



QUARTERLY OUTLOOK

OCTOBER 2020

The Key to Avoiding Nausea in Rough Seas: Keep Your Eyes on the Horizon
Thoughts from our Chief Investment Strategist

Dissecting the Global Recovery—What's Next?
Thoughts from our Chief Economist

Fixed Income Overview

Longer time horizons naturally have a wider window of uncertainty; the more time, the more opportunity for foreseen and unforeseen risks to jump into the picture. However, at this juncture, our perception of time and risk is flipped. Given the fraught U.S. elections, the unpredictable path of the coronavirus, and the uncertain effects from the flood of monetary and fiscal stimulus, we see more uncertainty in the near term than we do in the long term. Longer term, we believe improving credit fundamentals and investors' ongoing search for yield will provide fruitful results across several of the fixed income credit sectors, as we detail in the following pages.

- In [“The Key to Avoiding Nausea in Rough Seas: Keep Your Eyes on the Horizon,”](#) Robert Tipp, CFA, Chief Investment Strategist and Head of Global Bonds, examines some of the scenarios that could play out in the coming months along with the attendant effects on interest rates and credit products.
- With near-constant developments affecting the global economic outlook, Nathan Sheets, PhD, Chief Economist and Head of Macroeconomic Research, assesses the state of the global recovery, the time it may take to return to pre-virus levels, and the risks that could further jolt the economy in the months ahead. [“Dissecting the Global Recovery—What’s Next?”](#)

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[Coming Soon: The 2020 Elections—Global Investment Implications](#)

As the U.S. Presidential and Congressional elections loom, our upcoming webinar will examine how the potential outcomes could impact macroeconomic trends and global fixed income markets. [Register to join us on October 15, 2020.](#)

[Developed Market Rates](#) | 9

Opportunistic. In a generally low volatility rate environment, we continue to focus on opportunities from mispricings, including those driven by central bank expectations and Treasury auctions.

[Agency MBS](#) | 9

Positive on production coupon spreads and TBAs vs. intermediate Treasuries. Specified pools outside of the Fed’s purchases also appear attractive. We continue to prefer other sectors vs. MBS given the sector’s potential headwinds.

[Securitized Credit](#) | 10

We remain positive on high-quality spreads as near zero rates and aggressive Fed intervention creates an environment for spread tightening. We are wary of mezzanine risk for CLOs and conduit CMBS, but find value in subordinates of select securitized credit assets.

[Investment Grade Corporate Bonds](#) | 11

Positive in light of central bank support and the prospects for an economic recovery. Favor U.S. money center banks as well as select BBB-rated issues, cyclical credits, and fallen angels.

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Constructive over the medium and long term. Spreads are at attractive levels versus historic norms and will drive strong returns for investors with longer-term time horizons. Over the near term, the market will likely remain volatile (but relatively range-bound) given fears of a reacceleration of Covid cases and uncertainty around the U.S. elections. We believe actively managed credit selection will be a differentiating factor between managers.

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EM performance may bounce in Q4, though there may be bumps given the political uncertainties looming in the developed markets. Spreads will benefit from attractive relative valuations, and we favor spreads relative to local rates and FX. We continue to like higher-quality names and select higher-risk credits with additional room to perform. EM local bonds still have scope to do well, but we are focused on our overweight positions. EMFX has momentum if dollar weakness resumes, and positioning remains very selective.

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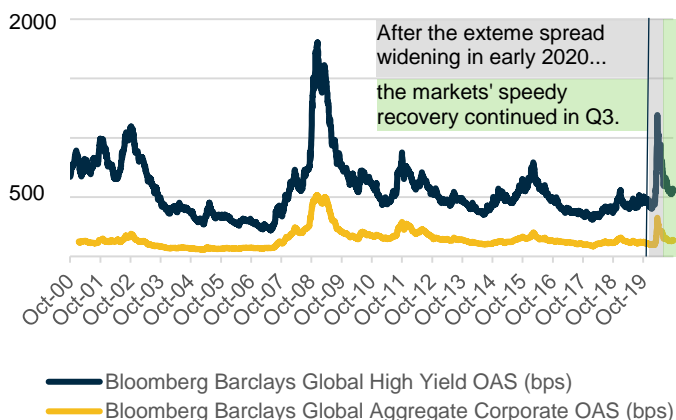
Despite attractive valuations, our near-term outlook remains cautious based on expectation of elevated supply prior to the U.S. elections, lack of additional federal aid for states and localities, and increased market volatility. We would expect more favorable technicals to support tax-exempts into year end.

▼ SECTOR VIEWS ▼

The Key to Avoiding Nausea in Rough Seas: Keep Your Eyes on the Horizon

As we turn the page to the last quarter of 2020, it's not hard to understand why investors are on the edge of their seats. After experiencing the Covid market crash and the aggressive policy-driven recovery in a fraction of a year, the markets' roundtrip set speed and distance records (See Figure 1). Investors now face a mind numbingly complex array of risks in Q4 and beyond thanks to the virus, the upcoming U.S. election, and a number of more idiosyncratic challenges, with many either directly or indirectly driven by the virus-induced drop in economic activity. What's next?

Figure 1: Credit spreads—Not as Bad as 2008, But Shy of That, the Largest Widening and Quickest Recovery in Recent Decades



Source: Bloomberg as of October 2020

Figure 2: Despite the low yield starting point, some investment grade sectors notched impressive YTD returns, ranging from the mid-single digits on up. Even the Euro Agg., starting the year with a yield barely above zero, posted a return of nearly 3%. With economic risks looming, higher-risk sectors, such as high yield and hard currency EM, have yet to recover.

Individual FI Sectors	Q3 2020	YTD 2020	2019	2018	2017
Long U.S. Treasuries	0.12	21.35	14.8	-1.84	8.53
U.S. Treasuries	0.17	8.90	6.86	0.86	2.31
U.S. Long IG Corporates	1.91	8.36	23.9	-7.24	12.09
CMBS	1.71	6.98	8.29	0.78	3.35
U.S. IG Corporate Bonds	1.54	6.64	14.5	-2.51	6.42
EM Local (Hedged)	0.23	3.75	9.14	0.75	3.68
Mortgage-Backed (Agency)	0.11	3.62	6.35	0.99	2.47
Municipal Bonds	1.23	3.33	7.54	1.28	5.45
European IG Corporate	1.99	0.78	6.24	-1.25	2.41
U.S. High Yield Bonds	4.71	0.00	14.4	-2.26	7.48
EM Debt Hard Currency	2.32	-0.51	15.04	-4.26	10.26
European Leveraged Loans	2.69	-0.75	4.38	1.25	3.72
U.S. Leveraged Loans	4.13	-0.83	8.17	1.14	4.09
European High Yield Bonds	2.60	-2.47	11.4	-3.35	6.79
EM Currencies	1.42	-4.00	5.2	-3.33	11.54

Multi-Sector	Q3 2020	YTD 2020	2019	2018	2017
U.S. Aggregate	0.62	6.79	8.72	0.01	3.54
Global Agg. (Unhedged)	2.66	5.72	6.84	-1.2	7.39
Global Agg. Hedged	0.73	4.65	8.22	1.76	3.04
Euro Aggregate (Unhedged)	1.50	2.76	5.98	0.41	0.68
Yen Aggregate	0.13	-0.77	1.64	0.93	0.18
Other Sectors			2019	2018	2017
S&P 500 Index	8.93	5.57	32.6	-4.4	21.26
3-month LIBOR	0.08	0.91	2.4	2.23	1.22
U.S. Dollar	-3.60	-2.60	1.35	4.9	-7.85

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). European returns are unhedged in euros unless otherwise indicated. Performance is for representative indices as of September 30, 2020. An investment cannot be made directly in an index.

