

Monthly Market Review

Asia Pacific | January 2018

Global economy:

- U.S. monetary and fiscal policy captured market attention in December. The Federal Reserve (Fed) raised policy rates by 25bps, as expected, while maintaining its forecast for three hikes in 2018. Meanwhile, the U.S. Congress passed the much anticipated tax reforms that reduce the corporate tax rate to 21% from 35%. Its impact on corporate earnings is likely to vary significantly by sector given the significant variations in effective tax rates that companies are paying after making necessary deductions. (GTMA P. 24-26)
- The Purchasing Managers' Index (PMI) in December remained broadly on the strong side, with the eurozone PMI climbing further to 60.6. In Asia, China's Markit PMI rose to 51.5, with India and Japan also making notable gains. However, Korea, Indonesia and Malaysia dipped below 50, indicating weaker momentum in manufacturing. Overall these numbers are consistent with the global economy entering 2018 with decent momentum and supportive to risk assets. (GTMA P. 15)

Equities:

- The global equities market made its 15th consecutive month of gains in December with the MSCI All Country Index up 1.5% in the month. The U.S. was a significant contributor with the S&P 500 up 1.2% in the month. The Stoxx 600 was also up 1.4% given stronger sentiment on the eurozone economy. The MSCI Emerging Markets (EM) index was up 3.4% as high beta markets continue to benefit from buoyant investor sentiment. (GTMA P. 29)
- The Asian equities market wrapped up its best year since 2009 with the MSCI Asia ex-Japan index up 42% in the year. Earnings improvements, valuation re-ratings and currency movements all contributed to the Asian market. China (H-shares), India and South Korea were amongst the best performing markets. Earnings momentum is expected to remain positive, and ongoing export growth should also continue to support market sentiment. (GTMA P. 30, 32)

Fixed income:

- The 10-year U.S. Treasury (UST) yield moved in a range of 2.35% and 2.5% as investors remained skeptical that inflation would accelerate in the near term. Meanwhile, the UST curve continues to flatten, with the 2-10 year spread reaching its post-crisis low of 52bps. We believe this is a reflection of the distortion from quantitative easing with central banks holding down the long end of the yield curve, as well as the Fed's consistent indication of interest rate increases in quarters ahead. (GTMA P. 48)
- Both hard and local currency EM debt generated positive return in December as risk appetites remain strong. Meanwhile, U.S. high yield credit tightened further to 404bps as tax reforms and steady momentum boost sentiment. (GTMA P. 49, 52)

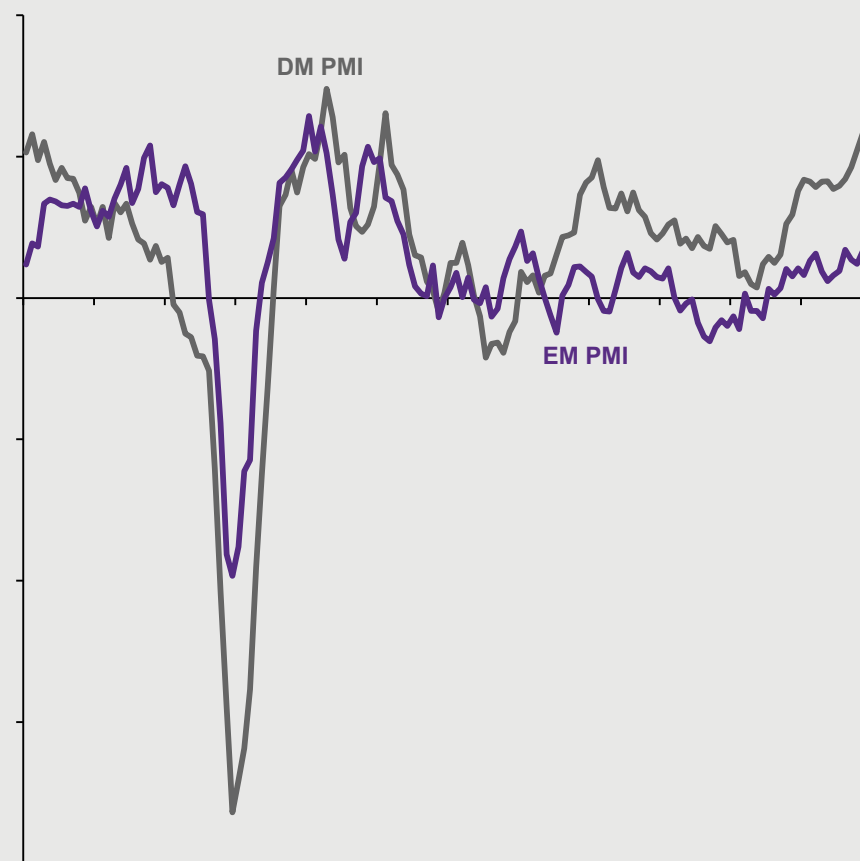
Other assets:

