in the EU. Such an outcome would finally provide some much-needed clarity to the Brexit process, but it would also introduce uncertainty due to Labour's market-unfriendly policy agenda.

Finally, it should be noted that if the UK crashes out of the EU without a deal, the UK might face longer-term existential threats to its sovereignty as the Scottish nationalists push for a second independence referendum and/or Northern Ireland threatens to embark on a re-unification path with Ireland. However, a House of Commons with a Conservative majority is less likely to sanction a second referendum on Scottish independence.

[1] There has been speculation that Johnson may ignore the Benn Act or that his government may try to find legal loopholes to avoid writing the letter to the EU requesting the extension. We think it's unlikely Johnson will pursue this route given the serious legal implications of such actions that could end his political career.

Figures 3 and 4: Equity and Spread Volatility Appears Higher This Cycle Than the Last

Source: Bloomberg as of October 1, 2019



Source: Bloomberg as of October 1, 2019

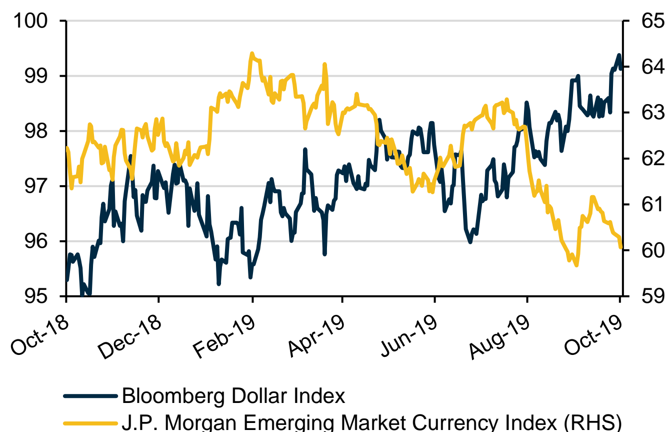
Our hypothesis is that volatile market reactions are amplified by the dangerous combination of slow nominal growth, high leverage, and proximity to the effective lower bound of monetary policy. As we've seen a few times during this expansion, each time a downside risk emerges, markets begin to reflect/fear the worst—a downward spiral that can't be reversed by rate cuts or any other poof of government fairy dust—and so the markets take it on the chin.

During the bouts of volatility since the financial crisis, investors have been frequently reminded of the need to position accordingly—i.e., judicious credit selection along with a combination of patience and tactically capitalizing on opportunities to add risk. **After all, in the absence of a serious economic downturn or credit event, the bouts of volatility should continue to be followed by recovery, allowing risk product to outperform over the intermediate to long term.**

Currencies: Strong Dollar And a Low Volatility Exception

The dominant trend in currencies—the strength in the U.S. dollar—appears poised to continue. The combination of relatively steady growth, the world's highest rates for a DM country, and maybe being in the driver's seat of the trade war juggernaut has kept the dollar moving higher vs. DM currencies, while EM currencies generally remain on the back foot as well.

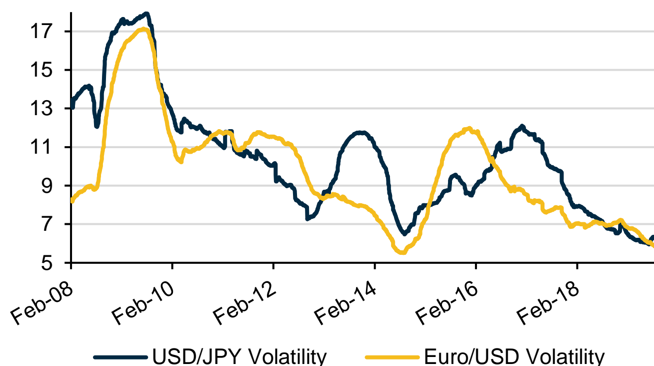
Figure 5: U.S. Dollar Strength Recently Unrelenting vs. EMFX



Source: Bloomberg as of October 1, 2019

Will the Fed's move to increase repo market liquidity be the nick in the armor that tips the dollar over? Will the expanding twin deficits in the U.S. eventually come home to roost? We'll stay tuned. But as of now, that day of reckoning seems well into the future. One interesting feature of this strong dollar trend has been its record low volatility. While we can't be sure what's driving the phenomenon—perhaps it's the stability in interest rates and economic fundamentals between countries or investor apathy and confusion—our best guess is that the trend continues for now.

Figure 6: Low FX Volatility May Be Around for Some Time



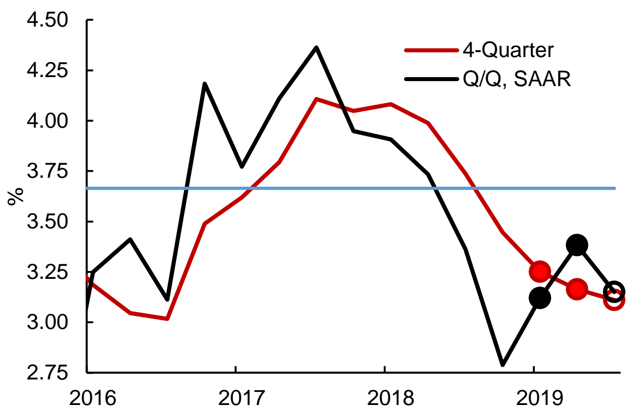
Source: Bloomberg as of October 1, 2019.

The Bottom Line: Slow nominal growth along with low or negative rates may not feel good for the average world citizen, nor register as success for policy makers. But as far as the bond market is concerned, accommodative central banks, low and rangebound rates, and an extended economic expansion should provide continued support, keeping long-term yields quite low and fueling spread market outperformance over the intermediate to long term. Ongoing bouts of volatility and investor disorientation should continue to provide above average opportunities for adding value through active management.