The potential for volatility is clear. But the configuration of value, fundamentals, and fiscal and monetary policies leaves us relatively optimistic about the bond market outlook. Over the intermediate to longer term, we are particularly positive on the outlook for spread product as we pass through the latter stages of the “Golden Age of Credit.” The story on government bond yields isn't so much that they are unduly high and will therefore rally, but more along the lines that yields are unlikely to rise on a sustained basis and scotch return prospects.

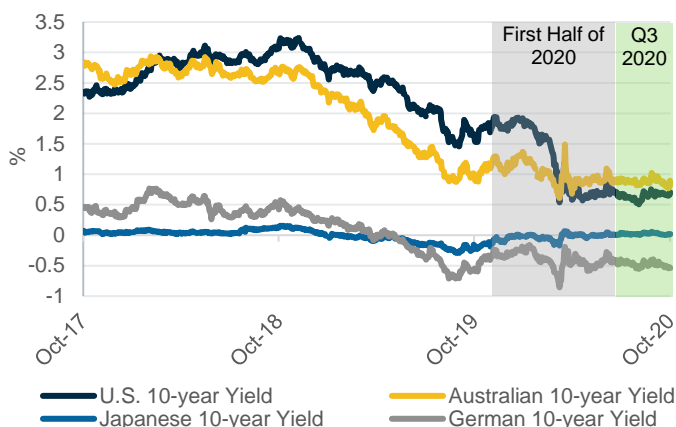
Solidly Grounded DM Rates

While the story in spreads is more of a largely, but not quite, complete recovery, the story in developed market interest rates is different: the decline in yields is likely permanent. Rate fundamentals have been turbocharged by central banks as, one by one, they have fallen into a trap of gunning for what may be unrealistically high inflation targets; successively guiding rates down to the effective lower bound of zero or into negative territory. And then getting stuck. If the Fed is serious about hitting, let alone averaging, 2% Core PCE inflation, then [it just joined that crowd](#).

In terms of market impact, other major rate markets have been stuck significantly below U.S. rates. Even prior to Covid, the 10-year JGB rested around 0%, and the 10-year bund traded around -0.5% (Figure 3). Despite more favorable growth fundamentals than the U.S., even the Australian 10-year yield hovered around 1% since the middle of 2019. As a result, we expect the U.S. 10-year Treasury yield to spend most of the time in the lower half of a 50-100 bps range for the foreseeable future.

Bond Market Outlook

Figure 3: DM Rates Set to Remain Low and Rangebound



Source: Bloomberg as of October 2020

Batten Down the Hatches!

As the quarter begins, the virus continues to spread with President Trump hospitalized after testing positive. Yet, the future course of the virus and the time frame for its containment takes second place on the list of question marks about the future. The U.S. presidential election—just the process, never mind the outcome—now sits at the top of the list. Soon, and hopefully before the end of the year, the election’s policy implications will move to the top of the list alongside the future course of the virus.

Election Outcomes

Let’s face it, the near-term range of scenarios is wide open. Take your pick: a quick, clean election result that is readily accepted by the President and the public, or a long dispute destined for the courts, possibly protested in the streets or from the Oval Office. The results could bring a sweep for Democrats or keep the status quo, i.e., a Republican President and a Republican Senate. No doubt, the virus’ impact on the President’s campaign and his popularity will affect the outcome of the election. Is high market volatility, if not disarray, all but assured?

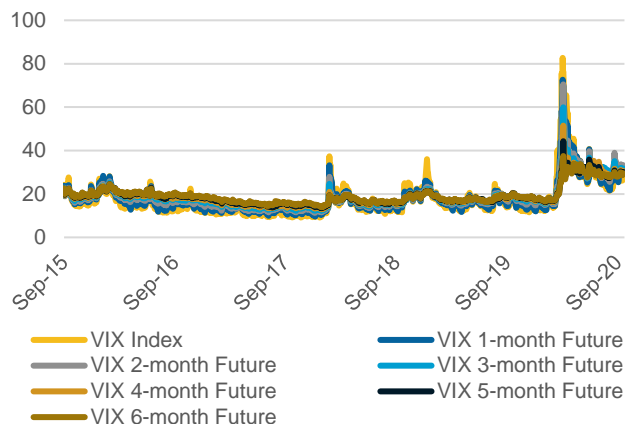
The Markets’ Valuation Premium Cushion

Maybe it will be a volatile quarter, but maybe not. Why? Because there’s a cushion in the markets. For example, *while U.S. and European credit spreads are around their long-term averages, investment grade and high yield spreads remain 50% wider than where they started the year. As a result, any investor bailing out of spread product risks substantial loss of incremental income, as well as the potential for capital gains, in a scenario where the trend towards economic normalization continues over the next 12 to 24 months.*

The market for equity volatility conveys another measure of risk premium, or as some describe it: the cost of insurance in the equity market. *S&P 500 implied volatility (30%) is running about*

double its normal levels (15%) not just through election day, but also for the next half of a year, according to the futures markets.

Figure 4: The VIX and the 1-6 Futures Contracts



Source: Bloomberg as of October 2020

Is Biden a Buzz Kill for the Markets?

While pundits have feared that a Biden presidency might unduly burden the economy with taxes and thereby hurt markets, additional fiscal stimulus, especially in the case of a democratic sweep, could more than offset the negative impact of the tax hikes. Yes, taxes could go higher. But based on the proposed stimulus packages thus far—sub \$1 trillion from Republicans and more than \$2 trillion from Democrats—and setting aside which is “best,” the markets have clearly traded positively on news of bigger stimulus and traded off on news of stimulus delays. And given the slack in the economy, the Biden platform certainly has plenty of planks that could be fashioned into stimulus dollars in the event that Democrats end up in the driver’s seat.

Could Fiscal Stimulus Go Wrong for the Markets, Like in 2018?

After Trump’s victory in 2016, his tax cut proposals languished until their surprise passage at the end of 2017, at which time markets went into a tailspin: Treasury yields shot up and volatility and spreads exploded. Why?

First of all, the late-2017 package hit at a different point of the cycle, striking as U.S. GDP growth approached 3% and unemployment sat at a generational low. And credit spreads were much tighter. As a result, the prospect of stimulus pushed rates higher on fears that the Fed would accelerate its rate hikes and drove spreads wider on fears of “crowding in” by the massive Treasury issuance. While this type of reaction to additional stimulus can’t be ruled out initially, this time the stimulus is counter-cyclical and clearly needed. As a result, following any shock jump in rates or widening in credit spreads, we would

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expect rates to eventually revert back to current levels and spreads to eventually tighten inside of current levels.

And the Virus ...

Cases are rising rapidly once again. Is it the “back to school” wave? Will there be a later “flu season” wave? Only time will tell, but the markets may choose to wait this out for a combination of reasons. First, deaths are contained in most areas despite higher cases, which may reduce the odds of economically damaging wholesale lockdowns. Second, markets may hold their fear in abeyance, clinging to expectations for a vaccine in the next few months. Third, vaccine or not, a slow growth environment, while perhaps not ideal for stocks, may be fine, or even preferred, by bond investors as it would likely keep government yields at rock bottom levels, and the ensuing reach for yield would continue to support spread product returns.

Everything (Markets) Goes Better with QE

In the wake of the Covid shock, quantitative easing has played a major role in calming the markets. In addition to restoring liquidity in the Treasury market, aggressive QE has absorbed the massive Treasury issuance caused by the fiscal stimulus. Without that, government issuance would “crowd in” the market, pushing credit spreads wider, forcing private borrowers to pay more in terms of yield to compete with government issuance.

