

QUARTERLY OUTLOOK

JULY 2020



The Gilt Edge of the Virus Cloud
Thoughts from our Chief Investment Strategist

A Light at the End of the Tunnel
Thoughts from our Chief Economist

Fixed Income Overview

Since the coronavirus swept across the globe and prompted economic shutdowns of varying degrees, “uncertainty” has become one of the operative terms for investment outlooks. Yet, as the first half of 2020 demonstrated, uncertainty can cut two ways: the first quarter ended with a market rout of historic proportions only for performance to snap back in the second quarter with a boost from global fiscal and monetary stimulus.

- What might be next for developed market interest rates, credit spreads, and currencies? In “[The Gilt Edge of the Virus Cloud](#),” Robert Tipp, CFA, Chief Investment Strategist and Head of Global Bonds, looks at the prevailing factors that may determine sector performance as the shadow of COVID-19 lingers over the markets.
- In “[A Light at the End of the Tunnel](#),” Nathan Sheets, PhD, Chief Economist and Head of Global Macroeconomic Research, addresses the prospects for inflation and growth amid the barrage of stimulus efforts as well as how the global economy may evolve once the virus clears.

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[Developed Market Rates](#) | 9

Constructive on U.S. duration amid a steep term premium and expectations that a gradual economic recovery will prompt the Fed to maintain a highly accommodative policy stance for the foreseeable future. Consistent demand continues to anchor core European rates.

[Agency MBS](#) | 9

Attractive relative to intermediate Treasuries. Likely to underperform other spread sectors as investors continue to search for yield with an ongoing, gradual economic recovery. Lower coupon 30-year TBA issues offer attractive carry vs. rates amid favorable valuations. We maintain a focus on specified pool in bonds away from Fed purchases.

[Securitized Credit](#) | 10

Constructive. High-quality spreads may revisit their post-crisis tightness, yet mezzanine risk faces challenging fundamentals, particularly for CLOs and CMBS with high retail and hospitality exposures. Marginally more constructive on consumer and commercial ABS and high-quality RMBS. As the U.S. election approaches, securitized assets may outperform given the reduced vulnerability to corporate tax and regulatory policy.

[Investment Grade Corporate Bonds](#) | 11

Positive in light of central bank support and the prospects of 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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Spreads appear attractive vs. historic averages and will drive strong returns for investors with longer-term time horizons. Over the near term, the market may remain volatile (but relatively range-bound) amid virus concerns. Active credit selection will be a differentiating factor between managers in volatile markets.

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Positive. We continue to find value in EM spreads. Many issuers pre-funded anticipated deterioration in economic conditions and fiscal slippage. Spreads for certain EM sovereign and corporate issuers across the credit spectrum are likely to tighten. Further alpha in local rates may emerge from curve positioning as well as in markets with positive real rates and expectations for policy rate cuts. We are more cautious on EMFX and recognize attractive relative-value opportunities between variously affected currencies.

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A constructive backdrop amid attractive valuations for many market segments and supportive technical conditions. Yet, a near-term cautious view is warranted given the recent spike in U.S. COVID cases. Without additional near-term federal support for states and localities, the sector could experience an increase in volatility.

▼ SECTOR VIEWS ▼

The Gilt Edge of the Virus Cloud

A whirlwind first half of the year saw a near total collapse in activity and markets followed by a quick return to modest growth—but a seemingly outsized market recovery. Now, we are once again at a crossroads where the tide of resurgent virus cases is on a collision course with improving market sentiment. Which will prevail, the markets or the virus? Or will geopolitics have a say?

In our estimation, the short answer is that bonds appear set to perform reasonably well over the intermediate to long term, although the pace of the rally may slow along an increasingly bumpy road.

Perhaps even more than in the first half of the year, the theme of credit selection will be a key determinant of performance in the months ahead as the fundamental impact of the virus and the drop in oil prices takes its cumulative toll on credit quality. So, while the result of the markets' long journey should be strong returns driven by further spread tightening, those average returns over the long run will not only abstract from the interim volatility, but they will also gloss over the minefield of downgrades and defaults that will need to be dodged to reap the benefits.

For Starters: Where Are We?

Let's back up and recap the first half in one sentence: despite the ongoing, risk-filled political horizon and virus progression, the crater that the markets left in Q1 was more than halfway backfilled by the unprecedented bulldozer of fiscal and monetary stimulus in Q2 (Figure 1).

In our last [Quarterly Outlook](#)—right after the meteor struck—our hypothesis was that the oncoming tsunami of fiscal and monetary stimulus would probably fuel a market recovery, featuring strong spread market performance, relatively stable long-term government yields, and maybe a weaker dollar. And we did not expect the markets to wait to see the whites of the recovery's eyes, but anticipated that the market recovery, as is typical, would start well ahead of the turn in the economy. *Since then, spreads have recovered the lion's share of the damage from Q1, and rates have begun to carve out what looks to be a durable, low post-Corona range of 50-100 bps for the 10-year Treasury yield for the foreseeable future.*

As of now, it appears that the markets' leap of faith that global growth would turn positive—notwithstanding the virus' varied course—has come to pass as economies have begun to grow again. But while COVID cases and deaths have fallen in many regions, new risks have come to the fore from the virus as well as from the political and policy fronts.

Figure 1: Leveraged Finance, EM, and Long IG Corporates Led the Q2 Rally

Individual FI Sectors	Q2 2020	YTD 2020	2019	2018	2017
European Leveraged Loans	12.95	-3.36	6.87	2.93	-0.48
EM Debt Hard Currency	12.26	-2.76	15.04	-4.26	10.26
U.S. Long IG Corporates	12.11	6.72	23.9	-7.24	12.09
European High Yield Bonds	11.16	-4.95	11.29	-3.63	6.74
U.S. Leveraged Loans	9.71	-4.76	8.17	1.14	4.09
U.S. High Yield Bonds	9.61	-4.78	14.41	-2.26	7.48
U.S. IG Corporate Bonds	9.36	5.18	14.50	-2.51	6.42
European IG Corporates	5.28	-1.19	6.24	-1.25	2.41
EM Local (Hedged)	5.01	3.51	9.14	0.75	3.68
CMBS	3.95	5.19	8.29	0.78	3.35
EM Currencies	3.42	-5.34	5.20	-3.33	11.54
Municipal Bonds	2.72	2.08	7.54	1.28	5.45
Agency MBS	0.94	3.50	6.35	0.99	2.47
U.S. Treasuries	0.48	8.71	6.86	0.86	2.31
Long U.S. Treasuries	0.25	21.2	14.80	-1.84	8.53
Multi-Sector			2019	2018	2017
Global Agg. (Unhedged)	3.32	2.98	6.84	-1.2	7.39
U.S. Aggregate	2.90	6.14	8.72	0.01	3.54
Global Agg. Hedged	2.42	3.90	8.22	1.76	3.04
Euro Aggregate	2.39	1.24	5.98	0.41	0.68
Yen Aggregate	-0.56	-0.90	1.64	0.93	0.18
Other Sectors			2019	2018	2017
S&P 500 Index	20.54	-3.08	32.6	-4.4	21.26
3-month LIBOR	0.19	0.62	2.4	2.23	1.22
U.S. Dollar	-1.67	1.04	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 June 30, 2020. An investment cannot be made directly in an index.

The Virus: Outcome vs. Expectations

To some extent, the path of the virus has gone as expected, at least in some prominent locations: there have been soaring cases, deaths, and lockdowns. All of these are at some stage of receding. Despite the unlocking, locations in Asia, the Northeastern U.S., and across Europe have so far avoided any major resurgence of the virus.

One lingering question—which areas have yet to experience a significant first wave of the virus—has been answered with a vengeance as cases have surged in emerging market countries (e.g., India and across Latin America), as well as across the U.S. “Sun Belt,” which encompasses a substantial swath of the land mass and population. Will mortality be the same or lower? Will the

Bond Market Outlook

surge be similarly short lived as seen elsewhere, or will these late breaking/arrival cycles take longer to play out?