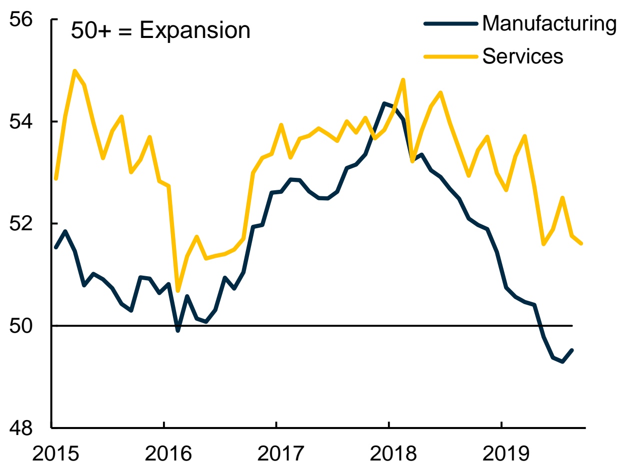
Assessing the Two-Track Global Economy—Manufacturing vs. Services

The recent performance of the global economy, although "soft" relative to its historical trend, has hardly been a disaster. Global growth hovered around 3.25% during the first half of the year, and we estimate that it landed at a similar pace in Q3. Given the headwinds from the trade war, this performance has shown notable resilience. In addition, with demographics becoming less supportive and China on a slowing longer-term trajectory, the global economy's sustainable growth rate seems poised to step down toward 3% over the medium term. As such, this year's performance may be a taste of things to come.

Figures 1 and 2: Global GDP Growth and Global PMIs



Source: Haver Analytics and PGIM Fixed Income



Source: IHS Markit and Haver Analytics

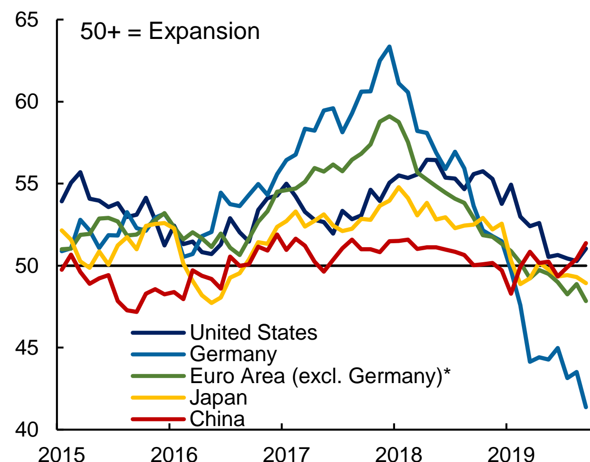
Looking beyond these aggregate numbers, we see evidence of a two-track global economy. Purchasing Managers Indexes (PMIs) indicate that the manufacturing sector is now in recession, while the services sector has slowed but has shown greater resilience. Going forward, the key question is whether the downward pull from manufacturing, coupled with restraint from the trade war and a long list of other challenges outlined below, eventually drag the services sector into recession as well. On the positive side of the ledger, central banks around the world are riding to the rescue. Of a panel of 30 leading central banks, over half of them, including the Federal Reserve and the European Central Bank, have cut rates during the past three months. The current episode is now the most concentrated easing cycle since the global financial crisis. Our sense is that the stimulus from these cuts is just beginning to be felt. Yet, a key question is whether they have the policy space to provide sufficient support, especially if the downdrafts intensify.

On balance, we see the global economy likely proceeding at roughly the present pace through the end of next year, with inflation remaining low and central banks providing stimulus, which should allow manufacturing to gradually find its footing. This environment should provide a favorable backdrop for financial markets. However, we see the risks around this central scenario as skewed mainly to the downside.

Manufacturing Has Turned Down

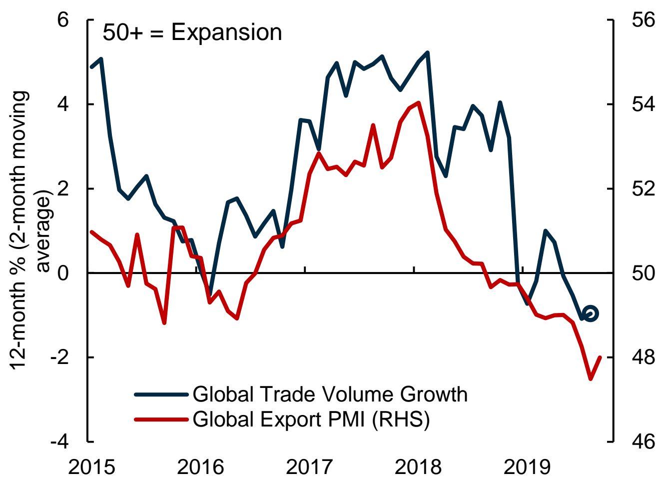
The country-level manufacturing PMIs tell a sobering story. Since late-2017, German manufacturing has plunged from over 60 to the low 40s, well into recessionary territory. This drop reflects headwinds from the trade war, China's growth slowdown, and soft UK demand given the Brexit uncertainties (the UK is one of Germany's major trading partners). These factors have dragged down manufacturing in other major countries, including the rest of the euro area, albeit to a lesser extent. In all of these other countries, manufacturing looks stagnant near the 50 breakpoint.

Figures 3: Manufacturing PMIs



*Source: IHS Markit, Haver Analytics, and PGIM Fixed Income. *German weights from Eurostat.*

Figure 4: Global Trade



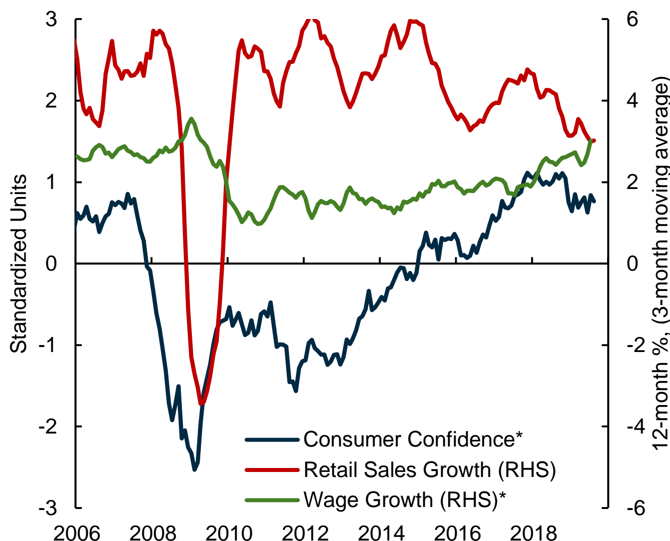
Source: Netherland's Bureau for Economic Policy Analysis and IHS Markit

In addition to the PMIs, other key manufacturing indicators have been soft. Global trade growth has slowed significantly this year. Global investment measures remain broadly weak, and data for the global high-tech sector point to further softness.