With central banks re-examining how to achieve the inflation targets that they’ve been missing and with plenty of slack in the global economy, we have every reason to expect the QE flood to continue given its key role in underpinning the markets and the recovery.

Eyes on the Horizon...

The election process, the policy aftermath, and the virus—before, during, and after—will keep the shock waves coming. But the markets appear to be at least partially braced for protracted election chaos, further virus waves, and the wait for a vaccine. No doubt, there will be volatility and surprises, but the markets have priced in room for error. Perhaps most important, with the economy on a moderating growth tack, inflation targets will continue to be missed and central banks will therefore maintain rock-bottom cash rates and the flow of liquidity.

The Bottom Line: Unless the markets’ worst fears materialize, we expect that once the dust settles, the fixed income markets, especially the credit sectors, will have performed much better than feared, finding that the combination of moderate growth and high QE keeps government yields low and encourages a search for yield that further compresses credit spreads.

Dissecting the Global Recovery— What's Next?

The ongoing stresses from the coronavirus have generated unprecedented volatility in global GDP growth. After a sharp drop during the first half of the year, which exceeded the worst readings during the global financial crisis by several times, the global economy appears to have subsequently recorded a much stronger-than-expected rebound during the third quarter.

On balance, the central tendency across a broad range of global indicators points to a recovery of roughly two-thirds of the ground lost during the spring. On the one hand, this leaves the global economy in a much stronger position than we anticipated as the fourth quarter commences. Consistent with this, we have marked up our 2020 forecast for PPP-weighted global growth to -3.6%, compared with a projection of -5.3% three months ago. On the other hand, economic activity is still well below its pre-virus level, and our expectation is that the pace of recovery is likely to be slower from here.

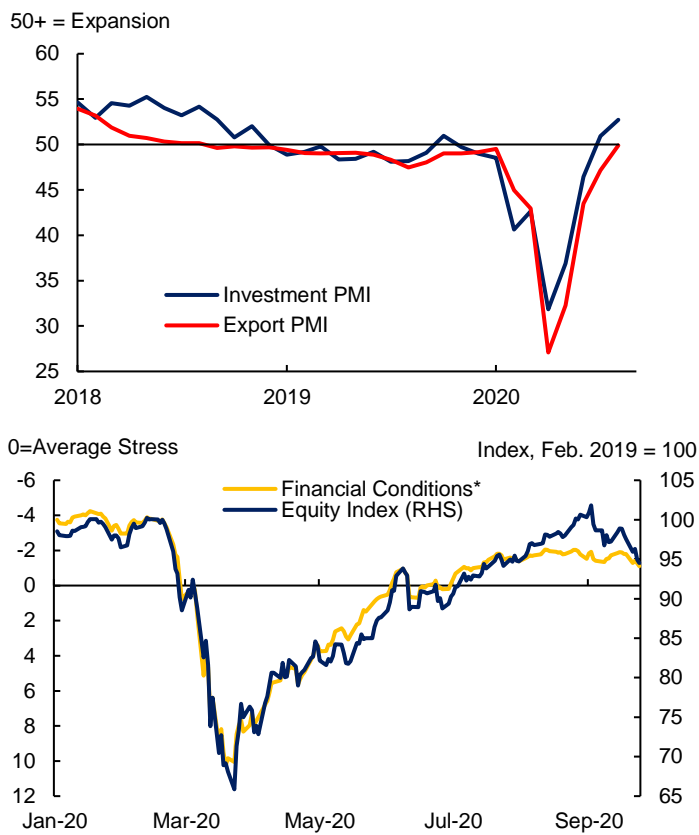
A Stronger than Expected Third Quarter Rebound

The third quarter rebound reflected the confluence of several factors. First, once the initial lockdowns were lifted, global consumer spending bounced back with vigor. Consumers have been somewhat less daunted by the virus' economic disruptions and health uncertainties than we had envisioned. While the rebound in consumer spending has been led by the goods sector, with services lagging, this spending has supported employment and pushed down inventory levels. And, as shown in the top panel of Figure 1, it is now echoing into global trade and investment.

A second driver of recovery has been the massive stimulus from central banks and governments. This support was provided with breathtaking speed and vigor. In many countries, it has focused particularly on supporting the flow of income to households. This has come either as wage support to firms, to allow them to maintain employment through the downturn, or as direct payments to households, including in the form of enhanced unemployment benefits. This support has been geared particularly toward working-class earners and has provided an important lift to consumer spending.

Third, global financial markets have bounced back sharply—shaking off much of the fear and uncertainty that characterized the spring downturn. As shown in the bottom panel of Figure 1, a measure of global financial conditions has now returned to roughly its pre-Covid readings, and global equity prices have moved in parallel. This rebound has reflected the recovery in economic activity, as well as the monetary and fiscal stimulus. The healing in financial conditions has, in turn, reinforced business confidence and boosted spending.

Figure 1: Global PMIs and Financial Conditions



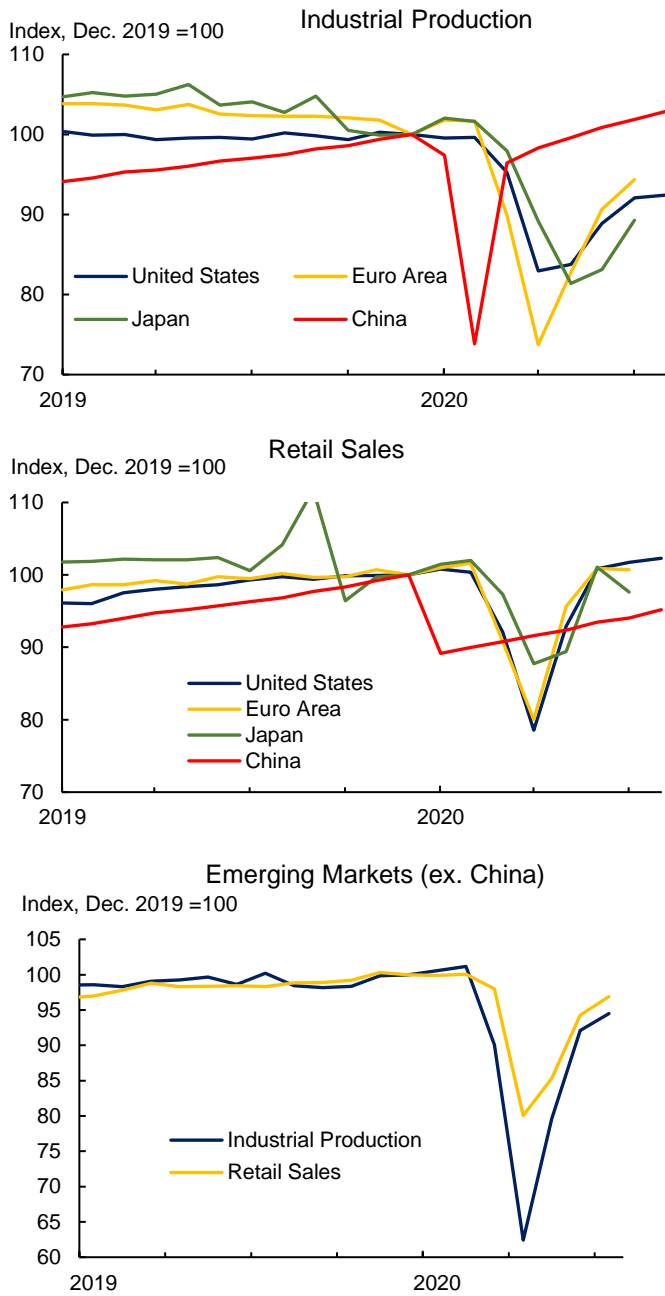
Source: PGIM Fixed Income and Haver Analytics

Whether market pricing is now too optimistic is an important question which investors are increasingly grappling with—as manifest by the recent correction in equity prices. That said, in previous business cycles, a similar divergence between financial and macro indicators, has often been a leading indicator of recovery.

