

Global Fixed Income Bulletin

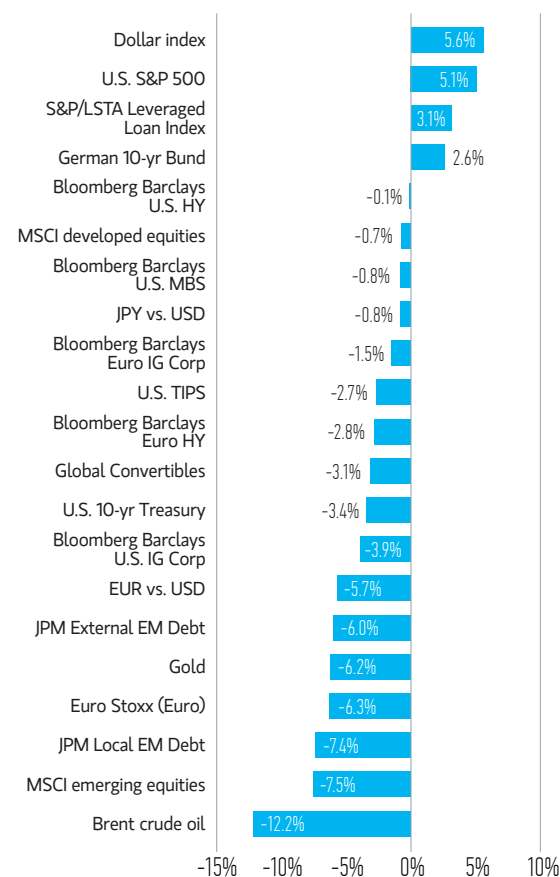
November's Blues

FIXED INCOME | GLOBAL FIXED INCOME TEAM | MACRO INSIGHT | DECEMBER 2018

Another tumultuous month saw major developed market rates rally with the U.S. Treasury yields dropping 16 basis points (bps) with the yield curve flattening further. Emerging market (EM) performance was mixed with local currency debt generating positive returns while hard currency debt ended in negative territory. But, alas as the weather has continued to cool, so too have the markets. Global credit underperformed government bonds as spreads, including both high-yield and investment grade, widened in November; both macroeconomic sentiment changes and concerns about microeconomic fundamentals contributed. e.g., the 20 percent drop in Brent crude did not help the energy sector. European corporate bond performance was notable as it continued its penchant to underperform U.S. credit. Securitized credit spreads also widened in sympathy with corporate bonds although there were less obvious catalysts.

DISPLAY 1

Asset Performance Year-to-Date



Note: USD-based performance. Source: Thomson Reuters Datastream. Data as of November 30, 2018. 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 6 and 7 for index definitions.

The views and opinions expressed are those of the Portfolio Management team as of December 2018 and are subject to change based on market, economic and other conditions. **Past performance is not indicative of future results.**

DISPLAY 2

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	2.99	-16		
United Kingdom	1.36	-7	-162	+8
Germany	0.31	-7	-267	+8
Japan	0.09	-4	-290	+12
Australia	2.59	-3	-40	+12
Canada	2.27	-23	-72	-7
New Zealand	2.72	0	-27	+16
EUROPE (Spread over Bunds)				
France	0.68	-7	37	+1
Greece	4.27	+3	395	+10
Italy	3.21	-21	290	-14
Portugal	1.83	-5	151	+3
Spain	1.50	-5	119	+3
EM				
	INDEX LOCAL YIELD (%)	MTD CHANGE (BPS)	USD SPREAD (BPS)	MTD CHANGE (BPS)
EM External Spreads			418	+27
EM Local Yields	6.56	-18		
EM Corporate Spreads			327	+27
Brazil	8.55	-12	265	+9
Colombia	6.72	-14	210	+24
Hungary	2.32	-41	142	+21
Indonesia	8.09	-53	222	+6
Malaysia	4.16	+3	147	+14
Mexico	9.24	+39	347	+40
Peru	5.75	-22	162	+10
Philippines	6.33	-29	110	-3
Poland	2.46	-12	72	+10
Russia	8.42	+6	239	+19
South Africa	9.57	-40	353	+10
Turkey	16.98	-244	463	+21
Venezuela	-	-	6255	+452
CREDIT				
			SPREAD (BPS)	MTD CHANGE (BPS)
U.S. IG			137	+19
EUR IG			149	+21
U.S. HY			418	+47
EUR HY			469	+72
SECURITIZED				
Agency MBS			95	+2
U.S. BBB CMBS			268	+14