- Having rebounded in September and October, the USD index (DXY) resumed its downtrend in November and December. The DXY was down 1% in December. The Australian dollar and Canadian dollar gained the most against the U.S. dollar, while the Japanese yen and British pound weakened. For EM currencies, the South African rand was up 10.6% against the U.S. dollar, but the Mexican and Argentine peso were the big losers in the month, down 5.2% and 7.1%, respectively. (GTMA P. 59)
- West Texas Intermediate (WTI) pushed above USD60pb for the first time since 2Q 2015 as OPEC cuts and firm global demand provided steady support and Brent rising 5.6% and 2.1% respectively in November. Brent crude oil pushed above USD65pb. The next question will be whether U.S. shale producers will be attracted to increase investment or they will remain disciplined to protect their profit margins, instead of raising earnings by pushing up volume. (GTMA P. 61)

Global PMI for manufacturing

	Jan'17	Feb'17	Mar'17	Apr'17	May'17	Jun'17	Jul'17	Aug'17	Sep'17	Oct'17	Nov'17	Dec'17
Global	52.8	53.0	53.0	52.7	52.6	52.6	52.8	53.2	53.3	53.5	54.1	54.5
DM	54.2	54.1	53.9	54.1	54.1	53.9	54.0	54.2	54.6	55.2	55.8	56.3
EM	50.8	51.3	51.6	50.9	50.6	50.8	51.0	51.7	51.4	51.2	51.7	52.2
U.S.	55.0	54.2	53.3	52.8	52.7	52.0	53.3	52.8	53.1	54.6	53.9	55.1
Euro area	55.2	55.4	56.2	56.7	57.0	57.4	56.6	57.4	58.1	58.5	60.1	60.6
Germany	56.4	56.8	58.3	58.2	59.5	59.6	58.1	59.3	60.6	60.6	62.5	63.3
France	53.6	52.2	53.3	55.1	53.8	54.8	54.9	55.8	56.1	56.1	57.7	58.8
Italy	53.0	55.0	55.7	56.2	55.1	55.2	55.1	56.3	56.3	57.8	58.3	57.4
Spain	55.6	54.8	53.9	54.5	55.4	54.7	54.0	52.4	54.3	55.8	56.1	55.8
Greece	46.6	47.7	46.7	48.2	49.6	50.5	50.5	52.2	52.8	52.1	52.2	53.1
UK	55.4	54.6	54.3	57.1	56.4	54.2	55.3	56.8	56.1	56.3	58.2	56.3
Australia	51.2	59.3	57.5	59.2	54.8	55.0	56.0	59.8	54.2	51.1	57.3	56.2
Japan	52.7	53.3	52.4	52.7	53.1	52.4	52.1	52.2	52.9	52.8	53.6	54.2
China	51.0	51.7	51.2	50.3	49.6	50.4	51.1	51.6	51.0	51.0	50.8	51.5
China (NBS)	51.3	51.6	51.8	51.2	51.2	51.7	51.4	51.7	52.4	51.6	51.8	51.6
Korea	49.0	49.2	48.4	49.4	49.2	50.1	49.1	49.9	50.6	50.2	51.2	49.9
Taiwan	55.6	54.5	56.2	54.4	53.1	53.3	53.6	54.3	54.2	53.6	56.3	56.6
Indonesia	50.4	49.3	50.5	51.2	50.6	49.5	48.6	50.7	50.4	50.1	50.4	49.3
India	50.4	50.7	52.5	52.5	51.6	50.9	47.9	51.2	51.2	50.3	52.6	54.7
Russia	54.7	52.5	52.4	50.8	52.4	50.3	52.7	51.6	51.9	51.1	51.5	52.0
Brazil	44.0	46.9	49.6	50.1	52.0	50.5	50.0	50.9	50.9	51.2	53.5	52.4
Mexico	50.8	50.6	51.5	50.7	51.2	52.3	51.2	52.2	52.8	49.2	52.4	51.7
# countries above 50*	14	13	14	15	14	16	14	16	17	16	17	15