While these may seem like key questions, the fact is that the widespread resumption of economic activity has *not* been entirely tied to the timing of the “unlocking,” or lifting of restrictions, on human activity. *Therefore, over a broad range of virus outcomes, it seems plausible to us that the combination of stimulus and adaptive social behavior will result, on net, in a general trend of expanding economic activity. And for markets, that combination has probably been the key to the current market buoyancy.*

The Old, and Possibly New, of Policy/Geopolitics

As if the virus and its toll weren't enough to deal with, the political and geopolitical risk horizons are likely to continue playing a prominent market role. As the U.S. elections approach, the ongoing trade war appears set to intensify, at least in terms of headline noise to rack up political points, but with presumably less of an intended economic bite considering that could overturn the economy and the markets.

Perhaps just as important, with presumptive Democratic nominee Joe Biden extending his lead in the U.S. polls and talking up plans for corporate tax hikes, investors may encounter concerns—whether justified or not—about a less business-friendly administration. *However, we see the potential of higher corporate taxes in the event of a Biden victory or democratic sweep as perhaps more relevant to the equity markets as earnings and valuations may be more affected by a possible increase in corporate tax rates and/or a change in the regulatory environment.*

The Bottom Line in Three Parts

Given the troubled event horizon that we face, what's the bottom line for the markets? Let's take that in three parts: interest rates, credit spreads, and currencies.

Outlook Part I: Where to for Rates? Even Lower for Even Longer

Figure 1: Rates—Prior to the Crisis, Inflation and Interest Rates Were Already Well Below 2%

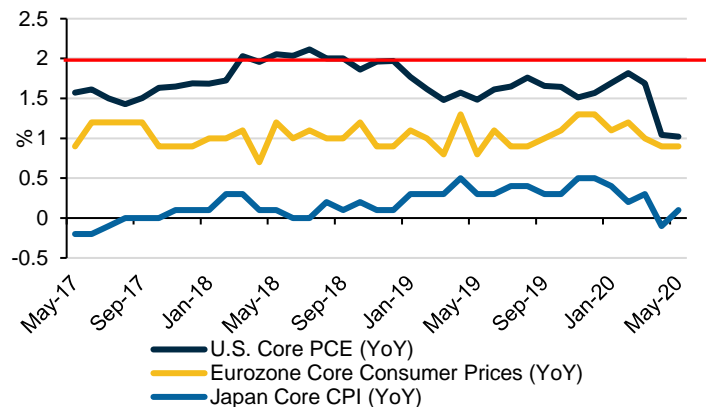


Figure 2: Rates—Lousy Growth Was Another Sign that Rates May Have Been Too High Prior to the Crisis

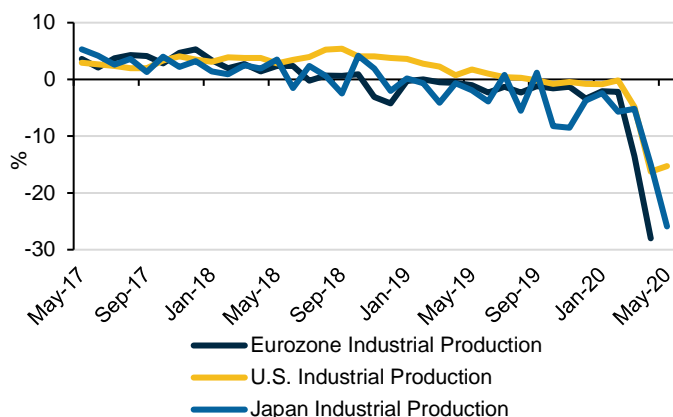
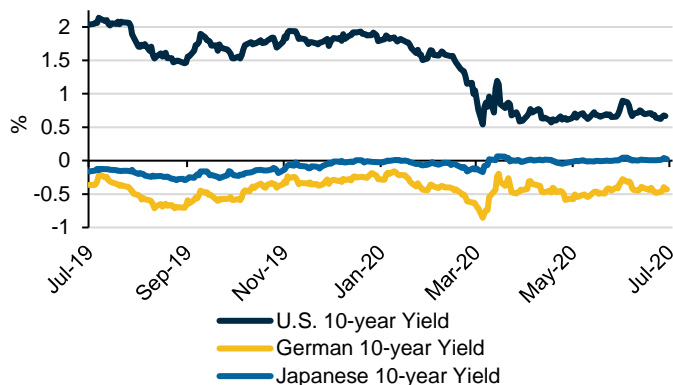


Figure 3: Among the G3, Bund and JGB Yields Did Not Decline Further as a Result of the Virus; Why?



Source for Figures 1-3: Bloomberg as of July 2020

If the bottom line is that growth has resumed, then shouldn't interest rates begin to normalize? To answer that question, let's get oriented: rates in Japan and Europe remain where they were pre-crisis, when inflation was below target, and growth was already in a torpor (see preceding Figures). Even if COVID is milder than expected, it's not clear that rates in Japan or Europe should be any higher.

As for the U.S., there is a greater risk that rates could flash higher on fears of stronger-than-expected growth. Yet, prior to COVID, with a 10-year Treasury yield of mid-1%, growth was moderate, inflation was below target, and the dollar was steadily rising. Even with a clean bill of health, it's not clear that the 10-year should top 1% and head for the “high” mid-1% levels of the “days of old.” *With the additional long-term headwinds courtesy of the virus, the 10-year Treasury yield seems more likely to remain in the bottom half of the recent 50-100 bps range for at least the balance of this year if not beyond.*

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While that may sound ludicrous to some, in light of the building secular forces pushing rates lower—high indebtedness, aging populations, shrinking workforces, and the resultant below target inflation and modest growth—these rates strike us as the expected natural consequence. *The fact that global forward-rate curves generally remain positively sloped provides an opportunity to boost returns and hedge downside economic risk by maintaining a generally long-duration posture while picking up yield and capital appreciation by rolling down steep curves.*

Outlook Part II—Credit Spreads: The Gilt Edge of the Virus Cloud

While an improving economic picture should create a tail wind for spread product, the fact is that spread markets have already priced in a substantial recovery.

As a result, at this point there is clearly the risk, if not the likelihood, that the market will periodically be unnerved by the realities of a veritable grab bag of risks—uneven lockdowns, low summer liquidity, fears of a new U.S. administration, trade war flare ups, and deteriorating credit quality and rising defaults.

While all of these risks deserve respect—and can undoubtedly contribute to credit risk and market volatility—one mitigating positive is that at least corporate debt holders may benefit from improved alignment with the interests of corporate management. *In buoyant times, management may look to boost stock prices at the expense of bondholders, but in the current environment, management teams are focused on retaining their credit ratings and market access in their bids to survive.*

In the end, investors who can avoid the credit hotspots and blow ups should experience strong returns from tighter credit spreads 12-24 months down the road. The uneven road to economic recovery will be strewn with potholes, but these are likely to be offset by fiscal and monetary policy support and investors' search for yield as they float debtors until economies recover and underlying credit risk stabilizes.