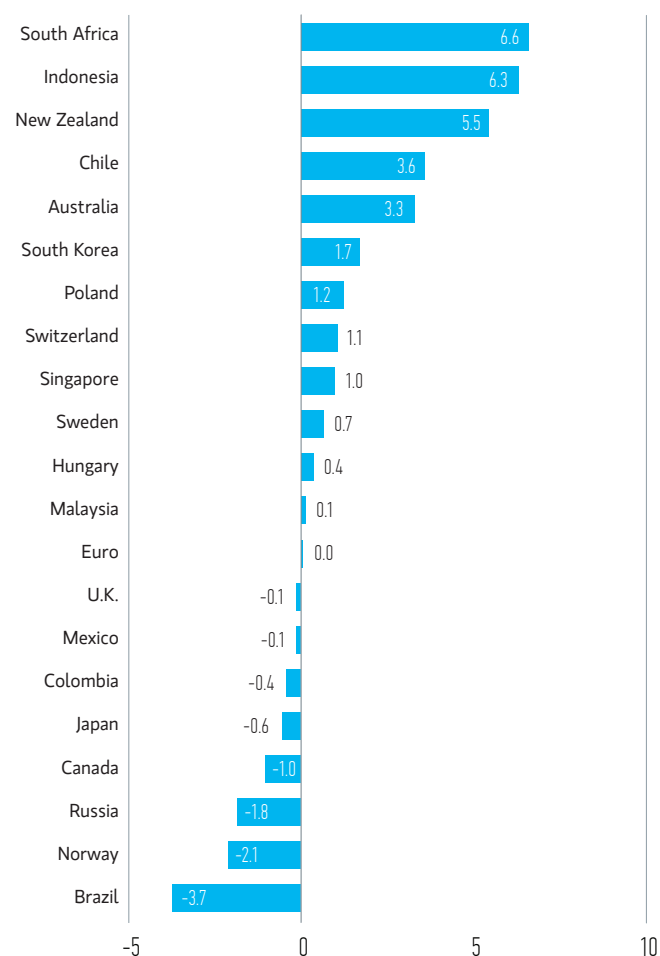
Positive Neutral Negative

Source: Bloomberg, JP Morgan. Data as of November 30, 2018.

DISPLAY 3

Currency Monthly Changes Versus U.S. Dollar

(+ = appreciation)



Source: Bloomberg. Data as of November 30, 2018. Note: Positive change means appreciation of the currency against the USD.

The views and opinions expressed are those of the Portfolio Management team as of December 2018 and are subject to change based on market, economic and other conditions. **Past performance is not indicative of future results.**

Fixed Income Outlook

As we enter 2019, two specific challenges face the two largest economies in the world. First, will U.S. financial markets have a soft, bumpy or hard landing following the likely peak of growth and earnings that were reached in 2018? Second, will stimulus policies in China stabilize growth conditions? Resolutions for both will be the key drivers for U.S. economy's financial asset prices in the months ahead.

U.S. fiscal policy was the major story this year. It energized the U.S. economy just as the rest of the world began to slow down. This divergence has been the major driver of asset markets. Loose fiscal policy, stronger than expected growth and higher than expected rates propelled the dollar higher, again higher than the market anticipated. The adrenaline shot the U.S. economy received in 2018 should weaken significantly in 2019, slowing the economy, reducing inflation risk and reducing the probability of ever higher short term rates. While a slower economy is good for risk free rates and reduced inflationary pressures, the impact on credit and earnings is more ambivalent. It will depend on how much the economy slows; how weak the equity market gets and how high inflation goes.

Context is important. We believe that tax reform and deregulation spurred business investment and a capital deepening that catalyzed a reversal in the falling trend in productivity. The rise in productivity may have a longer lasting impact that may lead to higher potential growth. The initial impulse was recorded in 2018 with U.S. gross domestic product (GDP) growing at 3 percent versus original consensus estimates of around 2 percent, which proved too low. Consensus expectation is for growth to slow to 2.6 percent in 2019, and to slow further to 1.8 percent in 2020, a level we think is about equal to potential growth. Our base case is that the U.S. Federal Reserve (Fed) will engineer a soft landing by not hiking too much, likely ending the rate hiking cycle at 3 percent in June 2019.