But There Are Also Sources of Support

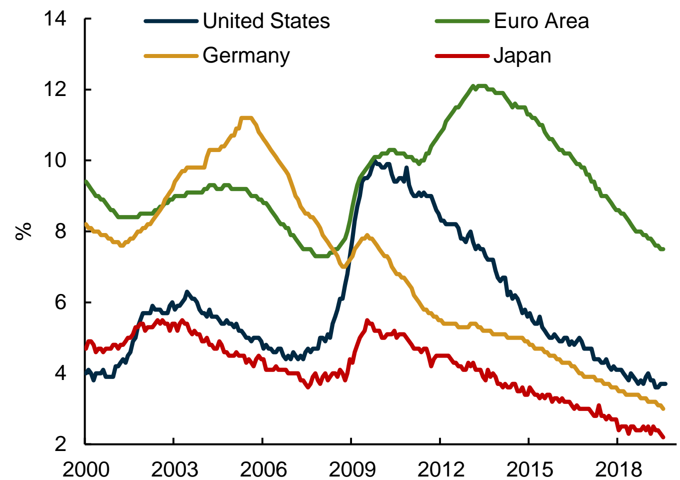
In the face of the manufacturing downturn, indicators for other sectors have generally weakened a notch, but they have continued to point to moderate gains. In addition to the global services PMI shown in Figure 2, consumer confidence in the advanced economies and global retail sales are generally moving ahead at a solid pace. This performance is supported by labor market tightness in major countries. Wage gains have continued and, if anything, have accelerated slightly, while unemployment rates in key countries have remained low.

Figure 5: Consumer Readings and Unemployment Rates



Sources: Haver Analytics and PGIM Fixed Income

Figure 6: Unemployment Rates



Sources: National Sources via Haver Analytics

As we move toward the end of the year, the markets are reacting to the latest developments in the tug-of-war between manufacturing weakness and more supportive, offsetting factors. This juxtaposition is playing out against a backdrop of some extraordinary global challenges.

Acute Global Risks Remain Skewed to the Downside

The Trade War: Our judgment is that the trade war has contributed significantly to the downturn in manufacturing and, more generally, to the slowing of the global economy. While predicting President Trump's next move is probably impossible, we maintain the general view that he needs a solid economy and financial markets to support his re-election bid; thus, he will not push the trade war so hard that the economy falls into recession. Similarly, President Xi has incentives to come to the table and strike a deal. While we are not calling for an imminent end to the trade tensions, we believe that they will be put on ice no later than Q1 2020. The recent impeachment effort may create some upside risks to this view, as President Trump may be looking for favorable offsetting headlines.

China Slowdown: China's economy this year has shown more underlying softness than we had expected—and the authorities' corresponding stimulus measures have been less forceful. By our reckoning, this soft performance reflects the imprint of the trade war, the long-tail of last year's de-risking campaign, but perhaps also some deeper slowing in the domestic economy. In tandem, China's high debt levels are limiting authorities' appetite for large-scale stimulus packages like those deployed in previous episodes. That said, our read is that the policy stance has again turned toward stimulus, albeit likely of moderate size, and President Xi remains committed to his 6.0% to 6.5% growth target for this year. Growth in 2020, however, will most likely have a 5% handle.

Brexit, Japan's Consumption Tax, and EM Stresses: We are also monitoring the ongoing tensions from Brexit, Japan's October 1 consumption tax hike, and stresses emerging from Argentina. Each will likely have implications for the affected domestic economy, with

secondary impacts regionally. However, we do not see these factors posing first-order risks to the global growth outlook.

Longevity of the Cycle: With the U.S. expansion in its 11th year, the longest of the post-war period, and the global cycle in a broadly similar position**, it's reasonable to ask whether this year's slowing of the global economy reflects, more deeply, the business cycle's advanced age. We remain skeptical that this is the case.** The global economy still seems relatively free of underlying vulnerabilities and imbalances, both economic and financial, which have triggered prior recessions. **Thus, we see the major risks as flowing from the unintended consequences of policy and political decisions.**

The remainder of this section considers developments in key parts of the global economy in more detail.

The U.S.

With domestic demand rebounding from weakness early this year, consensus U.S. GDP growth forecasts for 2019 and 2020 remain little changed from where they began the year. **We expect GDP to grow 2.4% this year and 1.9% in 2020, thus stair-stepping gradually lower from 2.9% in 2018 as the impact of fiscal stimulus wanes.** Inflation, too, has staged a notable rebound after plunging early this year on temporary factors. However, the U.S. outlook faces risks from global and domestic headwinds, including weaker economic growth abroad, persistent trade war uncertainties, and global political risks, particularly as the U.S. 2020 elections approach. But the Fed's pivot to rate cuts, with one additional 25 bp cut likely by year end, coupled with easier stances by most other central banks, is expected to provide a cushion against downside economic risks, and may even introduce more balanced upside risks by next year.

Consumer spending remains a key driver of economic strength, now clocking in at almost a 3% real pace year-over-year and a 4+% annualized real rate over the last three months. The fundamentals supporting consumption are strong—employment growth is still healthy, albeit not as strong as last year when fiscal stimulus provided an extra boost, and real disposable income is expanding solidly. Households also have more of a cushion in the event of negative shocks—e.g. the jump in oil prices following the attacks in Saudi Arabia—given their relatively elevated 8% savings rate. Business investment is weaker this year than last, but housing is staging a rebound and is set to add solidly to GDP growth in the second half of 2019. In sum, our judgment is that the U.S. economy has navigated the prevailing global risks fairly well to date.