An important nuance is that the trajectory of recovery has varied significantly across geographies. As shown in Figure 2, the rebound in industrial production in China has been particularly impressive, with output now slightly above its pre-Covid level. Rising exports, particularly of PPE and electronics, have been a key contributor to this bounce, and the authorities' macro stimulus has supported the industrial sector. In contrast, in the United States, the euro area, and Japan, the rebound has been sharpest in the consumer sector. In the emerging markets excluding China, industrial production fell more sharply than retail sales, but both have now rebounded to within roughly 5% of their pre-virus levels.

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Figure 2: Industrial Production, Retail Sales in DM and EM

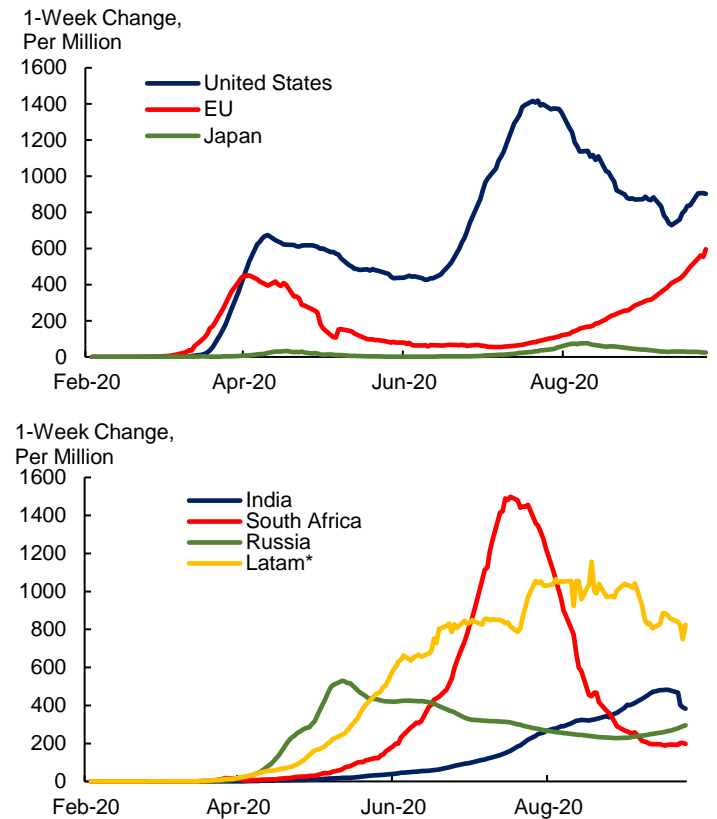


Source: PGIM Fixed Income and Haver Analytics

The virus' divergent impact across geographies has been one driver of the differing contours of recovery. The coronavirus first erupted in China, but it was quickly extinguished there. As shown in Figure 3, the virus moved next to Europe and then to the United States. Both of these economies endured severe outbreaks during the spring. While the U.S. saw a substantial second wave through the summer, new cases in Europe remained relatively subdued until August but are now rising again. The experience across the emerging markets has also varied. South Africa was hit particularly hard during the summer, but new cases have since declined

rapidly. In contrast, in Latin America, new infections have remained stubbornly high.

Figure 3: Coronavirus Cases



Source: PGIM Fixed Income and Johns Hopkins Coronavirus Resource Center. *Argentina, Brazil, Chile, Mexico, and Peru.

Another key factor has been the varying composition of fiscal stimulus. As noted, China's stimulus was primarily geared toward the industrial sector. In contrast, Europe provided significant assistance to firms through wage subsidy schemes, which provided funds to preserve employment and pay workers through the downturn. The U.S. effort was a mix of approaches. The Paycheck Protection Program (PPP) included incentives for firms to rehire their workers, which has contributed to the decline in unemployment. In addition, the (now-expired) enhanced unemployment benefits and lump-sum checks gave households the wherewithal to endure the worst of the downturn. The Japanese government also provided massive support for employment and spending.

But the Recovery Is Likely to Slow from Here

Our expectation is that the pace of recovery will slow meaningfully from here. The snapback phase of the rebound is behind us. Huge swathes of the economy—where it was possible to quickly adapt to social distancing and other precautions—are now functioning more or less normally. As noted, we have seen a sharp bounce in the global consumer goods sectors. In the services sectors, which depend heavily on face-to-face contact, the gap remains much

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more substantial, and the journey back is likely to be slow and difficult. Some of these services sectors may be permanently smaller. People have learned to “do business differently,” and this is likely to have lasting effects on the demand for transportation, hospitality, and entertainment.

The challenges in some jurisdictions with re-opening schools underscore these issues. The historical model for education has depended critically on face-to-face contact. This sector is a large portion of the economy, so its constrained functioning is a direct hit to GDP. But there are also indirect effects. With many schools meeting virtually, or a mix of virtual and in-person, it creates practical challenges for many working parents in balancing the demands of employment and family. In the longer term, the reduced time in the classroom risks lowering the human capital of students and reducing levels of productivity.

Of course, the coronavirus also remains a source of drag on the economy. While meaningful progress has been made in terms of treatments, allowing the fatality rate for recent infections to be much lower than during the spring, necessary precautions continue to disrupt activity in some sectors, weigh on confidence, and undercut consumption and investment. *As long as the virus remains a risk that people must face on a daily basis, aggregate production and spending are likely to remain below their pre-crisis levels.* We thus see a vaccine as critical for a global recovery.

Consistent with this, recent readings for key global indicators point to slower growth. As a few notable examples, in the United States, initial unemployment claims have leveled off in recent weeks. The composite PMI in the euro area moved back down to 50 in September, with a particular retreat in the services sector. Readings on retail sales in the United States, the euro area, and Japan have decelerated in recent months. The Chinese consumer remains cautious.

Taken together, our baseline forecast anticipates a gradual global recovery through the year ahead, with GDP returning to its pre-virus level sometime between the end of 2021 and the end of 2022. China, of course, has rebounded much faster, and other countries in emerging Asia seem poised to follow suit. In contrast, key Latin American countries and South Africa may see a slower recovery.

And We're Not Yet Out of the Woods

This outlook, of course, is bracketed by significant uncertainties. A global resurgence of the coronavirus through the fall, as the flu season takes hold, is a concern that we have flagged for some time. Our baseline is that the preventive measures now in place will be sufficient to avoid this outcome, but it remains to be seen. A related concern is that the vaccine may take longer to arrive or be less effective than anticipated.

Another risk is that the lingering effects of this episode—the so-called “scarring”—may be more severe than we have factored in. This could take the form of reduced labor market functioning; for example, unemployed workers may see their skills depreciate as

they struggle to find new jobs. As a related matter, many small firms whose pockets simply weren't deep enough to survive the downturn have gone out of business. Their exit implies a net loss of productive capacity for the economy. The virus will also leave scars on the balance sheets of households, firms, and the public sector. Any deleveraging that results is likely to be another restraint on spending and growth. We have considered these factors in framing our “gradual” global recovery, but the effects may be more severe than we have envisioned.