Credit asset performance will be impacted by post peak dynamics in growth and earnings. It needs to be recognized that this asset class is more vulnerable than usual at this point in an economic cycle due to high levels of leverage in the post quantitative easing (QE) era. That said, interest coverage is very strong at an aggregate level and should pose no systemic risk to the economy. Although a recession is not our base case scenario in the next couple of years, risk premia has

risen and will likely rise further, adjusting spreads wider to reflect the increased weighting of this risk. But, this also assumes static behavior in the corporate sector. We should not assume solidly performing companies will do nothing if credit conditions deteriorate further. How soon, how deep, how long a slowdown might materialize are therefore questions that need to be reconciled. We believe a soft landing scenario will benefit credit assets as we move along in 2019.

As previously mentioned, the outlook for the Chinese economy could be crucial for the performance of the global economy in 2019. Weakness in China this year has been due in no small measure to the significant policy tightening in 2017/early 2018. In 2017 China increased short rates by over 200 bps, pushing the renminbi up by 7 percent, as Chinese policymakers attempted to slowly deleverage the economy. But, the unanticipated escalation of U.S. trade tensions in conjunction with previous tightening moves has resulted in a significant reduction in the Chinese contribution to global growth, which was certainly felt in Europe.

In response to this unwanted slowdown (with the risk of more due to ongoing trade tensions), China has engaged in aggressive easing, such as lowering short term rates by more than 200 bps in 2018 and cutting the required reserve ratio (RRR) by 250 bps. The good news is that there are signs of the stimulus working. Since easing policies tend to work with a lag, we hopefully will see further stabilization of the economy as we move into 2019, offsetting negative effects of U.S. tariffs. Chinese economic and asset price stability will be supportive of global asset prices especially, but not only confined to, EM.

In conclusion, we see market uncertainty revolving around whether or not the end of the Fed tightening cycle will produce a soft, bumpy or hard landing, and whether or not China's stimulus policies enacted in 2018 (and likely continuing into 2019) will stabilize their economy in 2019. Additional considerations reside with Europe and Brexit, political risks that are difficult to price. Risk premia are on the rise, pushing asset prices below fundamental valuations in a non-uniform manner, making investment opportunities more idiosyncratic than systematic. We remain optimistic that absent any signs of economic deterioration a soft landing, supportive of asset prices is the most likely scenario for 2019.

The views and opinions expressed are those of the Portfolio Management team as of December 2018 and are subject to change based on market, economic and other conditions. **Past performance is not indicative of future results.**

MONTHLY REVIEW

OUTLOOK

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

In November, we saw DM yields moving lower where U.S. 10-year Treasury and German Bunds fell 16 bps and 7 bps respectively. U.K. rates also experienced big moves where 10-year gilt yields fell 7 bps but 30-year bond yields rose 22 bps amidst new Brexit developments. Italian bonds yields rallied 13-22 bps across the curve while Portugal fell 2-8 bps. The U.S. yield curve flattened further with the U.S. Treasury 2s10s spread tightening 7 bps this month to 20 bps.¹

U.S. growth is likely to be lower in 2019 as the fiscal impulse wears off and the lagged effect of higher rates bite. Recent speeches from the Fed policymakers give us further confidence that they are cognizant of the risk of over tightening and the need to move (at some point in the near future) to a more data dependent policy. The Fed wants to contain inflation risk; it does not want to cause a hard landing/recession. It is therefore likely that the market may also acknowledge that the peak in U.S. Treasury 10-year yield is likely to be below 3.50 percent. A longer term risk is a wider band for Japan Government Bonds (JGB) yields, as the Bank of Japan (BoJ) adjusts the yield curve control policy. This could introduce more volatility and create an upward push for risk-free rates. But, for now, the BoJ does not appear to be in a rush. Ultimately, we see market uncertainty revolving around whether or not the end of the Fed tightening cycle will produce a soft, bumpy or hard landing, and whether or not China's stimulus policies enacted in 2018 (and likely continuing into 2019) will stabilize their economy in 2019. Additional considerations reside with Europe and Brexit, political risks that are difficult to value. Risk premia are on the rise, pushing asset prices below fundamental valuations in a non-uniform manner, making investment opportunities more idiosyncratic than systematic. We remain optimistic that absent any signs of economic deterioration a soft landing, supportive of asset prices is the most likely scenario for 2019.