Outlook Part III: What's Next for Currencies? Bounce Realized; Back to Caution

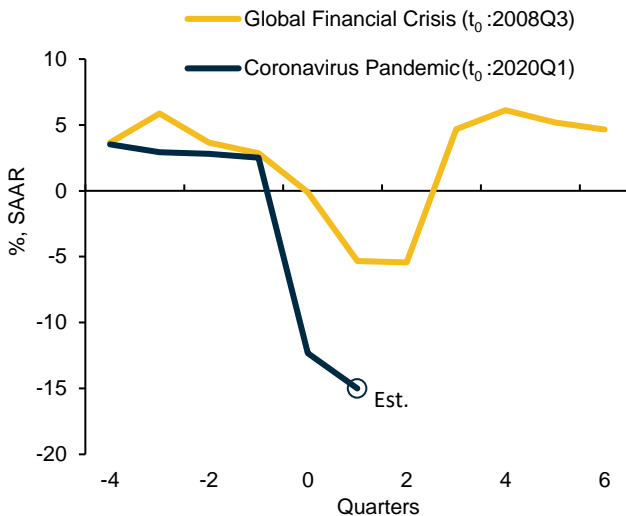
At the end of Q1 2020, the appreciation of the dollar seemed at odds with the Fed's reductions in U.S. short term interest rates and massive monetary expansion. The U.S. had lost its carry advantage and the dollar was precariously perched at a high level. Shouldn't currencies recover—or at least get a reprieve—and the dollar decline? The answer in Q2 was "yes." But that was then, and now things look less clear. Uncertainties from geopolitics and the virus look elevated, and currency under valuations versus the dollar look less extended. *So, as we pass through the potentially less risk-tolerant, low-liquidity environment of the Northern Hemisphere's summer, the dollar's downward course appears less assured, and it may even get a periodic boost from bouts of uncertainty and flights to quality.*

The Bottom Line: Following the Q2 recovery, the market has less upside, and there could be a rise in volatility thanks to myriad risk factors and reduced summer liquidity. But the strong likelihood of ongoing fiscal and monetary tailwinds and economic recovery suggest a continuation of the Q2 trends: low rates fuel a search for yield in the face of ongoing credit challenges, long-term government rates remain in check, and spreads tighten ahead of, or seemingly at odds with, fundamentals. Meanwhile, the uncertainties and mixed liquidity conditions may create bouts of market volatility and above-average opportunities to add value through sector allocation, credit selection, and positioning in currencies and interest rates.

A Light at the End of the Tunnel

The global economy has absorbed the most severe hit in decades, with an estimated 14% annualized contraction during the first half, roughly *three times* the drop during the worst of the global financial crisis (Figure 1). The coronavirus and the associated lockdowns have taken an unimaginably heavy toll on economic performance.

Figure 1: Global Real GDP Growth



Source: Haver Analytics

Looking ahead, we see the trajectory of global growth as depending on three key factors—the evolution of the virus, the psychology of consumers, and the extent of long-term scarring. The following is our take on each of these issues:

- *How will the virus evolve from here?* While we were expecting further episodic flare-ups in the virus, it remains to be seen whether the intensified outbreak in some parts of the U.S. is consistent with this expectation, or if it represents something more severe. In any event, political leaders and the public seem to be gradually learning how to better control the virus. Our baseline is that these measures, coupled with ongoing advances in testing and treatment, will be sufficient to prevent another round of broad (and simultaneous) lockdowns of major economies. The virus will temper the recovery, but it won't again bring activity to a halt.
- *When will consumers feel safe again?* The behavior of consumers is an important hinge point for the recovery. For the economy to bounce back, consumers must feel sufficiently safe from infection that they are willing to start spending again, including on services. As a related matter, they must also feel sufficiently secure economically to start spending down precautionary saving and, at least to some extent, taking on debt. To date, the data have been broadly encouraging on this score.
- *How much permanent economic scarring will there be?* Scarring could occur in several ways—otherwise efficient firms could go out of business, workers may remain unemployed (and see their

skills depreciate), and rising debt levels in the public and private sectors could create headwinds for the economy. While it's too early to assess the extent of these effects, we judge the likelihood of such scars to be high. The question is how severe will they be? In this respect, the sharp decline in the U.S. unemployment rate over the past two months should help reduce the risks of long-term damage to the labor market.

With these considerations in mind, we see a gradual recovery for the global economy as the most likely outcome, with the level of GDP picking up in the second half of the year. However, given the headwinds, activity is unlikely to reach its Q4 2019 level until late 2021 or somewhat thereafter. We view this path as a useful baseline, but we also emphasize the first-order upside and downside risks. The economy could be stronger than this—for example, if the virus recedes more quickly or consumer psychology proves more resilient. Conversely, the public health community has warned about the possibility of a concentrated second wave of the virus, most likely in the fall, which could require further lockdowns and throw the economy back into recession.

The remainder of this essay examines the rudiments of our outlook in greater detail. We look first at the contraction that occurred in the first half of the year, as well as some early signs of improvement in the high-frequency data. Next, we consider the massive monetary and fiscal response that national authorities have implemented, which should help support a recovery in coming quarters. We conclude with a few thoughts regarding the uncertainties that cloud the outlook.

The Unprecedented Downturn—And Some Glimmers of Hope

The previous section highlighted the extraordinary drop in global real GDP growth. The world economy has simultaneously sustained unprecedented shocks to supply and demand. No major economy has been exempt from the virus' blows.

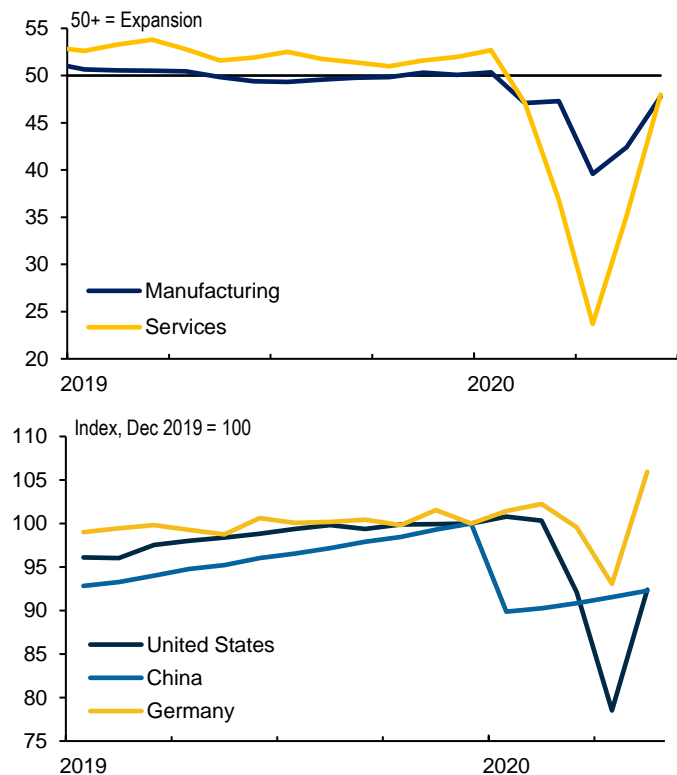
- **China** was the first to deal with the disruptions from the virus, with its GDP dropping sharply in Q1. Subsequently, the Chinese economy has recorded a gradual, but somewhat uneven, recovery. The bounce back in industrial production has outstripped that in retail sales. Notably, policy stimulus appears to increasingly be taking hold and should provide additional support.
- **The U.S.** economy is now in recession, with Q2 GDP plunging at an estimated 30-35% annual pace. That said, the experience with the virus has varied notably across regions. During the spring, the Northeast was pummeled while many southern and western states were comparatively unscathed. More recently, the tables have turned. Some states that largely dodged the first wave—such as Texas, Florida, and Arizona—are now seeing rising case counts. In contrast, the Northeast is gradually emerging from lockdowns and seems poised for recovery.

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- The virus hit activity in **Europe** even harder than it struck U.S. activity. This reflects that the major European countries were struck roughly in parallel. The good news is that they now look to be on the other side of the outbreak. Further, the structure of their labor markets, along with wage subsidies programs, have allowed them to avoid the sharp run-up in unemployment experienced in the U.S. Despite these positive factors, it's difficult to see Europe outpacing the global recovery in any sustained way, given its dependence on external demand.
- Finally, the **emerging markets** have been hit by severe capital outflows, the decline in global demand, and, more recently, some of these countries have faced rising infections and fatalities. Further, a large subset are commodity exporters. While financial conditions in these countries have now healed some, with the recovery in global markets and the IMF ramping up financial assistance, the level of stresses remains high.¹

Importantly, we are now seeing some “green shoots” in the global economy, with PMIs bouncing in May and June. The PMI for services dropped more sharply than that for manufacturing through the spring, but both have now recovered to readings just below 50, the critical breakpoint between expansion and contraction (Figure 2). Taken together, these indicators point to an improvement in global conditions, but they also highlight that the level of activity remains weak.

