

# QUARTERLY OUTLOOK

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JANUARY 2020

2020 Vision Check: All Things Considered, Not Bad  
*Thoughts from our Chief Investment Strategist*

Extolling the Virtues of Exquisitely Mediocre Global Growth  
*Thoughts from our Chief Economist*

# Fixed Income Overview

A common reaction to a year of strong fixed income returns in a late-cycle environment is that the perceived lack of value and the potential risks may soon bring a shift in sentiment that harms investors' future returns. While 2020 might not bring a similar degree of performance as 2019, there are indeed reasons to consider why the bond market—as well as the global economy—may remain on a positive, albeit slightly lower, trajectory this year.

- Robert Tipp, CFA, Chief Investment Strategist and Head of Global Bonds, specifies the two criteria needed to maintain the bullish bond backdrop and why they may come to fruition in [“2020 Vision Check: All Things Considered, Not Bad.”](#)
- In [“Extolling the Virtues of Exquisitely Mediocre Global Growth,”](#) Nathan Sheets, PhD, Chief Economist and Head of Global Macroeconomic Research, explains that what the global economic expansion needs to continue is its own level of mediocrity.

## Recent Thought Leadership on [PGIMFixedIncome.com](http://PGIMFixedIncome.com):

- [When Social Contracts Fail: The Economic and Investment Implications of Social Protests](#)
- [Greece—Near-Term Tailwinds, Medium-Term Headwinds](#)
- [Assessing Sub-Saharan Africa’s Long-Term Growth Upside](#)
- [Prospects for Global Potential Growth: The Next Decade](#)
- [Dispatches from Lebanon, Jordan, and Iraq](#)
- [Credit Research Roundtable](#)
- [Homebuilders as a Case Study in Late-Cycle High Yield](#)
- [U.S. Rates: Low for Long, but Likely Positive](#)

## PGIM Fixed Income’s Award Winning Papers in 2019

We are pleased to share that our white paper [“Capturing the Opportunity of Constraints,”](#) was recently honored by Savvy Investor as the Best Fixed Income Paper of 2019. The piece was authored by Gregory Peters, Head of Multi-Sector and Strategy, and Tom McCartan, FIA, CFA, Principal, Liability-Driven Strategies.

[“Wealth Inequality – A Tale of the Diverging Tails,”](#) by Nathan Sheets and George Jiranek, Associate, Global Macroeconomic Research, was recognized as “Highly Commended” in the Strategy & Economics category.

[“Uncovering Alpha Opportunities in Emerging Market Corporates,”](#) by Nick Ivanov, CFA, Head of Emerging Market Corporate Bond Research, and Aayush Sonthalia, CFA, Portfolio Manager, Emerging Markets Debt Team, was recognized as “Highly Commended” in the Emerging Markets category.

[Click here for the full list of award winning papers and the award methodology.](#)

## SECTOR VIEWS ▼

### [Developed Market Rates](#) | 9

Opportunistic. In the U.S., the Federal Reserve’s presence in the T-Bill and repo markets may move certain interest-rate derivatives closer to fair value from broadly overvalued levels. We anticipate most nominal rate complexes will remain range bound, and a backup in long-term Bund or JGB yields could present buying opportunities. Long-term UK linkers appear overvalued and poised for a selloff.

### [Agency MBS](#) | 9

Positive vs. developed market interest rates. Prepayment speeds likely peaked in 2019, hence moving up-in-coupon and away from production coupons generally presents the most attractive trade within the sector.

### [Securitized Credit](#) | 9

We continue to view high-quality securitized assets favorably on a relative-value basis and as a diversifier relative to other risk assets. We acknowledge high-quality securitized assets underperformed in 2019. We see mezzanine risk as more vulnerable to slowing fundamentals and are increasingly selective in where we take mezzanine exposure.

### [Investment Grade Corporate Bonds](#) | 11

Near-term positive amid favorable fundamentals, healthy technicals, and potentially tighter spreads. Continue to favor U.S. money center banks and select BBB-rated industrials.

### [Global Leveraged Finance](#) | 12

Constructive. Solid technicals and relatively stable fundamentals support seeking value in B-rated U.S. high yield, U.S. leveraged loans, and European high yield. The outlook for European loans remains encouraging as well, but close scrutiny of underwriting standards is needed.

### [Emerging Market Debt](#) | 13

Positive. In a supportive global backdrop with attractive valuations, we favor a barbell position comprised of lower-quality, front-end corporates and sovereigns—possibly in distressed names as well—and higher-quality, longer-dated issues. We are more measured in EM local bonds and are cognizant that our relative value focus in EMFX can become more directional if the U.S. dollar weakens more broadly.

### [Municipal Bonds](#) | 14

Positive. Strong technical backdrop and attractive valuations provide a supportive environment.

## 2020 Vision Check: All Things Considered, Not Bad

We've reached a juncture of several milestones: the end of a decade, two decades into the century, and 40 years into what has undoubtedly been one of the best bond bull markets in history.<sup>1</sup>

It's a logical point to reflect on where we are, where we may be headed, and what might be the most appropriate fixed income approach going forward.

Our conclusion is straight forward: stay in the markets. While it's a conclusion that may sound quaint—or even maniacal considering the level of yields and spreads—it's also one that has held true over the past several years. The bond market has put up respectable returns despite fears that interest rates have already approached rock bottom levels and that the business cycle has surely neared its end. The culmination of these factors has proven that the resulting, novel investment environment can provide fertile ground to add value through active management.

While a forecast for range bound developed market interest rates and credit spreads, which can still provide returns well in excess of cash, isn't overly exciting, the surprises and volatility along the way will likely provide plenty of opportunities to generate alpha. Our conviction is not only based on current conditions, but is also guided by recent, and not so recent, history.

### Interest-Rate Outlook: 40 Years and Counting

In 2019, the 40-year bull market proved that it can still put up some big numbers (see Figure 1).

**Figure 1: Low and Range Bound Yields and Spreads Don't Mean That Bonds are Dead Wood (Sorted by Q4 Total Return)**

Individual FI Sectors	Q4 2019	2019	2018	2017	2016
EM Currencies	3.73	5.20	-3.33	11.54	3.5
U.S. High Yield Bonds	2.61	14.40	-2.26	7.48	17.5
European High Yield Bonds	2.08	11.40	-3.35	6.79	10.8
EM Debt Hard Currency	1.81	15.04	-4.26	10.26	10.2
U.S. Leveraged Loans	1.68	8.17	1.14	4.09	9.9
U.S. Long IG Corporates	1.33	23.90	-7.24	12.09	11.0
U.S. IG Corporate Bonds	1.18	14.50	-2.51	6.42	6.1
EM Local (Hedged)	0.92	9.14	0.75	3.68	4.7
Municipal Bonds	0.74	7.54	1.28	5.45	0.3
Mortgage-Backed (Agency)	0.71	6.35	0.99	2.47	1.7
European Leveraged Loans	0.54	4.38	1.25	3.72	7.0
CMBS	-0.33	8.29	0.78	3.35	3.3
European IG Corporate	-0.51	6.24	-1.25	2.41	4.7
U.S. Treasuries	-0.79	6.86	0.86	2.31	1.0
Long U.S. Treasuries	-4.12	14.80	-1.84	8.53	1.3

<sup>1</sup> We are aware of the debate regarding the starting year of the new decade. In this usage, we're using the cultural reference of 2020.

