

Global Fixed Income Bulletin

Time to Be More Selective

FIXED INCOME | GLOBAL FIXED INCOME TEAM | MACRO INSIGHT | NOVEMBER 2017

Summary

After discounting their probability for much of the year, markets woke up in October to the prospect of a steeper U.S. Federal Reserve (Fed) rate path and the passage of tax reform. With continued growth momentum around the world and possible U.S. tax cuts, we see a quite benign environment for risk assets. Unless inflation picks up faster than expected, we believe many fixed income securities could and will out-carry the current projected pace of rate rises. We also believe security selection will be important, seeking to avoid those bonds most sensitive to rising rates or those with less than sound fundamentals and focusing on those with improving stories.

DEVELOPED MARKET (DM) RATE/FOREIGN CURRENCY (FX): Better economic performance and tax reform prospects led markets to price in higher odds of Fed hikes while a dovish European Central Bank (ECB) anchored European yields, leading the periphery spreads to tighten. Continuing from last month, most major currencies declined versus the dollar.

Though U.S. inflation could stay muted, we believe the Fed will continue to hike rates as long as growth dynamics remain solid. Market expectations may be too relaxed about the Fed's willingness to keep hiking while inflation remains below target. It will be interesting to see how the new Fed chairperson calibrates policy. A more assertive Fed, better growth and possible tax reform should pressure long-term yields higher. In terms of currencies, we believe risk-reward now tilts toward a more neutral to positive stance on the U.S. dollar. We believe the dollar has fallen further than justified, by relative rate or growth differentials, especially versus the Swiss franc.

EMERGING MARKET (EM) RATE/FX: EM performance was mixed in October. Despite rising U.S. Treasury yields, the external and corporate debt indices generated positive returns, while domestic debt registered its worse monthly performance of 2017. In China, the 19th Party Congress concluded with an emphasis on the quality rather than speed of growth. Adjustments to growth are to be achieved via advanced manufacturing, rural/financial/state-owned-enterprises (SOE) reforms and the Belt and Road Initiative.

EM fixed income assets have performed well year-to-date, and investors are being selective on the basis of fundamentals and valuations. Going into year's end, positioning and political risks (e.g., North Korea, North American Free Trade Agreement (NAFTA), U.S. tax reform) could have a greater impact on performance. In addition, the November Organization of the Petroleum Exporting Countries (OPEC) meeting could stoke volatility. We are more optimistic that selective EM currencies will eventually begin to perform again.

CREDIT: Credit spreads in both the U.S. dollar and the euro hit new post-crisis tights in October, with lower-rated bonds performing the best over the month. There was some increased variability within industries as sectors like energy and consumer cyclicals outperformed while consumer non-cyclicals underperformed due to some weakness in pharmaceuticals.

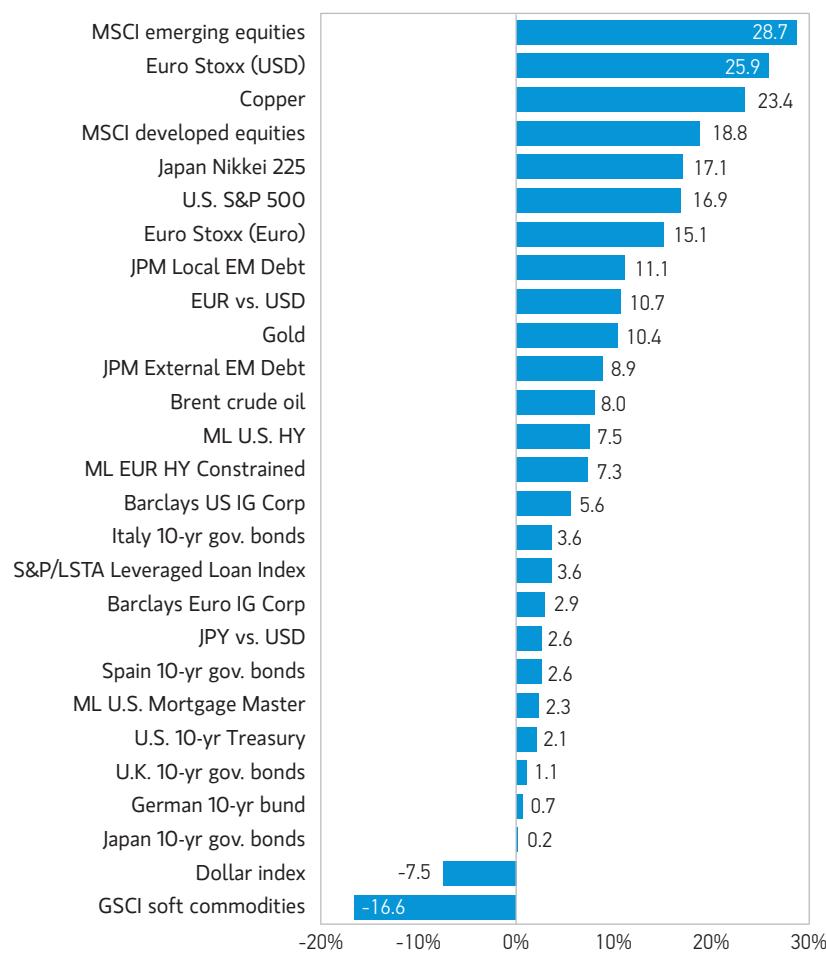
The views and opinions expressed are those of the Portfolio Management team as of October 2017 and are subject to change based on market, economic and other conditions. **Past performance is not indicative of future results.**

At current valuations, we do not foresee a drastic move tighter in spreads; however, we expect spreads to grind tighter into year's end if the current backdrop persists. We remain long and continue to favor financials over nonfinancials. The high-yield and convertible markets continue to present attractive opportunities, and we remain positive on both sectors, although expected returns have fallen.