Emerging Market (EM) Rate/FX

EM fixed income asset performance was mixed in the month with local currency debt posting positive returns while hard currency debt returns ended in negative territory. While not calling for a recession in the near future, global growth estimates have been reduced as data has underperformed optimism. The outlook for global growth has been overshadowed by the risks arising from trade disputes initiated by the U.S. and the implications for global trade. Despite an improved outlook for North American trade via the signing of the North American Free Trade Agreement's (NAFTA's) replacement, United States-Mexico-Canada Agreement (USMCA), there remains an ongoing dispute between the U.S. and China. The Asia-Pacific Economic Cooperation (APEC) summit ended in disarray after the U.S. and China failed to agree on a joint statement, reflecting tensions due to the ongoing trade war. This is the first time since the summit began in 1993 that no joint statement was issued. Political risk in Europe increased during the period as Russia seized three naval vessels from Ukraine, prompting the imposition of martial law in Ukraine.

After a challenging year for EM fixed income, we hold a constructive outlook for 2019, driven by attractive valuations, a benign global backdrop of moderate growth/subdued inflation and a Fed that is likely approaching the end of its tightening cycle. We believe these factors and growing twin deficits in the U.S. limit the scope for material U.S. Dollar (USD) appreciation. Our historical analysis indicates that EM fixed income tends to outperform when EM economies are closing negative output gaps and converging toward potential growth.

¹ Source: Bloomberg. Data as of November 30, 2018.

MONTHLY REVIEW

OUTLOOK

Credit

Global investment grade spreads widened in November, firmly establishing new year-to-date wides. The Bloomberg Barclays U.S. Corporate Index widened by 19 bps in November to end the month at 137 bps over government bonds, with financials leading the market wider. Spreads in the U.S. are now wider than they have been since the 3rd quarter of 2016. For the year, U.S. investment grade corporates are 44 bps wider on average. In Europe, the Bloomberg Barclays Euro-Aggregate Corporate Index moved 21 bps wider to end the month at 149 bps relative to governments. European corporate bonds continue to underperform U.S. investment grade as European investment grade corporates are 63 bps wider for the year.² One would have to look back to the energy crisis in early 2016 to find similarly wide spreads in the European investment grade market. As in prior months the drivers of credit remain macroeconomic worries and concerns about company fundamentals (especially leverage in BBB credit). Compounding these worries are poor technicals headed into year end, the most notable symptom being limited risk appetite in the dealer community.

Looking forward to 2019 the dangers cited are known, credible and well debated (and arguably in the price). The opportunity is that the recession does not arrive again and global growth stabilizes. In this scenario the increased systemic risk premium is unjustified as default rates stay low, company earnings continue to grow, higher yields stimulate demand for fixed income credit and confidence in the market increases liquidity.

Securitized

Widening securitized credit spreads and rallying risk free interest rates were the primary market themes in November. Securitized credit spreads had been resilient to spread widening for most of 2018, as spreads in corporate sectors and EM drifted wider. However, securitized credit spreads could not with stand the pressures coming from other sectors and have now widened for two consecutive months. Fundamental securitized credit conditions remain sounds with low default rates, healthy consumer balance sheets and stable housing markets, but increasing volatility, greater concerns over the future health of the U.S. economy, widening spreads in other credit sectors are combining to put pressure on securitized credit spreads. Agency mortgage-backed securities (MBS) outperformed credit-sensitive securitized for the first time this year, as their agency MBS spreads were essentially unchanged.

We are becoming a little more cautious on securitized credit assets. While we believe the fundamental credit environment remains positive, volatility has increased and credit spreads have now widened for two straight months. We do not anticipate any near-term deterioration of credit performance in the form of increased delinquencies or defaults, but we believe that credit spreads could continue to widen as the market's appetite for risk appears to be weakening.

² Source: Bloomberg Barclays. Data as of November 30, 2018.

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 the current rising interest rate environment, bond prices may fall and may result in periods of volatility and increased portfolio redemptions. **Longer-term securities** may be more sensitive to interest rate changes. In a declining interest rate environment, the portfolio may generate less income. 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 **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.

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.

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 **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 **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 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

The views and opinions expressed are those of the Portfolio Management team as of December 2018 and are subject to change based on market, economic and other conditions. **Past performance is not indicative of future results.**

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 **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 **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 (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 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 **ICE BofAML United States 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.