We also worry about “policy fatigue.” Monetary and fiscal stimulus has provided powerful support to the recovery. We are confident that central banks will stimulate until the storm has passed and, in many cases, until they see meaningful progress toward their inflation targets. The uncertainties regarding fiscal policy are greater, however. The political consensus in favor of stimulus that prevailed early in the outbreak may prove fragile. While rising debt levels are a real concern, especially in the emerging markets, the costs of shifting toward austerity too soon could nevertheless be high.

As a concrete matter, this fatigue is now manifest in the United States. Over the past two months, Congress has been unable to reach agreement on another round of fiscal stimulus, including an extension of enhanced unemployment benefits. These enhanced benefits have been crucial in allowing households to sustain consumption through the downturn. Without these benefits, the outlook for consumption becomes more murky, especially through the next couple of quarters. In contrast, governments in Europe have generally taken steps to ensure the continued flow of fiscal support.

Finally, politics and its ramifications could still evolve in unexpected directions. In Japan, the transition from Shinzo Abe, the longest-serving Prime Minister in the country's history, to Yoshihide Suga has occurred smoothly. Prime Minister Suga is expected to broadly continue the policies pursued by the Abe government, but it remains to be seen whether he will have the same political and diplomatic savvy. In the United States, the country is entering the final weeks of a hard-fought presidential campaign. Former Vice President Biden is generally ahead of President Trump in the polls, but our sense is that the election could still go either way. If Biden does win, the markets will likely welcome his more conventional operating style, and the prospect of renewed fiscal stimulus, but will also worry about the possibility of higher taxes and tighter regulation. A Trump victory, in contrast, is likely to bring another round of trade wars against China and, possibly, against the European Union. Another concern for the market is the possibility of a disputed outcome, where the outcome is unresolved for weeks after election day. Such a situation could be deeply divisive and create unwelcome uncertainties for the markets, and for the global economy more broadly.

Developed Market Rates

Developed market interest rates remained largely rangebound throughout the third quarter as the market digested the dual narratives of economic slowdown and fiscal expansion. We generally expect the rangebound trend to continue for the rest of the year, but anticipate periodic bouts of volatility leading up to the U.S. elections in November. With the heightened probability for increased, short-term volatility across risk assets, we continue to believe that the U.S. 10-year yield may trade near the bottom of the current 50-100 bps range through the end of the year.

Given our rangebound rate expectations, we continue to focus on global relative value opportunities across the developed market rates complex. One such opportunity exists in the real rates markets. For example, the Bank of Canada stands alone as the only G4 central bank currently projecting future rate hikes, which supports long positioning in 10-year Canadian real rates. Furthermore, we've held a short position in UK real rates vs. the U.S. as the 10-year UK linker yields about -3.0%, well below the recent yield of -1.0% on U.S. 10-year TIPS.

Elsewhere in the U.S., we believe shorter-term opportunities may continue to emerge around the Treasury's sizable auction calendar as concessions are built on increasing supply. In addition, 20- to 25-year Treasuries appear attractive from a carry perspective, and the Treasury's inclination to extend its weighted average maturity profile should continue to support the relatively tight levels of 30-year interest-rate swaps relative to the nominal yield on the long bond.

We have less conviction on views in Europe amid flatter yield curves and lower yields relative to the U.S. In terms of notable cross currency basis pairings, we continue to pay on the Japanese yen/U.S. dollar cross currency swap.

Over the long term, we are cognizant that our rangebound thesis may be tested by increased global fiscal stimulus and heightened uncertainty regarding U.S. political leadership. We believe increased fiscal spending may target infrastructure and technology, which could boost productivity capacity and eventually lead to higher real and nominal rates. That said, the expected moderation in developed market economic recoveries going forward will likely maintain a low and rangebound environment for DM rates well into the future.

Outlook: Opportunistic. In a generally low volatility rate environment, we continue to focus on opportunities from mispricings, including those driven by central bank expectations and Treasury auctions.

Agency MBS

The backdrop for the agency MBS sector is shaped by the Federal Reserve's guidance that it will increase its MBS holdings over the months "at least at the current pace to sustain smooth market functioning and help foster accommodative financial conditions supporting the flow of credit to households." As a result, we anticipate positive hedge-adjusted performance of production coupons vs. intermediate Treasuries as Fed purchases coupled with demand from domestic banks and yield-based buyers will absorb much of the increased net supply.

As the Fed's agency MBS holdings near \$2 trillion, its purchases have improved market conditions by siphoning generic bonds out of the market and cleaning up TBA (to-be-announced) deliveries. The convexity within the sector has also improved as the Fed has removed the cheapest-to-deliver MBS—i.e., the worst prepaying, most negatively convex bonds—across agencies, maturities, and coupons. At current prepayment speeds, paydown reinvestment on the Fed's portfolio alone total about \$70 billion per month.

Convexity-related accounts have been quiet as primary mortgage rates have stabilized and market expectations around prepayments have already repriced much of the MBS universe. We expect production coupon dollar rolls to remain firm, but higher-coupon positioning should be focused in carefully selected specified pools. Current spread levels on production coupons remain wide and may appear attractive to yield-based buyers relative to U.S. Treasuries. Demand from large banks should remain firm given the typical Q4 buying patterns. However, the Fed's extended constraints on dividend payouts and share buybacks in order to preserve bank capital may spur even greater focus to grow net income using MBS.

In terms of headwinds, model durations within the sector are relatively short given the level of primary rates. In addition, high mortgage purchase and refinancing application indices suggest that supply will remain elevated. The recent pace of origination is well above beginning of year and net supply estimates for 2020 have increased from about \$300 billion to about \$400 billion. Furthermore, the FHFA's previously delayed "Adverse Market Refinance Fee" may pull supply forward as the December 1st implementation date approaches, and eventual delinquency buyouts could accelerate prepayment speeds as well.

Some policy uncertainty also lingers over the sector as the Fed's purchases are driving the financing advantages in the segment of bonds that it buys. A change in purchase activity may alter carry advantages across coupons as we have observed with the Fed rolling down-in-coupon throughout the year. In addition, the outcome of the U.S. presidential election could alter the future direction of the GSEs and policy directives.

Outlook: Positive on production coupon spreads and TBAs vs. intermediate Treasuries. Specified pools outside of the Fed's purchases also appear attractive. We continue to prefer other sectors vs. MBS given the sector's potential headwinds.

Securitized Credit

Sector	Subsector	LIBOR OAS	Spread Change (bps)
		9/30/2020	Q3
CMBS			
CMBS: Conduit 2.0	First-pay 10-year	92	-48
CMBS 3.0 Conduit BBB-	BBB-	535	-231
CMBS: CMBX (OTR)	AAA	63	-6
CMBS: CMBX (2012)	AA	177	-94
CMBS: Agency Multifamily	Senior	42	-16
Non-Agency RMBS			
Legacy	RPL Senior	95	-35
Legacy	'06/'07 Alt-A	200	-85
GSE Risk-Sharing	M2	340	+50
CLOs			
CLO 2.0	AAA	130	-35
CLO 2.0	AA	170	-50
CLO 2.0	BBB	385	-30
ABS			
Consumer ABS	Seniors (One Main)	135	-55
Consumer ABS	B (One Main)	175	-125
Refi Private Student Loan	Seniors	95	-35
Generic	A Class	110	-10

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The 2020 election looms large as a potential source of fixed income spread volatility, but we continue to believe that securitized products are situated to perform comparatively well as they have less exposure to changes in tax and regulatory policy. The Fed's purchases of other assets, the TALF backstop for securitized products, and the expected prolonged misery of near-zero interest rates all point to further spread tightening, the U.S. election process or outcome notwithstanding. Regardless of who wins the election, we expect Mark Calabria to remain Director of the FHFA, which suggests that ending GSE conservatorship will remain on the agenda, though the path forward is uncertain. In the UK and Europe, the increasing likelihood of a hard Brexit opens the possibility of credit headwinds for UK RMBS and European CLOs.

