Morgan Stanley

INVESTMENT MANAGEMENT

Global Fixed Income Bulletin

It's All About the Virus

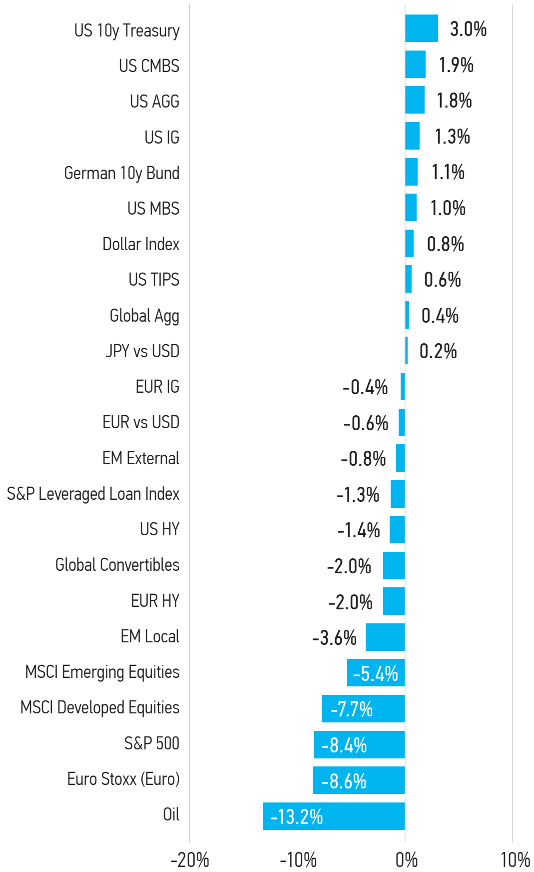
FIXED INCOME | GLOBAL FIXED INCOME TEAM | MACRO INSIGHT | MARCH 2020

February marked a watershed in the evolution of the coronavirus (COVID-19) outbreak and its ramifications. Through February 19 (the day the S&P hit its all-time high), optimism reigned. The world thought this health crisis was likely to be contained to Asia, predominantly China, with a relatively small impact on the U.S. and European economies. It was a temporary supply shock, disrupting supply chains, but importantly, it would not materially affect 2020 cumulative economic performance, either in the U.S. or China. Lost output could be made up without lasting impact on demand. So much for wishful thinking! By the end of the month, the 10-year U.S. Treasury yield was at a record low, equities were down close to double digits and high yield had a negative return year to date.

The failure to contain the spread of the coronavirus to China (and Asia) changed the game. The world now faces an aggregate demand shock (above and beyond a short-term collapse in Chinese demand) on top of the original Asian supply shock. Economic growth will take a bigger hit (although there is nothing really evident in the data yet). The hit will last longer. It will be global. And, maybe worst of all, no one knows when it will end. The Brookings Institute has come up with SEVEN potential scenarios. There are probably a lot more than that! This uncertainty will weigh on economies and financial markets until there is evidence that infection rates are likely to have peaked. Recession is likely in countries already facing weak economic prognoses and weak policy frameworks. Other countries, probably the U.S., will escape recession but at the cost of a stagnating economy. Volatility will stay high; government bonds should continue to be well supported; risky assets should struggle (financial markets were not well positioned for the plethora of bad news delivered post February 19). Medium term, this crisis should pass and economies return to normal. When and how much pain is felt along the way will determine how low yields go and how wide credit spreads move. As long as the virus's impact remains disruptive rather than destructive, we should be fine, eventually. Buckle your seat belts!

DISPLAY 1

Asset Performance Year-to-Date

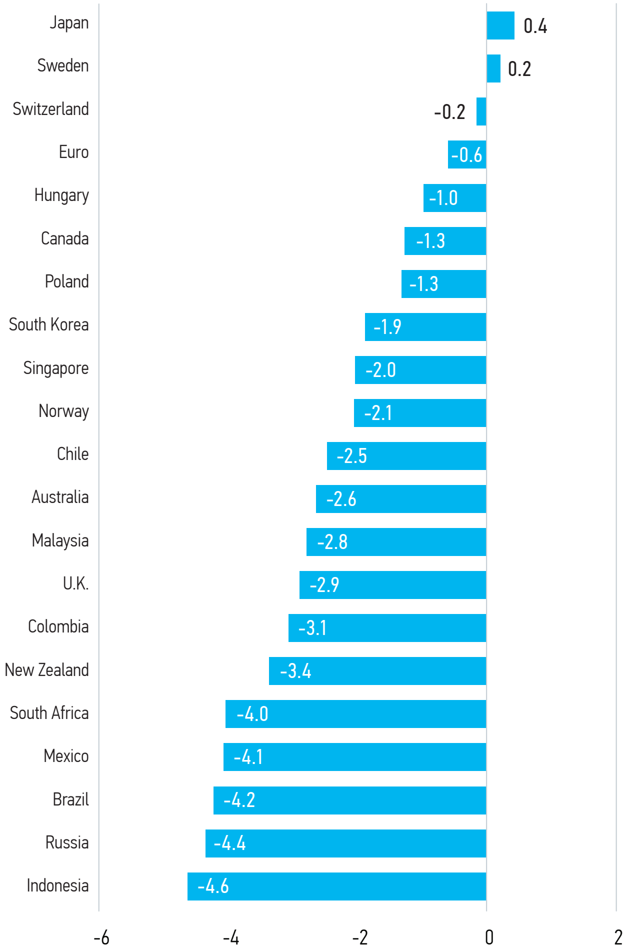


Note: USD-based performance. Source: Bloomberg. Data as of February 29, 2020. The indexes are provided for illustrative purposes only and are not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.** See pages 12 and 13 for index definitions.

DISPLAY 2

Currency Monthly Changes Versus U.S. Dollar

(+ = appreciation)



Source: Bloomberg. Data as of February 29, 2020. Note: Positive change means appreciation of the currency against the USD.