SECURITIZED: Agency mortgage-backed securities (MBS) had a flat performance in October, while credit-sensitive securitized assets continued to outperform. Commercial mortgage-backed securities (CMBS) spreads generally tightened in October, but specific CMBS performance remains closely tied to collateral types. Some uncertainty remains over the impacts from hurricanes Harvey, Irma and Maria on Houston, Florida and Puerto Rico properties. European MBS spreads continued to tighten in October and are now 30 to 100 basis points tighter in 2017.

Carry remains king in securitized assets. The spread tightening has slowed in recent months and may be coming to an end, but even without further expected spread tightening, we expect that credit-oriented securitized assets should continue to outperform more rate-sensitive assets given the current credit and rates environments.

DISPLAY 1 Asset Performance Year-to-Date



DISPLAY 2 Major Monthly Changes in 10-Year Yields and Spreads

| DM | RATES | | CURRENCY |
|----------------------------|-------|--------------|------------|
| | LEVEL | CHANGE (BPS) | CHANGE (%) |
| United States | 2.38 | 5 | |
| United Kingdom | 1.33 | -3 | -0.86 |
| Germany | 0.36 | -10 | -1.42 |
| Japan | 0.07 | 0 | -0.99 |
| EM | | | |
| EM External Spreads | 305 | -1 | |
| EM Local Yields | 622 | 16 | |
| EM Corporate Spreads | 225 | -7 | |
| Credit Spreads | | | |
| U.S. IG | 95 | -6 | |
| EUR IG | 87 | -9 | |
| U.S. HY | 347 | -31 | |
| EUR HY | 257 | -9 | |
| Securitized Spreads | | | |
| Agency MBS | 11 | -1 | |
| U.S. BBB CMBS | 353 | 3 | |

Source: Bloomberg, JP Morgan. Data as of October 31, 2017.

Note: U.S. dollar-based performance. Source: Thomson Reuters Datastream. Data as of October 31, 2017. 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.**

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Fixed Income Outlook

After discounting the probability for much of the year, markets woke up in October to the prospect of a steeper Fed rate path and the passage of tax reform. This consequently drove U.S. rates and the dollar higher. As rates rose, most spread products tightened, reflecting positive economic outlooks and good earning results.

After many false starts, Congress managed to put tax reform back on track by passing a budget that earmarks \$1.5 trillion for tax cuts.¹ This makes room for a tax bill to pass through the reconciliation process, probably by the first quarter of 2018. With midterm elections in sight, Republicans have a strong impetus to achieve a legislative win, so we are optimistic that some form of tax reform will be passed. The key policies we watch for are deregulation and corporate tax cuts, which could increase incentive to invest domestically, raising productivity.

With continued growth momentum and possible tax cuts, we see a benign environment for risk assets in 2018. The positive sentiment this year could translate to increasing business capital expenditure (capex) next year, which can extend the growth momentum. On the technical side, surveys of global fund managers show that cash levels remain much higher than average. Managers had

built up cash given ongoing risk events in 2015 and 2016, even as markets rallied. As sentiment turns more positive, these managers now feel they must participate and are beginning to reduce cash levels, which should dampen volatility.

As the cycle progresses, rate hikes become a source of uncertainty for spread products. However, central banks, from the Fed to the banks of Canada and England, seem committed to a gradual pace of normalization, aiming to minimize economic and market disturbances. The ECB will taper purchases but will continue being a net buyer until late 2018 and on. Unless inflation picks up dramatically, causing central banks to feel like they are behind the curve, we believe selected spread products could and will out-carry the current projected pace of rate rises.

Security selection will be important, picking securities with improving stories and those that are less rate-sensitive. Looking across asset classes, though spread products have done very well this year, on a relative basis, they do not look too expensive. Instead, given where economic fundamentals are, we believe risk-free rates are the most overvalued asset class, and we favor being underweight the sector. That said, given valuations, we are less long than we were at the beginning of the year.

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MONTHLY REVIEW
OUTLOOK

¹ Source: Mike DeBonis and Kelsey Snell. (October 26, 2017) https://www.washingtonpost.com/powerpost/house-narrowly-passes-budget-paving-way-for-15-trillion-tax-cut/2017/10/26/49867544-ba50-11e7-be94-fabb0f1e9ffb_story.html?utm_term=.690999d27442.

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Developed Market

Monthly Review

Better economic performance and tax reform prospects led markets to price in higher odds of Fed hikes while a dovish ECB anchored European yields, leading the periphery spreads to tighten. U.S. Treasury 10-year yields rose 5 basis points while the curve flattened. German 10-year yields declined 10 basis points.² Portugal was again the top performer for the month, narrowing 31 basis points in spread, followed by Italy, which tightened 28 basis points.³

Continuing from last month, most major currencies declined versus the dollar. The New Zealand dollar was the worst performer, as surprise election results, resulting in a coalition government of the center-left Labor party and the populist New Zealand First party, led the currency to sell off. Negative news on NAFTA negotiations caused the Mexican peso to underperform. Oil prices continued to rise, with Brent hitting \$61 at month's end.⁴

In the U.S., the Federal Open Market Committee (FOMC) minutes reiterated the message of the September meeting. Many participants believe that cyclical drivers could push inflation higher in the medium term and another rate hike would be appropriate if current outlooks remain unchanged. In terms of data, headline Consumer Price Index (CPI) inflation rose to 2.2 percent in September from 1.9 percent previously, but core CPI stayed unchanged at 1.7 percent. Third-quarter growth was quite good, at 3.0 percent quarter-on-quarter annualized, beating expectations of 2.6 percent.⁵