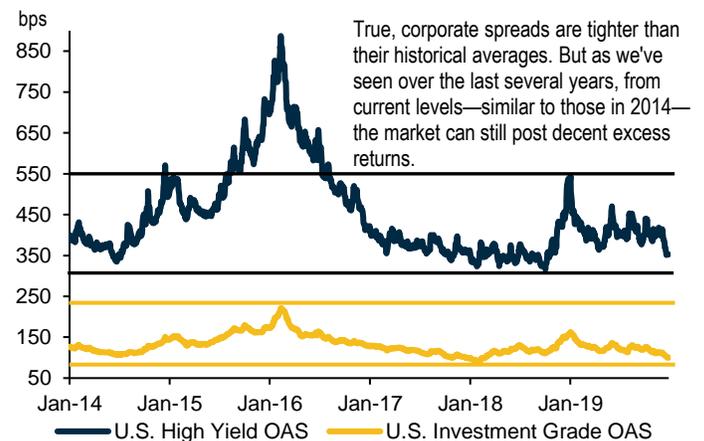
Multi-Sector	Q4 2019	2019	2018	2017	2016
Global Agg. (Unhedged)	0.49	6.84	-1.20	7.39	2.1
U.S. Aggregate	0.18	8.72	0.01	3.54	2.7
Global Agg. Hedged	-0.49	8.22	1.76	3.04	4.0
Yen Aggregate	-1.19	1.64	0.93	0.18	3.0
Euro Aggregate	-2.24	5.98	0.41	0.68	3.3

Other Sectors	Q4 2019	2019	2018	2017	2016
S&P 500 Index	6.75	32.6	-4.40	21.26	10.6
3-month LIBOR	0.50	2.40	2.23	1.22	0.7
U.S. Dollar	-0.67	1.35	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 (ICE BofAML), Bank Loans (Credit Suisse). Performance is for representative indices as of December 31, 2019. An investment cannot be made directly in an index.*

We don't think 2019 was the market's grand finale. For some time now, long-term developed market interest rates have been low and range bound while credit spreads have been tighter than average (see Figures 2 and 3). And yet, the effect of rolling down spread and yield curves combined with some spread compression and a slight decline in yields has resulted in sizable returns in three out of the last four years (again, see Figure 1). Granted, based on current yield and spread levels, the market may be out of room for similar returns—at least for now. But as we've seen, these conditions can still work for bonds assuming two conditions hold: 1. a continuation of the low and range bound backdrop for rates; and 2. an extended business cycle. Our economic outlook for an [exquisitely mediocre](#) 2020 certainly meets these conditions. From a longer-term, secular perspective, it appears these conditions may also hold for some time to come. Let's take a look at each of these in turn.

**Figures 2 and 3: Investment Grade and High Yield Spreads and the 10-year Treasury Yield Find Themselves in Familiar Territory**



# Bond Market Outlook

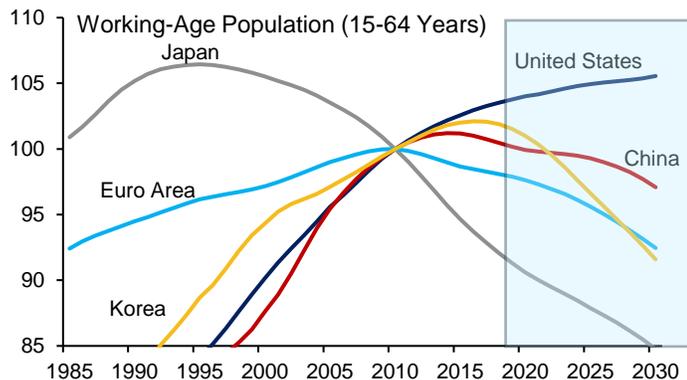


Source: Bloomberg as of December 27, 2019. Spreads are based on ICE BofAML indices.

## Just the Beginning of the Demographic Bite

While most are aware of the aging demographic conditions sweeping across the globe, the shift in many of the most economically significant economies (e.g. Europe and China) from an *expanding* workforce to a *contracting* workforce may be broadly underappreciated (Figure 4).

**Figure 4: Working-Age Population —The Fallout from the Recent, Massive Deceleration Has Probably Just Begun**



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

The bottom line is that the combination of extended debt levels, China's economic maturation and deceleration, and the global swing to a contracting workforce may be delivering a much lower equilibrium of interest rates than forecasters expected. And as we've posited before, the combined impact of these factors isn't behind us, but is likely just beginning ([See Countdown to Zero—The Final Chapters](#)).

## Central Bank Overdrive

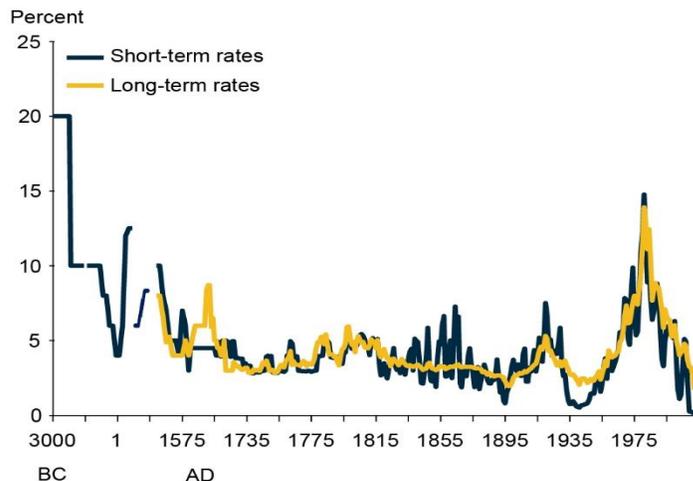
Developed market central banks stand as the clinchers for the ultra-low rate environment. Gunning for unreasonably high rates of growth and inflation, they have pushed short-term interest rates to unnaturally low levels (the U.S. aside) and have dropped another giant weight on long-term yields with their aggressive bond buying

programs. The bullish secular picture for bonds combined with the course set by developed market central banks suggests that interest rates could stay at perhaps surprisingly low levels.

## Putting Historical Precedent in Perspective: Maybe This *Is* Normal

Is the low and range bound outlook for rates plausible in a historical context? In 2015, the Bank of England's chief economist pointed out that rates weren't just near recent lows, but were at the lows looking back over *thousands* of years (Figure 5). For many, the take away from the BoE research is that developed market interest rates are in fact too low, and they should revert higher.

**Figure 5: Not a New Phenomenon...**



Source: Growing, Fast and Slow. A speech given by Andrew G. Haldane, Bank of England Chief Economist and Executive Director, Monetary Analysis & Statistics, February 7, 2015.

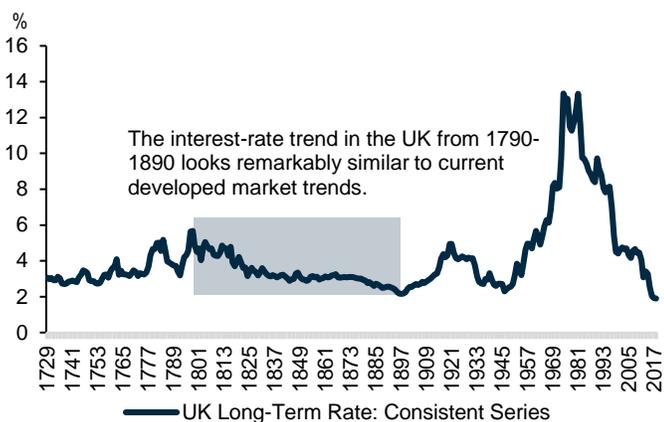
For us, however, the takeaways from the research are: 1. the rarity of persistently-high interest rates; and 2. the extreme longevity of interest-rate trends. Since the 1890s, for example, there have only been four major trends (two bears and two bulls). Furthermore, from 1690 to 1890, there were only two major trends (one bear and one bull) over roughly 200 years.