DISPLAY 3

Major Monthly Changes in 10-Year Yields and Spreads

COUNTRY	10-YR YIELD LEVEL (%)	MONTH CHANGE (BPS)	10-YR SPREAD (BPS)	MONTH CHANGE (BPS)
			(Spread over USTs)	
United States	1.15	-36		
United Kingdom	0.44	-8	-71	+28
Germany	-0.61	-17	-176	+19
Japan	-0.15	-9	-130	+27
Australia	0.82	-13	-33	+22
Canada	1.13	-14	-2	+22
New Zealand	1.06	-25	-9	+11
EUROPE			(Spread over Bunds)	
France	-0.29	-11	32	+6
Greece	1.33	+16	194	+33
Italy	1.10	+17	171	+34
Portugal	0.35	+9	96	+26
Spain	0.28	+5	89	+22
EM	**INDEX LOCAL YIELD (%)**	**MTD CHANGE (BPS)**	**USD SPREAD (BPS)**	**MTD CHANGE (BPS)**
EM External Spreads			352	+55
EM Local Yields	5.09	-7		
EM Corporate Spreads			321	+49
Brazil	5.90	-13	252	+27
Colombia	5.75	+17	214	+38
Hungary	1.56	+29	135	+43
Indonesia	7.09	+18	194	+29
Mexico	6.89	+19	219	+32
Peru	4.44	+11	129	+33
Philippines	4.12	-3	109	+25
Poland	1.61	-28	64	+24
Russia	6.25	+23	194	+44
South Africa	9.65	+19	370	+45
Turkey	12.70	+277	520	+148
Venezuela	–	–	10374	-5332
CREDIT			**SPREAD (BPS)**	**MTD CHANGE (BPS)**
U.S. IG			122	+20
EUR IG			114	+20
U.S. HY			500	+110
EUR HY			410	+81
SECURITIZED				
Agency MBS			92	+4
U.S. BBB CMBS			259	+10

Positive Neutral Negative

Source: Bloomberg, JP Morgan. Data as of February 29, 2020.

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Fixed Income Outlook

February has been a match of two halves: Pre-February 19 the outlook was still optimistic, post February 19, goldilocks has been postponed, maybe indefinitely. Before the 19th, the outlook was a continuation of the steady recovery which characterized the end of 2019. Equities rallying and government bonds rallying, credit performing well in spite of some minor spread widening due to the tight levels at the end of 2019 and risks surrounding the coronavirus. By the end of February, markets had had their worst week since the 2008 financial crisis and the 10-Year Treasury Note hit historic lows, as the coronavirus continued to spread across the globe. By now it's clear the coronavirus pandemic will have a meaningful impact on the global economy. While consensus had been that the worst impact would be felt in the first quarter and a recovery in the second quarter, this is now likely overly optimistic. We increasingly believe uncertainty is unlikely to be resolved until at least late in the second quarter.

Thus, thinking about the outlook for the next few months is tricky to say the least. The coronavirus creates a fluid situation for markets with no one certain about how long and far it will run. On the positive side, it appears to be receding in China, where it started, allowing the economy to start to recover; some other Asian economies—Japan, Singapore, and Taiwan—have been remarkably successful at containing the virus. On the negative side, infections outside of China, particularly in Europe, have been accelerating and are only just to pick up in the U.S. and many other countries. A public health failure in just one or two major economies could be severely disruptive to the entire global economy.

Fixed income markets have reacted to the increased risk sentiment with risk free duration rallying and credit spreads widening (investment grade, high yield and emerging markets). With government bond yields making new all-time lows in many advanced economies, it is not clear how much further they can fall, unless economies move into recession. Central banks have responded with emergency easing—rate cuts as well as measures to ease monetary conditions and keep liquidity flowing—but the market was quick to anticipate this response and significant rate cuts have been priced for every developed economy central bank.

Looking forward, the debate is whether the impact will merely be "disruptive" to the global economy, with a rebound in economic activity following the current slowdown, or "destructive," with the timeline uncertain and longer term damage inflicted. Our base case is still for it to be disruptive with open questions over (1) the timeline to the peak in the infection rate, (2) the impact on consumer/business confidence and (3) the level where markets offer extreme value. The good news is that we are seeing both central banks and governments moving into action, with combined monetary and fiscal stimulus, but it remains to be seen if the response will be enough to calm markets.

While monetary accommodation is not a solution to a medical problem, and will have limited effect in cushioning the economy from a supply side shock, it can help prevent monetary conditions from tightening. The Fed's surprise emergency rate cut (50 bps) in early March was extremely important in this regard. Moreover, we expect central banks and fiscal authorities to deliver on credit easing measures to support corporate/household cash flows and their access to credit.

	MONTHLY REVIEW	OUTLOOK
Developed Markets	In February, yields fell to historic levels across the globe as markets braced for the social and economic impact of the coronavirus, as the virus continued to rapidly spread outside of China. Other geopolitical risks around the globe took a backseat as the coronavirus was the main driver of market moves, particularly at the end of the month. The OECD slashed its global growth forecasts for 2020 from 2.9% to 2.4%. 10-year global yields across the developed markets dropped, including 36 basis points on the United States Treasury, 25 basis points in New Zealand, and 17 basis points in Germany. The VIX closed the month at 40%, which was close to a 5-year high, signaling increased concern among investors of the impacts the coronavirus will have on the global economy. U.S. breakevens fell, with the 10-year breakeven ending the month at 1.43.[1] The reinversion of the Treasury yield curve and collapse of real yields was also indicative of uncertainty about the economy.	The global outlook is contingent on the coronavirus' path and pace at which it spreads in the coming weeks. Expectations are that the virus spreads to the EU and U.S., posing serious disruptive risks to the regional and global economy, even if the Chinese economy is starting to normalize. If the situation continues to worsen, particularly in the U.S., the Fed is likely to deliver on additional rate cuts at its March meeting or soon after. The Fed could reset rates back at the lows seen after the global financial crisis. The Fed has promised to help stabilize financial markets, and is committed to being flexible regarding interest rate policy. If the spread of the virus slows, we believe there could be a sharp global rebound. The risk of a meaningful recession is unlikely if labor markets do not weaken.
Emerging Markets	Emerging markets (EM) fixed income asset performance was negative in the month, as investors reduced risk due to the uncertainty surrounding the spread and economic impact of COVID-19. EM currencies weakened versus the U.S. dollar, while local bond returns were flat as bond yields failed to match the decline in Treasury yields. Inflows into the asset class ($4.4bn) continued for most of the month, primarily into hard currency strategies ($4.1bn), while local currency strategies gained $0.2bn. Many central banks cut rates or enacted other easing measures to combat the slowdown in economic activity.[2]	We remain cautious on EM debt in the near term, on the back of a still fluid situation regarding the COVID-19 virus. The transmission of the coronavirus shock through the global economy is likely to come from different sources: the demand-side (as declining consumer confidence weighs on private consumption), the financial sector (an equity sell-off implies a negative shock to wealth, and thus consumption, whereas wider spreads translate into tighter financial conditions and thus reduced corporate investment), and from the supply-side, as quarantines and other emergency measures disrupt global supply chains. In our view, we think the demand/financial channel is the most significant one, and as a result, monetary/fiscal policy accommodation may prove effective in mitigating the shock and providing some needed stabilization to financial assets. Markets have already priced in over 100 bps of Fed easing in the next year, and other Central Banks are likely to follow suit with their own monetary policy easing. In addition, some countries affected by the virus have also announced small fiscal stimuli (for example, Italy), which could be expanded depending on the severity of the shock.