In the Eurozone, the ECB announced plans to taper quantitative easing (QE) purchases at the October meeting. The Monetary Policy Committee (MPC)

DISPLAY 3
Government Bond Yields for Major Economies

| COUNTRY | 10YR YIELD LEVEL (%) | MONTH CHANGE (BPS) | 10YR SPREAD (BPS) | MONTH CHANGE (BPS) | 2S - 10S YIELD CURVE (BPS) | MONTH CHANGE (BPS) |
|---------------------|----------------------------|--------------------------|-------------------------|--------------------------|----------------------------------|--------------------------|
| (Spread over USTs) | | | | | | |
| United States | 2.38 | 5 | | | 78 | -7 |
| United Kingdom | 1.33 | -3 | -105 | -8 | 87 | -3 |
| Germany | 0.36 | -10 | -202 | -15 | 111 | -4 |
| Japan | 0.07 | 0 | -231 | -4 | 23 | 4 |
| Australia | 2.67 | -17 | 29 | -22 | 85 | -4 |
| Canada | 1.95 | -15 | -43 | -19 | 56 | -3 |
| New Zealand | 2.92 | -5 | 54 | -10 | 91 | 3 |
| (Spread over Bunds) | | | | | | |
| Belgium | 0.60 | -13 | 24 | -3 | 123 | -3 |
| France | 0.76 | 1 | 39 | 11 | 135 | 12 |
| Germany | 0.36 | -10 | | | 111 | -4 |
| Greece | 5.47 | -19 | 511 | -9 | 236 | -13 |
| Ireland | 0.58 | -16 | 22 | -6 | 114 | -10 |
| Italy | 1.83 | -28 | 146 | -18 | 210 | -24 |
| Netherlands | 0.47 | -11 | 11 | -1 | 120 | -5 |
| Portugal | 2.07 | -31 | 171 | -21 | 221 | -20 |
| Spain | 1.46 | -14 | 110 | -4 | 180 | -12 |
| Denmark | 0.47 | -8 | 10 | 2 | 108 | -9 |
| Norway | 1.61 | 2 | 125 | 12 | 108 | 5 |
| Sweden | 0.79 | -13 | 43 | -3 | 157 | -4 |
| Switzerland | -0.08 | -6 | -44 | 4 | 77 | -1 |

Source: Bloomberg, Data as of October 31, 2017

plans to reduce monthly purchases starting in January 2018 from 60 billion per month currently to 30 billion per month. This will last until September 2018. The ECB plans on continuing to reinvest to maintain the balance sheet size. The gradual pace of tapering means the policy environment should be benign for European assets. In September, activity continued to be strong; Purchasing

Managers Index (PMI) strengthened to 58.6, versus 58.0 previously.⁶

In the U.K., markets are currently anticipating a rate hike at the November 2nd meeting after hawkish comments from the MPC in the past few months. Inflation continued to rise slightly in September, reaching 3.0 percent from 2.9 percent previously.

² Source: Bloomberg. Data as of October 31, 2017.

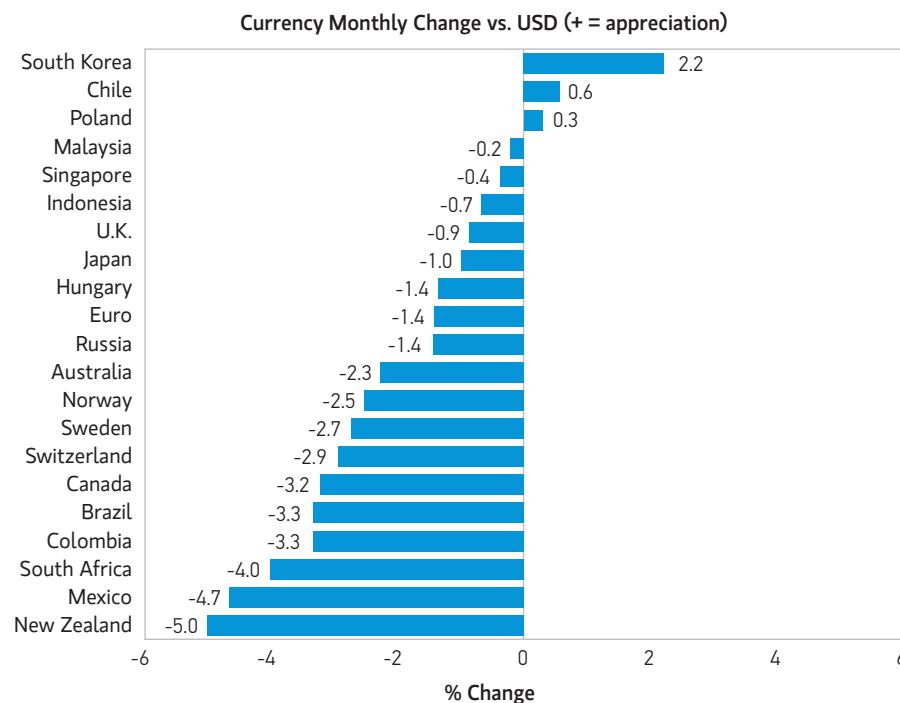
³ Source: Bloomberg. Data as of October 31, 2017.

⁴ Source: Bloomberg. Data as of October 31, 2017.

⁵ Source: Bloomberg. Data as of October 31, 2017.

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DISPLAY 4
Currency Monthly Changes Versus U.S. Dollar



Source: Bloomberg. Data as of October 31, 2017. Note: Positive change means appreciation of the currency against the U.S. dollar.

