Morgan Stanley

INVESTMENT MANAGEMENT

Global Fixed Income Bulletin

And the Beat Goes On...

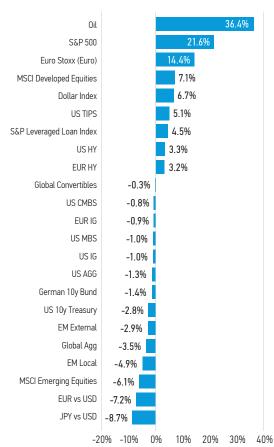
GLOBAL FIXED INCOME TEAM | MACRO INSIGHT | DECEMBER 2021

November continued where October left off: heightened volatility, hawkish (or less dovish) central bank rhetoric, rising yields and flattening yield curves. However, around mid-month things changed. The discovery of the Omicron variant and its uncertain impact in conjunction with hawkish central banks upended credit and equity markets. After making new highs on November 18th, the S&P 500 Index fell almost 3% over the remainder of the month. Credit spreads, after gently widening over the previous two months, widened significantly. But longer maturity U.S. Treasury yields and other risk-free government bond yields fell sharply (German yields fell more than U.S. Treasury yields) and yield curves flattened in response to sell-offs in equities and credit, worries about growth, and the worry that the Fed would be accelerating tightening into an uncertain post-Omicron world.

It seems like only yesterday hopes were high that vaccines would allow the world to normalize and get back to where things were pre-pandemic. In terms of economics, many countries are getting there; e.g., recovering lost output and getting back to full employment. But it is happening at a cost: higher inflation. How will Omicron impact the growth/ inflation nexus? If the world is lucky, it will prove to be a milder version, less lethal, less virulent in terms of its negative health implications. If so, it could accelerate the process of moving to a more normal world. Strong growth, higher inflation, higher interest rates is probably okay for credit and equity markets. On the other hand, suppose it is a more transmissible Delta-like variant?, Maybe more resistant to existing vaccines? Will growth weaken? Will inflation worsen? Will economies weaken due to intensified supply side issues? And/or will it constrain demand as mobility decreases once again? And how will it impact monetary policies?

For now, we think the best working assumption is that Omicron will not cause any radical changes in health outcomes or economic behavior. If true, the biggest risk for financial markets is inflation and how central banks react. We are seeing today probably the greatest dispersion in central bank policies (current and prospective) in many years. Most importantly, the Fed has changed its tune most aggressively: from believing inflation was predominantly transitory, it now believes it is likely to be persistent,

DISPLAY 1 Asset Performance Year-to-Date



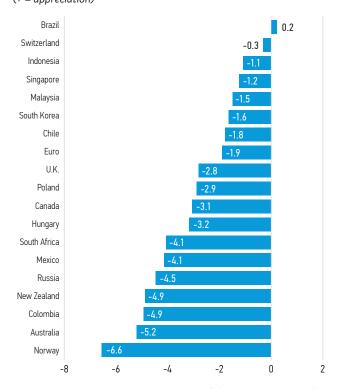
Note: USD-based performance. Source: Bloomberg. Data as of November 30, 2021. The indexes are provided for illustrative purposes only and are not meant to depict the performance of a specific investment. **Past performance is no guarantee of future results.** See pages 6 and 7 for index definitions

¹ Source: Bloomberg. Data as of November 30, 2021.

necessitating a change in policy. Tapering of QE is likely to accelerate so that it ends before July; Chairman Powell has stated as much in recent comments. This opens the door to rate hikes sooner, possibly as soon as the second quarter. Other central banks are more sanguine on the inflation outlook: the European Central Bank (ECB), People's Bank of China (PBOC), Bank of Japan, Swedish Riskbank, and the Reserve Bank of Australia. On the other hand, many central banks, primarily in emerging markets, are tightening policy aggressively. Amongst developed countries, the UK, Canadian and New Zealand central banks look set to raise rates before the Fed or, in the case of New Zealand, continue to raise them.

A key question for financial markets will be to what extent central banks follow through on their current plans. Clearly, if a central bank was dovish prior to Omicron, it is likely to be more dovish post. For example, the Swedish central bank is adamant that essentially all the inflation spike is transitory and there is no need to raise rates before 2024! On the other hand, the UK—not too distant from Sweden—seems quite keen to raise rates immediately, although recent comments suggest there could be advantages to waiting for more evidence on the impact of Omicron. Regarding the Fed, there appears to be no impediment to accelerating tapering. This was an emergency program to deal with the initial impact of the pandemic. With inflation where it is and growth and employment strong, why should QE exist? It should not. Fortunately, for the Fed, the decision to raise rates can be postponed for several months while QE is tapered, allowing more time to evaluate the impact of the Omicron variant and the path of inflation. All in all, we expect central banks to proceed cautiously in the near future.