The Euro Area

The persistent trade war and Brexit-related uncertainties continue to overshadow the outlook for the euro-area economy. Euro-area export volume growth turned negative in Q2 (relative to a year earlier), and the long-lasting slide in industrial production deepened throughout Q3. The contraction of capital goods output extended throughout Q3 amidst elevated investment uncertainties. It is no wonder that economies that are disproportionately dependent on trade and manufacturing are at the forefront of the European downturn. In our estimation, Germany likely entered a mild recession in the third quarter, while the manufacturing recession has so far prevented Italy's economy from regaining its footing. Looking ahead, as the euro PMI continued its decline throughout Q3, order books continued to contract, thus casting a shadow well into next year. Amidst signs that the manufacturing recession is beginning to weigh on domestic demand, the euro-area services PMI sagged in Q3 and overall employment growth eased somewhat, although remaining solid.

Against this background, the ECB delivered a broad-based easing package in September. The package spanned a wide array of measures, including a cut in the key policy rate deeper into negative territory and a resumption of asset purchases. However, at €20B per month, the scale of the purchases is relatively small, likely reflecting the opposition of hawks on the Governing Council. As expected, the ECB cut both its inflation and growth forecasts, although its growth expectations remain rather optimistic in our view. **We expect real GDP growth to decelerate to 0.8% next year, well below the downward revised ECB forecast of 1.2%. Further growth and inflation disappointments may trigger another deposit rate cut, possibly as early as December 2019.**

Japan

Ahead of the consumption tax hike on October 1, Japan's economy was fairly solid, bolstered by domestic demand that mitigated the impact of slowing net exports amidst weaker global growth and elevated trade war concerns. But the consumption tax hike is expected to create volatility in GDP growth, as spending was likely pulled forward ahead of the tax, with consequent payback expected through coming months. The negative impact on consumption and overall GDP is expected to be more muted than after the 2014 hike; the current tax hike is smaller and narrower in scope, and it is offset for a time by fiscal support. On balance, real GDP growth is forecast to slow from a pace of nearly 1% in 2019 to around 0.5% in 2020, but an outright recession is likely to be avoided. Inflation barely remains in positive territory, running at 0.5% in August. Despite a strong labor market and low 2% unemployment rate, wage growth remains subdued. Modest upward pressure on the yen this year and the low global inflation backdrop have also capped price pressures. Faced with limited remaining room for policy easing, the BoJ has postponed additional accommodation, but appears likely to ease further after the tax hike. A continued emphasis on steepening the yield curve in order to improve the monetary transmission mechanism is expected.

China

A confluence of developments in Q3 led us to change our outlook for China after broadly disappointing data releases. Industrial production growth came in at the lowest rate since well before the 2008 global crisis; producer price deflation became more

entrenched, and stimulus efforts have yet to show traction, notwithstanding sharply increasing fiscal deficits; meanwhile, onshore interest rates substantially lagged the global trend lower.

In addition to the underwhelming data, trade tensions with the U.S. escalated sharply, and August saw a tit-for-tat in higher tariffs and retaliation that sent global markets into risk-off mode. An announcement of renewed trade talks for October has assuaged market concerns somewhat. But it should be stressed that by the end of Q3, U.S. tariffs on China had increased substantially from Q2 (with a rate of 25% on about half of all U.S. imports from China), China retaliated, and the ability of Huawei to access U.S. high-tech inputs remained uncertain. Moreover, further tariff increases are scheduled for October 15 with further hikes slated before year end. As such, the Chinese government has acknowledged its difficulty maintaining growth at the present pace. We agree and have lowered our growth projection for next year to below 6%.

Other Emerging Markets

After rebounding fairly strongly in Q2, following a poor showing in Q1, leading indicators point to a mild acceleration in the emerging markets (EMs). In addition, in line with renewed stimulus from developed market central banks, many EM central banks, including those in China, Brazil, Mexico, Russia, South Africa, and India, have also cut their policy rates.[2] This easing is mainly affecting exchange rates rather than inflation, which remains generally subdued. We remain cautious about the EM economic outlook given the risks from the trade war and the global manufacturing downturn. As a group, EMs still seem to be in limbo, awaiting more clarity on the DMs' policies and growth trajectory. At the individual country level, two events stand out. First, the recent attack on Saudi Arabia's oil infrastructure led to an increase in global geopolitical risk, and the heightened geopolitical tensions contribute to the overall uncertainty and cast a meaningful shadow over the outlook.

The second country-specific event was the result of the primary elections in Argentina, which rendered a surprising landslide victory for the opposition candidate Alberto Fernández. He is now favored to win the election later this year. Markets reacted badly to this outcome, fearing a return of the unorthodox policies pursued by his running mate, former president Cristina Fernández de Kirchner. To date, he has failed to articulate a convincing agenda to address Argentina's challenging economic picture in the context of the IMF program. Against this backdrop, bond prices now reflect the market's expectation of a potential debt restructuring. As an attempt to gain votes for the October presidential elections, the current administration has decided to extend the repayment of the local-law debt. In addition, it has increased salaries and subsidies, cut income taxes, and reintroduced capital controls. Meanwhile, the economy remains mired in stagflation, FX reserves keep declining, and the continuation of the IMF program appears highly uncertain.

Developed Market Rates

Developed market rates took another leg down in Q3 as central banks collectively eased policies to counter signs of mounting global economic weakness and uncertainty. It was the second consecutive quarter of double-digit basis point declines for U.S. and German 10-year yields (down 35 bps and 25 bps to 1.67% and -0.57%, respectively), while the Japanese 10-year yield also fell deeper into negative territory (down 10 bps to -0.22%).

As Q4 progresses, U.S. Treasury yields remain elevated in a global context, particularly with nearly $15T in negative-yielding debt outstanding. We remain bullish on 5-year and 10-year TIPS and 30-year nominal bonds, particularly given the relatively steep term premium along the U.S. yield curve. That said, the back of the curve could see some volatility going forward if the Treasury proceeds with ultra-long issuance of 50-year or 100-year bonds in 2020.

The U.S. repo market also captured investors' attention as rates surged amid a confluence of events. We believe the New York Fed's overnight and term repo operations will be extended until the next FOMC meeting on October 29-30 when the Fed could announce $300-$500B in yearly asset purchases as a way to rebuild banks' excess reserves. We also anticipate that the Fed may reduce the target range on the Fed funds rate by another 25 bps by the end of the year. We've become more constructive on 30-year swap spread wideners as renewed Fed asset purchases could lead to a lower 30-year U.S. Treasury yield (i.e., wider 30-year swap spreads). In addition, with derivatives remaining rich to cash Treasuries, we're maintaining basis positions in futures and swap spreads across the U.S. rates complex.