Figure 2: Global PMIs and Retail Sales



Source: Haver Analytics

Notably, U.S. retail sales posted a remarkable rebound in May—recovering more than half of the previous loss. In contrast, Chinese retail spending fell much less sharply, but has also rebounded more gradually. On net, the decline in the two countries is almost identical. In contrast, the German consumer has been resilient—with a relatively measured drop through the spring and then a surge in May that not only recovered—but also paid back—much of the previous decline.

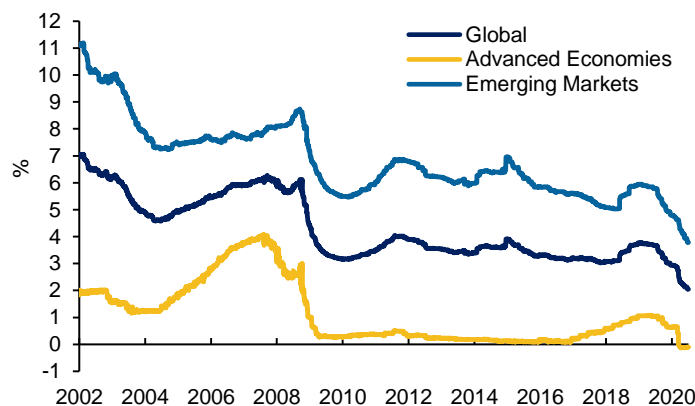
As for other signs of green shoots in the recent data, we are seeing a moderate bounce back in oil demand from the March-April lows (which has supported oil prices of late), a rebound in various measures of car traffic and mobility, and an increase in dinner reservations. Air travel has also climbed back a bit, but has remained very weak.

Taken together, these indicators point to recent improvement in global performance, but they also highlight that the global economy is still substantially below its pre-virus level.

The Equally Unprecedented Policy Response

The severity of the contraction in the global economy has triggered a flood of monetary and fiscal stimulus. Led by rapid responses from the Fed and the ECB, dozens of central banks around the world have aggressively implemented stimulus measures, including cutting policy rates, initiating (or ramping up) asset purchases, and expanding liquidity facilities. Monetary policy has been deployed to facilitate market functioning, support activity, and offset disinflationary pressures.

Figure 3: Nominal Policy Rate



Source: Haver Analytics

- In the advanced economies, the weighted-average policy rate across major central banks is negative in nominal terms (Figure 3), and balance sheets have expanded by more (as a share of GDP) than in 2008 following Lehman Brothers' failure.
- The emerging-market central banks have also vigorously reduced rates, many by 100 bps or more, with further cuts likely in the pipeline. In aggregate, EM policy rates are at historically

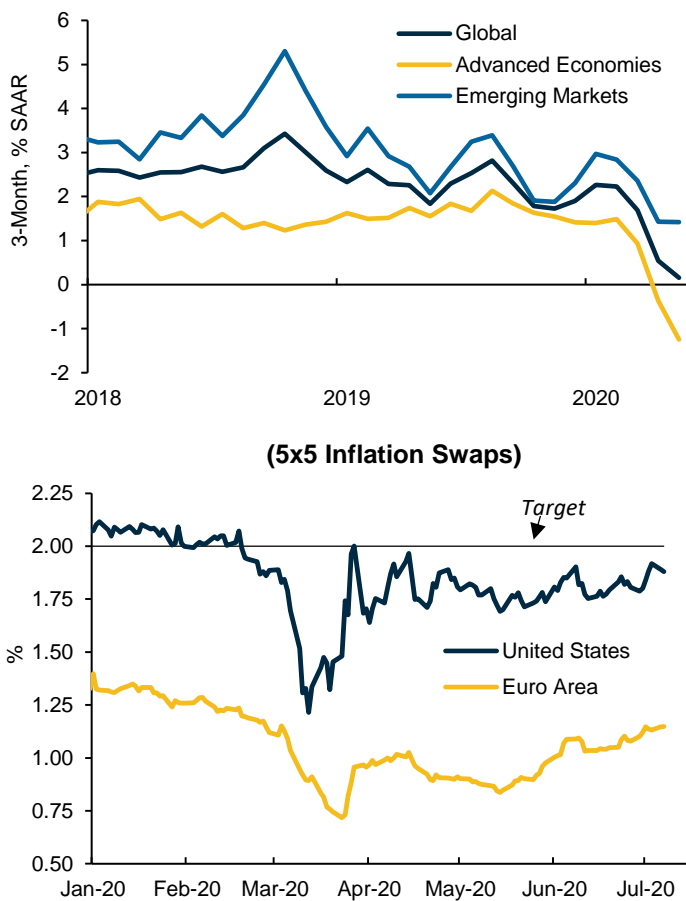
¹ For a broader discussion of EM vulnerability, please see our paper, [“The Prospects for the Emerging Markets—Looking Beyond the Storm.”](#) July 2020.

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low levels. The scope of EM central banks to ease policy into the downturn highlights their expanding institutional credibility. In previous episodes, rates often had to be raised sharply to support the currency and preempt a depreciation-driven surge in inflation.

More broadly, the weak performance of inflation across the globe has allowed central banks to be collectively stimulative and, in countries where inflation is undershooting its target, has been a key rationale for that accommodation. As shown in Figure 4, recent readings on core inflation globally have been very soft, with both the advanced economies and the emerging markets seeing declines in recent months. In addition, inflation expectations have sagged in some economies, including in the U.S. and the euro area, reflecting the devastating economic downturn and weak oil prices.

Figure 4: Global Core Inflation and Inflation Expectations



Source: Haver Analytics

This monetary stimulus has been paired with powerful fiscal interventions. In the U.S., Congress has approved over \$2.5 trillion of spending and tax breaks, with further stimulus likely to be approved later this summer. Many other countries, including Japan, Germany, Australia, Brazil, and South Africa, have also put exceptionally large packages in place. In total, the IMF estimates that the stimulus from these efforts averages nearly 6% of GDP across the G-20 countries. This spending will provide significant

support to the global economy through the downturn and fuel a more rapid recovery.

Assessing the Risks

Pulling all this together, we see the global economy contracting at a 5.25% rate during the year as whole, with every major region and country posting declines. That said, the economy seems to have felt the worst of the virus' blows and, in aggregate, is in the early stages of recovery. We see this recovery gaining steam through the second half of the year. Even so, given the depth of the decline and the continuing headwinds, global GDP is unlikely to match its Q4 2019 level until the end of next year or, perhaps, until sometime in 2022.

Suffice it to say that the uncertainties around this outlook are pronounced. The unexpected resurgence of the virus in some U.S. states underscores its extraordinary capacity to spread and, correspondingly, the need for social distancing and cautious approaches to re-opening. The virus clearly remains a first-order risk, and we remain concerned about the possibility of second-wave infections, particularly during the fall flu season.

But the virus is not the only source of uncertainty. We are closely watching political outcomes. Of particular note, the U.S. Presidential election is fast approaching. With President Trump suffering in the polls, markets are increasingly grappling with what a Biden Presidency would mean, especially for taxes and regulation. Clearly, it would be a sharp swing relative to current policies. The open issue, however, is the extent to which it would also be a swing relative to the Obama years. As a related concern, the U.S.-China relationship continues to deteriorate. To date, the two sides have avoided a full-blown confrontation. But China's recent passage of the National Security Law, which tightens Beijing's grip on Hong Kong, seems to have further elevated the tensions.