DISPLAY 2 Currency Monthly Changes Versus U.S. Dollar (+ = appreciation)



Note: Positive change means appreciation of the currency against the USD. Source: Bloomberg. Data as of November 30, 2021.

In terms of our market views, we have generally been reducing portfolio risk given the uncertain outlook. We remain long risky assets (corporate credit, securitized credit, emerging markets), a bit less than last month, because of the positive economic outlook and strong fundamentals. We expect government bond yields to reverse at least some of their Omicron related fall but meaningful rises will depend on three things: equity market stabilization, Fed hawkishness, and volatility. But it will be a "long and winding road".

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	1.44	-11		
United Kingdom	0.81	-23	-64	-12
Germany	-0.35	-24	-179	-14
Japan	0.06	-4	-139	+7
Australia	1.69	-40	25	-29
Canada	1.57	-16	12	-5
New Zealand	2.49	-15	104	-4
EUROPE			(Spread over Bunds)	
France	0.01	-26	36	-2
Greece	1.26	-6	161	+18
Italy	0.97	-20	132	+4
Portugal	0.33	-19	68	+5
Spain	0.40	-21	75	+3

ЕМ	INDEX LOCAL YIELD (%)	MTD CHANGE (BPS)	USD SPREAD (BPS)	MTD CHANGE (BPS)
EM External Spread		323	+3	
EM Corporate Sprea	ds		266	+8
EM Local Yields	5.89	+32		
Brazil	11.71	-69	366	+4
Colombia	8.12	+34	359	+53
Hungary	4.30	+85	120	+10
Indonesia	6.20	+1	163	+4
Mexico	7.54	0	234	+18
Peru	6.04	+8	164	+14
Philippines	4.76	+29	115	+7
Poland	3.05	+67	56	+17
Russia	8.31	+21	170	+11
South Africa	10.27	+3	387	+29
Turkey	20.62	+198	566	+52
Venezuela	_	_	30406	+4305

	SPREAD	MTD CHANGE
CREDIT	(BPS)	(BPS)
U.S. IG	99	+12
EUR IG	108	+21
U.S. HY	337	+50
EUR HY	349	+46
SECURITIZED		
Agency MBS	69	+6
U.S. BBB CMBS	292	+18

Positive Neutral Negative

Source: Bloomberg, JPMorgan. Data as of November 30, 2021.

Fixed Income Outlook

November looked like a repeat of October until the Omicron variant was uncovered. Central banks continued to talk and act hawkishly. Yields were rising and curves were flattening. And volatility was up. But then the Omicron variant arrived or, more precisely, was uncovered. This, in conjunction with demanding valuations and Fed hawkishness, hit credit and equity markets. Until mid-month the S&P 500 was making new highs. Over the remainder of the month, it lost almost 3%. Investment grade spreads widened approximately 12 basis points (bps) (a big move for this market) and high yield 50bps—moves that far from qualify as a bear market, but a meaningful correction nonetheless given underlying solid corporate fundamentals. Given the absence of any meaningful corrections in these markets for over a year, maybe one was overdue and a healthy development given the somewhat exuberant state of financial markets in recent months.

Looking into the future, our assumption is that the Omicron variant (and/the residual effects of Delta variant) will not derail the underlying economic story underpinning financial markets. Yes, the pandemic will continue to find ways to act as a headwind; and yes, central banks and policymakers in general (outside of China) are dialing back support for economies, but household and corporate fundamentals look solid enough to generate above-trend growth, and, unfortunately, above-target inflation in 2022. Inflation remains a problem for most countries while growth outlooks remain resilient despite pandemic headwinds (i.e., mobility constraints and drags from energy prices). Global growth should accelerate in the fourth quarter with little abatement of inflation pressures, which do not seem to have peaked with the Omicron variant likely to not be helpful in terms of reducing inflation pressures. Unfortunately, this means that inflation concerns are likely to remain and central banks, like the Fed, will remain on a course of reducing accommodation.

Despite a lot of inflation angst, we expect central banks to move slowly and deliberately, particularly with the Omicron variant out there. We must keep in mind that, although the Fed is now firmly in the reduce-accommodation camp, the other three big central banks are clearly not: ECB, PBOC, BoJ. Global monetary policy in the more advanced economies is unlikely to tighten much in 2022. Emerging Market (EM) central banks are on a different trajectory, especially in Latin America and CEMEA. For those central banks moving to tighten, they are very likely to move slowly and will avoid doing anything to suggest policy needs to be "tight" rather than just "less easy". But it must be said, with the Fed likely to end QE in the first half of 2022 and countenancing rate hikes in 2022, it will be easier for other central banks to follow.