In Japan, the Bank of Japan (BoJ) maintained current policies, as widely expected. President Abe managed to secure a super-majority in the snap parliamentary election in October 22nd. This is a strong mandate for Abe to continue current Abenomics policies and other constitutional reforms, which bodes well for equities while being negative for the yen.

Outlook

Though U.S. inflation could stay muted, we believe the Fed will continue to hike rates as long as growth dynamics remain solid. Market expectations may be too relaxed about the Fed's willingness to keep hiking while inflation remains below target. We expect the Fed to hike rates in December. A more assertive Fed, better growth and possible tax reform would likely push long-term yields higher,

and we could see yields closing the year at 2.60 percent. However, geopolitical noise and wobbles in growth or inflation data are risks to this view. It will be interesting to see how the new Fed chairperson calibrates policy in 2018.

The ECB as well as the performance of German government bonds could also impact global Treasury markets. In the remainder of 2017, German bonds will likely not only respond to economic conditions but also to the planned tapering of monthly ECB purchases. As such, we believe German yields could rise toward year's end but offer poor risk/reward nonetheless. Peripheral European bonds are likely to remain well bid and narrow in spread with Germany. Political risk has receded in the past month, as Catalonian secession has been blocked by the Spanish central government, but Italian general elections remain a source of uncertainty.

In other DMs, we expect Japanese Government Bond (JGB) yields to remain low, but talk of exiting yield curve control may push 10-year JGBs slightly above 0.10 percent. We believe being overweight Australian government bonds makes sense given their economic prospects and as a hedge to a weaker-than-expected China.

In terms of currencies, we believe risk-reward now tilts toward not being short/underweight the U.S. dollar. The recent dollar depreciation looks overextended and the Fed seems to be changing its reaction function toward a faster pace of tightening (real rate rises), which would support the dollar. Particularly against the Swiss franc, we believe the dollar has fallen much further than justified by relative rate or growth differentials. If better fundamentals lead to better risk appetite in Europe, the Swiss franc, a safe-haven currency, could see outflows. Europe in general has been strengthening, and we are positive on euro-linked currencies such as the Polish zloty. EM currencies struggled recently and we have pared back exposure as we wait for EM fundamentals to reassert themselves. We continue to be relatively medium-term bullish on the fundamentals underlying these currencies.

Emerging Markets

Monthly Review

EM performance was mixed in October. Despite rising U.S. Treasury yields, the external and corporate debt indices generated positive returns, while domestic debt registered its worse monthly performance of 2017. Still, the global backdrop remains supportive: EM growth is recovering, inflation is generally low and major central banks remain accommodative despite gradual policy normalization. EM fixed income assets have performed well year-to-date, and investors are being selective on the basis of fundamentals and valuations. Going into year's end, positioning and political risks (e.g., North Korea, NAFTA, U.S.

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DISPLAY 5

Major Economic Data Releases

| COUNTRY | | | LATEST | CONSENSUS | PREVIOUS | AS OF |
|-----------|----------|-------------------------------------|---|-----------|----------|------------|
| U.S. | Labor | Non-farm Payrolls ('000s) | -33 | 80 | 169 | 9/30/2017 |
| | | Unemployment rate (%) | 4.2 | 4.4 | 4.4 | 9/30/2017 |
| | | Participation rate (%) | 63.1 | | 62.9 | 9/30/2017 |
| | | Average Hourly Earnings (%YoY) | 2.5 | | 2.4 | 9/30/2017 |
| | Activity | ISM Manufacturing | 60.8 | 58.1 | 58.8 | 9/30/2017 |
| | | GDP (%QoQ, saar) | 3 | 2.6 | 3.1 | 9/30/2017 |
| | | GDP (%YoY) | 2.3 | | 2.2 | 9/30/2017 |
| | | Inflation CPI (%YoY) | 2.2 | 2.3 | 1.9 | 9/30/2017 |
| | | Core CPI (%YoY) | 1.7 | 1.8 | 1.7 | 9/30/2017 |
| | | | | | | |
| Euro Area | Labor | Unemployment rate (%) | 8.9 | 9 | 9 | 9/30/2017 |
| | Activity | PMI Manufacturing | 58.6 | 59 | 58 | 10/31/2017 |
| | | GDP (%QoQ) | 0.6 | 0.5 | 0.7 | 9/30/2017 |
| | | GDP (%YoY) | 2.5 | 2.4 | 2.3 | 9/30/2017 |
| | | Inflation CPI (%YoY) | 1.5 | 1.5 | 1.5 | 9/30/2017 |
| U.K. | Labor | Core CPI (%YoY) | 1.1 | 1.1 | 1.2 | 9/30/2017 |
| | | Unemployment rate (%) | 4.3 | 4.3 | 4.3 | 8/31/2017 |
| | | Average Weekly Earnings (%) | 2.2 | 2.1 | 2.2 | 8/31/2017 |
| | Activity | PMI Manufacturing | 55.9 | 56.2 | 56.7 | 9/30/2017 |
| | | GDP (%QoQ) | 0.4 | 0.3 | 0.3 | 9/30/2017 |
| | | GDP (%YoY) | 1.5 | 1.5 | 1.5 | 9/30/2017 |
| Japan | Activity | Inflation CPI (%YoY) | 3 | 3 | 2.9 | 9/30/2017 |
| | | Core CPI (%YoY) | 2.7 | 2.7 | 2.7 | 9/30/2017 |
| | | PMI Manufacturing | 52.9 | | 52 | 9/30/2017 |
| | | GDP (%QoQ, saar) | 2.5 | 2.9 | 1.2 | 6/30/2017 |
| | | GDP (%YoY) | 1.4 | | 1.5 | 6/30/2017 |
| | | Inflation CPI (%YoY) | 0.7 | 0.7 | 0.7 | 9/30/2017 |
| | | Core CPI (ex food and energy, %YoY) | 0 | | 0 | 9/30/2017 |

Source: Bloomberg. Data as of October 31, 2017.

tax reform) could have a greater impact on performance. In addition, the November OPEC meeting could stoke volatility.