As another case in point, we turn to the UK from 1790–1890—a span that featured relatively stable central bank and fiscal frameworks combined with a general trend towards geopolitical stability—as a period that may rhyme with current conditions (Figure 6).<sup>2</sup> Over that interval in the UK, there was one basic trend in the bond market: falling long-term interest rates, ultimately to levels similar to current rates. The business cycle and other cyclical undulations mostly manifested themselves in waves of rising and falling short-term rates. Yet, with stable long-term growth and inflation expectations, there was little impact on the overall trend in long-term interest rates.

<sup>2</sup> For example, callable UK consols yielding between 2% and 3% are arguably not that different from the current yields on non-callable 30-year U.S. Treasury bonds.

# Bond Market Outlook

**Figure 6: We've Also Seen Periods of Low-for-Long in the UK**



Source: Lawrence H. Officer, "What Was the Interest Rate Then? Measuringworth, 2019

While the UK comparison is not necessarily our vision for the next century, it characterizes our outlook for now and the foreseeable future—low and range bound long-term rates. Fundamental and technical conditions point in that direction, and, if history is any guide, a bond market trend that's four decades old could only be half over.

## Not Just Lower-for-Longer Rates, but a Later-for-Longer Business Cycle

The current business cycle could also remain in its current slow, late-stage environment for a prolonged span. In past cycles, regulators and central banks tended to allow financial bubbles to mushroom and/or allowed economic activity to overheat, only to subsequently aggressively hike rates, pop the bubble, and crush growth. Instead, we're currently in more of a damp-squib environment with no clear exuberance, irrational or otherwise, in asset prices.

Perhaps more important, the post-crisis environment—the BBB-rated corporate and bank loan markets notwithstanding—has seen comparatively judicious extension of credit. And unlike prior late-cycle policies, central banks aren't aggressively hiking rates with the intent of heading inflation off at the pass by slowing the economy. In short, we're lacking the froth and/or bubble to pop.

Although central banks have arguably been the most culpable entities in exacerbating the business cycle over the last several decades, their recent recognition of their culpability may be a watershed event in terms of lengthening the cycle (see the following box).

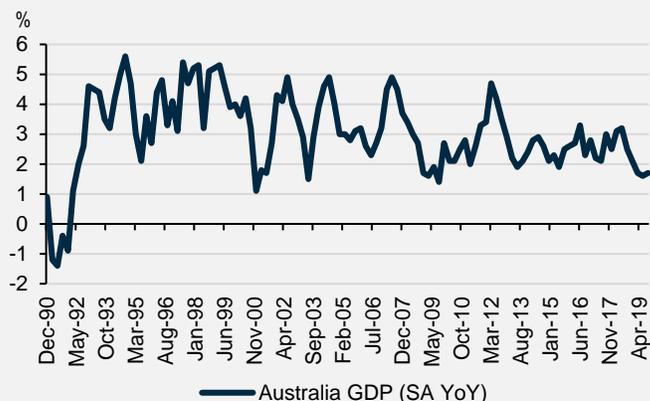
## The 21st Century Has Been Volatile—Expect More of the Same

Since the financial crisis, bouts of widening credit spreads have been profound considering the dampened economic volatility. In our view, this juxtaposition stems from the potentially toxic combination of slow growth, high debt, extended durations amid historically low benchmark yields, and close proximity to the effective lower bound for monetary policy.

## Is It Ridiculous to Expect a Longer Business Cycle?

It has been nearly 30 years since Australia has had a recession, showing that it's certainly possible for a business cycle to extend for a generation, or even longer, if it's not stamped out by a central bank.

Our key take away is that, as growth continues and the business cycle extends, spread sector outperformance should continue.



Source: Bloomberg as of December 27, 2019

The possibility for sharp corrections and intermittently jittery markets is amplified by the potential for a downturn to turn ugly with no good rescue plan left on the shelf. Looking ahead, we see more of the same: periods of intense market turbulence whenever investor confidence is shaken.

Without a doubt, 2020 will hold a few surprises for investors, thanks to risk drivers known—such as U.S. and UK politics as well as the customary volatility in economic data—and unknown. And when these risks materialize, investors' fears may be stoked, and volatility will likely spike as seen in 2018, 2015, and 2011.

**The Bottom Line:** Buckle up and hunt for value and tactical opportunities in a low-for-long rate environment and a late-for-longer economic cycle. On net, the future holds a thinner environment for bond market returns. But low and range bound long-term rates should allow global bond markets to continue outperforming cash, albeit with significant volatility.

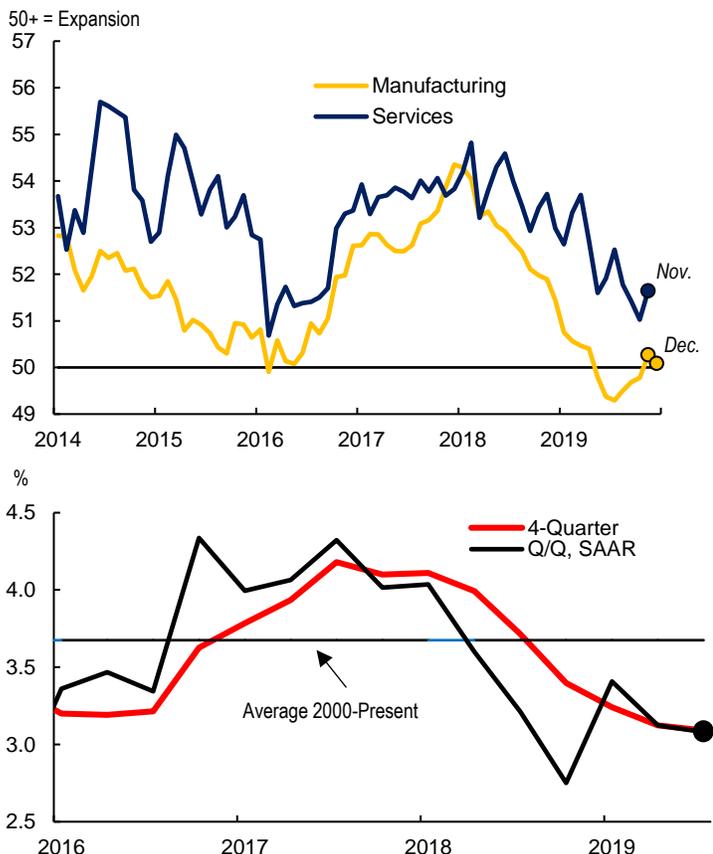
The new nexus of an extended business cycle and investors' ongoing need for yield countered by tight credit spreads, high leverage, and central banks' proximity to the effective lower bound, should still allow spread sectors to generally outperform. This novel backdrop should continue to brew confusion among investors, contributing to future volatility and creating opportunities to add value through active management.

## Extolling the Virtues of Exquisitely Mediocre Global Growth

We expect the global economy to provide a favorable backdrop for markets in the year ahead. Growth is poised to plod along at a modestly below trend pace. This should be sufficient to support risk-taking and sentiment while still not stoking the imbalances and vulnerabilities that plague the end of a cycle. Given that the global expansion is now in its eleventh year—the longest of the post-war period—this lukewarm outcome seems ideally suited to maximize the likelihood that the expansion continues.

More specifically, we read the recent data as suggesting that the sustained downturn in global manufacturing is bottoming out. Notably, as shown in Figure 1, the global manufacturing PMI has turned up in recent months and now points to stability or slight expansion. This important development, along with intensified stimulus from central banks around the world, should be sufficient for the services sector to find its footing and avoid recession. Support from these factors should allow global GDP growth to come in at around 3.25% in 2020, somewhat (but not significantly) below the average of the past two decades (see Figure 2). We see global growth stabilizing during the first half of the coming year, with some possible acceleration during the second half.

**Figures 1 and 2: Global PMIs and Global GDP Growth**



Source: IHS Markit, Haver Analytics, and PGIM Fixed Income. Latest data as of November/December and Q3 2019.