[1] Source: Bloomberg. Data as of February 29, 2020 [2] Source: Bloomberg. Data as of February 29, 2020

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	MONTHLY REVIEW	OUTLOOK
Credit	Unsurprisingly, the key driver of credit spreads in February was the uncertainty surrounding the coronavirus and its impact on economic activity and market/business confidence. Additional weak economic data (started before the virus), Q4 2019 corporate results that were ahead of lowered expectations and the start of U.S. election news were all discussed, but were not material market movers.	In February we continued to be conservative in our credit positioning, participating in a limited number of new issues while maintaining an unchanged risk exposure, long of credit but less long following sales in Q4 2019. We see the coronavirus as a "fluid situation" for markets with new cases continuing to increase and more regions being impacted. Fixed income markets have reacted to the increased risk sentiment with risk-free duration rallying and credit spreads widening. Looking forward the debate is whether the impact will be "disruptive" or "destructive."
Securitized Products	As with the other sectors, coronavirus was the dominant story in February, with U.S. interest rates rallying sharply to new lows and equities selling off materially. In an ironic twist, the securitized markets had essentially an opposite reaction, where government guaranteed agency MBS was the worst performing asset class, while credit-oriented securitized assets performed well. While this sounds counter-intuitive, this market dynamic actually makes sense when one drills a little deeper. Credit-oriented securitized assets performed well during the month driven by the continued demand for yield, and also supported by continued strong fundamental market conditions. Agency MBS underperformed as lower rates increased prepayment concerns and limited how much agency MBS prices could rise.	We are generally more cautious in the securitized markets as we enter March, given the potential economic consequences of the virus outbreak. We continue to add to our government guaranteed agency MBS positions, and are slowly reducing some of our credit exposures. We remain positive on mortgage and securitized markets overall from a fundamental perspective, but we believe that liquidity and volatility conditions could deteriorate, and markets could cheapen in the coming weeks as a result. Agency MBS has cheapened meaningfully over the past two years and now look attractive on a risk-adjusted relative value basis, while securitized credit opportunities have widened less than their corporate equivalents in recent weeks.

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Developed Market (DM) Rate/ Foreign Currency (FX)

MONTHLY REVIEW

In February, yields fell to historic levels across the globe as markets braced for the social and economic impact of the coronavirus, as the virus continued to rapidly spread outside of China. Other geopolitical risks around the globe took a backseat as the coronavirus was the main driver of market moves, particularly at the end of the month. The OECD slashed its global growth forecasts for 2020 from 2.9% to 2.4%. 10-year global yields across the developed markets dropped, including 36 basis points on the United States Treasury, 25 basis points in New Zealand, and 17 basis points in Germany. The VIX closed the month at 40%, which was close to a 5-year high, signaling increased concern among investors of the impacts the coronavirus will have on the global economy. U.S. breakevens fell, with the 10-year breakeven ending the month at 1.43.[3] The reinversion of the Treasury yield curve and collapse of real yields was also indicative of uncertainty about the economy.

The minutes from the Fed's January meeting showed that the committee believed (at the time) that the "'current stance of monetary policy was appropriate." The minutes also discussed the Fed's view that the economy had gotten stronger, with growth chugging along at a moderate pace. Uncertainty (in the near term) around trade seemingly had diminished, a welcome reprieve from the tumultuous past several months of trade negotiations, and as a result, global growth appeared to stabilize. The U.S. election remains a risk for the second half of the year. However, the Fed did note that the coronavirus posed a new risk to the outlook.

At the end of the month, the coronavirus quickly changed the global landscape, with almost all central banks in the developed markets vowing to promote financial stability. Fed Chair Jerome Powell said the Fed would take action from a monetary policy standpoint if warranted. The Bank of Japan also vowed to ensure stability in the financial markets by buying government debt via repo operations.[4] The markets expect significant central bank intervention, as rate cuts are now expected around the world in the coming months due to the potential impact of the coronavirus.

On the Brexit front, Prime Minister Boris Johnson told the European Union that they have four months (by June) to make a Brexit deal, and published its negotiating mandate for the next phase of negotiations.[5] While many of the EU and UK's interests are aligned, two main areas of disagreement remain in regulatory alignment and court oversight. Boris Johnson wants to structure the agreement to be similar to what Canada has in place, but the EU disagrees with this approach.

OUTLOOK

The global outlook is contingent on the coronavirus' path and pace at which it spreads in the coming weeks. Expectations are that the virus spreads to the EU and U.S., posing serious disruptive risks to regional and global economy, even if the Chinese economy is starting to normalize. If the situation continues worsen particularly in the U.S., the Fed is likely to deliver on additional rate cuts at its March meeting or soon after. The Fed could reset rates back at the lows seen after the global financial crisis. The Fed has promised to help stabilize financial markets, and is committed to being flexible regarding interest rate policy. If the spread of the virus slows, we believe there could be a sharp global rebound. The risk of a meaningful recession is unlikely if labor markets do not weaken.