Central banks were active during the month. In Argentina, the Banco Central de la República (BCRA) surprisingly hiked its policy rate by 150 basis points to 27.75%, citing higher gasoline prices and core inflation pressures. After missing this year's inflation target, the bank is focused on anchoring expectations for 2018. In Colombia, against market consensus for a hold, the Banco de la República (BanRep) cut its policy rate by 25 basis points to 5%, flagging a widening output gap and more sanguine inflation outlook as its motivation. In Mexico, the central bank announced a \$4 billion FX intervention to support the peso, which underperformed significantly during the month, as investors recalibrated their expectations for NAFTA and the 2018 presidential elections. In Russia, the Central Bank of the Russian Federation (CBR) cut rates by 25 basis points as expected, signaling its preference for a gradual continuation of the easing cycle given the contrast between headline inflation (low) and expectations (elevated). In Brazil, the Banco Central do Brasil (BCB) cut the Selic rate by 75 basis points to 7.5%, but signaled "moderate reduction in the magnitude of easing" in the future.

In China, the 19th Party Congress concluded with an emphasis on the quality rather than speed of growth, to be achieved via advanced manufacturing, rural/financial/SOE reforms and the Belt and Road Initiative. In Mexico, financial markets were unsettled by a contentious 4th round of NAFTA negotiations, which ended in a stalemate, as well as the possibility of a leftist candidate, Andres Manuel Lopez Obrador, winning the 2018 presidential election, which could trigger a shift toward populist/heterodox policy. In India, the Reserve Bank of India (RBI) announced a plan to recapitalize public-sector banks, which are expected to increase

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credit growth to support investment. In South Africa, Finance Minister Gigaba delivered the Medium Term Budget Policy Statement (MTBPS), which implied a significant fiscal deterioration through 2021, to be funded by increased debt issuance. The report increased the likelihood of ratings downgrades from Moody's and/or S&P before year's end and led to a sell-off in local rates and the rand.

EXTERNAL: EM external sovereign and quasi-sovereign debt returned +0.18% in the month, bringing year-to-date performance to 8.92%, as measured by the JP Morgan EMBI Global Index.⁷ High-yielders and commodity exporters outperformed during the month. Bonds from Ecuador, Ghana, Jordan, Mongolia, Angola, Egypt, Paraguay and Argentina outperformed the broader market, while those from Belize, Turkey, Mexico, South Africa, Lebanon, Belarus and Pakistan lagged.

DOMESTIC: EM domestic debt returned -2.82% in the month, bringing year-to-date performance to 11.06% as measured by the JP Morgan GBI-EM Global Diversified Index.⁸ EM currencies weakened 2.20% versus the U.S. dollar and EM bonds returned -0.62% in local terms as yields rose.⁹ Within the domestic debt universe, bonds from Poland, Chile, Russia and Peru outperformed. Conversely, bonds from Colombia, Brazil, Mexico, South Africa and Turkey lagged the broader market.

CORPORATE: EM corporate debt returned 0.34% in the month, as measured by the JP Morgan CEMBI Broad Diversified Index.¹⁰ Higher-yielding, lower-quality companies outperformed higher-rated companies in the month. From a regional perspective, companies in Latin America (Brazil, Argentina), Africa (Nigeria) and Asia (China, Indonesia) led the market, while those from the Middle East and Europe (Israel, Turkey) lagged.

DISPLAY 6 EM External and Local Spread Changes

| COUNTRY | USD SPREAD (BPS) | MTD CHANGE (BPS) | INDEX LOCAL YIELD (%) | MTD CHANGE (BPS) |
|--------------|------------------|------------------|-----------------------|------------------|
| Brazil | 237 | ● -3 | 8.8 | +27 |
| Colombia | 183 | ● -2 | 6.4 | +7 |
| Hungary | 95 | ● +4 | 1.4 | -7 |
| Indonesia | 163 | ● -6 | 7.1 | +28 |
| Malaysia | 109 | ● -16 | 4.0 | +14 |
| Mexico | 247 | ● +14 | 7.3 | +34 |
| Peru | 136 | ● -4 | 5.5 | +10 |
| Philippines | 92 | ● +1 | 4.8 | -0 |
| Poland | 48 | ● -2 | 2.8 | +2 |
| Russia | 182 | ● -6 | 7.5 | -6 |
| South Africa | 288 | ● +22 | 9.7 | +44 |
| Turkey | 303 | ● +18 | 11.8 | +93 |
| Venezuela | 3171 | ● +77 | - | - |

Source: JP Morgan. Data as of October 31, 2017.

Outlook

From a fundamental perspective, EM economies, in aggregate, have continued to improve. The EM/DM growth differential appears to be recovering in favor of EM as the negative growth impacts from Brazil and Russia lessen. China's growth slowdown is likely to continue in the medium term, as the government emphasizes the quality of growth over its pace. In the U.S., the "Trump reflation trade" that markets have shunned during most of the year is now being revisited, leading to a sell-off in U.S. Treasury yields, a partial reversal of dollar weakness and underperformance of EM risk (particularly EMFX). Though final enactment of the tax reform is not assured (and its implications on U.S. growth are also uncertain), the market

is pricing in higher odds of its successful implementation, which may weigh on EM assets, at least in the short term.