CMBS: CMBS AAA spreads in the low to mid 90 bps remain compelling at about 15-20 bps wide of their pre-Covid tightness. We think they will revisit those tightness in 2021, if not late 2020. Limited new issue supply for the balance of the year coupled with our view of the market's grab for high-quality spread products provide technical tailwinds. Down the credit stack, the CMBS credit curve flattened in Q3 as bargain hunters picked over the mezzanine stack. Nevertheless, the curve remains steeper than it entered the year, particularly for pre-Covid transactions. We do not think the current environment is a good entry point for mezz as uncertainty remains high for many properties in conduit deals. We do see opportunities in better Single Asset/Single Borrower mezz, which

trade wide of pre-Covid levels and present the opportunity to better understand property fundamentals. As to property types, apartments and industrial properties have generally been resilient with office cashflow still performing well, but subject to about a 10% valuation decline on average. [Hotels remain vulnerable](#) on low occupancy, but retail shows some signs of stabilizing, especially for well-positioned malls and stand-alone centers.

Non-Agency RMBS: A very aggressive and unified policy response to this crisis, notably in comparison to the GFC, and the imperative of sheltering in place has staved off the adverse housing performance that has occurred in other large-scale unemployment scenarios. Policy makers this time did not have to agonize about the moral hazard implications of bailing out imprudent borrowers/lenders/investors. Coupled with record low mortgage rates, housing has actually exceeded and is up about 4% over the last year, much better than we anticipated at the outset of the crisis. AAA re-performing mortgage (RPL) spreads have recovered meaningfully but remain wide to pre-Covid levels. RPL cashflow velocity (the percentage of scheduled payments collected) is recovering more slowly than Fannie/Freddie (GSE) mortgages and RPL prepayment risk, while muted thus far, is a problem for high dollar price bonds. We are also sensitive to the risk of a negative technical in this space, as well as legacy non-agencies, if money managers need to unwind their overweight over the coming year in response to redemptions. We like GSE credit risk transfer (CRT) spreads at these post-Covid wider levels, particularly deals that have been issued post-March in which the forbearances have been stripped out of the pool. We also like mortgage insurance CRT (MI-CRT) spreads at current levels and prefer the MI version at the margin as MI-CRT has less exposure to both loan modification losses and climate risk than regular GSE CRT.

ABS: Consumer ABS has benefited, once again, from aggressive residential forbearance. Not having to pay for housing frees up a lot of cash for other debt service. We remain constructive on unsecured consumer loan and select subprime auto ABS across the capital structure, but with AAA spreads flirting with, and sometimes through, pre-Covid tightness, we are more constructive on mezz than AAAs in the near term. Student loan convexity has been costly in the rate rally as prepaids have eroded premium bond dollar prices, and, with spreads tight, we are hitting pause on additional purchases. Going forward, the expiry of government consumer stimulus coupled with the resolution of Covid-related loan forbearance adds uncertainty to the credit performance of consumer loans, though early indications suggest it will be manageable.

CLOs: We continue to like AAA and AA CLOs at current levels, and A-rated tranches are also interesting at the margin as a surrogate for bank loans themselves, but we remain wary of BBBs and below. Down the stack, we remain concerned about CLO mezz's levered exposure to bank loans with high balance sheet leverage and how bank loan defaults with weaker corporate capital structures will weigh on ultimate recoveries. Aggressive corporate creditor-on-

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creditor restructuring actions are a loss severity concern for CLOs as they are sometimes unable to participate in workout options that maximize recoveries. Over the next six months, we expect U.S. CLO spreads to remain in the current range as high supply in primary market coupled with the threat of higher refinancings of 2017 and 2018 deals will likely stymie meaningful spread compression. For European CLOs, we expect spread compression as spreads have further to re-trace to pre-Covid levels.

Outlook: We remain positive on high quality spreads as near zero rates and aggressive Fed intervention creates an environment for spread tightening. We are wary of mezzanine risk for CLOs and conduit CMBS, but find value in subordinates of select SASB CMBS, ABS, and non-agency CRT RMBS.

Investment Grade Corporate Bonds

	Total Return (%)		Spread Change (bps)		OAS (bps)
	Q3	YTD	Q3	YTD	9/30/2020
U.S. Corps.	1.54	6.64	-14	43	136
European Corps	1.99	0.78	-30	26	119

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Global investment grade corporate bonds continued to recover in Q3 against a backdrop of substantial global central bank support, improving economic growth (albeit still negative on the year), better-than-expected corporate earnings, and robust technicals. By year end, we expect spreads to tighten further, notwithstanding a near-term spike in volatility surrounding the U.S. presidential election as well as other global political developments and the path of the virus.

U.S. Corporate Bonds: The backstop of the Federal Reserve, with its near zero rates, primary and secondary credit facilities (although little used so far), and commitment to do “whatever it takes,” have greatly improved liquidity in the corporate marketplace. Both fundamentals and technicals have been, and should continue to be, key market drivers across select industries and issuers.

On the fundamental side, there are notable quality differences between those companies that have benefitted from the virus lockdown, such as technology and on-line retailers, and those caught in the headwinds, primarily leisure, gaming, and other service-related issuers. Management teams across all corporate sectors—but primarily from BBB-rated issuers—have adopted a much more conservative stance by cutting expenses, eliminating share buybacks, and improving free cash flow, essentially aligning their behavior with bondholders. Negative credit rating actions have declined, and fallen angels have been minimal in recent months. We expect the upcoming Q3 earnings season to show notable improvement versus the prior quarter.

On the technical side, new issuance dominated the headlines, breaking records on a year-to-date basis. Investor demand has been equally strong in this “reach for yield” environment, not just from U.S. investors but also from non-U.S. investors in light of reduced hedging costs. Companies are aggressively trying to lock in low rates. Some are intent on financing growth, but the majority of proceeds are earmarked for cash reserves or to refinance existing debt. Some mergers and acquisitions have been initiated, mostly by high-quality companies that have been able to weather the Covid-19 pandemic. Tenders have begun to rise and should increase as companies look to lock in lower rates. This is in addition to the prefunding that has already taken place this year. In all, we expect issuance to decline as the year closes.

As Q4 commences, we continue to favor select, lower-quality, shorter maturities, as well as attractively priced 20-year issues and longer-duration maturities that offer attractive spreads and should benefit from further spread tightening. We are looking to take advantage of spread compression in select higher-yielding BBB bonds, distressed survivors, and cyclical, such as select autos, chemicals and energy, as the economy recovers. We also favor industries that should weather any upcoming volatility, such as electric utilities, taxable municipals, and money center banks that are still under the watch of the Fed.

European Corporate Bonds: European corporate spreads tightened notably more than U.S. spreads, resulting in a more attractive absolute total return in Q3. European corporate performance was greatly influenced by more limited supply and massive ECB support. Investors’ ongoing reach-for-yield and, unlike the U.S., a stalled supply calendar in August and September also pulled spreads tighter. In some weeks, much of the supply comprised of attractively priced U.S. issues denominated in euros.

Going forward, we may even see some better-quality companies that borrowed in Q2 start to buy back their debt, depending on the strength of the recovery. With overall issuance pegged to decline in 2021 and sustained central bank bond buying, we look for technicals to remain fairly healthy, at least over the next six months.