Across individual economies, U.S. growth is likely to edge down a bit, but remain near its 2% trend as fiscal stimulus diminishes. The Federal Reserve’s recent easing should provide support, especially to housing, but business investment will likely remain soft as firms continue to worry about the political and trade environments. In the euro area, annual growth is poised to slip further, but we expect the region to avoid recession. Conditions in Germany’s manufacturing sector are likely to show gradual improvement, and ongoing stimulus from the European Central Bank should help support the labor market and consumer spending. Meanwhile, the Japanese economy should shake off the restraint associated with the recent consumption tax hike given the government’s large fiscal stimulus package, expected tourist expenditure from the Olympics, and support to consumer spending from the tight labor market. In China, we see growth remaining on a generally slowing trajectory as President Xi’s financial de-risking campaign continues to restrain the size and composition of the policy stimulus.

Emerging markets are broadly expected to continue growing at a moderate pace as well. As usual, idiosyncratic developments, such as the actions of the new Argentinian government or the apparent rapprochement between Russia and Ukraine, will impact different countries in different ways. One crucial development to follow, though, will be whether the spontaneous popular protests that have erupted in many countries (e.g. Ecuador, Lebanon, Iraq, and Chile) with very different economic situations will continue in 2020 and whether this will bring more expansionary fiscal policies.

The remainder of this essay considers the rudiments of our story in more detail.

### Two Underlying Judgments

Our outlook is importantly conditioned on two key judgments. First, global inflation should remain contained. Tight labor markets are providing support for consumers around the world, and wage growth is generally solid. But this has not kicked-off upward pressures on product prices. Indeed, many central banks continue to struggle with stubbornly below-target inflation. With moderate growth and stimulative central banks, inflation may gradually trend higher this year, but the risks of a sharp rise seem limited.

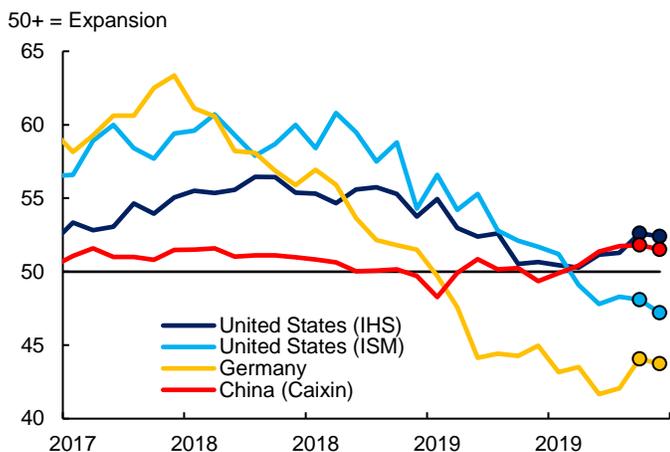
Second, both President Xi and President Trump have good reasons to follow-through on their “skinny” trade deal this year, and this should be constructive for the growth outlook. In our view, it’s not essential that the respective sides roll tariffs back further, although that would be welcome. Rather, the two sides need to cool the rhetoric and allow the trade picture to regain some semblance of stability. While the existing tariffs are exerting a downward pull on spending and growth, the trade war’s more adverse implication has been increased uncertainty about future prospects, which has restrained business sentiment and investment. The cease fire that is implicit in the skinny deal should reduce downside “tail risk” and provide support to global growth and financial markets.

# Global Economic Outlook

## Manufacturing is Bottoming Out

As shown in Figure 1, the global manufacturing PMI has recently edged above the 50 breakpoint. PMIs for key countries (Figure 3) appear to have stabilized or even picked up in recent months. Notably, this includes the German manufacturing PMI, although it remains in deeply recessionary territory. Further, global PMIs for manufacturing exports, production of investment goods, and inventories have strengthened a bit in recent months. All that said, readings on “hard data” for the global manufacturing sector, including industrial production, have yet to show a similar improvement.

**Figure 3: Manufacturing PMIs**

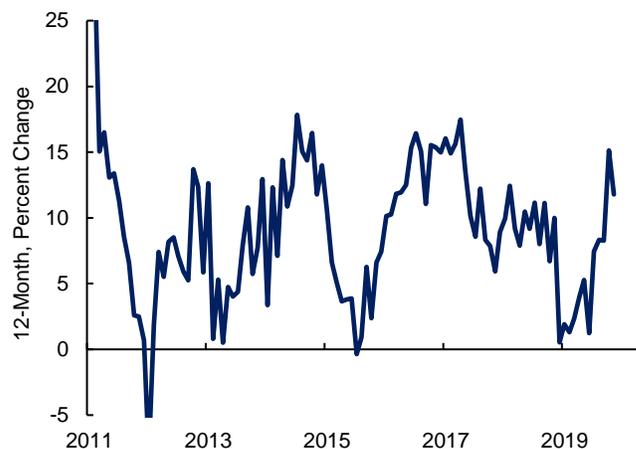


Source: IHS Markit, Haver Analytics, and PGIM Fixed Income. Latest data December.

The global auto and high-tech sectors, highlighted in Figures 4 and 5, play an important role in our projections for manufacturing. Roughly half of the downturn in global manufacturing since mid-2018 is linked to the weakness in autos, particularly in Germany. While structural factors, such as a move toward electric vehicles, are partially responsible for the drop, a range of more cyclical factors are also important. For example, China has phased out key consumer purchase incentives in recent years; shifting European emission standards have amplified the inventory cycle and weighed on production; and more broadly, global auto demand has taken a breather after years of rapid growth following the financial crisis. We expect that these headwinds will diminish in the year ahead. In particular, we remain bullish on the global consumer and, ultimately, this should provide support to the sector.

**Figures 4 and 5: Autos' Contribution to Manufacturing Slowdown (June 2018-September 2019) and Global Tech Production**

	Δ Mfg. IP (%)	Δ Auto IP (%)	Weight in IP (%)	Auto Contrib. (% Points)
<b>Global</b>	<b>-1.1</b>	<b>-6.1</b>	<b>0.09</b>	<b>-0.6</b>
<i>Of Which:</i>				
<i>Euro Area</i>	-2.1	-12.9	0.10	-1.3
<i>Germany</i>	-6.4	-16.3	0.18	-2.9
<i>United States</i>	-0.1	-4.2	0.07	-0.3
<i>Japan</i>	-0.5	-1.6	0.15	-0.2
<i>United Kingdom</i>	-2.4	-3.3	0.09	-0.3



Source: Haver Analytics and PGIM Fixed Income. Latest data as of November.