The Bank of Japan (BoJ) policy will likely remain easy as well and is prepared to continue to provide support, especially given the impact of the coronavirus in the region, but it may be uncomfortable with 10-year JGB yields falling below -0.20%. A key conundrum for the BoJ is how the currency will respond to its monetary policy, with a stronger yen problematic for both supporting the economy and boosting inflation. The BoJ may tailor its response to the actions of other central banks, with aggressive rate cuts elsewhere opening the door for it to cut as well. Data for the eurozone economy was showing signs of improvement before the virus hit, but, with the Italian economy severely affected, the issue has become how Europe will negotiate the coronavirus disruption. A package of easing measures is expected from the ECB but, with less room to maneuver than other central banks. The fiscal response may be more important, with the challenge being the EU's difficulties at achieving a coordinated response given the differing interests and preferences of member states.

In the UK, the combined monetary and fiscal measures taken provide a template for what other countries can do. In addition to an emergency 50 bps rate cut, the Bank of England has set up special lending facilities to small- and medium-size businesses (SMEs) and eased the capital buffers for banks, while the UK government has promised to provide the health system with whatever funds it requires and a broader fiscal boost.[6]

Emerging Market (EM) Rate/FX

MONTHLY REVIEW

Emerging markets (EM) fixed income asset performance was negative in the month, as investors reduced risk due to the uncertainty surrounding the spread and economic impact of COVID-19.

[3] Source: Bloomberg. Data as of February 29, 2020
[4] Source: Bloomberg. Data as of February 29, 2020
[5] Source: Bloomberg. Data as of February 29, 2020
[6] Source: Bloomberg. Data as of February 29, 2020

EM currencies weakened versus the U.S. dollar, while local bond returns were flat as bond yields failed to match the decline in Treasury yields. Inflows into the asset class ($4.4bn) continued for most of the month, primarily into hard currency strategies ($4.1bn), while local currency strategies gained $0.2bn. Many central banks cut rates or enacted other easing measures to combat the slowdown in economic activity.[7]

In Latin America, Mexico's state-owned energy company, "Pemex," announced its 4Q19 results, which delivered just enough to avoid a downgrade on a stand-alone basis (not considering sovereign support). Mexico's central bank cut its benchmark rate by 25bps to 7%. While being cautious on inflation, they acknowledged a weaker growth outlook by revising down its GDP growth forecast for 2020 and 2021, and increased its inflation forecast. Ratings agencies did act in the case of Ecuador, as Moody's downgraded the country's external debt rating to Caa1, from B3, citing limited governability and thus, ability to pass IMF-directed fiscal reforms, which are necessary to maintain debt sustainability, but lack popular support.[8] In Argentina, the Central Bank lowered the key rate to 40% in the month, citing a decline in the pace of inflation, which was still 53% for the year. In Brazil, inflation came in lower than expected but we believe the Central Bank will remain on hold in the coming months.[9]

In the CEMEA region (Central/Eastern Europe, Middle East, and Africa) growth in Central and Eastern Europe beat expectations but still decelerated last quarter. Turkey's economy surprised to the upside. Lebanese external debt underperformed significantly as the government weighed alternatives to face a $1.2bn Eurobond redemption coming due on March 9.[10] Central banks in Hungary, Poland, and Egypt kept rates on hold in their latest meetings, while the Central Bank of Russia cut its key rate by 25bp to 6% (in line with consensus), keeping the door open for further easing in the next meetings. The Czech National Bank (CNB) also surprised the market by hiking its policy rate by 25bp to 2.25%. In South Africa, the Finance Minister presented the 2020 budget showing a small improvement that reduces the chances of a Moody's downgrade in March.[11]

In Asia, Malaysia's 4Q19 GDP growth came in much weaker than expected on the back of supply disruptions in the commodities sector. The domestic yield curve rallied in response to the weak release, as well as rising growth concerns stemming from the COVID-19 virus. Central banks in Thailand and the Philippines cut rates by 25 bps on lower inflation and weakening economic activity.[12] However, India's Reserve Bank (RBI), kept rates on hold, but RBI did strike a dovish tone by changing its liquidity management operations and introducing unconventional monetary policies to support flagging growth.

OUTLOOK

We remain cautious on EM debt in the near term, on the back of a still fluid situation regarding the COVID-19 virus. The transmission of the coronavirus shock through the global economy is likely to come from different sources: the demand-side (as declining consumer confidence weighs on private consumption), the financial sector (an equity sell-off implies a negative shock to wealth, and thus consumption, whereas wider spreads translate into tighter financial conditions and thus reduced corporate investment), and from the supply-side, as quarantines and other emergency measures disrupt global supply chains. In our view, we think the demand/financial channel is the most significant one, and as a result, monetary/fiscal policy accommodation may prove effective in mitigating the shock and providing some needed stabilization to financial assets. Markets have already priced in over 100bp of Fed easing in the next year, and other Central Banks are likely to follow suit with their own monetary policy easing. In addition, some countries affected by the virus have also announced small fiscal stimuli (for example, Italy), which could be expanded depending on the severity of the shock.

The global growth slowdown will have repercussions on EM economies, as they are exposed to global developments via trade and financing channels, and in a few cases, they also contend with coronavirus outbreaks in their own economies. However, monetary policy space in the EM world is more ample than in DM economies, where policy rates are very close to the zero lower bound. In the next weeks, we are likely to see EM Central Banks joining those in DM in delivering additional monetary policy accommodation. In addition, fiscal stimulus to address lagging growth could also be deployed by economies with enough fiscal space to do so (for example, Russia, Chile, Indonesia). All of this monetary and fiscal stimulus could have a significant positive impact on global growth if and when COVID-19 fears subside. Finally, we continue to monitor idiosyncratic developments in EM economies, such as Argentina's government negotiations with bondholders in an effort to restructure the country's external obligations before a self-imposed March 31 deadline. Finally, we continue to see progress on structural reforms in several countries, such as Brazil, which is considering a tax reform and a Central

[7] Source: JP Morgan. Data as of February 29, 2020
[8] Source: Moody's: Data as of February 29, 2020
[9] Source: Bloomberg. Data as of February 29, 2020
[10] Source: Bloomberg. Data as of February 29, 2020
[11] Source: Bloomberg. Data as of February 29, 2020
[12] Source: Bloomberg. Data as of February 29, 2020

Bank independence bill, whereas in Ukraine, our initial optimism is tempered by doubts about the stability of the current Cabinet which could weigh on its ability to implement actions needed to secure IMF financing.