In terms of fundamentals, we look for European corporate earnings to improve in Q3 but remain well below Q3 2019 levels. At this juncture, we are carefully analyzing a company’s potential journey through the pandemic, especially given the recent resurgence of virus cases throughout Europe and related tightening of restrictions. It will be critical to identify managements’ commitment to maintaining “healthy” balance sheets and the potential scenarios that may affect a company’s profitability.

In European corporate portfolios, we hold a moderately long spread duration averaging +0.2 years relative to the index. We remain overweight banks that we believe will benefit from full government support. We remain overweight European risk, but given the tight spread levels of ECB eligible paper, we favor ineligible “reverse-yank” euro-denominated U.S. corporate bonds. Many of these

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issues have priced with healthy concessions and better pricing than the company's USD holdings and EUR issuers of similar quality.

Global Corporate Bonds: In global corporate portfolios we generally hold a balanced risk exposure to EUR vs. USD, prefer reverse-yankee U.S. issues rather than ECB eligible paper, and hold a slight overweight in spread duration (long exposure to the euro and USD and short exposure to the yen, Swiss franc, etc.). We remain flat to underweight sterling denominated credit spreads. We still prefer U.S. money center banks, electric utilities denominated in dollars, and taxable municipal bonds. We continue to take advantage of price and yield dislocations between EUR and USD bonds of the same and/or similar issuers.

In Q4, we could see a spike in near-term volatility due to uncertainties regarding the U.S. election and Brexit negotiations. In addition, the unknown path of the virus, potential slowdowns in economic re-openings, and global trade tensions may stall this "golden age of credit" in the near term. We expect U.S. corporate spreads to ultimately tighten by year end, and they could be tighter by up to 30 bps or more by March 2021 if the economic recovery stays on course. European spreads are more likely to be rangebound through year end, but will likely be tighter within the next six months. Currently, we believe U.S. and European spreads remain attractive, and we are actively searching for opportunities to add value.

Outlook: Positive in light of central bank support and the prospects for an economic recovery. Favor U.S. money center banks as well as select BBB-rated issues, cyclical credits, and fallen angels.

Global Leveraged Finance

	Total Return (%)		Spread Change (bps)		OAS/DM (bps)
	Q3	YTD	Q3	YTD	9/30/2020
U.S. High Yield	4.71	0.00	-103	181	541
Euro High Yield	2.60	-2.47	-56	161	485
U.S. Leveraged Loans	4.13	-0.83	-121	118	579
Euro Leveraged Loans	2.64	-0.75	-59	125	548

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U.S. Leveraged Finance: Heavy year-to-date inflows of \$39 billion into high yield bond funds, fewer-than-expected fallen angels, and a new issue calendar consisting mostly of refinancing activity provided a strong technical backdrop to the U.S. high yield market in Q3. We remain constructive on the sector given the enormous monetary and fiscal responses seen to date, and our two-year outlook is highly constructive. While near-term concerns remain around the November elections, a virus resurgence, and a reversal in fund flows, we believe the worst of the cycle may be behind us. After rallying from the YTD wides of 1,087 bps, spreads are slightly wide of 500 bps but remain about 180 bps wider on the year, and

our base case is for spreads to tighten inside 400 bps as we progress through 2021. More importantly, our downside case appears less likely, and we have reduced our default expectations to 8% over the next 12 months and to 2% for the following 12 months. Further supporting downside protection is a "willing-and-able" Federal Reserve standing by, and our view is that once the dust settles from the elections, more fiscal stimulus will arrive, if necessary, in 2021.

In terms of positioning, we are adding to fallen angels and fallen angel candidates in investment grade. We believe BB-rated bonds are attractive on a relative-value basis and are less susceptible to a second virus-related shutdown. We are currently underweight BBs but are selectively adding exposure. We are maintaining an overweight to independent power producers and, within energy, we are underweight oil producers and overweight natural gas. We are also overweight autos, chemicals, gaming, housing, and telecom. We have cut our exposure to consumer staples and restaurants given the recent rally in both sectors.

U.S. leveraged loans may also continue to benefit from the CLO-formation and refinancing tailwind that tightened discount margins in from the YTD wides of 974 bps. Discount margins remain about 90 bps wider on the year.

While the loan default rate rose to a multi-year high of 4.3% in August, we expect defaults to continue for weaker issuers as liquidity becomes increasingly stressed. The Covid-19 crisis has already taken a significant toll on many loan issuers and the next three to six months will determine whether certain issuers will be able to survive. Meanwhile, we expect loan recovery rates (currently at multi-cycle lows) to remain well below their historic average. We currently favor the higher-quality, BB-rated segment of the market, particularly in defensive sectors, such as cable, supermarkets, food, technology, and healthcare. However, there are also attractive B-rated issuers that are not at risk, or may even benefit, from the pandemic. We continue to see prevalent risks in the retail, energy, gaming & lodging, auto supplier, and leisure industries.

European Leveraged Finance: Despite their strong bounce-back from the YTD wides of 884 bps, European high yield spreads remain at attractive levels versus historic norms and will, in our view, drive strong returns for investors with longer-term time horizons.

While we expect defaults to rise in the coming quarters, we expect European default rates to remain below those in the U.S. given the high percentage of BB-rated issuers, low percentage of energy issuers in the market, and the breadth of state support for corporations. Despite the economic stress, we believe default rates will remain below 3.0% in European high yield over the next 24—our base case is for a 2.0% default rate over the next 12 months and a 2.2% default rate over the following 12 months. For loans, our base case is for a default rate of 2.0% over the next 12 months and 3.1% over the following 12 months.

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While near-term risks remain elevated with coronavirus cases picking up heading into the U.S. elections—making short-term market moves difficult to predict—we remain constructive on European high yield bonds and loans. We believe the upside risk from a potential vaccine and ongoing global stimulus outweighs the downside economic risks from a second virus wave. Through active management and strong credit selection, we believe deteriorating situations can largely be avoided and attractive opportunities can be harnessed across the sectors.

In terms of positioning, we are currently broadly running above market-level risk, with investments weighted towards the best relative value opportunities given the evolving backdrop. Ultimately, we think actively-managed credit selection will be a key differentiating factor between managers in these volatile markets.

Outlook: Constructive over the medium and long term. Spreads are at attractive levels versus historic norms and will drive strong returns for investors with longer-term time horizons. Over the near term, the market will likely remain volatile (but relatively range-bound) given fears of a reacceleration of Covid cases and uncertainty around the U.S. elections. We believe actively managed credit selection will be a differentiating factor between managers.

Emerging Markets Debt

	Total Return (%)		Spread / Yield Change (bps)		OAS (bps)/ Yield % 9/30/20
	Q3	YTD	Q3	YTD	
EM Hard Currency	2.32%	-0.51%	-42	141	432
EM Local (hedged)	0.23%	3.75%	-0.03	-0.74	4.48
EMFX	1.42%	-4.00%	-0.12	-1.59	1.77
EM Corps.	2.75%	2.58%	-35	93	404

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The recovery in emerging market debt continued at a slower pace in Q3 compared to the prior quarter, and hard currency and EMFX slipped on the broader risk-off tone as the quarter concluded. From a top-down perspective, global growth, supportive liquidity conditions, low developed market yields, and accommodative policies will still provide the sector with a tailwind. From a bottom-up view, the focus as we head into 2021 will also be about the sustainability of the growth rebound given the fallout from the Covid-19 shock. Our forecast for EM growth next year is 7.2%, compared with -2% this year. The expected acceleration reflects the statistical rebound from the 2020 contraction and is not necessarily an “all clear” signal. The sector faces several key issues going forward: the ability for issuers to access the market, the further use of fiscal stimulus, the effect from China’s recovery and EM trade flows, and the continued support from multilateral institutions. To be clear, not all of these factors will be negative for

EM. Even though EM central banks may be at the end of their easing cycle, it is unlikely that a bout of policy tightening will impair the EM growth outlook. Headwinds and market volatility may emerge from policy and political uncertainty. Idiosyncratic developments pertaining to geopolitics, political cycles, various imbalances will also affect future outcomes. Performance in the short term could be bumpy in scenarios with future trade conflicts, sputtering economic growth amid rising virus cases, weaker commodity prices, and/or an acceleration in inflation across the sector. Still our base case is that EM will avoid a significant “second wave” of the virus, and the trends of spread tightening and a possibly gradually weakening dollar may resume. In that scenario, improved performance across higher-quality EMFX should support relatively solid performance across the broader sector as well.