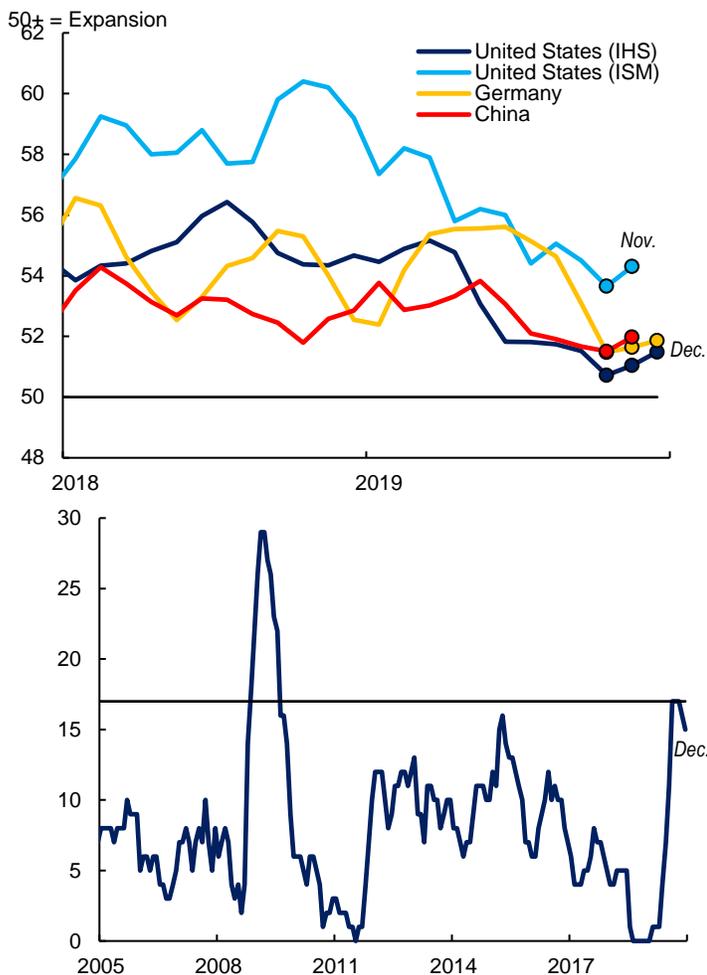
In addition, we see two other hopeful signs. First, there is evidence of a rebound in global tech production, led by China and the U.S. Second, we are not quite ready to call a bottom in the global inventory cycle, but we expect the bottom to be reached in 2020. At that point, there would be scope for a more pronounced bounce back in global manufacturing and exports. If so, the global economy might surprise on the upside.

## Services Should Skirt Recession

The global services PMI has recorded a sustained decline over the past year, but we expect the sector to avoid recession. These indexes have generally not breached the 50 breakpoint between expansion and recession, with recent readings pointing to soft but still positive growth. In the readings through November and December, several key countries saw an improvement (Figure 6), and the global employment PMI registered a sharp upturn.

# Global Economic Outlook

**Figures 6 and 7: Services PMIs\*, Global Central Bank Rate Cuts\*\***



Sources: IHS Markit, Haver Analytics, and PGIM Fixed Income. Latest data as of November/December. \*Three-month moving average. \*\*Last three months; panel of 30 major central banks.

We find these recent data encouraging, but our expectation for services rests more fundamentally on several additional factors. First, as noted, we see manufacturing bottoming out and, thus, diminishing downdrafts to the services sector. Second, central banks have shifted to a much more stimulative stance. The last few months have seen the most concentrated central bank easing since the global financial crisis (Figure 7). Further, the major advanced economy central banks are, on net, again expanding their balance sheets. The ECB has restarted its QE program, and the Fed—faced with the September disruption in the repo market—is adding reserves, mainly by buying at the short end of the curve. Third, solid labor markets should support consumer spending and the demand for services. As a bottom line, we anticipate that the global services sector will stabilize over the next six months, with growth then moving back up.

## Trade War and Other Risks

Despite the recent agreement, uncertainties about the trade war remain a principal risk for the global economy. On the one hand,

we believe that President Trump and President Xi have incentives to follow through on the deal and to continue the negotiations into Phase 2. For Trump, a de-escalation will support the economy and markets through the election year, while President Xi has a full plate dealing with tensions in Hong Kong and managing the economic slowdown. On the other hand, developments in this sphere have proven difficult to predict. For example, President Trump may become dissatisfied with China’s pace of agricultural purchases, or his perception of the political winds on this issue might change, which could trigger additional tariffs. Accordingly, we are painfully aware that dire outcomes remain on the table. A renewed trade war could strangle the incipient stabilization in global manufacturing.

As a related matter, during the year ahead, markets will be struggling to price in risks associated with the U.S. presidential election and the outlook for 2021. If President Trump is re-elected, what does Trump 2.0 look like? Without the discipline of an impending election, will he feel free to pursue initiatives that are potentially more disruptive than those in his first term, including on the trade front? If Democrats are elected, there is only a small probability that the broad sweep of policies that they are advocating on the campaign trail would actually be implemented. But a marked shift in regulatory and administrative policies that can be implemented by executive action—including those pertaining to consumer and labor rights, the environment, health care, the financial sector, and energy policies—might disrupt the markets. Further, there is broad agreement among Democrats that taxes need to rise. A scenario where a Democrat is in office would likely entail rolling back much of President Trump’s 2017 cut.

Of course, in addition to political surprises, we might also be misreading the global economic situation. The weakness in global services or, especially, in global manufacturing may prove more persistent than we assess. Similarly, economic performance in China and the euro might continue to fall short of expectations.

But there are also upside risks. The supportive effects of the current trade deal could be stronger than expected, or the ongoing negotiations between the U.S. and China might eventually reach a more transformative agreement. In addition, it’s not clear that the global economy has felt the full effects of the central bank easing put in place this past fall. Alternatively, following Japan’s lead, fiscal policy in the euro area or China could become more stimulative. Finally, Boris Johnson still has some heavy lifting to do to ink a trade agreement with the EU, but at least the UK political environment should be less fractured than in recent years.

In sum, while important risks remain and need to be monitored, global performance during 2020 is likely to be comfortably mediocre—a bit below trend but still solidly expansionary. Further, with low inflation and generally accommodative central banks, economic developments seem poised to provide a supportive environment for risk taking. Indeed, the limiting factor for markets is likely to be asset valuations, rather than recession risk.

## Developed Market Rates

The Federal Reserve is one of several developed market central banks that will likely remain on hold through much, if not all, of 2020. Yet, the Fed's ongoing initiatives in 2020—including its significant T-Bill purchases and series of repo operations—shape some of our opportunistic positions as the new year commences.

Given the Fed's presence in the short-term market and some improvement in banks' balance sheet capacity, we expect T-Bills to richen and interest-rate derivatives to move closer to fair value from broadly overvalued levels. As such, we're maintaining long positioning in futures basis trades and swap spread wideners. In addition, with the spread between coupon and principal strips trading at historically wide levels, we expect that dynamic to mean revert going forward.

In terms of nominal U.S. rates, we anticipate that the 10-year yield could trade in a range of 1.50-2.25% in Q1 with the potential for some slight bear steepening. However, an increase in the 10-year yield above 2.00% would be difficult to sustain given the prevalence of low-yielding developed market rates globally. Elsewhere, while we don't expect material changes in nominal Bund or JGB yields with the ECB and BoJ likely on hold as well, a correction to higher yields in either market—possibly on increased Q1 supply in Germany, for example—could present buying opportunities.

The most attractive investment we see outside of the U.S. is a short position in UK real rates given the developments with Brexit (albeit with lingering uncertainty) and the prospects for fiscal spending. At about -235 bps, we see the possibility that 10-year UK linkers could selloff by as much as 100 bps in a base case scenario.

**Outlook:** Opportunistic. In the U.S., the Federal Reserve's presence in the T-Bill and repo markets may move certain interest-rate derivatives closer to fair value from broadly overvalued levels. We anticipate most nominal rate complexes will remain range bound, and a backup in long-term Bund or JGB yields could present buying opportunities. Long-term UK linkers appear overvalued and poised for a selloff.

## Agency MBS

Although MBS spreads firmed in the latter part of 2019, they remain attractive versus developed market interest rates amid expectations for rising U.S. Treasury issuance relative to MBS production and generally declining volatility. Prepayment speeds may have peaked last year, particularly among issues produced in 2018 and early 2019. With that backdrop, we believe taking on some prepayment risk, while avoiding the heaviest of supply coupons, generally represents the most attractive positioning within the sector.

Although we continue to prefer specified pools vs. TBAs for better option adjusted spreads and convexity, specified pools have

become more difficult to source at reasonable levels. Therefore, we are focused on lower priced pools, which offer value vs. TBAs, on the basis that, if prepayment speeds have peaked, pools with the highest call protection and payups could face headwinds. In terms of TBA positioning, we favor TBA UMBS 3.5% as we expect some exhaustion in prepayments. We are avoiding 30-year 3.0% issues considering they will comprise the bulk of upcoming production.