Developed and emerging market manufacturing PMI



Source: Australian Industry Group, J.P. Morgan Economic Research, Markit, National Bureau of Statistics of China (NBS), J.P. Morgan Asset Management.

Heatmap colors are based on PMI relative to 50, which indicates contraction (below 50) or expansion (above 50) of the sector.

*Number of countries displayed in the above heatmap, excluding regional aggregates (Global, DM, EM and euro area), which are in expansionary territory. The Markit PMI, not the National Bureau of Statistics PMI, is counted for China.

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Monthly inflation trend

Year-over-year change

■ Below target by more than 0.5% or below range

■ Within +/- 0.5% of target or within range

■ Above target by more than 0.5% or above range

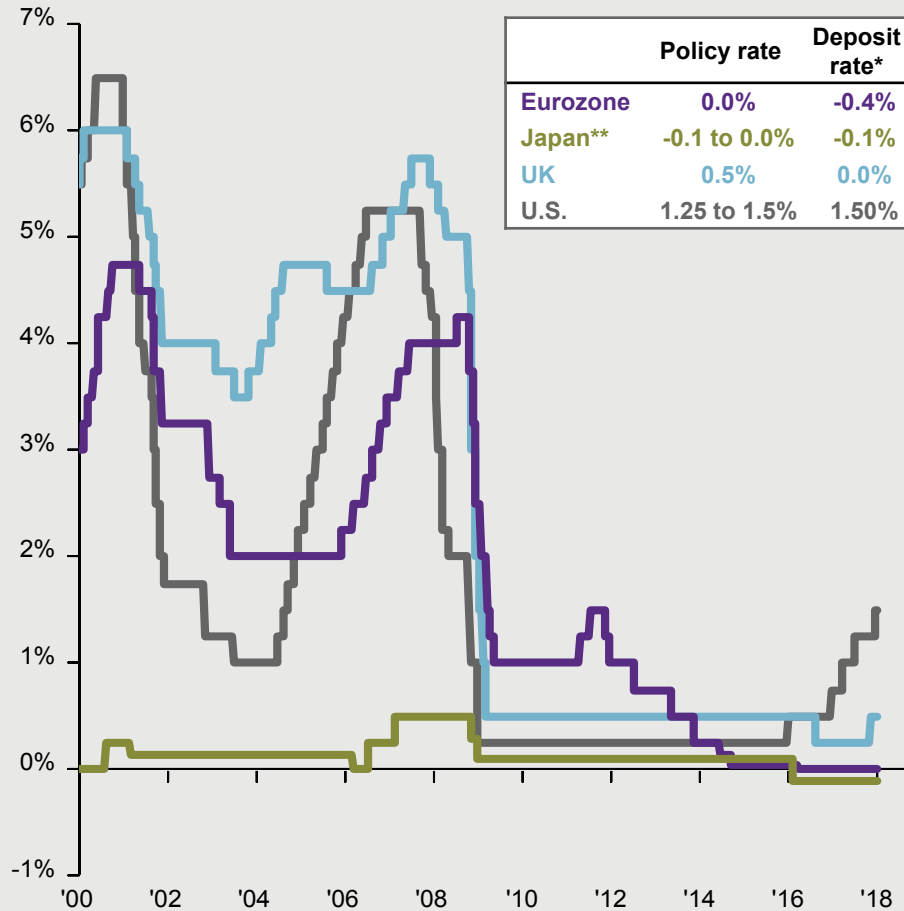
Country	Nov 2016	Dec 2016	Jan 2017	Feb 2017	Mar 2017	Apr 2017	May 2017	Jun 2017	Jul 2017	Aug 2017	Sep 2017	Oct 2017	Nov 2017	Central bank target	Key policy rate* (↓easing, ↑tightening)
China	2.3	2.1	2.5	0.8	0.9	1.2	1.5	1.5	1.4	1.8	1.6	1.9	1.7	3.0	4.35 (↓10/2015)
India	3.6	3.4	3.2	3.7	3.9	3.0	2.2	1.5	2.4	3.3	3.3	3.6	4.9	2.0 – 6.0	6.00 (↓8/2017)
Indonesia	3.6	3.0	3.5	3.8	3.6	4.2	4.3	4.4	3.9	3.8	3.7	3.6	3.3	3.0 – 5.0	4.25 (↓9/2017)
Japan	0.5	0.3	0.4	0.3	0.2	0.4	0.4	0.4	0.4	0.7	0.7	0.2	0.6	2.0	-0.1 – 0.0 (↓2/2016)