In Europe, the ECB's decision to renew its asset purchases creates a supportive backdrop for rates, particularly at the 7-year point of the German Bund and French Oat markets.

After the Bank of Japan mentioned the desirability of a steeper yield curve to support the banking sector, it subsequently announced reduced purchases at the back of the curve. Looking ahead, the BoJ may take additional steps in its attempt to steepen the yield curve.

Outlook: Remaining tactical. We continue to see several opportunities in the U.S. as rates remain elevated on a global basis. QE should keep European rates rangebound, while the BoJ may continue its attempt to steepen the JGB yield curve.

[2] *China's PBoC reduced its reserve requirement ratio.*

Agency MBS

In what was a relatively volatile quarter for MBS amid declining Treasury rates and associated prepayment concerns, option adjusted spreads ultimately ended Q3 slightly tighter. Our core positioning themes—preferences for 30-year 3.5% issues, higher coupon GNMA2s, 15-year 2.5% and 3.5% issues, and specified pools over TBAs—largely played out during the volatility. Looking ahead, the option adjusted spreads on MBS continue to appear attractive vs. U.S. Treasuries. Our long-standing preference for specified pools over TBAs—based on better convexity and more attractive spreads—remains, but with a caveat. TBAs have cheapened considerably and now appear more reasonable. This is a notable development given that specified pools are becoming difficult to source cheaply.

From a demand perspective, MBS paydowns have slightly exceeded the Fed's cap recently. Therefore, some small purchases by the Fed will likely absorb some of the cheapest-to-deliver production pools. The weakness in conventional TBA dollar rolls largely reflects investors' hesitancy toward cheapest-to-deliver pools. Elsewhere, U.S. commercial banks continued to add MBS with their YTD annualized holdings rising to 12% compared to a 7% annualized rate over the last five years. It's possible bank demand could rise further if the Treasury yield curve were to steepen.

In terms of GSE reform, in September, the U.S. Treasury released a detailed Housing Reform Plan on behalf of the Trump administration that began the groundwork for the GSEs to emerge from conservatorship and formalize an ultimate government backstop for MBS. Although the plan is unlikely to move forward in Congress, the plan provided much-needed reassurance that FHFA Director Mark Calabria would not seek to change the existing implicit guarantee of Fannie Mae and Freddie Mac MBS.

In terms of positioning, we continue to prefer specified pools while limiting exposure to TBAs, despite their more reasonable levels. However, generic UMBS 4.0% issues appear unattractive given their strong hedge-adjusted performance and potential for elevated prepayments if rates decline further. Elsewhere, production coupons in conventional 30-year and 15-year issues appear more attractive after their underperformance on new supply. Within GNMA2s, we remain positive on post-peak pools across the coupon stack and continue to favor higher-coupon issues.

Outlook: Positive vs. rates. Nominal spreads and OAS have rebounded from distressed levels, and while prepayments have increased, they remain within expectations. The most recent 2018/2019 issues are expected to show the worst convexity.

Securitized Credit

Sector	Subsector	LIBOR OAS	Spread Change (bps)	
		9/30/2019	Q3	YTD
CMBS				
CMBS: Conduit 2.0	First-pay 10-year	95	9	-8
CMBS 3.0 Conduit BBB-	BBB-	278	-17	-142
CMBS: CMBX (OTR)	AAA	55	3	-22
CMBS: CMBX (2012)	AA	81	1	-65
CMBS: Agency Multifamily	Senior	60	2	-8
Non-Agency RMBS				
Legacy	RPL Senior	81	2	-26
Legacy	'06/'07 Alt-A	140	-5	-10
GSE Risk-Sharing	M2	202	-21	-88
CLOs				
CLO 2.0	AAA	133	5	-2
CLO 2.0	AA	180	0	-25
CLO 2.0	BBB	400	50	-25
ABS				
Consumer ABS	Seniors (One Main)	85	-10	0
Consumer ABS	B (One Main)	130	-10	15
Refi Private Student Loan	Seniors	100	5	5
UK Non-Conf 2.0 Senior	A Class	100	0	-35
Generic	AAA Credit Card	34	1	2

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Non-Agency: Our expectations for slowing home price appreciation (HPA) has emerged in recent data, and **we believe HPA may move lower in 2020, while remaining positive. Overall, we remain constructive on residential housing and post-crisis mortgage credit. Our favorite non-agency RMBS investments remain bespoke financings of high-quality mortgage pools at spreads of roughly LIBOR +115-225 bps.** Legacy, pre-crisis bonds remain fully valued. UK RMBS spreads have held in well and are tighter on the year. Three-year non-conforming and buy-to-let seniors trade L+95-100bps, while second pays trade at L+150-160 bps. **We feel Brexit-related tail risks are not fully priced and see more favorable relative value when considering a global securitized products opportunity set.**

CMBS: Commercial real estate (CRE) fundamentals appear stable as vacancies remain low and net operating income (NOI) growth trends above inflation. Generally, new CRE supply has been in equilibrium with demand, and there is a lack of typical late-cycle overbuilding. **Conduit underwriting for new issue CMBS is showing early indications of deterioration, reflected by a subtle shift towards higher LTVs and unusual loan characteristics. Given this deterioration, we're closely**

monitoring specific submarkets (e.g. NYC office) as well as the high concentration of hospitality and suburban office properties that have taken the place of retail in recent conduit transactions. In non-agencies, we continue to favor risk-remote senior tranches from CMBS conduit transactions that we expect to outperform over the next real estate or economic cycle and single asset/single borrower (SASB) transactions, from seniors to the mezzanines, depending on specific property fundamentals. We expect full year 2019 and 2020 Agency CMBS issuance to be in line with 2018. **We continue to recommend Agency CMBS as a diversifier.**