Within GNMA2s, the middle of the coupon stack experienced heavy pressure and may offer value if the recent technical selling pressure recedes. We remain positive on post-peak GNMA2 pools, particularly in the 3.5% coupon and up.

Risks to our positioning include a risk-off environment where rates rally and volatility picks up, leading to faster prepayments, increased supply, and reduced demand from yield-based buyers. A similar outcome could occur if the Fed were to migrate from T-Bills to coupon purchases or were to restart an explicit quantitative easing program. TBAs could worsen if dollar rolls underperform due to deteriorating cheapest-to-deliver expectations.

**Outlook:** Positive vs. developed market interest rates. Prepayment speeds likely peaked in 2019, hence moving up-in-coupon and away from production coupons generally presents the most attractive trade within the sector.

## Securitized Credit

Sector	Subsector	LIBOR OAS	Spread Change (bps)	
		12/31/2019	Q4	2019
<b>CMBS</b>				
CMBS: Conduit 2.0	First-pay 10-year	82	-13	-21
CMBS 3.0 Conduit BBB-	BBB-	275	-3	-145
CMBS: CMBX (OTR)	AAA	49	-6	-28
CMBS: CMBX (2012)	AA	64	-17	-82
CMBS: Agency Multifamily	Senior	55	-5	-13
<b>Non-Agency RMBS</b>				
Legacy	RPL Senior	83	2	-24
Legacy	'06/'07 Alt-A	140	0	-10
GSE Risk-Sharing	M2	193	-9	-97
<b>CLOs</b>				
CLO 2.0	AAA	133	0	-2
CLO 2.0	AA	180	0	-25
CLO 2.0	BBB	360	-40	-65
<b>ABS</b>				
Consumer ABS	Seniors (One Main)	80	-5	-5
Consumer ABS	B (One Main)	125	-5	10
Refi Private Student Loan	Seniors	95	-5	0
UK Non-Conf 2.0 Senior	A Class	95	-5	-40
Generic	AAA Credit Card	28	-6	-4

*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. Source: PGIM Fixed Income as of December 31, 2019.*

## Q1 2020 Sector Outlook

**Non-Agency RMBS:** Legacy non-agency mortgage-backed securities remain fully valued with a mix of idiosyncratic downside risks (e.g. uncertain proceeds at clean-up call and LIBOR cessation, etc.) and ongoing structural complexity. A slowing housing market further tilts the risk/reward dynamic to other risk assets. GSE mortgage underwriting remains conservative with originators still not taking full advantage of guideline flexibility, which bodes well for housing stability, and a bubble appears unlikely. Nonetheless, the housing market is showing signs of turning as home price appreciation is decelerating. We expect home price appreciation of 2-3% in 2020. Regional differences are likely to narrow as previously high-growth areas (the coasts and desirable cities) potentially retrench amid reduced affordability. Going forward, the large Millennial cohort is key to housing values. While there are signs that a surge in household formation and housing demand is forthcoming, headwinds, including student loan debt, remain. Our favorite non-agency RMBS investments remain bespoke financings of high-quality mortgage pools that we have been able to execute at spreads of roughly LIBOR+115-225 bps. We are more constructive on UK RMBS spreads going into 2020 due to reduced near-term risks around a hard Brexit.

**CMBS:** Spread tightening in late 2019 mitigates our near-term bullish view on CMBS in 2020. We expect AAA-rated, last cashflow (LCF) spreads and BBB-rated conduit spreads to be range bound in Q1. We expect 2020 issuance to be similar to 2019, which supports our range bound spread outlook. Furthermore, CMBS spread moves tend to be more muted vis-à-vis corporate spreads. Our modeling suggests conduit underwriting quality improved during the second half of 2019. That said, we believe the quality barbell is increasing, which increases the risk in the lower part of the CMBS capital structure. We expect single asset/single borrower (SASB) issuance to mirror 2019's issuance of \$45 billion. We expect BBs to stay at wider levels (250-260 bps) provided loan-to-value (LTV) leverage stabilizes, but BBs could widen even further if future deals have higher LTVs. We remain positive on commercial real estate (CRE) despite record low capitalization rates and new highs in commercial property indices. Low capitalization rates are reasonable considering that capitalization rate premia (capitalization rates less Treasury rates) are wide by historical standards, implying that commercial property valuations can be supported at current levels.<sup>3</sup> We are bullish on multi-family, industrial, cold storage, and logistics properties. We are monitoring flexible office trends (WeWork issues notwithstanding) to see how firms might adjust their footprints. We are still negative on lower-level malls in tertiary markets and cautious on hotels due to operating leverage. We remain negative on transition loans and CRE CLO performance.

**ABS:** We expect technical conditions to remain supportive of ABS spreads in 2020 with manageable gross supply expectations

(\$225-250 billion range) relative to 2019 totals. Generally, we expect ABS to earn its carry in Q1, which should be construed as positive given that the bonds are generally short duration. While we expect generally stable consumer fundamentals in 2020 amid record-low unemployment, headwinds persist. Specifically, loan underwriting standards have loosened and the tiering in consumer leverage poses particular challenges for lower income cohorts who have not been able to de-lever during the post-crisis expansion. ABS collateral pools are beginning to reflect these fundamental trends, and marginal borrower weakness has emerged. Furthermore, structural protections in ABS, while still robust, have been deteriorating as credit rating agencies require less enhancement for a given rating. We continue to favor the up-in-quality trade in ABS, which we feel will outperform in the long run. We find value in select issuer shelves with strong ESG characteristics in unsecured consumer loans (+85-130 bps for seniors), subprime autos (+80-115 bps for senior/2nd pay), and private refinanced student loans (+100 bps senior) with a focus on originators with consumer income underwriting (vs. FICO based underwriting models) and securitizations with robust structural features.

**CLOs:** CLO spreads are poised to remain stable with a small bias towards tightening in Q1 2020. We expect primary U.S. AAA-rated spreads to remain in a range of three-month LIBOR +132-150 bps, depending on perceived manager quality. AA-rated tranches will likely continue to price about 50-125 bps behind AAAs. We expect mezzanine tranches (BBB/BB) to be range bound to tighter in Q1, consistent with our overall expectation of robust spread markets. At current spreads, senior CLOs continue to offer excellent risk-adjust returns, but we remain cautious on mezzanine tranches as spreads do not reflect the potential for lower bank loan recoveries, higher cashflow variability, higher ratings volatility, ephemeral liquidity, nor the tranches' higher mark-to-market volatility. We expect lower recoveries in the next default cycle than in the past. The increase in loan-only capital structures will likely dampen recoveries as a lack of subordinated debt provides less cushion to absorb losses, and distressed investors can extract value during a workout by creating assets that will be ineligible for CLO purchases. Nonetheless, we expect bank loan defaults to remain low in 2020. In Europe, we expect AAA spreads to remain in the 3m Euribor+100 bps area in Q1 2020. Longer term, we believe spreads have a widening bias given concerns over the European market's ability to absorb the forward pipeline and the lack of relative value for U.S.-based investors. We continue to favor U.S. CLOs over European CLOs given current spreads (currency and Euribor-floor adjusted) and documentation differences. Furthermore, we expect a greater focus on ESG from CLO investors and managers in 2020.

<sup>3</sup> Capitalization rates are the rates at which commercial property cashflows are discounted to calculate property values.

# Q1 2020 Sector Outlook

**Outlook:** We continue to view high-quality securitized assets favorably on a relative-value basis and as a diversifier relative to other risk assets. We acknowledge high-quality securitized assets underperformed in 2019. We see mezzanine risk as more vulnerable to slowing fundamentals and are increasingly selective in where we take mezzanine exposure.