Credit

MONTHLY REVIEW

Unsurprisingly, the key driver of credit spreads in February was the uncertainty surrounding the coronavirus and its impact on economic activity and market/business confidence. Additional weak economic data (started before the coronavirus), Q4 2019 corporate results that were ahead of lowered expectations and the start of U.S. election news were all discussed but were not material market movers.

BBB-rated names broadly underperformed higher rated securities both in the U.S. and in Europe. In the U.S., the Bloomberg Barclays U.S. Corporate Index closed 22 basis points (bps) wider in February to end the month at 123 bps over government bonds and Financials slightly outperformed non-financials in the month. In terms of excess returns versus government bonds, the U.S. Investment Grade (IG) index generated a negative excess return of -1.76%.[13] European IG, as measured by the Bloomberg Barclays Euro-Aggregate Corporate Index, slightly outperformed the U.S. market in February, closing 21 bps wider at 114 bps. European financials closed 24 bps wider, underperforming European non-financials (19bps wider).[14]

February ended an eight month streak of positive performance for U.S. High Yield as markets experienced growing fears about the economic impact of the coronavirus. The Bloomberg Barclays U.S. High Yield Corporate Index returned -1.41% in February as spreads widened 114bps to 528bps and yields rose 71 bps to end the month at 6.23%. Much of this widening occurred in the last week of February, as the S&P 500 experienced its biggest weekly drop since 2008.[15]

As to be expected in a risk off environment, lower rated bonds underperformed higher quality credits. On a total return basis, the Ba Index was down 1.33%, the B Index was down 1.30%, and the Caa Index returned -2.36%.[16]

Sector performance was generally negative. The worst performing sectors were E&P (-10.01%), Oil Field Services (-8.09%) and Leisure (-4.32%). The best performing sectors were Wireless (+3.45%), Pharmaceuticals (+1.43%) and Wirelines (+0.65%).[17]

While high yield new-issue activity slowed by the final week of February, the market was robust at the start and February saw $27.9bn price across 41 deals.[18] High yield mutual funds and ETFs experienced month-to-date outflows of $2.4bn, according to Lipper.

Default activity remains relatively muted, with four defaults totaling $1.9bn in loans in February.[19] Year to date, a total of seven companies have defaulted totaling $4.3bn in bonds and loans. By comparison, four companies defaulted during the first two months last year; however, the total debt affected for the same time periods was larger, $7.4bn.[20]

Global convertibles had their downside mitigation aspects tested in February as rising concerns about the coronavirus led to a material drop in global stocks and a rise in bond yields for the second month in a row. MSCI Global equities were down the most since May, 2012, falling 8.21% in February, and Barclays Global Credit rose 0.38% while the Reuters Global Convertibles index fell 1.37%.[21] Over the first two months of the year, convertibles have helped mitigate downside risk in uncertain markets with the Reuters Global Convertibles index up 0.64% despite a fall of 9.28% in MSCI Global equities. Supply in the convertibles market has surprisingly been ahead of pace compared to this time last year, with $9.3bn coming in February and $17.7bn year-to-date.[22] Often when stocks are falling, issuers hold off bringing convertible deals, but the continued supply perhaps indicates issuers believe stocks will take time to recover from the impact of the virus on global growth.

OUTLOOK

In February we continued to be conservative in our credit positioning participating in a limited number of new issues while maintaining an unchanged risk exposure, long of credit but less long following sales in Q4 2019.

We see the coronavirus as a "fluid situation" for markets with new cases continuing to increase and more regions being impacted. Fixed income markets have reacted to the increased risk sentiment with risk-free duration rallying and credit spreads widening. Looking forward the debate is whether the impact will be "disruptive" or "destructive".

Considering the value question we are defining value relative to credit spreads seen in Q4 2018 and Q1 2016 where markets priced recessionary scenarios. For fundamentals, we expect continued volatility driven by headlines.

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13 Source: Bloomberg Barclays. Data as of February 29, 2020

14 Source: Bloomberg Barclays. Data as of February 29, 2020

15 Source: Bloomberg Barclays. Data as of February 29, 2020

16 Source: Bloomberg Barclays. Data as of February 29, 2020

17 Source: Bloomberg Barclays. Data as of February 29, 2020

18 Source: Bloomberg. Data as of February 29, 2020

19 Source: JP Morgan. Data as of February 28, 2020.

20 Source: JP Morgan. Data as of February 28, 2020.

21 Source: Thomson Reuters. Data as of February 29, 2020

22 Source: Bloomberg. Data as of February 29, 2020

Securitized

MONTHLY REVIEW

As with the other sectors, coronavirus was the dominant story in February, with U.S. interest rates rallying sharply to new lows and equities selling off materially. In an ironic twist, the securitized markets had essentially an opposite reaction, where government guaranteed agency MBS was the worst performing asset class, while credit-oriented securitized asset performed well. While this sounds counter-intuitive, this market dynamic actually makes sense when one drills a little deeper. Credit-oriented securitized assets performed well during the month driven by the continued demand for yield, and also supported by continued strong fundamental market conditions. Agency MBS underperformed as lower rates increased prepayment concerns and limited how much agency MBS prices could rise.