ABS: Consumer fundamentals in aggregate remain stable and employment is strong; however, **we are mindful of increasing consumer leverage, particularly for lower income cohorts, leaving consumer lending books more exposed should employment conditions soften. Tiering in originator underwriting remains prevalent and warrants caution, reinforcing our strong preference for originators that employ cashflow-based underwriting, have a consistent capital base, and have robust legal/compliance capabilities.** The YTD issuance of $173B is just 3% behind last year's pace, and we expect 2019 issuance to match 2018's totals by year end. Looking forward, our expectation is for ABS securities to earn their carry in Q4. **We currently see value in up-in-quality securities/issuers in refinance private student loan (5-year, AAAs at swaps+100 bps), subprime auto (3-year, As at swaps+85-90 bps), and unsecured consumer loan (3-year, AAAs at swaps+85-120 bps) that are currently trading at-or-wider than their 12-month averages. Select ABS shelves offer attractive carry and some upside potential from spread tightening at current levels, with sufficient structural features to protect senior tranches from the risks of deteriorating consumer credit performance.**

CLOs: CLO issuance remains ahead of expectations, which is hindering spread compression in senior tranches while exacerbating weakness in mezzanine tranches. Fundamentally, senior CLO tranches remain resilient to underlying bank loan credit performance due to significant credit enhancement and underlying portfolio diversification. However, mezzanine and equity CLO tranches have been affected by many underlying loan issuers, resulting in risk repricing and wider spreads. Defaults in bank loans remain low as markets remain extremely receptive to supply and underlying economic fundamentals remain well supported. **However, we expect that recoveries in the next default cycle will be lower relative to historical observations. We believe that the increase in loan-only capital structures will dampen recoveries and that some loans will be indistinguishable from traditional high yield bonds upon default. We expect top tier AAA spreads to remain within a 5 bps range of recent levels and AA spreads to remain around 50 bps wide of AAA spreads. At these spreads, senior CLOs continue to offer excellent risk-adjusted returns, but we remain cautious on mezzanine tranches as spreads do not reflect the potential for lower loan recoveries, higher cashflow variability, higher ratings volatility, ephemeral liquidity, nor the higher mark-to-market volatility of these tranches.**

Outlook: Securitized assets appear attractive on a relative-value basis and as a diversifier to other risk assets. Although fundamentals appear less strong going forward than they have been recently, the top of the capital structure remains attractive and this conservative positioning provides a more-than-adequate buffer.

U.S. and European Corporate Bonds

	Total Return (%)		Spread Change (bps)		OAS (bps)
	Q3	YTD	Q3	YTD	9/30/2019
U.S. Corps.	3.05	13.20	0	-38	115
European Corps	1.29	6.79	-1	-41	111

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U.S. and European corporate bonds also posted strong results in Q3 amid continued (albeit low) growth, stable inflation, strong technicals, and central banks that appear set to provide stimulus.

U.S. Corporate Bonds: Credit metrics remain solid with strong profit margins and ample free cashflow. However, Q3 earnings growth is expected to weaken and may even turn negative for some companies. Not only have issuers taken on excess debt in recent years, but slower global growth and escalating U.S./China trade tensions are contracting the manufacturing sector. On the positive side, M&A deals are slowing, credit rating upgrades are still outpacing downgrades, and a number of companies are taking steps to deleverage their balance sheets. Anheuser Busch InBev, for example, successfully spun off its Asia Pacific business in Q3 and used some of the proceeds to pay down $5B of debt.

New issuance, often at a frantic pace, continues to steer the market. In many cases, proceeds are being used to pay off or refinance existing debt at lower rates and/or longer maturities. As a result, while gross supply is expected to decline just 5% in 2019, net supply is projected to fall 23%. Given the abundance of negative yielding global debt, and the higher absolute level of U.S. yields, we expect the "reach for yield" to continue for some time.

Our core positioning remains flexible, but little changed on the quarter. We continue to overweight lower-quality, shorter maturities and underweight higher-quality, long-maturity industrials that have increased leverage. We are selectively investing in BBB-rated non-financials that are deleveraging (e.g., healthcare, telecom, and pipelines). We continue to favor money center banks and certain European banks that have cheapened amid uncertainties on the continent. We still favor electric utilities and taxable municipal bonds and see some

value in reverse yankee corporates. We are negative on lower-rated financials and cautious on autos given weaker global growth and the workers' strike at General Motors.

European Corporate Bonds: European spreads first tightened in July in anticipation of more ECB accommodation, widened in August, then tightened again toward quarter end. As part of the ECB's easing package, the November resumption of €20B in monthly asset purchases may see €3-4B allocated to corporates. This is on top of the current reinvestment of maturities and coupons. In all, European credit fundamentals remain stable while technicals dominate the market. Issuance has surged recently and is expected to continue apace, particularly from U.S. companies drawn by ultra-low rates. Low dealer inventory is also exaggerating spread movements. Once issuance slows, we believe spreads may be poised to tighten. **In European portfolios, we are slightly short spread risk with an overweight in short-to-intermediate corporates and are looking to reduce long-dated BBB-rated exposure into market strength. We're holding overweights in banks, insurers and non-core REITS as well as from reverse yankee euro denominated issues with large concessions relative to USD holdings and EUR issuers of similar quality.**

Global Corporate Bonds: Global portfolios are also positioned slightly short spread risk. With the value of USD and EUR spreads roughly even at quarter end, we are looking to reduce our EUR overweight, and we remain flat to underweight GBP credit spreads. We still prefer money center banks and U.S. utilities denominated in U.S. dollars, as well as banks and select corporates denominated in euros (but not necessarily European companies). We continue to take advantage of price and yield dislocations between EUR and USD bonds of the same and/or similar issuers. Going forward, we hold a positive short-term view on U.S. and Europe corporates. Spreads have already tightened solidly this year but may narrow further amid slow-to-stable growth and strong supply/demand. Risks include geopolitical tensions, including Brexit, trade disruptions, negative earnings surprises, and softer economic growth across major countries, including China.

Outlook: Positive near term on favorable fundamentals, healthy technicals, and potentially tighter spreads. Still favor U.S. money center banks.