## Investment Grade Corporate Bonds

	Total Return (%)		Spread Change (bps)		OAS (bps)
	Q4	2019	Q4	2019	12/31/2019
U.S. Corps.	1.18	14.50	-22	-60	93
European Corps	-0.51	6.24	-18	-59	93

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The underlying trends supporting the corporate sector should help spreads grind tighter in Q1 2020. These include positive (albeit moderating) global economic growth, accommodative global central banks, solid credit fundamentals, and investors' ongoing search for yield.

**U.S. Corporate Bonds:** Credit metrics remain a bright spot amid strong profit margins and ample free cashflow, even though earnings growth weakened in 2019. M&A activity has slowed, and leverage has inched lower in BBB-rated credits. Large capital structures have also started to deleverage, and credit rating upgrades have continued to outpace downgrades. The slowdown in global trade and manufacturing bears close watching as a turnaround will take more than just an easing of U.S./China trade tensions.

On the technical side, issuance may be unusually high in early 2020 as companies look to enter the U.S. primary market before the "Super Tuesday" primary elections in early March. However, we generally expect gross and net issuance to decline in 2020, providing a supportive tailwind. As in 2019, we expect the higher absolute level of U.S. yields to continue to attract non-U.S. investors, particularly from countries with negative real yields. In fact, the demand for yield is so strong that an increasing amount of non-U.S. investors are choosing not to hedge their FX exposure.

Portfolio positioning is little changed from the prior quarter. We continue to overweight lower-quality, shorter-term maturities and underweight higher-quality, long-maturity industrials that we consider "over rated." We are selectively investing in BBB-rated industrials that are deleveraging, particularly in the healthcare, telecom, energy, and pipeline sectors. We favor U.S. money center banks and certain UK and European banks, which performed well in Q4 2019. We are also finding some value in reverse yankee corporates issued in Europe and still favor electric utilities and taxable municipal bonds. We are negative on lower-rated financials

and cautious on autos. Challenges in the auto sector have greatly contributed to the contraction in the manufacturing sector.

**European Corporate Bonds:** The European corporate market has experienced similar, positive macro and credit-related trends as those in the U.S., but with a few differences, primarily on the technical side. In 2020, we expect gross issuance to continue marching higher, although net issuance could fall once redemptions (a potential increase from €180 billion to about €200 billion), coupons, and demand from the ECB are considered. The increase in reverse yankee issuance is of particular note, and we expect this trend to continue throughout 2020. Finally, the ECB's accommodative stance provides a technical tailwind. The resumption of its Asset Purchase Program in November 2019 was expected to include €2 billion to €4 billion of corporate bond purchases per month, however it's possible that purchases could increase to €6 billion over time. We expect to gain some clarity on the purchase pace in early 2020.

In European corporate portfolios, we raised spread duration to a "flat" exposure and remain overweight banks, insurers, and non-core REITS. In the banking sector, we are looking to lighten up our positions into market strength. We also increased exposure to reverse yankee euro-denominated issues that priced with decent concessions.

**Global Corporate Bonds:** Global portfolios are also positioned with flat spread duration risk (long exposure to the euro and the dollar and short exposure to the yen, Swiss franc, etc.). We moderately prefer euro spreads to dollar denominated spreads due to the technical support of the ECB. We remain flat to underweight sterling denominated credit spreads. We still prefer money center banks and U.S. utilities denominated in 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 European corporates. Spreads have already tightened considerably over the past year, but may narrow further in Q1 and possibly Q2 amid slow-to-stable growth and strong supply/demand technicals. Risks include an unexpected rise in real and nominal rates, Brexit trade disruptions, and softer economic growth across major countries, including China. The U.S. presidential election in the Fall of 2020 may also increase volatility, possibly presenting a buying opportunity.

**Outlook:** Near-term positive amid favorable fundamentals, healthy technicals, and potentially tighter spreads. Continue to favor U.S. money center banks and select BBB-rated industrials.

## Global Leveraged Finance

	Total Return (%)		Spread Change (bps)		OAS/DM (bps)
	Q4	2019	Q4	2019	12/31/2019
U.S. High Yield	2.61	14.41	-42	-173	360
Euro High Yield	2.08	11.38	-59	-198	324
U.S. Leveraged Loans	1.68	8.17	-17	-90	461
Euro Leveraged Loans	0.54	4.38	+7	-35	423

*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 December 31, 2019. An investment cannot be made directly in an index. European returns are euro hedged.*

**U.S. Leveraged Finance:** On the back of a solid Q4 when U.S. high yield spreads reached their year-to-date tightests, we remain constructive on the sector as 2020 commences. Given limited net issuance, high cash balances among investment managers, and a potential shift in sentiment by defensively-positioned investors, we believe that option adjusted spreads could tighten into 330 bps in Q1. The medium-term outlook appears encouraging as well amid waning trade-war risks, decreasing risk of tail events from the 2020 elections in the U.S., and generally accommodative central banks.

Credit fundamentals also remain supportive as the usual signs of late-cycle behavior are relatively muted. The more challenged sectors, such as energy and commodities, already trade at a discount and are likely to benefit somewhat from the stabilization of the global economy in 2020. While we generally expect defaults to slightly increase from 3.9% as of November 2019 (mostly in the energy sector), the U.S. default rate should remain below historical averages, perhaps surprisingly so.

On the supply side, estimates call for a year-over-year decline of about 20% in gross issuance. Although net issuance is expected to increase modestly next year, investor demand should easily digest the increase.

In terms of positioning, we prefer the B-rated portion of the market and select CCC-rated issues as the latter segment significantly underperformed in 2019. We are taking advantage of the current steepness of the spread curve through an underweight to low-spread, front-end credits and an overweight to the belly (4-7 years) of the maturity curve. We are balancing our large underweight to BB-rated issues with attractive, AAA-rated CLO positions. We're maintaining overweights to independent power producers and U.S. consumer-related names. We recently shifted to an overweight in the energy sector with a particular focus on natural gas (and related fuels) producers and distributors. We're also opportunistically and selectively adding healthcare issuers.

Similarly, we favor the B-rated segment of the leveraged loan market given its sizable underperformance relative to BB-rated loans in 2019. That said, we're cognizant of the need for careful issue selection and close monitoring given that lower-quality loans carry higher risks related to slowing global growth and weak loan documentation.

Loan default rates are tracking near 1.75%, and although they are expected to remain low into the second half of 2020, the threat of idiosyncratic defaults introduces upside risk to the outlook. We expect the increase in loan repricings to drive primary loan issuance in the first half of 2020. Retail outflows from the asset class may continue, but we expect some moderation.

We believe risks in the retail, technology, auto supply, 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 remain crucial if global growth slows and creditor protections weaken.

**European Leveraged Finance:** We also maintain a constructive view on European high yield in the medium term and expect spreads to tighten in the first half of 2020. However, credit selection remains critical as the bifurcated market will likely punish earnings misses and other negative developments. Given Europe's tepid economic backdrop, weaker credits could stay under pressure, and we expect the default rate to increase slightly to 2-3% by the end of 2020. That deterioration may be somewhat offset by healthy technicals as demand should comfortably absorb an expected increase in net supply.

In terms of high-yield positioning, select B-rated issuers still offer the best risk/reward opportunities. Within European leveraged loans, we're maintaining a positive view amid supportive technicals as higher-rated issuers may continue issuing bonds to retire outstanding loans. However, caution should be exercised given the prevalence of weak underwriting standards. On a relative-value basis, we continue to prefer European high yield vs. loans, but the differential is less pronounced than in early 2019 and requires assessment on a case-by-case basis.

**Outlook: Constructive.** Constructive. Solid technicals and relatively stable fundamentals support seeking value in B-rated U.S. high yield, U.S. leveraged loans, and European high yield. The outlook for European loans remains encouraging as well, but close scrutiny of underwriting standards is needed.