Volatility has remained low as investor concerns have been offset by global central bank liquidity, despite U.S. Fed rate hikes and balance sheet reduction. This positive fundamental outlook could be threatened by a variety of factors, including a sharp return of volatility, monetary policy missteps or a flare-up in geopolitical tensions. De-globalization risks are likely to intensify as NAFTA renegotiation talks are prolonged into 2018, but we remain constructive on the final outcome. A U.S. withdrawal from the agreement would be economically self-defeating, causing severe disruptions in the existing value chains of key U.S. industries. Moreover, the political gain

⁷ Source: JP Morgan. Data as of October 31, 2017.

⁸ Source: JP Morgan. Data as of October 31, 2017.

⁹ Source: JP Morgan. Data as of October 31, 2017.

¹⁰ Source: JP Morgan. Data as of October 31, 2017.

from exiting NAFTA does not appear to be clear-cut, since there are segments of the President's support base that stand to lose significantly from such a decision (for example, states with strong agricultural sectors).

We remain optimistic about the prospects for EM fixed income in the remainder of 2017 as country fundamentals and the macroeconomic environment remain supportive. The various factors both pushing and pulling investors into EM fixed income remain in place: DM yields remain very low, economic data in EM appears to be recovering, Fed rate hikes are likely to remain gradual, U.S. protectionist inclinations have diminished and concerns about a sharp slowdown in China have eased. We believe that EM assets should be able to weather Fed rate hikes if driven by increasing U.S. growth and not inflation; however, assets remain vulnerable to spikes in U.S. policy uncertainty from undue Fed hawkishness, or Chinese policy tightening triggering a sharper-than-expected growth downturn. We are also cognizant of potential geopolitical risks, which may flare up and trigger spikes in volatility. However, we anticipate such events will be transitory and idiosyncratic to specific countries, rather than systemic.

Credit

Monthly Review

The global credit market traded better in October as spreads continued to narrow. Economic data continues its positive trajectory and while inflation remains low, central banks remain set on their gradual and deliberate path toward normalization.

In October, global equities performed well, with the major global indices generally up between 2% and 4%

DISPLAY 7 Credit Sector Changes

| SECTOR | USD SPREAD LEVEL (BPS) | MONTH CHANGE (BPS) | EUR SPREAD LEVEL (BPS) | MONTH CHANGE (BPS) |
|-----------------------------------|------------------------|--------------------|------------------------|--------------------|
| Index Level | 95 | -6 | 87 | -9 |
| Industrial Basic Industry | 117 | -10 | 77 | -10 |
| Industrial Capital Goods | 76 | -5 | 73 | -7 |
| Industrial Consumer Cyclicals | 89 | -7 | 85 | -16 |
| Industrial Consumer Noncyclicals | 87 | -2 | 78 | -7 |
| Industrial Energy | 120 | -14 | 80 | -14 |
| Industrial Technology | 76 | -5 | 60 | -9 |
| Industrial Transportation | 89 | -6 | 80 | -6 |
| Industrial Communications | 136 | -4 | 93 | -11 |
| Industrial Other | 85 | -4 | 109 | -11 |
| Utility Electric | 93 | -6 | 77 | -9 |
| Utility Natural Gas | 99 | -10 | 83 | -9 |
| Utility Other | 104 | -6 | 82 | -10 |
| Financial Inst. Banking | 81 | -6 | 86 | -4 |
| Financial Inst. Brokerage | 93 | -7 | 85 | -7 |
| Financial Inst. Finance Companies | 92 | -3 | 78 | -4 |
| Financial Inst. Insurance | 102 | -5 | 149 | -21 |
| Financial Inst. REITS | 112 | -9 | 92 | -12 |
| Financial Inst. Other | 100 | -7 | 119 | -8 |

Source: Bloomberg Barclays. Data as of October 31, 2017. The indexes are provided for illustrative purposes only and are not meant to depict the performance of a specific investment.

depending on geography and market cap.¹¹ Oil ended the month up more than 5%, and volatility, as measured by the VIX index, rose 7% but remains at extremely low levels from a historical perspective.¹² Investment-grade credit spreads tightened in both the United States and Europe, with lower-rated bonds performing the best.

Consistent with much of 2017, investment grade spread tightening in October was broad based in both the United States and Europe, as every major rating category and sector saw its spreads tighten relative to Treasuries. Financials and non-financials tightened by identical amounts, though BBB non-financials and subordinated financials

¹¹ Source: Bloomberg. Data as of October 31, 2017.

¹² Source: Bloomberg. Data as of October 31, 2017.

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did slightly better. There was some increased variability within industries as sectors like energy and consumer cyclicals outperformed while consumer non-cyclicals underperformed due to some weakness in pharmaceuticals. European investment-grade outperformed the U.S., led by non-financials. Like in the U.S., European energy and consumer cyclicals performed best while insurance was the best performing financials subsector.

In a sign of continued normalization of the financial markets, AIG was stripped of its designation as a non-bank systemically important financial institution (SIFI). The Financial Stability Oversight Council recognized that AIG has taken steps to significantly de-risk its business since the crisis, especially its financial products group, which was a major focus during the crisis. With this change, and MetLife's previous actions that rid them of the SIFI designation, Prudential remains the last non-bank SIFI.

The large U.S. banks all reported earnings in October. General earnings themes remained consistent across the institutions. Earnings remain strong in traditional banking business with net interest income (NII) generally higher, and asset quality remains strong. Trading operations were weaker, while equity operations are steadier. Capital ratios remain strong and have generally increased year-over-year. While payouts have increased, they are not having a negative effect on the ratios given strong earnings. There has been some weakness in the consumer segments (auto loans and credit cards), though neither is expected to have a material impact on credit quality.