Global Leveraged Finance

	Total Return (%)		Spread Change (bps)		OAS/DM (bps)
	Q3	YTD	Q3	YTD	9/30/2019
U.S. High Yield	1.22	11.50	-5	-131	402
Euro High Yield	1.33	9.11	-1	-139	379
U.S. Leveraged Loans	0.92	6.39	18	-72	478
Euro Leveraged Loans	1.09	3.81	-9	-43	415

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U.S. Leveraged Finance: As the U.S. high yield sector posted another solid quarter of total returns, pushing its 2019 return higher into double-digit territory, we noted some recent structural changes within the market. **The market has become shorter based on years to final maturity, which we view positively**. While not necessarily a wall of maturities, the shorter composition should keep management teams focused on credit profiles and liability management. On a par value basis, the market has also contracted in size over the last several years. The ongoing change occurred as 2019 net issuance is up just 8% year-over-year amid increased refinancing activity. Recent issuance has been higher-quality where demand has been the strongest. Gross issuance thus far has totaled $208B, representing a 24% increase year-over-year. Moody's trailing 12-month global speculative grade issuer default rate ended August at 2.3%, unchanged since the end of Q2. Moody's expects the global default rate to end 2019 at 2.6% and climb to 3.6% a year from now. **We also expect defaults to slightly rise in the coming 12 months (mostly in energy) and to remain below historical averages.**

In terms of positioning, we prefer B-rated names and are taking advantage of a steep spread curve with an overweight in the 4- to 7-year segment and an underweight to the front of the curve. We're balancing a large underweight to BB-rated credits with AAA CLOs. We're also maintaining overweights to independent power producers and U.S. consumer-related names. We remain cautious on commodities, but are exploring select natural gas opportunities.

Despite continued retail outflows, U.S. leveraged loans continue to receive support from strong CLO creation and loan paydowns. Loan default rates are tracking near 1.5% and are expected to remain low into the second half of 2020. Loan issuance is down more than 40% compared to 2018, and we expect primary supply to trend lower in Q4. Loan demand will likely moderate on negative net flows amid anticipation of additional Fed rate cuts and a slowdown in CLO creation due to lower equity arbitrage.

We continue to favor BB-rated, public companies (preferably with a high yield bond cushion) due to the risks around slowing global growth, tariff/trade war risk, and weak loan documentation. However, we acknowledge that this segment of the market has outperformed materially in 2019 and certain lower-quality loan issuers appear to offer superior relative value at this point. We believe risks in the retail, technology, auto suppliers, energy, and pharmaceutical sectors are the most prevalent, while fundamentals in the building products, gaming, and cable sectors are stable or improving. Security selection will be increasingly crucial if global growth slows and creditor protections weaken.

European Leveraged Finance: European high yield carried its strong 2019 performance into Q3, taking year-to-date total returns near +10%. As global growth softened, dovish central banks and a lack of net new supply continued to support the market, sending spreads tighter in Q3. Fundamentals generally remain solid with low defaults (Moody's European default rate of 1.1%), however

some cyclical credits have begun to feel earnings pressure, and dispersion and stress have picked up. Careful credit selection and active risk management are undoubtedly being rewarded in the current environment as about 10% of the index has posted negative returns this year. Technicals remain firm with negative net supply in Q3 due to a lack of primary issuance and the significant Win-Tre redemption. **With a benign supply outlook for Q4, we expect the market to remain technically well supported into year end.**

European leveraged loans also posted solid returns in Q3. Loans remain less volatile than bonds but have lagged the strong performance of European high yield this year. The primary market remained very active in Q3, but was comfortably absorbed by strong demand, with deals generally pricing tighter than initial guidance. **Given the strong appetite for loans, it's likely we will see a pickup in repricing activity of existing loans in Q4**.

We remain constructive on European high yield given benign default expectations, favorable supply technicals, dovish central banks, and our expectation of a resolution of the U.S.-China trade dispute in the medium term. **That said, we think credit selection remains critical with earnings misses and other negative catalysts punished by an increasingly bifurcated market.** In terms of positioning, we continue to think carefully selected B-rated issuers offer the best risk/reward, and **if the market remains constructive, compression of the lower-rated (but performing) credits will likely be a theme in Q4.** Within loans, our constructive view remains amid supportive technical. However, caution should be exercised given weak underwriting standards. **On a relative-value basis, we continue to prefer European high yield vs. loans, but the differential is less pronounced than earlier this year and requires assessment on a case-by-case basis.**

Outlook: Constructive on U.S. high yield, particularly in the belly of the curve, with a preference for Bs. Within U.S. leveraged loans, our preference is for the higher-rated portion of the market, with a focus on security selection going forward. In Europe, compression of lower-rated, performing credits may be a theme. We prefer European high yield vs. loans.

Emerging Markets

	Total Return (%)		Spread / Yield Change (bps)		OAS (bps)/ Yield %
	Q3	YTD	Q3	YTD	9/30/19
EM Hard Currency	1.50	12.99	-9	-78	337
EM Local (hedged)	2.74	8.15	-0.48	-1.24	5.21
EMFX	-2.08	1.41	0.62	0.40	5.70
EM Corps.	1.66	10.64	14	-24	347

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Despite the various headwinds facing EMD, the sector put forth a resilient performance in Q3. Looking ahead, the broader global backdrop appears relatively constructive amid expanding central bank stimulus, investors' ongoing search for yield, and low—but not recessionary—growth. The two-way risk to the trade war remains: a truce could provide a tailwind to EM assets, while an escalation could mitigate central banks' easing steps.

EM Hard Currency Sovereigns: The lack of Argentina-related and Venezuela-related contagion in Q3 reflects the diversity in EM economies, particularly those with high-yield ratings, as well as instances of prudent policy planning. For example, Ukraine should benefit from land reform that may be passed as early as Q4, while Turkey should continue to stabilize as the country's external vulnerability diminishes. With our expectation that global DM rates are likely to remain low, higher-quality credits will likely find support given their relatively strong balance sheets and investors' demand for duration. Our diversified positioning, via a barbell approach, should continue to be an effective strategy in capturing alpha.

EMD flows generally appear balanced as investors have avoided growth-sensitive assets with modest positioning (excluding Argentina) across the sector. That said, the total return in hard currency sovereigns continues to draw attention, and recent spreads of 337 bps generally remain attractive relative to the 2018 tights of 260 bps and to most U.S. high yield spreads. On the supply side, financing needs for EM sovereigns and corporates are very low in Q4 with net financing needs close to zero.