## Emerging Markets Debt

	Total Return (%)		Spread / Yield Change (bps)		OAS (bps)/ Yield %
	Q4	2019	Q4	2019	12/31/19
EM Hard Currency	1.81	15.04	-47	-125	291
EM Local (hedged)	0.92	9.14	0.01	-1.24	5.22
EMFX	3.73	5.20	-2.34	-1.94	3.36
EM Corps.	2.21	13.09	-36	-60	311

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## Q1 2020 Sector Outlook

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The positive outlook for emerging market debt in 2020 is largely dependent on the continued easing of trade tensions between the U.S. and China and the potential for a rebound in global growth. It's a feasible scenario where China's growth reaches the high end of estimates (i.e. slightly less than 6.0%) and developed market central banks generally remain accommodative.

While a stabilization in growth may support fundamentals, the [wave of social protests](#) that recently swept across several countries demonstrated that pressures remain. Episodes of social protest are difficult to predict, and they pose short-term risks of disrupting economic activity, further straining fiscal balances, and repricing credit spreads. In most cases, the protests will not lead to credit events, and each country's response to the protests will determine the long-term effects. As this process unfolds, investors will likely have an opportunity to differentiate between the affected countries.

Supply and demand dynamics could also provide the sector with some momentum in 2020. Indeed, gross sovereign issuance is expected to decline from \$166 billion to \$142 billion, and net issuance is expected decline by more than 50% from \$55 billion to \$21 billion. Gross EM corporate issuance is estimated to decline from \$485 billion to \$432 billion, while net issuance is expected to plummet from \$96 billion in 2019 to only \$4 billion in 2020. On the demand side, retail and strategic flows will likely slow from 2019's pace of about \$65 billion, but they should remain positive in 2020 and roughly balanced between hard and local currency assets. China's inclusion into local bond indices should also support flows into local markets, and many investors already reduced local bond allocations after 2019's strong performance.

**EM Hard Currency Sovereigns and Corporates:** Hard currency spreads remain attractive from a historical and relative-value perspective. When new entrants and Venezuela are excluded from the benchmark index, spreads trade roughly in line with the five-year average. Furthermore, the difference between emerging market high yield and U.S. high yield credit spreads is at the wider end of the 10-year range.

As part of our barbell approach, we continue to favor select shorter-maturity B-rated sovereign issuers—including Ecuador, Ukraine, Egypt, the Ivory Coast and a mix of sub-Saharan issuers—that are implementing reforms and have proven market access and/or support from the International Monetary Fund. There are also some CCC-rated issuers that are trading at distressed levels, including Argentina and Lebanon, where recent developments are already priced in. For instance, if a restructuring on Argentina's sovereign dollar bonds emerges that is more market friendly than indicated by current prices, then Argentina assets could perform well. In Lebanon, a political resolution, combined with international funding support, could contribute to higher bond prices going forward. At the other end of the barbell, we favor high-quality, longer-maturity issues. Those include bonds from select Gulf Cooperation Council countries that trade wide of their credit ratings and quasi-sovereign names that trade wide of the sovereign, such as PEMEX, or feature improving credit quality, such as Petrobras.

EM corporate bonds generally trade wide of sovereigns and could benefit from increased inflows as investors seek to diversify hard currency allocations. Moreover, supportive market conditions have allowed companies to extend maturities, and our base case is that the prices for many commodities have found a floor. Both factors should contribute to a relatively benign EM corporate default forecast of 2.5% in 2020. While recent corporate defaults in China have generated headlines, they reflect the government's emphasis on market efficiency and are not indicative of generally rising defaults. In EM corporates, we like the debt from Mexican and Brazilian banks, high-quality property names in China, renewable power generators in India, and mobile tower companies in Africa.

**Local Rates:** In general, an attractive differential between emerging market and developed market yields remains, and positions in Mexico, Russia, and China—three markets where central banks are explicitly easing policy and real rates remain attractive—comprise our key duration overweights. We will look for yield-curve opportunities in Brazil and in South Africa where rate hikes are priced in. Our underweights are in countries that could face fiscal pressures, such as Colombia and Chile, or with challenging fundamentals and unorthodox policies, such as Turkey. In terms of curve positioning, we're focusing on steep yield curves with 5- to 7-year maturities while avoiding the diminished risk premia at the back end.

**FX:** EM currencies may find some momentum in 2020 if the Phase 1 trade deal between the U.S. and China doesn't unravel and global growth firms. Conversely, if 2020 brings headwinds, relative-value opportunities in EMFX will likely remain, reflecting better growth stories and stronger balance of payments flows.

At this point, we remain focused on relative value in EMFX. We favor currencies with high carry profiles, attractive real yields, and limited exposure to global trade, including Russia, Mexico, Ukraine, and Egypt. We're maintaining underweight allocations to low-growth, underperforming economies, such as Hungary and other Central and Eastern European markets, and to countries that may be vulnerable to local outflows, such as Brazil. In Asia, we favor higher-quality currencies with current account surpluses, such as Taiwan and Singapore, that stand to benefit from the upturn in the technology cycle. We are also constructive on China amid the potential for further trade developments, which could contribute to a currency below 7 against the U.S. dollar. In general, our currency exposures will likely increase with signs of sustainable dollar weakness. A scenario where FX outperforms hard currency assets could emerge as the emerging markets' surprise of 2020.

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**Outlook:** Positive. In a supportive global backdrop with attractive valuations, we favor a barbell position comprised of lower-quality, front-end corporates and sovereigns—possibly in distressed names as well—and higher-quality, longer-dated issues. We are more measured in EM local bonds and are cognizant that our relative value focus in EMFX can become more directional if the U.S. dollar weakens more broadly.

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### Municipal Bonds

Conditions in the municipal bond market appear broadly supportive in Q1 2020 as investor demand for tax-exempt and taxable assets is expected to remain robust amidst steady supply. Following the solid performance in 2019, attractive taxable equivalent yields should continue to appeal to retail investors. In addition, after the 5/30s municipal yield curve steepened by 22 bps to 100 bps in Q4 2019, the relative steepness of the curve provides attractive opportunities to extend along the curve.

While mutual fund flows have the potential to moderate from the record pace of 2019, a stable-to-declining rate environment should support continued inflows, especially in early Q1. However, if mutual fund flows turn negative, the back-end of the curve could face pressure as U.S. banks and P&C insurers have less demand for tax-exempt issues given the reduction in the corporate tax rate.

In terms of issuance, estimates for total gross issuance average about \$430 billion for 2020, roughly in line with 2019's volume. Tax-exempt net supply is expected to be flat to modestly higher versus 2019.

While gross taxable supply is forecast to exceed \$100 billion, compared to nearly \$80 billion in 2019, increased issuance may provide investors with opportunities to add exposure with new issue concessions. The potential increase in issuance will be interest rate driven and should be easily digested as investors appreciate the diversification offered by high grade municipal credits, particularly considering their relative safety from event risk when compared to corporate bonds. In general, taxable municipals will likely lag corporate bonds during periods of spread tightening and may outperform corporates in a corporate spread widening environment.

From a credit perspective, restructured Puerto Rico General Obligation debt has the potential to impact the high yield municipal space in 2020. However, the timing of a transaction is highly uncertain given the complexity of the restructuring. While many states have built up reserves and rainy-day funds, unfunded pension liabilities and other post-employment benefit obligations remain a long-term credit concern for certain states and localities.

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**Outlook:** Positive. Strong technical backdrop and attractive valuations provide a supportive environment.

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# Important Information

Source of data (unless otherwise noted): PGIM Fixed Income and Bloomberg as of January 2020

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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

## Important Information

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.

**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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