The unprecedented magnitude of global monetary and fiscal stimulus, which has been necessary to fight the virus, has triggered worries about several medium-term risks. In the past, high levels of central bank liquidity and government debt have triggered periods of high inflation. Similar fears were also voiced following the global financial crisis, but inflation in many countries was subsequently softer than desired, despite the best efforts of central banks. Another risk is that macro policies may have less latitude to provide stimulus in the event of a downturn. But, as we've seen in this episode, even in the face of such constraints, policymakers have shown the ability to devise tools to provide necessary support. A third concern—which strikes us as the most worrisome—is the possibility of increased moral hazard. Vigorous policy interventions may have been interpreted by some investors as a message that central banks and finance ministries can be relied on to bail them out during times of stress. If so, this could lead to undisciplined risk-taking and increased volatility in markets. This is a possibility that we will be watching closely in the years ahead.

Developed Market Rates

One of the more notable developments within the U.S. Treasuries complex in Q2 was a sharp steepening of the yield curve on some initial signs of a solid economic rebound. The 2- to 10-year curve started the quarter at 43 bps and subsequently bear steepened to 69 bps as the 10-year yield exceeded 90 bps following the stronger-than-expected May payroll report. That set the stage for curve flattening positions during the quarter given our expectations for a more gradual recovery and that the Federal Reserve may provide years of broad monetary accommodation given the widening gap to achieving its dual mandate of price stability and full employment. The 10-year yield ended the quarter at 65 bps.

As Q3 begins, we believe the long tail of the virus and its effects will continue to support a bull-flattening rally along the U.S. curve, particularly considering a historically high term premium of nearly 20 bps. While long-term rates may periodically adjust higher on additional signs of recovering economic growth, these periodic corrections could present additional buying opportunities.

The backup in rates amid the precarious economic conditions also fueled speculation regarding additional easing steps from the Fed, including the potential introduction of yield curve control (YCC). Given the largely unproven results of YCC, at this point, we believe the Fed is more likely to take an indirect approach via more explicit, goals-based (rather than time-based) forward guidance.

Looking ahead, we see a range of 50-100 bps for the U.S. 10-year yield through the end of the year. An unlikely, downside scenario into the 30 bps area could emerge if risk appetite and/or growth recedes dramatically and the Fed is compelled to expand its market involvement. Although an upside scenario into the 1.0-1.30% range is also not our base case as such a scenario could involve a combination of additional stimulus, stronger growth, receding virus counts, and a decrease in other looming risk factors.

In other positions, we expect bonds in the 20-25-year range (i.e. slightly longer than the newly issued 20-year bond) to outperform, 20-year swap spreads to widen, and 5-year TIPS to rally even after real rates declined solidly in Q2.

Elsewhere, we remain short UK linkers as they trade highly rich to 5-year U.S. TIPS, and we're maintaining long positioning in real rates in Canada. Core rates in Europe continue to appear well supported on steady bank demand amid the ECB's ongoing TLTRO program, and French OATS in the 5-10-year range appear modestly attractive. We also favor paying the yen/dollar cross currency basis.

Outlook: Constructive on U.S. duration amid a steep term premium and expectations that a gradual economic recovery will prompt the Fed to maintain a highly accommodative policy stance for the foreseeable future. Consistent demand continues to anchor core European rates.

Agency MBS

The Federal Reserve's confirmed commitment to the agency MBS market continued to improve market liquidity in Q2 and the sector outperformed U.S. Treasuries, but couldn't keep pace with the strong rally across the other spread sectors during the quarter.

The Fed will increase its Agency MBS holdings at the equivalent of \$40 billion per month in addition to reinvesting MBS paydowns, bringing its MBS holdings to about \$1.9 trillion as Q3 commences. The improved transparency and liquidity within the market has encouraged broker/dealers to again make active two-way markets in coupon swaps, dollar rolls, and MBS/UST basis trades.

In early Q3, option adjusted spreads continue to trade in a narrow range given the Fed's purchases relative to originations, which increased in Q2 amid the low-rate environment. Prepayments also responded to low rates and were more resilient-than-expected amid the virus-related lockdowns. In fact, aggregate prepayment speeds notched multi-year highs in Q2, surpassing 2016's pace.

Looking ahead, option adjusted spreads appear attractive vs. intermediate Treasuries with the Fed's ongoing purchases (through at least Q3 based on the Fed's June statement) and with positive hedge-adjusted carry amid strong dollar rolls in production coupons compared to previous QE cycles. As the Fed siphons out bonds and cleans up the To-Be-Announced market, spread levels may also appear attractive to yield-based domestic and overseas buyers.

If recent conditions hold (barring a resurgence of the virus), MBS performance should remain similar as well: potentially outperforming Treasuries, but underperforming spread sectors as markets heal, economies gradually recover, and investors continue to search for yield.

The risks to the market include short durations with low primary rates and elevated origination (recent averages reached \$8 billion per day, twice the rate from early 2020) as delayed housing activity emerges. Prepayments will also present headwinds for the foreseeable future given the likelihood for the low-rate environment to persist and the possibility that loans in forbearance (about 10% of the GSE book) and delinquencies eventually lead to buyouts and prepayments. Lower-coupon TBAs are preferred, but select specified pools may be the sensible approach to higher coupons.

Outlook: Attractive relative to intermediate Treasuries. Likely to underperform other spread sectors as investors continue to search for yield with an ongoing, gradual economic recovery. Lower coupon 30-year TBA issues offer attractive carry vs. rates amid favorable valuations. We maintain a focus on specified pool in bonds away from Fed purchases.

Securitized Credit

Sector	Subsector	LIBOR OAS	Spread Change (bps)
		6/30/2020	Q2
CMBS			
CMBS: Conduit 2.0	First-pay 10-year	112	-88
CMBS 3.0 Conduit BBB-	BBB-	700	-118
CMBS: CMBX (OTR)	AAA	62	-39
CMBS: CMBX (2012)	AA	213	-92
CMBS: Agency Multifamily	Senior	45	-40
Non-Agency RMBS			
Legacy	RPL Senior	130	-170
Legacy	'06/'07 Alt-A	285	-315
GSE Risk-Sharing	M2	300	-625
CLOs			
CLO 2.0	AAA	165	-85
CLO 2.0	AA	220	-155
CLO 2.0	BBB	415	-385
ABS			
Consumer ABS	Seniors (One Main)	190	-510
Consumer ABS	B (One Main)	300	-600
Refi Private Student Loan	Seniors	130	-195
Generic	AAA Credit Card	25	-125

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Non-Agency RMBS: Widespread forbearance programs for residential mortgages makes this recession fundamentally different than the Global Financial Crisis as today's policy makers need not worry about the moral hazard implications of providing relief to negligent borrowers and lenders. Mortgage forbearance is freely available, yet the resolution of who cures, needs help through loan modification, or succumbs to foreclosure remains unknown. The near-term effect has been varied across product types, with forbearance ranging from 7% for Fannie/Freddie (GSE) mortgages to up to 40% for some non-qualified mortgages pools. We are wary of the reported collateral performance as reported delinquencies do not necessarily match cashflows. Nonetheless, spreads have ripped tighter over the quarter for all product types. For GSE credit risk transfer (CRT), the GSEs essentially gifted investors a "do-over" by announcing that borrowers in COVID-related forbearance would be eligible to have their delinquent balances capitalized in a non-interest-bearing balance due upon maturity or sale. In the near term, this is great news for CRT and spreads have justifiably rallied. Longer term, we find it difficult to value CRT risk given the arbitrary dictates of the GSEs and FHFA.

CMBS: Despite the massive spread tightening across the capital stack, commercial real estate (CRE) faces a challenging environment, with different property sectors disproportionately impacted by the pandemic. Hotel revenue per available room (RevPAR) is 62.4% lower on a YOY basis with economy properties

outperforming luxury and upscale; however, metrics across segments have steadily improved since bottoming out in mid-April. Retail properties, struggling before the pandemic, face the additional challenges of temporary malls closures and permanent store closures. Mall REITs have indicated rent collections have been low (25%), while strip center REITs have only fared slightly better (~50%). More positively, office, multifamily and industrial properties have continued to have strong rent collections (90+%), which is in line with a year ago. Nonetheless uncertainty is prevalent. CMBS delinquencies continue to rise—conduit 30+ DQs are now almost 9%, with hotel and retail loans comprising the majority. Bringing it together to the investable CMBS universe: 1) we believe conduit senior bonds have adequate protection and are biased to tighten, while mezzanine tranches will bear the brunt of the malaise; and 2) well-researched single asset/single borrower transactions will continue to add value (e.g., logistics properties) while large hotel/retail financings will face daunting prospects despite much lower dollar entry points.