This relatively sanguine monetary policy outlook is not without risk. Inflationary pressures are not abating, or at least not fast enough. Worries about second round effects and surging housing markets worry central banks. The most recent surge has come from higher energy prices (especially European natural

gas prices), but the pressure is more broad-based: many other commodities (e.g., food, a particular concern for EM central banks) are also at multi-year highs; COVID-induced bottlenecks continue to cause shortages in many consumer goods supply chains, and there are widespread reports of labor shortages across developed economies. Omicron may in fact exacerbate some of these issues. It is currently unclear just how persistent, or permanent, many of these issues are, but what is certain is that the current surge in inflation is expected to last longer than previously thought. Thus, the need for central banks to play defense and engage risk mitigation strategies, which imply reduced accommodation.

One important factor keeping longer maturity yields low (outside of massive global liquidity) is, in our view, expectations that terminal rates, i.e., the peak in policy rates, will not reach new highs. Indeed, current market expectations are that peak rates this cycle will be meaningfully lower than last cycle (2015-2018). The risk to bond valuations comes more from the length of the hiking cycle and the eventual terminal policy rate rather than the pace or start date (although they matter for the shape of the yield curve). But if the market starts expecting a more normal central bank cycle, then we believe yields should rise further. Credit investors have also become more nervous recently, causing credit spreads to widen; we think this is mainly reflective of how tight spreads have become rather than any meaningful increase in default risk or deteriorating fundamentals. Further widening could be a buying opportunity. EM risk remains predominantly on the local side. Very hawkish central banks, with inflation pressures still evident, make it premature, despite significant rate hikes in recent months, to get bullish. The Fed moving to a less accommodative posture in the months ahead is also likely to be a challenge. Politics in several countries is also taking its toll.

Where does this leave our views on markets? In general, we remain overweight the riskier, cyclical sectors but we have been reducing our exposure at the margin given valuations and increased volatility/uncertainty. On government bonds, we expect yields to move higher, but this is likely to be a long process given high global liquidity/savings and a likely slow tightening cycle. That said, we think low expected terminal rates and highly negative real yields make longer-maturity bonds relatively unappealing. Shorter maturity bonds are more interesting due to much higher risk premiums now priced in. The danger is those expectations of tightening could increase if inflation remains stubbornly elevated in December and early 2022. And, of course, Omicron remains an unknown. We remain overweight corporate credit (although less so than last month) and securitized products, particularly lower quality investment grade bonds and selective high yield (avoiding too much market beta); we are overweight in selective emerging markets, where there are, in our view, idiosyncratic reasons to be bullish.

MONTHLY REVIEW

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

November was full of volatility in the developed markets. Initially, strong economic data, inflation concerns, and hawkish beliefs drove rates up, inflation expectations higher, and yield curves steeper. In the end, however, that story was overshadowed by COVID concerns, which reversed the prior movements. The initial increases in rates were reversed into overall rate declines and yield curves to their flattest levels of the year.²

OUTLOOK

If Omicron has a significantly negative impact on the economic outlook, then government bonds could remain well supported at current levels for some time. However, repeated upside inflation surprises, and some signs of inflation persistence, are pressuring central banks to normalize monetary policy quicker. We expect most DM central banks to have started hiking rates in 2022 (if they haven't already), with the ECB, RBA and BoJ being notable exceptions. In currency markets, we see value in many emerging markets vs. G10. However, negative risk sentiment and greater macro risks mean EM FX could continue to trade cheap for some time. Amongst G10 currencies, we see limited valuation differences and hence are relatively neutral on our currency positioning.

Emerging Market (EM) Rate/FX

EM debt returns were negative in November, with hard currency sovereigns -1.8%, on wider spreads, partially offset by a rally in U.S. Treasuries.³ EM Corporates returns were negative for the month with high yield underperforming investment grade corporates. Local currency bonds posted negative returns, primarily due to weaker EM currencies against the U.S. dollar. From a broad market perspective Malaysia, Morocco, Hungary and China were the best performers in November, while bonds from Lebanon, Ethiopia and El Salvador were laggards. From a sectoral perspective, Diversified and Infrastructure companies led the market, while those in the Oil & Gas, Metals & Mining and Real Estate sectors lagged.^{4,5}

We have a cautious stance towards Emerging Market debt at present on the back of tighter global monetary policy in the face of rising inflation, as well as uncertainty over the transmissibility of the new Omicron variant and its potential impact on global growth and inflation. Notwithstanding cheap valuations, high-yield sovereigns may continue to underperform investment-grade credits in the near term. Similarly, on the local side, EMFX may face near term challenges if dollar strength persists. In local rates, we prefer yield curves that are already pricing in aggressive monetary policy tightening.