Lastly, in mergers and acquisitions (M&A) news, CVS Health is reported to be in talks to acquire Aetna for more

than \$66 billion. This deal would create a vertically integrated health care giant spanning insurance, pharmacy, benefit management and retail and would represent the largest M&A deal to involve a U.S. insurer. We expect the transaction to have a large debt component that would necessitate new CVS/Aetna bond issuance, and we anticipate the combined entity would be one of the largest in the U.S. investment-grade corporate market.

The high-yield and convertibles markets continued to perform well in October, as an appetite for risk and the support of global equities continued to fuel the performance of both asset classes. In high-yield, we saw many of the same themes we saw in investment-grade credit markets, with higher-beta issuers outperforming and lower-rated bonds outperforming higher-rated credits. Strong equity performance continued to support convertibles throughout the month. Of note within convertibles: We continue to see cyclical sectors outperform after underperforming defensive sectors in 2016, as improving corporate earnings and economic growth support these sectors.

Outlook

We anticipate that the remainder of 2017 will continue to be defined by a steady grind tighter in credit spreads fueled by strong technicals, a positive macroeconomic backdrop, low volatility and strong equity performance. While spreads are trading at long-term medians, and continue to hit new post-crisis tights, we remain cautiously optimistic about global credit. At current valuations, we do not foresee a drastic move tighter in spreads; however, we expect spreads to grind tighter into year's end if the current backdrop persists.

Securitized Products

Monthly Review

Agency MBS had a flat performance in October, while credit-sensitive securitized assets continued to outperform. Nominal spreads on current coupon agency MBS tightened 4 basis points in October to 80 basis points above interpolated Treasuries, while the option-adjusted spread (OAS) tightened 1 basis point to 11 basis points above interpolated Treasuries as volatility and prepayment concerns remain subdued.¹³ The Bloomberg Barclays Capital U.S. MBS Index finished down 0.03% in October but still outperformed the Bloomberg Barclays U.S. Treasury Index, which was down 0.12% for the month. The Mortgage Index is up 2.29% through the first 10 months of 2017, outperforming the Treasury Index, which is up 2.13% year-to-date.¹⁴ The Fed purchased approximately \$24 billion agency MBS in October and actually increased its agency MBS holdings to \$1.76 trillion, in contrast to previous FOMC statements announcing the beginning of "balance sheet normalization" in October.¹⁵ We still expect the Fed to begin reducing its MBS purchases in the coming weeks, and that slowing its reinvestments will likely have a meaningful negative impact on agency MBS.

Non-agency MBS spreads continued their tightening trend in October, extending the strong gains of 2017, while cash flow and credit performance continue to improve. Fundamental U.S. housing market and mortgage market conditions remain positive. National home prices were up 0.5 percent in August and are up 6.1 percent over the past year.¹⁶ New mortgage defaults increased slightly to a 0.66% annual default rate in September, but remain near the lowest levels over the

¹³ Source: Yield Book. Data as of October 31, 2017.

¹⁴ Source: Barclays. Data as of October 31, 2017.

¹⁵ Source: Federal Reserve Bank of New York. Data as of October 31, 2017.

¹⁶ Source: S&P Case-Shiller National Home Price Index. Data as of October 31, 2017.

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past 10 years.¹⁷ With unemployment low, the economy slowly improving and homes remaining generally affordable at current mortgage rates, we expect mortgage credit performance to continue to improve.

CMBS spreads generally tightened in October, but specific CMBS performance remains closely tied to collateral types. Negative retail news continued to weigh on the retail-shopping CMBS sectors, and some uncertainty remains over the impacts from hurricanes Harvey, Irma and Maria on Houston, Florida and Puerto Rico properties. Spreads for non-retail and non-hurricane-affected CMBS generally continued to perform well.

Fundamentally, CMBS performance remains on reasonably solid ground, although there are some areas of concern. Commercial real estate prices were unchanged in September and remain up 0.2% in 2017. After several years of 10-plus percent annual increases, commercial real estate prices have flattened over the past year, but we do not expect price changes to turn materially negative given the continued strength of the U.S. economy. Commercial real estate prices are 26.9 percent above the previous peak in August 2007.¹⁸ Multifamily vacancy rates increased slightly in Q2 2017 due to new supply, but vacancy rates remain at a historically low rate of 4.6%.¹⁹ Retail shopping centers remain a major area of concern. Mall vacancy rates inched up 0.2% to 8.1% during the second quarter of 2017, and the leasing of vacant retail space fell to the lowest rate since 2011 during the quarter.²⁰ While we do see some signs of concern, overall we believe CMBS represents one of the more attractive credit sectors from a relative value perspective.

European MBS spreads continued to tighten in October and are now 30 to 100 basis points tighter in 2017.²¹ Low interest

rates and moderate signs of economic growth in Europe seem to be outweighing any material concerns over Brexit fallout. The ECB reduced its asset-backed securities (ABS) purchases again in September, and their ABS portfolio shrank by €0.3 billion to €24.1 billion of European ABS as of the end of September 2017.²² After a slow September, European ABS issuance picked back up again in October with €11.6 billion issued, for a 2017 total issuance volume of €69.0 billion, less than the €74.9 billion during the first 10 months of 2016.²³ We expect securitized issuance to remain slower for the remainder of 2017 given the continuation of regulatory constraints.