ABS: ABS rallied significantly in Q2. Strong demand for paper and an improved liquidity environment were the byproducts of massive stimulus programs. Further, supply technicals were favorable (34% behind last year's pace). While ABS technicals have been strong, the fundamental picture, particularly in consumer sectors, carries increased uncertainty and is ultimately dependent upon the duration/impact of COVID-19 and concomitant economic shutdown. Generally, government stimulus and the use of forbearance programs by issuers has resulted in near-term performance stability in ABS trusts. However, in Q3, the true extent of collateral delinquencies and defaults will be determined by how stimulus complements the pace of the economic reopening. As we await a clearer view of the health of originators and collateral performance, we maintain a preference for strong ABS originators and "top-of-the-capital structure" securities. We favor prime auto revolver, refinanced private student loans, and floorplan assets, all of which recently traded in the +100-175 bps range with continued upside to early 2020 levels. We are cautious on unsecured consumer loans, particularly subordinate classes, as the underlying borrowers could experience relatively worse credit outcomes. We are sellers of AAA credit cards for more risk-seeking portfolios as spreads have retraced back to pre-COVID levels.

CLOs: AAA CLO spreads, along with rest of capital structure, continued to recover in Q2. While AAA spreads have retraced about 75% from the recent wides, we have seen large bifurcation in secondary mezzanine CLO spreads as the market is now pricing in potential principal impairments. Most of these impairments are likely to happen in the more seasoned CLOs as their collateral pools had previously been stressed through pre-COVID issues, notably in retail and energy sectors. Despite these potential losses, we have seen the primary market rekindle the issuance of BB-tranches as investors continue to chase higher yields. These primary spreads are at least 500 bps inside of comparably rated secondary spreads—reflecting underlying collateral quality and current credit enhancement. We expect further credit migration on

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mezzanine tranches due to underlying loan issues. We expect an acceleration of companies to either go to CCC or default, which will continue to stress CLOs' overcollateralization tests (a positive for AAAs as they will de-lever). We expect senior CLO tranches to remain protected from credit losses, but the lower mezzanine tranches may be impaired or written off entirely. We are keeping a close watch on CLO managers as some may face stress from either underwater warehouses or from less subordinate asset management fees if cash flows begin to get diverted. Over the next year, we remain highly constructive on senior spreads and believe they are likely to be tighter than pre-COVID levels. However, we also anticipate higher volatility as markets digest the economic impacts of the virus, and we expect pockets of opportunities to result from changes in risk sentiment over the next few months.

Outlook: Constructive. High-quality spreads may revisit their post-crisis tightness, yet mezzanine risk faces challenging fundamentals, particularly for CLOs and CMBS with high retail and hospitality exposures. Marginally more constructive on consumer and commercial ABS and high-quality RMBS. As the U.S. election approaches, securitized assets may outperform given the reduced vulnerability to corporate tax and regulatory policy.

Investment Grade Corporate Bonds

	Total Return (%)		Spread Change (bps)		OAS (bps)
	Q2	YTD	Q2	YTD	6/30/2020
U.S. Corps.	9.36	5.18	-122	57	150
European Corps	5.28	-1.19	-90	56	149

Past performance is not a guarantee or a reliable indicator of future results. See Notice for important disclosures. All investments involve risk, including possible loss of capital. Represents data for the Bloomberg Barclays U.S. Corporate Bond Index and the Bloomberg Barclays European Corporate Bond Index (unhedged). Source: Bloomberg Barclays as of June 30, 2020. An investment cannot be made directly in an index.

Global investment grade corporate bonds rebounded in Q2 in response to unparalleled global central bank support, measured reopening of the global economy across many regions, rebounding oil prices, and exceedingly strong technicals. New issuance rose to record levels in both the U.S. and Europe as issuers sought to capture low rates and build generous cash reserves. Meanwhile, investors continued their search for yield, realizing that spreads had risen too far, too fast, in Q1 as the virus broke. So far this year, U.S. corporate spreads over similar-maturity Treasuries rose from under +100 bps at year-end 2019 to a high of ~370 bps in mid-March, before narrowing to +150 bps by the end of Q2.

U.S. Corporate Bonds: The Federal Reserve's aggressive stimulus activities, including a near-zero Fed funds rate and its primary and secondary credit facilities, significantly improved market liquidity in Q2. New issuance this year reached a record high at quarter end at about \$1.1 trillion, more than 2019's full-year total. Investor demand has been strong, not just from U.S. investors but also from non-U.S. investors in light of reduced hedging costs. Unlike the first quarter, BBB-rated issues, longer-duration issues, and select distressed sectors, such as energy and autos, outperformed.

Fundamentals remain key with most companies taking steps to improve free cash flow, shore up balance sheets, and refinance/extend debt maturities, which is a stance that should benefit bondholders in the quarters to come. For example, the majority of new issue proceeds were earmarked to improve capital and cash positions, rather than finance shareholder dividends, stock buybacks, or M&A activities. Another game changer toward quarter end was the Fed's decision to include individual bonds in its secondary market credit facility purchases, which previously focused on ETFs. The Fed will now purchase index-eligible corporate bonds rated BBB and above with 5-years or less to maturity, a move that signals its intent not just to be a backstop, but to be an active participant in driving spreads back to pre-COVID levels. Credit rating downgrades remain a concern, however, negative ratings actions slowed in Q2.

Against this backdrop, we favor shorter maturities that should benefit from the Fed's bond buying program, as well as longer-duration maturities that offer attractive spreads and should benefit from further spread tightening. Issues in the 20-year range also appear attractive relative to the newly-issued 20-year Treasury bond. We are looking to take advantage of spread compression in select higher-yielding BBB bonds, distressed survivors, cyclicals such as autos and chemicals, and "off-the-run" bonds. We still favor electric utilities, taxable municipals, and money center banks that we believe will weather recessionary forces. In fact, while all of the largest banks passed their annual stress tests at quarter end, the Fed imposed new restrictions to preserve capital, such as suspending share buybacks and capping dividends. Banks are also required to resubmit their payout plans later this year.

European Corporate Bonds: Although European corporate spreads tightened less than those in the U.S. in Q2, euro spreads did not widen as much in Q1. European corporate indices also tend to have a shorter duration than U.S. indices (~ 5 years vs. 6.5-7 years.)

Historic new issuance and investor demand for yield was a key driver in spread compression. Concessions varied widely depending on the quality of the issuer and the market's risk appetite. Overall, technicals remain highly supported by government stimulus measures and the ECB, including its existing Asset Purchase Programme and newly-expanded Pandemic Emergency Purchase Programme (from €750 billion to €1.35 trillion), a similar magnitude as the purchases by other major central banks, including the Fed and the Bank of England.

As in the U.S., credit fundamentals bear close watching. While we believe most corporate managements are striving to shore up their balance sheets, only time will tell the ultimate impact of the virus lockdown and its effect on corporate stability.

In European corporate portfolios, we hold a moderately long spread duration of ~0.2 years to the index. We now view euro spreads versus USD spreads as similarly attractive given the equalization of central bank policies. We remain overweight banks that we

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believe will benefit from full government support. We are also overweight “reverse-yankee” euro-denominated U.S. corporates. Many of these issues came to market with better pricing than USD holdings and EUR issuers of similar quality.

Global Corporate Bonds: We are similarly positioned in global corporate portfolios with balanced risk exposure to euro vs. USD spreads and 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 and electric 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, the corporate market is susceptible to negative headline risk in the short term due to ongoing uncertainty about the path of the virus, a potential slowdown in economic re-openings, and escalating trade tensions worldwide. We expect new issuance to decline notably in Q3 relative to Q2’s historic levels. We believe U.S. and European spreads remain attractive and are actively searching for opportunities to add value as the economy recovers. We believe global central banks and governments will continue to support an economic recovery and will step in to increase stimulus measures as needed.