² Source: Bloomberg, as of November 30, 2021.

⁴ Source: JPM Indices. Data as of November 30, 2021.

³ Source: IPM Indices. Data as of November 30, 2021.

⁵ Source: Bloomberg, as of November 30, 2021.

MONTHLY REVIEW

OUTLOOK

Credit

Credit spreads widened meaningfully in November on the risk-off sentiment. Sector and corporate news were dominated by Q3 earnings reports that confirmed performance was healthy and the impact of cost increases on margins was less than expected.⁶ The high yield market came under pressure in November amidst elevated volatility across global risk markets. The average credit spread widened by more than a half-percent by month-end. Global convertibles underperformed both equity and credit in November as the Refinitiv Global Convertibles Focus Index fell.8 Loan prices steadily firmed for much of November's opening three weeks. Record-setting investor demand and an overall supply-deficit technical condition remained the catalysts. Loan prices later softened from November highs after the holiday however, as virus headlines took their toll on investor psyches and ultimately capital markets.9

Looking forward we see little changed in the base case credit outlook with valuations looking full but fundamentals well supported by the four pillars of (1) expectations financial conditions will remain easy supporting low default rates (2) economic activity that is expected to rebound as vaccinations allow economies to reopen (3) strong corporate profitability with conservative balance sheet management as overall uncertainty remains high (4) demand for credit to stay strong as excess liquidity looks to be invested. We expect some volatility into year-end given the current uncertainty and lack of appetite for risk positioning.

Securitized Products

Securitized markets remained choppy in November with performance largely driven by liquidity and depth of sponsorship rather than specific credit concerns. New issuance and secondary activity both remained high, and larger and more-liquid sectors outperformed more esoteric sectors. 10 Agency MBS underperformed meaningfully impacted by the flattening curve and potentially accelerated Fed taper expectations. U.S. Non-agency RMBS spreads were mixed, but generally either flat or wider across most residential sectors. Non-agency RMBS new issuance remained high, putting supply pressure on some parts of the markets.¹² U.S. ABS spreads were also generally wider, with both more liquid sectors (auto and credit card) and less liquid sectors (aircraft, consumer loans, etc) experiencing spread widening.¹³ U.S. CMBS spreads also widened.¹⁴ European RMBS, CMBS and ABS activity remained high, and European spreads remained steady. European securitized spreads remain relatively tight compared to comparable U.S. securitized assets, despite talk of the ECB potentially reducing its asset purchases.15

We expect market activity to slow in December. Higher rates, wider spreads and approaching year-end could cool overall activity levels. Credit fundamentals should remain healthy, especially for residential and consumer assets. European securitized markets should remain well supported by the historically low rates in Europe and by the asset purchase programs and lending programs of the ECB and BOE, although these purchase programs could also be reduced in the coming months.

⁶ Source: Bloomberg, as of November 30, 2021.

⁷ Source: Bloomberg, as of November 30, 2021.

 $^{{\}bf ^8}$ Source: Bloomberg Index, as of November 30, 2021.

⁹ Source: Bloomberg, as of November 30, 2021.

¹⁰ Source: Bloomberg, as of November 30, 2021.

¹¹ Source: Bloomberg Indices. Data as of November 30, 2021.

¹² Source: JP Morgan. Data as of November 30, 2021.

¹³ Source: Manheim Used Car Index. Data as of November 30, 2021.

¹⁴ Source: JP Morgan. Data as of November 30, 2021.

¹⁵ Source: Bloomberg, as of November 30, 2021.

Risk Considerations

Diversification neither assures a profit nor guarantees against loss in a declining market.

There is no assurance that a portfolio will achieve its investment objective. Portfolios are subject to market risk, which is the possibility that the market values of securities owned by the portfolio will decline and that the value of portfolio shares may therefore be less than what you paid for them. Market values can change daily due to economic and other events (e.g. natural disasters, health crises, terrorism, conflicts and social unrest) that affect markets, countries, companies or governments. It is difficult to predict the timing, duration, and potential adverse effects (e.g. portfolio liquidity) of events. Accordingly, you can lose money investing in a portfolio. 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, and 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

Basis point: One basis point = 0.01%.

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.