EM Sovereign Spreads: Our base case is for continued sovereign spread compression through the end of the year. At about +200 bps, IG spreads are likely to reach and possibly break through pre-pandemic levels of just through 150 bps over the medium-term amid better than anticipated growth, ongoing market access, and momentum from developed market spread compression. It is unlikely high yield sovereign issuers will reach the sub +500 bps level from earlier this year, but at about +750 bps (in from wides of +1200), there is scope for some tightening, which appears very compelling, particularly in comparison to U.S. high yield if risk appetite returns. Thus far in 2020, the most dire forecasts for sovereign defaults have not materialized. While Lebanon, Argentina, and Ecuador defaulted, the latter two countries restructured, and their performance will be a function of country specific policies and technical factors. The recovery values were higher than expected, and given the debt rollover trajectory, do not necessarily pose a risk of a repeat credit event in the near term. Argentina’s post-restructuring performance has particularly underwhelmed, likely due to a combination of technicals and policy missteps. While other select frontier countries are vulnerable to commodity price volatility, or politics/policy measures that may lack compatibility with IMF funding availability, we don’t see many near-term triggers for a wave of market negative credit events. We will continue to keep our eye on countries where policy measures have stretched confidence and foreign exchange metrics in some markets, i.e. Turkey, and in countries impacted by geopolitics, i.e. Belarus/Ukraine/China/Russia/Turkey.

The credit rating trajectory for EM sovereigns is still biased to downgrades, as recent actions have shown (Angola and Sri Lanka to CCC and Turkey’s downgrades), but this is probability reflected in spreads and unlikely to add to default totals. YTD flows into EM hard currency ended Q3 in positive territory, and this trend will likely continue as investors see the value in EM in a post-pandemic context. Flows tend to follow performance, and inflows typically increase in September through November.

Local Rates: With local rate yields only 15 bps higher than their all-time lows of 4.35%, further gains from an outright overweight to local rates duration seems limited. In most EM countries,

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disinflation is bottoming out and central banks' rate cuts are coming to an end. With many EM curves pricing in small hikes over the next two years, front end positions represent carry and rolldown trades, while the belly and long end of the curves may be highly correlated with the performance of EM currencies.

Our biggest active position is in China, which has lagged its peers, and index inclusion flows should provide newfound support in the quarters ahead. We also favor select high-yielding markets, such as Mexico, Russia, South Africa and Brazil, amid attractive hedged yields and steep two- to 10-year curves. While EM local flows are still negative year-to-date, recent inflows, along with a more constructive outlook for EMFX, should support the case for blend strategies going forward. Risks to EM local rate performance going forward includes the unwinding of U.S. dollar short positions and the re-coupling of the correlation between FX and local rates.

EMFX: Barring an EM economic relapse into a Covid-induced recession, the U.S. dollar may gradually weaken going forward. The Federal Reserve's flexible average inflation targeting regime is significant—at this point, the Fed is the only major central bank explicitly signaling that it will not hike rates for three-plus years. As a result, financial conditions should remain loose as the Fed may be more apt to increase, rather than decrease, QE. Within EM, China is leading the global recovery, and its strong fiscal and credit stimulus is expected to continue into 2021. Additional support may come from improving fund flows into local currency bonds and EM equities. However, G10 currencies are likely to outperform EMFX as the latter is more differentiated with some currencies offering notably better risk/return profiles than others.

Outlook: EM performance may bounce in Q4, though there may be bumps given the political uncertainties looming in the developed markets. Spreads will benefit from attractive relative valuations, and we favor spreads relative to local rates and FX. We continue to like higher-quality names and select higher-risk credits with additional room to perform. EM local bonds still have scope to do well, but we are focused on our overweight positions. EMFX has momentum if dollar weakness resumes, and positioning remains very selective.

Municipal Bonds

	Total Return (%)	
	Q3	YTD
High Grade	1.23	3.33
High Yield	3.09	0.37
Long Taxable Munis	1.45	10.65

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Issuance continued at a steady pace in Q3 bringing YTD levels to \$362 billion, which includes \$131 billion in taxable muni deals. The expectation is that issuers will accelerate deals ahead of the election which could result in record supply in October, and more

manageable levels in November and December. While supply will likely pressure tax-exempts early in Q4, the steady flow of taxable muni deals presents a more favorable technical backdrop for the tax-exempt market. In addition, a stable to declining interest rate environment is typically supportive of mutual fund flows; steady mutual fund inflows in Q3 brings the YTD total to \$20 billion. The relatively steep muni curve (5s30s muni curve steepened 14 bps in Q3 to 136 bps) presents attractive opportunities on the long end with the expectation that the muni curve will flatten in Q4.

Despite the broad federal assistance provided under the CARES Act earlier this year, the loss of revenues and increased expenditures due to Covid-19 continue to pressure many states, localities, and other municipal entities. Absent another round of fiscal stimulus, we would expect these entities to implement additional layoffs, expenditure cuts, and seek new sources of revenue through increased taxes and other fees. Higher-quality credits across are better positioned to weather the current dislocations caused by Covid-19 and should have less ground to recover as we move through the next stages of the pandemic; therefore, we believe wider credit spreads present opportunities in lower-rated segments of investment grade credits. We expect certain high yield municipal credits dependent on narrow revenue streams to face continued pressure, which could result in higher default levels amongst the high-yield segment of the market.

The Federal Reserve's Municipal Liquidity Facility (MLF) is an important backstop for the market and has been accessed by two lower rated credits, the State of Illinois and New York's Metropolitan Transportation Authority (MTA). To date, the Fed has been responsive to market conditions and adjusted certain MLF terms accordingly. We would expect this responsiveness to continue. The State of New Jersey has also indicated its intention to consider borrowing from the MLF as part of its overall Q4 borrowing plans. The State of Illinois will be in focus on election day as voters will face the Fair Tax ballot initiative. If passed, the initiative will amend the state constitution and allow Illinois to levy a graduated income tax. A change in its personal income tax structure will provide much needed revenue flexibility. The Governor has identified other revenue raising measures if the initiative does not pass.

High grade taxable munis should perform in line with comparably rated corporate bonds, although may be subject to more constrained liquidity. In addition, the relentless pace of taxable muni issuance may also pressure spreads. However, we believe that essential service revenue bond credits provide better insulation from multi-notch downgrade risk than corporate bonds.

Outlook: Despite attractive valuations, our near-term outlook remains cautious based on expectation of elevated supply prior to the U.S. elections, lack of additional federal aid for states and localities, and increased market volatility. We would expect more favorable technicals to support tax-exempts into year end.

Important Information

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

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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.

Important Information

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.

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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. Information has been obtained from sources believed to be reliable, but J.P. Morgan does not warrant its completeness or accuracy. The Index is used with permission. The Index may not be copied, used, or distributed without J.P. Morgan's prior written approval. Copyright 2020, J.P. Morgan Chase & Co. All rights reserved.

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.

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