Local Rates: While the global rate backdrop appears constructive amid slowing inflation and below-trend growth, the recent rally in EM rates seems overextended—with the recent 5.85% yield on the GBI-EM index marking a five-year low—as most expected interest rate cuts are largely priced in. In a relatively rare occurrence, the correlation between EM local rates and EMFX turned negative and was primarily driven by a lack of FX passthrough to inflation, allowing many EM central banks to maintain their dovish stances.

FX: The outlook for EMFX is relatively weak, but U.S. dollar strength is relative, not absolute. Currencies with strong year-to-date performance include countries with strong growth, attractive real yields, and low external vulnerability, such as Egypt, Ukraine, Russia, Mexico, Indonesia, and Turkey. Currencies with weaker YTD performance include countries with open economies, low growth, and low real yields, such as those in Central/Eastern Europe, South Korea, and Brazil. We expect this theme to continue with below-trend global growth and lingering trade protectionism.

Positioning: We continue favoring hard currency spreads, particularly select B-rated sovereign issuers that are implementing reforms with proven market access and/or support from the International Monetary Fund, including Ecuador, Ukraine, Egypt, and the Ivory Coast. We're maintaining overweight positions in Argentina on expectations that a recovery value will be higher than current market prices. In the BB-rated space, Turkey appears attractive as its external vulnerability has improved recently. The

index inclusion of the Gulf Cooperation Council countries provides opportunities in IG issuers, such as Qatar and Saudi Arabia. Select quasi-sovereigns, such as Petrobras and Pemex, also appear attractive. The latter trades similar to a B-rated credit at 250 bps wide to Mexico, and its recent liability management transaction and forecast of no new issuance for more than two years supports a positive technical tailwind. Other higher-quality exposures include Romania, Indonesia, and Russia. Indonesia and Russia have relatively closed economies with low external vulnerability placing them in a strong position to handle a potential trade war escalation. We favor India-based credits in EM corporates.

In EM local rates, we're maintaining an overweight duration in countries with below-potential growth, low or slowing inflation, and central banks that appear set on easing policies, including China, Mexico, Russia, and Brazil. In terms of positioning along the curve, we prefer the intermediate portion in overweight countries given the major curve flattening and shrinking term premium at the back of the curve. Underweights include Colombia, Chile, Turkey, and other countries with limited room for further policy easing.

Active FX positioning is net long USD with a focus on relative value. We built our net long USD position after the Fed rate cut in July failed to spark a rally in EMFX. We increased the net long USD position as the trade war escalated and Chinese stimulus fell short of market expectations. Major long positions include Russia, India, Egypt, Ukraine, and Mexico, while major short positions include Chile, Brazil, Central Eastern Europe, and Taiwan.

Outlook: Conditionally constructive. A "barbell" overweight of lower-quality, front-end sovereigns and higher-quality, back-end issues may capture the upside in a constructive environment and limit the downside in a volatile backdrop. The outlook for EM rates and FX is bifurcated with a focus on relative-value opportunities.

Municipal Bonds

In Q3, AAA-municipal yields were lower by 3-30 bps, and municipals underperformed U.S. Treasuries across the curve. The 10- and 30-year Muni/Treasury yield ratios finished Q3 three ratios higher at 84.9% and 94.9%, respectively. A declining rate environment and attractive taxable equivalent yields continued to support strong demand for tax-exempt municipals. Mutual fund net inflows now exceed $68B this year following 38 consecutive weeks of inflows.

The municipal yield curve flattened by 22 bps in Q3 with the spread between 5/30s at 78 bps. Total returns for the quarter were +1.58% and +2.84% for the high grade and high yield indices, respectively. For the year, total returns were +6.75% and +9.69% for the high grade and high yield indices, respectively. Long taxable municipal total returns were 4.86% in Q3, underperforming the long corporate index (5.61%). In Q3, the excess returns on long taxable municipals were flat, outperforming the long corporate index, which recorded an excess return of -24 bps).

Gross supply totaled $103B in Q3, which represents a 17.8% increase year-over-year. YTD supply totaled $275B, an 8.7% year-over-year increase. The issuance pickup for the quarter was driven by issuers taking advantage of low rates to advance refund outstanding tax-exempt debt and is a trend we expect to continue through year end. **We believe increased taxable issuance will be well received as investors appreciate the diversification offered by high-grade municipal credits. We continue to expect taxable municipals to perform in line with corporate bonds, with potential for outperformance in a corporate spread widening environment.**

Rate volatility in September resulted in higher yields, higher Muni/Treasury yield ratios, and spread widening across certain sectors. We believe that this volatility represented an attractive entry point as favorable supply/demand technicals will become more pronounced by year end. **A stable-to-declining rate environment should be supportive of continued mutual fund inflows, especially given the attractive taxable equivalent yields.**

Outlook: Positive. Strong technical framework and attractive valuations should lead to outperformance vs. Treasuries.

Important Information

Source of data (unless otherwise noted): PGIM Fixed Income and Bloomberg as of October 2019

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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 U.S.D-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: The ICE BofAML U.S. High Yield Index covers US dollar denominated below investment grade corporate debt publicly issued in the US domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, and at least one year remaining term to final maturity as of the rebalancing date.

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 M.

Important Information

U.S. Senior Secured Loans: Credit Suisse Leveraged Loan Index: The Credit Suisse Leveraged Loan Index is a representative, unmanaged index of tradable, U.S. dollar denominated floating rate senior secured loans and is designed to mirror the investable universe of the U.S. 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 EUR 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 return does not reflect the impact of principal repayments in the current month.

Emerging Markets U.S.D Sovereign Debt: JP Morgan Emerging Markets Bond Index Global Diversified: The Emerging Markets Bond Index Global Diversified (EMBI Global) tracks total returns for U.S.D-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 U.S. 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 U.S.D-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 U.S. Treasury Index measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. 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 U.S. 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 U.S. Aggregate Index covers the U.S.D-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.

The S&P 500® is widely regarded as the best single gauge of large-cap U.S. equities. There is over U.S.D 9.9 trillion indexed or benchmarked to the index, with indexed assets comprising approximately U.S.D 3.4 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

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