"Bloomberg®" and the Bloomberg Index/Indices used are service marks of Bloomberg Finance L.P. and its affiliates, and have been licensed for use for certain purposes by Morgan Stanley Investment Management (MSIM). Bloomberg is not affiliated with MSIM, does not approve, endorse, review, or recommend any product, and does not guarantee the timeliness, accurateness, or completeness of any data or information relating to any product.

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

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

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

The Bloomberg 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 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 **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 largeand mid-cap representation across 23 emerging markets (EM) countries.

The MSCI World Index (MSCI developed equities) captures large and midcap representation across 23 developed market (DM) countries.

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

The **Russell 2000® Index** is an index that measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

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.

S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index seeks to measure the value of residential real estate in 20 major U.S. metropolitan areas: Atlanta, Boston, Charlotte, Chicago, Cleveland, Dallas, Denver, Detroit, Las Vegas, Los Angeles, Miami, Minneapolis, New York, Phoenix, Portland, San Diego, San Francisco, Seattle, Tampa and Washington, D.C.

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.

The Chicago Board Options Exchange (CBOE) Market Volatility (VIX) Index shows the market's expectation of 30-day volatility.

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.

Ireland: MSIM Fund Management (Ireland) Limited. Registered Office: The Observatory, 7-11 Sir John Rogerson's Quay, Dublin 2, DO2 VC42, and Ireland. Registered in Ireland as a private company limited by shares under company number 616661. MSIM Fund Management (Ireland) Limited is regulated by the Central Bank of Ireland. 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: MSIM Fund Management (Ireland) Limited Niederlassung Deutschland, Grosse Gallusstrasse 18, 60312 Frankfurt am Main, Germany (Gattung: Zweigniederlassung (FDI) gem. § 53b KWG). Italy: MSIM Fund Management (Ireland) Limited, Milan Branch (Sede Secondaria di Milano) is a branch of MSIM Fund Management (Ireland) Limited, a company registered in Ireland, regulated by the Central Bank of Ireland and whose registered office is at The Observatory, 7-11 Sir John Rogerson's Quay, Dublin 2, DO2 VC42, Ireland. MSIM Fund Management (Ireland) 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 11488280964. The Netherlands: MSIM Fund Management (Ireland) Limited, Rembrandt Tower, 11th Floor Amstelplein 1 1096HA, Netherlands. Telephone: 31 2-0462-1300. Morgan Stanley Investment Management is a branch office of MSIM Fund Management (Ireland) Limited. MSIM Fund Management (Ireland) Limited is regulated by the Central Bank of Ireland. France: MSIM Fund Management (Ireland) Limited, Paris Branch is a branch of MSIM Fund Management (Ireland) Limited, a company registered in Ireland, regulated by the Central Bank of Ireland and whose registered office is at The Observatory, 7-11 Sir John Rogerson's Quay, Dublin 2, DO2 VC42, Ireland. MSIM Fund Management (Ireland) Limited Paris Branch with seat at 61 rue

de Monceau 75008 Paris, France, is registered in France with company number 890 071863 RCS. **Spain:** MSIM Fund Management (Ireland) Limited, Sucursal en España is a branch of MSIM Fund Management (Ireland) Limited, a company registered in Ireland, regulated by the Central Bank of Ireland and whose registered office is at The Observatory, 7-11 Sir John Rogerson's Quay, Dublin 2, D02 VC42, Ireland. MSIM Fund Management (Ireland) Limited, Sucursal en España with seat in Calle Serrano 55, 28006, Madrid, Spain, is registered in Spain with tax identification number W0058820B. **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 2.20 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 Japan Securities Dealers Association, 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 appropriate 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 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. This publication has not been reviewed by the Monetary Authority of Singapore. Australia: This publication is disseminated in Australia by Morgan Stanley Investment Management (Australia) Pty Limited ACN: 122040037, 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 MSIM Fund Management (Ireland) Limited. MSIM Fund Management (Ireland) Limited is regulated by the Central Bank of Ireland. MSIM Fund Management (Ireland) Limited is incorporated in Ireland as a private company limited by shares with company registration number 616661 and has its registered address at The Observatory, 7-11 Sir John Rogerson's Quay, Dublin 2, D02 VC42, Ireland.

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 appropriate 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 appropriate 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 directly or indirectly reproduced, copied, modified, used to create a derivative work, performed, displayed, published, posted, licensed, framed, distributed, or transmitted or any of its contents disclosed to third parties without MSIM's express written consent. The work may not be linked to unless such hyperlink is for personal and non-commercial use. All information contained herein is proprietary and is protected under copyright law.

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