Current coupon agency mortgage backed security (MBS) nominal spreads widened 17 basis points to 114 basis points above interpolated U.S. Treasuries in February, the widest levels since 2016.[23] The Bloomberg Barclays U.S. MBS Index returned 1.04% in February, and is now up 1.74% year-to-date in 2020. The duration of the Bloomberg Barclays U.S. MBS Index shortened 0.45 years to 2.17 years during February, and is now 1.03 years shorter year-to-date and at the lowest duration levels since 2016.[24] National mortgage rates decreased 16 basis points in February to 3.29%, and finished the month at the lowest levels since 2016.[25] Pay-ups for specified pools remain strong as investors look for pools with lower prepayment risks. The Federal Reserve's (Fed) MBS portfolio shrank by $15 billion during February to $1.372 trillion. We forecast the Fed's agency MBS holdings to decline by roughly $240 billion in 2020, following the $228 billion decline in 2019.[26] Mortgage mutual funds saw net inflows of roughly $3 billion in February, after nearly $4 billion of inflows in January.[27] Primary dealer holdings of agency MBS continued to decline, falling by $10 billion to $29 billion in February.[28] Agency MBS will likely remain under pressure from both prepayment concerns given the historic low rates and from the continued reduction of the Fed's MBS holdings, but at these wider spread levels, we believe agency MBS offer improved relative value. We have been reducing our underweight to agency MBS in 2020, and we expect to continue to incrementally add agency MBS to our portfolios if valuations remain at current levels or cheapen further.

Non-agency RMBS spreads widened in February, but to a lesser extent than either agency MBS or comparable corporate credit.[29] Fundamental credit conditions in the U.S. housing market remain positive. National home prices increased 0.1% in December and were up 3.75% overall in 2019.[30] January existing home sales decreased 1.3% from December, but home sales are still up 9.6% from January 2018.[31] Housing inventory rose slightly from 1.40 million existing homes for sale in December to 1.42 million in January, or a 3.1 month supply based on current sales volumes, but inventory is down 10.7% (3.7 month supply) from a year ago, and remains very low by historical standards.[32] Lower mortgage rates continue to improve home affordability, which is very reasonable from a historical perspective with the median monthly mortgage payment accounting for 15.5 % of the U.S. median household income in December 2019, essentially unchanged from November, but down meaningfully from 17.1% in December 2018.[33] Mortgage credit performance continues to be strong, and new mortgage delinquencies remain very low, at 0.84%.[34] Overall, we believe the U.S. housing market remains on solid ground, supported by low unemployment, rising wages and lower mortgage rates. Our non-agency U.S. RMBS positioning has remained largely unchanged over the past few months.

ABS spreads widened across nearly all sectors in February, with consumer credit conditions performing relatively better while aircraft ABS spreads widened substantially. U.S. unemployment levels remains at the 50 year low rate of 3.5% in December. Personal income increased 0.2% in December, and personal spending rose 0.3% during the month.[35] Personal savings rates decreased slightly to 7.6% in December, but remain high from a historical perspective.[36] Overall consumer debt levels remain below historical levels on an inflation-adjusted basis. We have reduced our consumer ABS holdings over the past year—not due to fundamental credit concerns but due to less compelling relative value as spreads have tightened meaningfully over the past year.

CMBS spreads also widened in February, with AAAs roughly 10 basis points wider and BBBs closer to 25

[23] Source: Bloomberg. Data as of February 29, 2020

[24] Source: Bloomberg, Data as of February 29, 2020

[25] Source: Mortgage News Daily, Data as of February 29, 2020

[26] Source: Federal Reserve Bank of New York. Data as of February 29, 2020

[27] Source: Lipper U.S. Fund Flows. Data as of February 29, 2020

[28] Source: Bloomberg, Data as of February 29, 2020

[29] Source: Wells Fargo. Data as of February 29, 2020

[30] Source: S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index. Data as of February 29, 2020

[31] Source: National Association of Realtors. Data as of February 29, 2020

[32] Source: National Association of Realtors. Data as of February 29, 2020

[33] Source: National Association of Realtors. Data as of February 29, 2020

[34] Source: S&P Experian First Mortgage Default Index. Data as of February 29, 2020

[35] Source: U.S. Bureau of Economic Analysis. Data as of February 29, 2020

[36] Source: U.S. Department of Labor. Data as of February 29, 2020

basis points wider.[37] Commercial real estate market credit conditions remain positive; commercial real estate prices were unchanged again in January, but are up 2.5% over the past year.[38] Fundamental conditions remain favorable in most commercial real estate markets, with high occupancy rates and improving rental rates. CMBS delinquency rates continued to decline to 2.1% in January from 2.3% in December, and remains at a post-crisis low.[39] Overall, we remain positive on residential-related commercial real estate and office buildings and remain cautious on retail shopping centers and hotels. We have reduced our CMBS positions over the past year, selling some positions due to spread tightening.

In Europe, interest rates fell further in February as rates rallied globally due to heightened coronavirus concerns. European securitized spreads were largely unchanged in February, in contrast to U.S. securitized assets which were generally wider during the month. Consumer economic conditions remain favorable in Europe and supply remains relatively light. European MBS and ABS are also receiving support from the renewed ECB asset purchase program, which were announced in September and began in November. The ECB asset holdings increased by 23 billion Euros to 2.623 trillion Euros in February, and the ECB's ABS holdings increased by 0.2 billion Euros to 28.3 billion Euros.[40] Mortgage rates throughout the Eurozone and U.K. remain historically low, which is a positive dynamic for European real estate and consumer credit. Consumer credit conditions remain healthy, employment continues to improve in Europe, incomes are rising across the majority of the region and consumer balance sheets are improving, helped by low rates and rising wages. We have reduced our UK RMBS positions over the past few months, as spreads have tightened meaningfully and the "Brexit risk premium" is no longer as compelling.

OUTLOOK

We are generally more cautious in the securitized markets as we enter March, given the potential economic consequences of the coronavirus outbreak. We continue to add to our government guaranteed agency MBS positions, and are slowly reducing some of our credit exposures. We remain positive on mortgage and securitized markets overall from a fundamental perspective, but we believe that liquidity and volatility conditions could deteriorate, and markets could cheapen in the coming weeks as a result. Agency MBS has cheapened meaningfully over the past two years and now look attractive on a risk-adjusted relative value basis, while securitized credit opportunities have widened less than their corporate equivalents in recent weeks.