Outlook

Carry remains king in securitized assets. Despite considerable spread tightening over the last 18 months, credit-risk securitized assets continued to outperform more interest-rate sensitive securitized assets in October, and credit-risk still appears to offer better risk-adjusted yields. The spread tightening has slowed in recent months and may be coming to an end, but even without further expected spread tightening, we expect that the cash flow carry of credit-oriented securitized assets should continue to outperform more rate-sensitive assets given the current credit and rates environments. The real estate and consumer credit environments remain very benign, with low unemployment, slowly improving wage growth, strengthening Gross Domestic Product (GDP) and still historically low interest rates. The interest rate environment appears more concerning to us, with economic growth strengthening both domestically and globally, and with the Fed seemingly committed to further rate hikes and beginning to implement "balance sheet normalization" by slowing its asset purchases.

Despite plans to begin "balance sheet normalization" in October, the Fed did not actually reduce its MBS holdings during the month. In fact, the Fed's MBS holdings actually increased by \$10 billion during the month to \$1.76 trillion. Despite this lack of balance sheet reduction in October, we still expect the Fed to begin implementing its slowing of MBS purchasing in the coming weeks. Given the expected reduction in Fed MBS purchases, we believe agency MBS are poised to underperform as a function of weaker demand and potential increased rates volatility and the associated increased mortgage option cost. Agency MBS are currently at their tightest nominal spread levels in over 20 years, as a function of both Fed MBS purchases and dampened interest rate volatility over the last few years, and we expect the reversal of both of these conditions will lead to some spread widening. On an option-adjusted basis, agency MBS spreads are not nearly as expensive looking, but these OAS valuations are predicated on continued low rates of volatility and low mortgage option cost. We remain generally underweight agency MBS based on current valuations and the potentially deteriorating market conditions for agency MBS.

Non-agency RMBS continue to be one of the best performing sectors in 2017. Although spreads have tightened significantly this year, this tightening seems mostly warranted given the reduction of credit risk and improving cash flow dynamics. Mortgage delinquencies and defaults continue to decline and prepayment speeds continue to increase, both positive cash flow conditions for the predominantly below-par-priced legacy non-agency residential mortgage-backed securities

¹⁷ Source: S&P Experian First Mortgage Default Index. Data as of October 31, 2017.

¹⁸ Source: Green Street. Data as of October 31, 2017.

¹⁹ Source: CBRE. Data as of October 31, 2017.

²⁰ Source: REIS Inc. Data as of October 31, 2017.

²¹ Source: JP Morgan. Data as of October 31, 2017.

²² Source: European Central Bank. Data as of October 31, 2017.

²³ Source: Deutsche Bank. Data as of October 31, 2017.

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(RMBS) market. With the housing market continuing to strengthen, and with non-agency RMBS cash flow yields still offering attractive risk-adjusted relative value, we expect non-agency RMBS to continue to perform well in the coming months, although probably not replicating the very strong performance over the past year. Future returns will likely be more a function of cash flow-based carry than spread tightening.

We continue to have a mixed view on CMBS. We still like CMBS collateralized by residential housing exposures, office space and moderately seasoned hotel loans, but we remain cautious on CMBS with significant retail shopping exposures or backed by newly originated hotel loans. Retail shopping concerns have been well-documented in the press, with store closures and retailer bankruptcies seemingly becoming weekly events. We believe that our CMBS backed by residential properties and office buildings should continue to perform well, reflecting the broader strength of the U.S. economy. CMBS spreads have generally lagged the tightening of most other credit

sectors in 2017 and could be poised to tighten further in the last two months of the year or in 2018.

In ABS, we still prefer more esoteric ABS over traditional ABS such as credit card loans and auto loans. ABS backed by consumer loans, subprime auto loans, aircraft leases and various residential mortgage servicing-related assets offer more compelling yields, while maintaining relatively conservative risk profiles through robust securitization structures with high levels of credit protection.

In Europe, we continue to favor seasoned U.K. RMBS and seasoned peripheral Eurozone RMBS. Home prices have been steadily climbing throughout Europe over the past few years, supported by accommodative ECB policies of low interest rates and asset purchases. Many European housing markets remain below pre-crisis levels and still have further room to recover. In the U.K., while we have significant concerns about the impact of Brexit on the U.K. economy and housing markets, we also

believe that very seasoned (-10 years or more) U.K. RMBS will be resilient to Brexit pressures due to four factors: 1) seasoned U.K. loans have borrowers who have proven their credit worthiness by making payments consistently over the past 10+ years; 2) these borrowers' payments have been nearly cut in half over the past 10 years as mortgage rates on these mostly floating rate loans have declined; 3) home prices in the U.K. are up nearly 25% over the past 10 years and therefore the borrowers have some equity cushion if home prices were to decline from Brexit-related impacts; and 4) securitization capital structures have improved substantially over the past 10 years for many seasoned U.K. RMBS as senior bonds have paid down and subordinate securities have remained outstanding, thus significantly increasing credit support levels for many securities. We believe the current risk premiums (spreads) that we receive on many of these seasoned U.K. RMBS overstate the actual risks on these seasoned securities. We continue to have an overweight to this sector.

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

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

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.

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 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 **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.

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.

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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 generic 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.

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 **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.

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

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

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

The **BofA Merrill Lynch European Currency High-Yield Constrained Index (ML 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 domestic or euro domestic markets by issuers around the world.

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

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.

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 **BofA Merrill Lynch U.S. Mortgage-Backed Securities (ML 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 **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 **Bloomberg Barclays Euro Aggregate Corporate Index (Barclays Euro IG Corporate)** is an index designed to reflect the performance of the euro-denominated investment-grade corporate bond market.

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

The **Bank of America Merrill Lynch United States High Yield Master II Constrained Index (Merrill Lynch 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.

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

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

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

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 **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.

The **Dow Jones Commodity Index Gold (Gold)** is designed to track the gold market through futures contracts.

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 ICE Brent Crude futures contract (**Brent crude oil**) is a deliverable contract based on EFP delivery with an option to cash settle.

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.

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