Outlook: Positive in light of central bank support and the prospects of 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) 6/30/2020
	Q2	YTD	Q2	YTD	
U.S. High Yield	+9.61	-4.78	-233	+284	+644
Euro High Yield	+11.16	-4.95	-238	+217	+542
U.S. Leveraged Loans	+9.71	-4.76	-274	+239	+700
Euro Leveraged Loans	+12.95	-3.36	-391	+185	+607

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U.S. Leveraged Finance: The U.S. high yield bond market rebounded sharply in Q2 as investors responded positively to the unprecedented monetary and fiscal stimulus programs aimed at stabilizing the economy and financial markets. Although spreads tightened from their March wides of 1,087 bps, they remain far wider than the January tights of 338 bps.

Reflecting the sentiment, fund flows were strongly positive in Q2, and the five largest weekly inflows on record occurred over the last 12 weeks. Lower-rated credits outperformed with CCC-rated bonds

outperforming B-rated bonds and BB-rated bonds. For the year to date, however, BB-rated bonds continue to outpace Bs and CCCs. All but one sector (airlines) posted positive returns in Q2, with energy, gaming, autos, and lodging all outperforming. Despite a strong rally of 37% in Q2, the energy sector is still down more than 17% so far this year.

The primary market re-opened with a string of five-year, secured deals, and terms gradually loosened as investors became more willing to move down the capital structure and out on the curve. Despite the nearly one-month closure, issuance of \$199 billion represented a 57% increase from a year earlier. Net issuance of \$81 billion was an 89% increase from the same period in 2019.

We remain constructive on the sector over the medium term given the enormous monetary and fiscal responses seen to date—including the Fed’s decision to purchase recently fallen angels and high yield bond ETFs. We also believe current spread levels adequately compensate for an expected increase in defaults to 10% and 5%, respectively, over the next two years. Over the near term, we believe the market is vulnerable to uncertainty around a second wave of COVID-19, the November elections, slowing inflows, and new supply used to fund corporate losses.

In terms of positioning, we are adding to fallen angels and fallen angel candidates in investment grade. Given their recent underperformance, 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.

After leverage loan spreads widened to 974 bps in March, they also tightened in Q2, but remain well-wide of their pre-COVID-19 tights. Although loan mutual funds continued to experience substantial outflows in Q2, muted new issuance volume and demand from CLOs provided a relatively strong technical backdrop.

While the loan default rate rose sharply in Q2, we expect a further uptick in defaults as liquidity becomes increasingly stressed, especially for B2-rated and B3-rated issuers with direct or early secondary exposure to COVID. The crisis can be expected to take a significant toll on many issuers, especially if normal economic activities are not resumed in short order. We believe the most prominent risks are in the retail, energy, gaming & lodging, airline, auto supplier, and leisure industries. We currently favor the higher-quality BB-rated segment of the market, particularly in defensive sectors, such as cable, supermarkets, food, technology, and healthcare, as well as in some idiosyncratic situations where we think recent price reactions have overshot fair value.

European Leveraged Finance: In Q2, European high yield bonds posted their best quarterly performance since Q1 2012 as spreads tightened from the March wides of 884 bps. While the rally began with higher-rated credits and more defensive sectors, returns were later driven by the virus-impacted sectors, such as leisure,

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transportation, gaming, and autos as the market began to price in a more optimistic recovery. By quality, CCC-rated bonds outperformed. Despite their rebound in Q2, spreads remain at attractive levels versus historic averages and will, in our view, drive strong returns for investors with longer-term time horizons.

While defaults may rise in the coming quarters, the bulk of expected ratings actions have already taken place. Despite the economic stress, we think European high yield default rates will remain below 3% and well below the rate in the U.S. high yield market in 2020—our base case is a 1.3% default rate in 2020 and a 2.0% default rate in 2021. Most of the short-term stress has been addressed through a combination of prudent corporate cost and cash management and investor/state support.

While the recovery from the crisis will almost certainly hit speedbumps (making short-term market moves difficult to predict), we are confident macroeconomic data will steadily improve as major economies slowly re-open. Through active management and strong credit selection, we believe deteriorating situations can largely be avoided and attractive opportunities can be harnessed. In terms of positioning, we remain constructive on high yield and currently prefer bonds to loans. We are currently broadly running above market-level risk, with investment weighted towards the best relative-value opportunities given the evolving backdrop.

Outlook: Spreads appear attractive vs. historic averages and will drive strong returns for investors with longer-term time horizons. Over the near term, the market may remain volatile (but relatively range-bound) amid virus concerns. Active credit selection will be a differentiating factor between managers in volatile markets.

Emerging Markets Debt

	Total Return (%)		Spread / Yield Change (bps)		OAS (bps)/ Yield %
	Q2	YTD	Q2	YTD	6/30/20
EM Hard Currency	+12.26	-2.76	-152	+184	+474
EM Local (hedged)	+5.01	+3.51	-0.85	-0.71	4.51%
EMFX	+3.42	-5.34	-1.57	-1.47	1.89%
EM Corps.	+11.15	-0.16	-160	+128	+439

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EM assets staged a strong recovery in Q2. Higher yielding assets, which had been hit the hardest during the height of the March selloff rebounded significantly from oversold levels. Likewise, in spread terms, the sovereign index tightened from the wides of +721 bps and are still about +170 bps wider on the year. There is a wide dispersion of spreads of issuers in the index. At about 817 bps, EM high yield spreads remain elevated and trade about 200 bps wide of U.S. high yield spreads. While EM issuers do not benefit from the support being offered to DM credit, the sector will continue to

benefit from the broad improvement in liquidity, a better growth outlook along amid the bounce in oil prices, ongoing market access, and support from the IMF and other avenues for the those sovereigns confronted with a sudden stop scenario.

Every country, with the exception of China, which joined the local rate benchmark index in February, experienced a rally in rates all along the curves. The primary driver of this impressive performance was aggressive easing by EM central banks, which utilized conventional and unconventional monetary measures. The unprecedented easing by the Fed and the ECB provided a tailwind for EM policy makers, and the lack of inflation passthrough further boosted the case for lower rates without concerns about FX depreciation. As a result, the main policy rates were cut to all-time lows in most countries, and the steepening in most local curves caused by March's massive delevering also reversed.

EM currencies retraced a bit more than half of their Q1 losses in Q2. The positive EMFX performance began on May 18th when the French-German Recovery Fund proposal and optimism regarding a virus vaccine triggered broad USD selling. The unwinding of heavily skewed long USD market positioning also played a major role in many of the vulnerable currencies outperforming during this period. We were correct in our view that the recovery in EMFX was going to lag the recovery in credit and rates, and we remain cautious on the asset class.

What Will Matter in Q3? In spite of the positive turn in economic data and market performance, debates regarding valuation versus fundamentals and the "second wave" of the virus will dominate sentiment and risk appetite going forward. The extent to which the deterioration in EM fundamentals increases defaults or questions on debt sustainability will be a central focus for investors.

Looking over a longer horizon, we see the economic challenges of the virus as only one of the several factors determining EM vulnerabilities. The episode's more lasting effects are likely to be less correlated with the distribution of cases across countries and more correlated with underlying macro and financial fundamentals. However, the longer-term resiliency of issuers is often overlooked, particularly given the sector's near-term funding needs, which are manageable (click here for more on [EM vulnerabilities](#)).

EM spreads across the credit spectrum still have room to compress, and we continue to find value in "up-in-quality trades" as well as lower-rated issuers that still trade with default probabilities that are too high. We think many of the sector's vulnerabilities are already priced in, including those of distressed names as well. In an environment where the trajectory of the recovery disappoints, we don't expect a repeat of March given the support from DM and EM policymakers. We would anticipate that multilateral institutions would also increase their support.