We have moved from underweight to neutral on agency MBS over the past few months as spreads have widened due to increased prepayment concerns from lower mortgage rates and from supply pressures as the Fed continued to reduce its agency MBS holdings. The prepayment speeds are likely to remain elevated with mortgage rates at the lowest levels since 2016 and rates volatility appears likely to remain high. The supply pressure from the Fed's balance sheet reduction will continue in 2020, as we anticipate the Fed to reduce its MBS holdings by another $200 billion in 2020, but we also expect increased demand for agency MBS in 2020 from money managers, U.S. banks, and foreign central banks now that agency MBS look attractive from a relative value perspective versus corporate credit and U.S. Treasuries. Overall, we believe the supply pressure could continue to push spreads modestly wider in 2020, but improving demand should minimize the impact. Within agency MBS, we have shifted our focus towards lower coupon, less prepay-sensitive MBS. We expect prepayment speeds to remain fast and higher coupon MBS should continue to underperform, unless we see a material back-up in rates. TBA rolls will likely remain weak, and we expect specified pools to continue to outperform TBAs in 2020.

Our U.S. non-agency RMBS outlook remains relatively steady. We are positive on the U.S. housing market and U.S. household economic conditions (employment, savings rates, etc), but relative value remains more challenging as non-agency RMBS spreads have widened less than comparable sectors. Legacy pre-crisis non-agency MBS looks relatively expensive, but more recent securitizations of newly originated loans and non-performing/re-performing loans look more compelling. Lower mortgage rates should improve home affordability and help reduce residential credit risk, while also increasing prepayment risk in these non-agency RMBS sectors as well. Overall, we continue to find attractive risk-adjusted relative value opportunities in the U.S. non-agency RMBS market, and we are maintaining our moderately overweight to this sector given the positive housing market conditions.

After reducing our CMBS positions over the past few years due to a combination of credit and relative value concerns, we may begin adding to our CMBS positions in March now that CMBS spreads have widened materially and relative value has improved. We remain cautious on retail shopping centers and we have become increasingly concerned about hotels due to the potential coronavirus impact, but we

37 Source: Bank of America. Data as of February 29, 2020

38 Source: Green Street Advisors. Data as of February 29, 2020

39 Source: Trepp. Data as of February 29, 2020

40 Source: European Central Bank. Data as of February 29, 2020

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remain positive on multifamily housing, office and logistics centers.

We have reduced our U.S. consumer ABS positions over the past year—not due to credit concerns but as a function of tighter spreads that no longer offer as much relative value. If spreads continue to widen, we may look to add to our positions. Overall, we remain positive on consumer credit conditions, although we are closely watching for any impacts from coronavirus on U.S. employment or consumer confidence.

We may reduce our European RMBS in March if relative value conditions remain unchanged. European RMBS and ABS spreads were largely unchanged in February while U.S. opportunities generally widened. We still have a positive credit outlook for Europe, supported by historically low interest rates and stable economies, but relative value spreads and benefits of hedging euro- and sterling-denominated assets back into U.S. dollars have weakened over the past month.

Risk Considerations

Fixed-income securities are subject to the ability of an issuer to make timely principal and interest payments (credit risk), changes in interest rates (interest rate risk), the creditworthiness of the issuer and general market liquidity (market risk). In a rising interest-rate environment, bond prices may fall and may result in periods of volatility and increased portfolio redemptions. In a declining interest-rate environment, the portfolio may generate less income. **Longer-term securities** may be more sensitive to interest rate changes. Certain **U.S. government securities** purchased by the strategy, such as those issued by Fannie Mae and Freddie Mac, are not backed by the full faith and credit of the U.S. It is possible that these issuers will not have the funds to meet their payment obligations in the future. **Public bank loans** are subject to liquidity risk and the credit risks of lower-rated securities. **High-yield securities (junk bonds)** are lower-rated securities that may have a higher degree of credit and liquidity risk. **Sovereign debt securities** are subject to default risk. **Mortgage- and asset-backed securities** are sensitive to early prepayment risk and a higher risk of default, and may be hard to value and difficult to sell (**liquidity risk**). They are also subject to credit, market and interest rate risks. The **currency market** is highly volatile. Prices in these markets are influenced by, among other things, changing supply and demand for a particular currency; trade; fiscal, money and domestic or foreign exchange control programs and policies; and changes in domestic and foreign interest rates. Investments in **foreign markets** entail special risks such as currency, political, economic and market risks. The risks of investing in **emerging market** countries are greater than the risks generally associated with foreign investments. **Derivative instruments** may disproportionately increase losses and have a significant impact on performance. They also may be subject to counterparty, liquidity, valuation, correlation and market risks. **Restricted and illiquid securities** may be more difficult to sell and value than publicly traded securities (liquidity risk). Due to the possibility that prepayments will alter the cash flows on **collateralized mortgage obligations (CMOs)**, it is not possible to determine in advance their final maturity date or average life. In addition, if the collateral securing the CMOs or any third-party guarantees are insufficient to make payments, the portfolio could sustain a loss.

DEFINITIONS

R* is the real short term interest rate that would occur when the economy is at equilibrium, meaning that unemployment is at the neutral rate and inflation is at the target rate.

INDEX DEFINITIONS

The indexes shown in this report are not meant to depict the performance of any specific investment, and the indexes shown do not include any expenses, fees or sales charges, which would lower performance. The indexes shown are unmanaged and should not be considered an investment. It is not possible to invest directly in an index.

The **Bloomberg Barclays Euro Aggregate Corporate Index (Bloomberg Barclays Euro IG Corporate)** is an index designed to reflect the performance of the euro-denominated investment-grade corporate bond market.

The **Bloomberg Barclays Global Aggregate Corporate Index** is the corporate component of the Barclays Global Aggregate index, which provides a broad-based measure of the global investment-grade fixed income markets.

The **Bloomberg Barclays U.S. Corporate Index (Bloomberg Barclays U.S. IG Corp)** is a broad-based benchmark that measures the investment-grade, fixed-rate, taxable corporate bond market.

The **Bloomberg Barclays U.S. Corporate High Yield Index** measures the market of USD-denominated, non-investment grade, fixed-rate, taxable corporate bonds. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below. The index excludes emerging market debt.