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.

DISTRIBUTION

This communication is only intended for and will only be distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

United Kingdom: Morgan Stanley Investment Management Limited is authorised and regulated by the Financial Conduct Authority. Registered in England. Registered No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA, authorised and regulated by the Financial Conduct Authority. **Dubai:** Morgan Stanley Investment Management Limited (Representative Office, Unit Precinct 3-7th Floor-Unit 701 and 702, Level 7, Gate Precinct Building 3, Dubai International Financial Centre, Dubai, 506501, United Arab Emirates. Telephone: +97 (0)14 709 7158).

Germany: Morgan Stanley Investment Management Limited Niederlassung Deutschland Jungthofstrasse 13-15 60311 Frankfurt Deutschland (Gattung: Zweigniederlassung (FDI) gem. § 53b KWG). **Italy:** Morgan Stanley Investment Management Limited, Milan Branch (Sede Secondaria di Milano) is a branch of Morgan Stanley Investment Management Limited, a company registered in the U.K., authorised and regulated by the Financial Conduct

Authority (FCA), and whose registered office is at 25 Cabot Square, Canary Wharf, London, E14 4QA. Morgan Stanley Investment Management Limited Milan Branch (Sede Secondaria di Milano) with seat in Palazzo Serbelloni Corso Venezia, 16 20121 Milano, Italy, is registered in Italy with company number and VAT number 08829360968. **The Netherlands:** Morgan Stanley Investment Management, Rembrandt Tower, 11th Floor Amstelplein 1 1096HA, Netherlands. Telephone: 31 2-0462-1300. Morgan Stanley Investment Management is a branch office of Morgan Stanley Investment Management Limited. Morgan Stanley Investment Management Limited is authorised and regulated by the Financial Conduct Authority in the United Kingdom. **Switzerland:** Morgan Stanley & Co. International plc, London, Zurich Branch/ Authorised and regulated by the Eidgenössische Finanzmarktaufsicht ("FINMA"). Registered with the Register of Commerce Zurich CHE-115.415.770. Registered Office: Beethovenstrasse 33, 8002 Zurich, Switzerland, Telephone +41 (0) 44 588 1000. Facsimile Fax: +41(0)44 588 1074.

Japan: For professional investors, this document is circulated or distributed for informational purposes only. For those who are not professional investors, this document is provided in relation to Morgan Stanley Investment Management (Japan) Co., Ltd. ("MSIMJ")'s business with respect to discretionary investment management agreements ("IMA") and investment advisory agreements ("IAA"). This is not for the purpose of a recommendation or solicitation of transactions or offers any particular financial instruments. Under an IMA, with respect to management of assets of a client, the client prescribes basic management policies in advance and commissions MSIMJ to make all investment decisions based on an analysis of the value, etc. of the securities, and MSIMJ accepts such commission. The client shall delegate to MSIMJ the authorities necessary for making investment. MSIMJ exercises the delegated authorities based on investment decisions of MSIMJ, and the client shall not make individual instructions. All investment profits and losses belong to the clients; principal is not guaranteed. Please consider the investment objectives and nature of risks before investing. As an investment advisory fee for an IAA or an IMA, the amount of assets subject to the contract multiplied by a certain rate (the upper limit is 2.16 percent per annum (including tax)) shall be incurred in proportion to the contract period. For some strategies, a contingency fee may be incurred in addition to the fee mentioned above. Indirect charges also may be incurred, such as brokerage commissions for incorporated securities. Since these charges and expenses are different depending on a contract and other factors, MSIMJ cannot present the rates, upper limits, etc. in advance. All clients should read the Documents Provided Prior to the Conclusion of a Contract carefully before executing an agreement. This document is disseminated in Japan by MSIMJ, Registered No. 410 (Director of Kanto Local Finance Bureau (Financial Instruments Firms)), Membership: The Investment Trusts Association, Japan, the Japan Investment Advisers Association and the Type II Financial Instruments Firms Association.

U.S.

A separately managed account may not be suitable for all investors. Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing. A minimum asset level is required. For important information about the investment manager, please refer to Form ADV Part 2.

Please consider the investment objectives, risks, charges and expenses of the funds carefully before investing. The prospectuses contain this and other information about the funds. To obtain a prospectus please download one at morganstanley.com/im or call 1-800-548-7786. Please read the prospectus carefully before investing.