EM Corporates: Given the normalization of commodity prices and improvement in financial conditions, we believe the worst can be avoided with respect to EM corporate fundamentals. EM corporate

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high yield defaults will likely trend towards the low end of our 6-8% forecast for 2020 (YTD actual defaults are 1.7%). Companies have been able to draw credit lines, negotiate asset sales, cut capex and even access the bond market, which seemed unthinkable as Q1 concluded. EM corporate spreads have tightened over 200 bps from the wides of late March (vs. a long-term average of mid 300 bps), but valuations are still attractive from a medium- to long-term perspective. While the supply pipeline remains heavy, issuance in certain sectors, such as Chinese property, has been less than feared as companies were able to take advantage of low borrowing rates in the local market. New issue concessions have compressed to near zero, but demand has remained healthy. In terms of positioning, we continue to favor higher-quality, high-yield names and are underweight sub-scale oil & gas and commodity firms.

EM Local Bonds And FX: In absolute terms, the yields on the overall local index and individual country index trade at historical lows, but relative to core rates, the spread between EM and DM yields still has room to tighten. Alpha opportunities in Q3 will come from three sources: 1) focusing on the front end of the curves where the central banks have room to cut rates; 2) taking an active view on the shape of the curves amid various QE measures; and 3) playing correlation between EMFX and EM rates.

With the Fed on hold for the next two to three years, the five-year point of the curve is the new point from which the term premium can be derived. The spread of the benchmark index to the five-year U.S. Treasury note is an attractive 425 bps. While the long end of EM curves may be vulnerable to increasing debt and deficit levels, the 5- to 7-year segments of the curve are the preferred tenors for expressing a view on duration.

Policy rates in Mexico, Russia, Indonesia, and China remain higher than historical lows, and they could conceivably decline to match those in other countries, such as Brazil and South Africa. We think policy rates in Mexico, Russia, and Indonesia will have a 3% handle by end of the year, and we are expressing this view via interest-rate swaps and bonds in the 2- to 5-year part of the curves in these three countries. Rates in China appear too high relative to economic fundamentals, and money market liquidity is likely to revert to Q1 levels once the PBoC closes various arbitrage loopholes. With negative real rates and all-time low nominal policy rates in Chile, Peru, Czech Republic, and Brazil, QE policies may also provide alpha opportunities. Turkey is the only country where inflationary pressures have started to rebuild, which warrants consideration for underweight positioning.

We don't think the turnaround in EMFX is sustainable if the flow picture doesn't improve. In Q2, there were net outflows from both EM local bonds and EM equities. EMFX market positioning is now closer to home rather than heavily skewed toward long dollar positioning. Looking forward, the performance of EMFX hinges upon the performance of global risk assets, which will be dependent on the type of recovery that will unfold over the

remainder of the year. If the recovery is faster and stronger, then inflows are likely to return to local bonds and EM equities, providing some support to currencies. Conversely, a disappointing recovery will likely present a challenging backdrop now that the technical picture is more neutral. Our conviction rests more on relative-value opportunities. We think FX benefitting from factors, such as relatively high carry, higher growth, strong external balance positions, and less reliance on globalization benefits, are likely to outperform. We favor currencies such as the IDR, RUB, KRW, SGD, THB, and to a lesser extent MXN and European currencies. We are cautious on the BRL, CLP, COP, ZAR, and TRY—currencies with relatively sizeable fiscal deficits, higher current account deficits, lower growth, and low to negative real rates.

Outlook: Positive. We continue to find value in EM spreads. Many issuers pre-funded anticipated deterioration in economic conditions and fiscal slippage. Spreads for certain EM sovereign and corporate issuers across the credit spectrum are likely to tighten. Further alpha in local rates may emerge from curve positioning as well as in markets with positive real rates and expectations for policy rate cuts. We are more cautious on EMFX and recognize attractive relative-value opportunities between variously affected currencies.

Municipal Bonds

	Total Return (%)	
	Q2	YTD
High Grade	2.72	2.08
High Yield	4.55	-2.64
Long Taxable Munis	9.15	9.07

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Manageable issuance YTD (\$198B through Q2) is expected to continue into Q3; taxable municipal issuance accounts for over 35% of the total, providing a supportive technical for the tax-exempt market. The expectation of continued mutual fund inflows adds to the favorable technical backdrop for tax-exempts in Q3. In addition, the relatively steep municipal yield curve (the 5- to 30-year muni curve steepened by 32 bps in Q2 to 122 bps) presents attractive opportunities on the long end with the expectation that the muni curve will flatten in Q3. While credit spreads for many high-grade sectors have largely recovered from recent wides, certain sectors, including transportation and hospitals, have lagged. In addition, lower investment grade credits have underperformed relative to AAA and AA credits. We expect segments of the market that have lagged through Q2 to outperform from a credit spread tightening perspective in Q3.

While the fundamental, long-term credit profile for most municipal sectors is stable, the short-term outlook for many sectors has weakened. Uncertainty regarding the depth and duration of the

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economic downturn and the ultimate impact on muni credit continues to weigh on segments of the market. Federal support provided via the CARES Act and the Fed's newly created Municipal Liquidity Facility (MLF), helped to stabilize the market in Q2. However, additional federal stimulus funds will be required to prevent deep expenditure cuts, furloughs and layoffs of public sector workers, and increased borrowing as budget gaps persist for many states and localities. The urgency of another federal stimulus package has increased as a resurgence in COVID cases is pressuring certain states and localities. We continue to believe that certain high yield muni credits dependent on narrow revenue streams will likely experience a pickup in defaults.

High grade taxable municipals should perform in line with comparably rated corporate bonds, but may be subject to more constrained liquidity. However, we believe that essential service revenue bond issuers provide better insulation from multi-notch downgrade risk than corporate bonds.

Outlook: A constructive backdrop amid attractive valuations for many market segments and supportive technical conditions. Yet, a near-term cautious view is warranted given the recent spike in U.S. COVID cases. Without additional near-term federal support for states and localities, the sector could experience an increase in volatility.

Important Information

Source of data (unless otherwise noted): PGIM Fixed Income and Bloomberg as of July 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.-denominated, investment-grade, fixed-rate or step up, taxable securities sold by industrial, utility and financial issuers. It includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements. Securities included in the index must have at least 1 year until final maturity and be rated investment-grade (Baa3/BBB-/BBB-) or better using the middle rating of Moody's, S&P, and Fitch.

European Investment Grade Corporate Bonds: Bloomberg Barclays European Corporate Bond Index (unhedged): The Bloomberg Barclays Euro-Aggregate: Corporates bond Index is a rules-based benchmark measuring investment grade, EUR denominated, fixed rate, and corporate only. Only bonds with a maturity of 1 year and above are eligible.

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

European High Yield Bonds: ICE BofAML European Currency High Yield Index: This data represents the ICE BofAML Euro High Yield Index value, which tracks the performance of Euro denominated below investment grade corporate debt publicly issued in the euro domestic or eurobond markets. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P, and Fitch). Qualifying securities must have at least one year remaining term to maturity, a fixed coupon schedule, and a minimum amount outstanding of €100 M. ICE Data Indices, LLC, used with permission. ICE DATA INDICES, LLC IS LICENSING THE ICE DATA INDICES AND RELATED DATA "AS IS," MAKES NO WARRANTIES REGARDING SAME, DOES NOT GUARANTEE THE SUITABILITY, QUALITY, ACCURACY, TIMELINESS, AND/OR COMPLETENESS OF THE ICE DATA INDICES OR ANY DATA INCLUDED IN, RELATED TO, OR DERIVED THEREFROM, ASSUMES NO LIABILITY IN CONNECTION WITH THEIR USE, AND DOES NOT SPONSOR, ENDORSE, OR RECOMMEND PGIM FIXED INCOME OR ANY OF ITS PRODUCTS OR SERVICES.

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.-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.-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.

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