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. Introduced in 1985, the GNMA, FHLMC and FNMA fixed-rate indexes for 30- and 15-year securities were backdated to January 1976, May 1977 and November 1982, respectively. In April 2007, agency hybrid adjustable-rate mortgage (ARM) pass-through securities were added to the index.

Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care.

Euro vs. USD—Euro total return versus U.S. dollar.

German 10YR bonds—Germany Benchmark 10-Year Datastream Government Index; **Japan 10YR government bonds**—Japan Benchmark 10-Year Datastream Government Index; and **10YR U.S. Treasury**—U.S. Benchmark 10-Year Datastream Government Index.

The **ICE BofAML European Currency High-Yield Constrained Index (ICE BofAML Euro HY constrained)** is designed to track the performance of euro- and British pound sterling-denominated below investment-grade corporate debt publicly issued in the eurobond, sterling

The **ICE BofAML U.S. Mortgage-Backed Securities (ICE BofAML U.S. Mortgage Master) Index** tracks the performance of U.S. dollar-denominated, fixed-rate and hybrid residential mortgage pass-through securities publicly issued by U.S. agencies in the U.S. domestic market.

The **ICE BofAML U.S. High Yield Master II Constrained Index (ICE BofAML U.S. High Yield)** is a market value-weighted index of all domestic and Yankee high-yield bonds, including deferred-interest bonds and payment-in-kind securities. Its securities have maturities of one year or more and a credit rating lower than BBB-/Baa3, but are not in default.

The **ISM Manufacturing Index** is based on surveys of more than 300 manufacturing firms by the Institute of Supply Management. The ISM Manufacturing Index monitors employment, production inventories, new orders and supplier deliveries. A composite diffusion index is created that monitors conditions in national manufacturing based on the data from these surveys.

Italy 10-Year Government Bonds—Italy Benchmark 10-Year Datastream Government Index.

The **JP Morgan CEMBI Broad Diversified Index** is a global, liquid corporate emerging markets benchmark that tracks U.S.-denominated corporate bonds issued by emerging markets entities.

The **JPMorgan Government Bond Index**—Emerging markets **(JPM local EM debt)** tracks local currency bonds issued by emerging market governments. The index is positioned as the investable benchmark that includes only those countries that are accessible by most of the international investor base (excludes China and India as of September 2013).

The **JPMorgan Government Bond Index Emerging Markets (JPM External EM Debt)** tracks local currency bonds issued by emerging market governments. The index is positioned as the investable benchmark

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that includes only those countries that are accessible by most of the international investor base (excludes China and India as of September 2013).

The **JP Morgan Emerging Markets Bond Index Global (EMBI Global)** tracks total returns for traded external debt instruments in the emerging markets and is an expanded version of the EMBI+. As with the EMBI+, the EMBI Global includes U.S. dollar-denominated Brady bonds, loans and eurobonds with an outstanding face value of at least $500 million.

The **JP Morgan GBI-EM Global Diversified Index** is a market-capitalization weighted, liquid global benchmark for U.S.-dollar corporate emerging market bonds representing Asia, Latin America, Europe and the Middle East/Africa.

JPY vs. USD—Japanese yen total return versus U.S. dollar.

The **National Association of Realtors Home Affordability Index** compares the median income to the cost of the median home.

The **Nikkei 225 Index (Japan Nikkei 225)** is a price-weighted index of Japan's top 225 blue-chip companies on the Tokyo Stock Exchange.

The **MSCI AC Asia ex-Japan Index (MSCI Asia ex-Japan)** captures large- and mid-cap representation across two of three developed markets countries (excluding Japan) and eight emerging markets countries in Asia.

The **MSCI All Country World Index (ACWI, MSCI global equities)** is a free float-adjusted market capitalization weighted index designed to measure the equity market performance of developed and emerging markets. The term "free float" represents the portion of shares outstanding that are deemed to be available for purchase in the public equity markets by investors. The performance of the Index is listed in U.S. dollars and assumes reinvestment of net dividends.

MSCI Emerging Markets Index (MSCI emerging equities) captures large- and mid-cap representation across 23 emerging markets (EM) countries.

The **MSCI World Index (MSCI developed equities)** captures large and mid-cap representation across 23 developed market (DM) countries.

Purchasing Managers Index (PMI) is an indicator of the economic health of the manufacturing sector.

The **S&P 500® Index (U.S. S&P 500)** measures the performance of the large-cap segment of the U.S. equities market, covering approximately 75 percent of the U.S. equities market. The index includes 500 leading companies in leading industries of the U.S. economy.

The **S&P/LSTA U.S. Leveraged Loan 100 Index (S&P/LSTA Leveraged Loan Index)** is designed to reflect the performance of the largest facilities in the leveraged loan market.

The **S&P GSCI Copper Index (Copper)**, a sub-index of the S&P GSCI, provides investors with a reliable and publicly available benchmark for investment performance in the copper commodity market.

The **S&P GSCI Softs (GSCI soft commodities) Index** is a sub-index of the S&P GSCI that measures the performance of only the soft commodities, weighted on a world production basis. In 2012, the S&P GSCI Softs Index included the following commodities: coffee, sugar, cocoa and cotton.

Spain 10-Year Government Bonds—Spain Benchmark 10-Year Datastream Government Index.

The **Thomson Reuters Convertible Global Focus USD Hedged Index** is a market weighted index with a minimum size for inclusion of $500 million (U.S.), 200 million euro (Europe), 22 billion yen, and $275 million (Other) of convertible bonds with an equity link.

U.K. 10YR government bonds—U.K. Benchmark 10-Year Datastream Government Index. For the following Datastream government bond indexes, benchmark indexes are based on single bonds. The bond chosen for each series is the most representative bond available for the given maturity band at each point in time. Benchmarks are selected according to the accepted conventions within each market. Generally, the benchmark bond is the latest issue within the given maturity band; consideration is also given to yield, liquidity, issue size and coupon.

The **U.S. Dollar Index (DXY)** is an index of the value of the United States dollar relative to a basket of foreign currencies, often referred to as a basket of U.S. trade partners' currencies.

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