Morgan Stanley Distribution, Inc. serves as the distributor for Morgan Stanley Funds.

NOT FDIC INSURED | OFFER NO BANK GUARANTEE | MAY LOSE VALUE | NOT INSURED BY ANY FEDERAL GOVERNMENT AGENCY | NOT A BANK DEPOSIT

Hong Kong: This document has been issued by Morgan Stanley Asia Limited for use in Hong Kong and shall only be made available to "professional investors" as defined under the Securities and Futures Ordinance of Hong Kong (Cap 571). The contents of this document have not been reviewed nor approved by any regulatory authority including the Securities and Futures Commission in Hong Kong. Accordingly, save where an exemption

The views and opinions expressed are those of the Portfolio Management team as of December 2018 and are subject to change based on market, economic and other conditions. **Past performance is not indicative of future results.**

is available under the relevant law, this document shall not be issued, circulated, distributed, directed at, or made available to, the public in Hong Kong. **Singapore:** This document should not be considered to be the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (i) to an institutional investor under section 304 of the Securities and Futures Act, Chapter 289 of Singapore ("SFA"), (ii) to a "relevant person" (which includes an accredited investor) pursuant to section 305 of the SFA, and such distribution is in accordance with the conditions specified in section 305 of the SFA; or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Australia: This publication is disseminated in Australia by Morgan Stanley Investment Management (Australia) Pty Limited ACN: 12204-0037, AFSL No. 314182, which accept responsibility for its contents. This publication, and any access to it, is intended only for "wholesale clients" within the meaning of the Australian Corporations Act.

IMPORTANT INFORMATION

EMEA: This marketing communication has been issued by Morgan Stanley Investment Management Limited ("MSIM"). Authorised and regulated by the Financial Conduct Authority. Registered in England No. 1981121. Registered Office: 25 Cabot Square, Canary Wharf, London E14 4QA.

There is no guarantee that any investment strategy will work under all market conditions, and each investor should evaluate their ability to invest for the long-term, especially during periods of downturn in the market. Prior to investing, investors should carefully review the strategy's/product's relevant offering document. There are important differences in how the strategy is carried out in each of the investment vehicles.

A separately managed account may not be suitable for all investors.

Separate accounts managed according to the Strategy include a number of securities and will not necessarily track the performance of any index. Please consider the investment objectives, risks and fees of the Strategy carefully before investing.

The views and opinions are those of the author or the investment team as of the date of preparation of this material and are subject to change at any time due to market or economic conditions and may not necessarily come to pass. Furthermore, the views will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing, or changes occurring, after the date of publication. The views expressed do not reflect the opinions of all investment teams at Morgan Stanley Investment Management (MSIM) or the views of the firm as a whole, and may not be reflected in all the strategies and products that the Firm offers.

Forecasts and/or estimates provided herein are subject to change and may not actually come to pass. Information regarding expected market returns and market outlooks is based on the research, analysis and opinions of the authors. These conclusions are speculative in nature, may not come

to pass and are not intended to predict the future performance of any specific Morgan Stanley Investment Management product.

Certain information herein is based on data obtained from third party sources believed to be reliable. However, we have not verified this information, and we make no representations whatsoever as to its accuracy or completeness.

This communication is not a product of Morgan Stanley's Research Department and should not be regarded as a research recommendation. The information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This material is a general communication, which is not impartial and has been prepared solely for informational and educational purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy. All investments involve risks, including the possible loss of principal. The information herein has not been based on a consideration of any individual investor circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.

Any index referred to herein is the intellectual property (including registered trademarks) of the applicable licensor. Any product based on an index is in no way sponsored, endorsed, sold or promoted by the applicable licensor and it shall not have any liability with respect thereto.

MSIM has not authorised financial intermediaries to use and to distribute this document, unless such use and distribution is made in accordance with applicable law and regulation. Additionally, financial intermediaries are required to satisfy themselves that the information in this document is suitable for any person to whom they provide this document in view of that person's circumstances and purpose. MSIM shall not be liable for, and accepts no liability for, the use or misuse of this document by any such financial intermediary.

This document may be translated into other languages. Where such a translation is made this English version remains definitive. If there are any discrepancies between the English version and any version of this document in another language, the English version shall prevail.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without MSIM's express written consent.

Morgan Stanley Investment Management is the asset management division of Morgan Stanley.

All information contained herein is proprietary and is protected under copyright law.