Korea	1.5	1.3	2.0	1.9	2.2	1.9	2.0	1.9	2.2	2.6	2.1	1.8	1.3	2.0	1.5 (↑11/2017)
Malaysia	1.8	1.8	3.2	4.5	5.1	4.4	3.9	3.6	3.2	3.7	4.3	3.7	3.3	2.0 – 3.0	3.00 (↓7/2016)
Taiwan	2.0	1.7	2.2	-0.1	0.2	0.1	0.6	1.0	0.8	1.0	0.5	-0.3	0.3	2.0	1.375 (↓6/2016)
Thailand	0.6	1.1	1.6	1.4	0.8	0.4	0.0	0.0	0.2	0.3	0.9	0.9	1.0	1.0 – 4.0	1.5 (↓4/2015)
U.S.	1.7	2.1	2.5	2.7	2.4	2.2	1.9	1.6	1.7	1.9	2.2	2.0	2.2	2.0	1.25 – 1.5 (↑12/2017)
Eurozone	0.6	1.1	1.8	2.0	1.5	1.9	1.4	1.3	1.3	1.5	1.5	1.5	1.5	2.0	0.00 (↓3/2016)
UK	1.2	1.6	1.8	2.3	2.3	2.7	2.9	2.6	2.6	2.9	3.0	3.0	3.1	2.0	0.5 (↑11/2017)

Source: FactSet, various central banks, J.P. Morgan Economic Research, J.P. Morgan Asset Management.

All inflation numbers refer to headline CPI inflation. *Arrows and dates indicate the direction and date of last change, respectively. The central bank's policy rates used are: the one-year benchmark lending rate (*China*), RBI policy repo rate (*India*), BI 7-day reverse repo rate (*Indonesia*), the BoJ's policy rate on the aggregate balance of all financial institutions' current accounts at the BoJ (*Japan*), BoK base rate (*Korea*), overnight policy rate (*Malaysia*), discount rate (*Taiwan*), one-day repurchase rate (*Thailand*), fed funds rate (*U.S.*), eurozone main refinancing operations rate (*eurozone*) and BoE official bank rate (*UK*). Past performance is not a reliable indicator of current and future results.

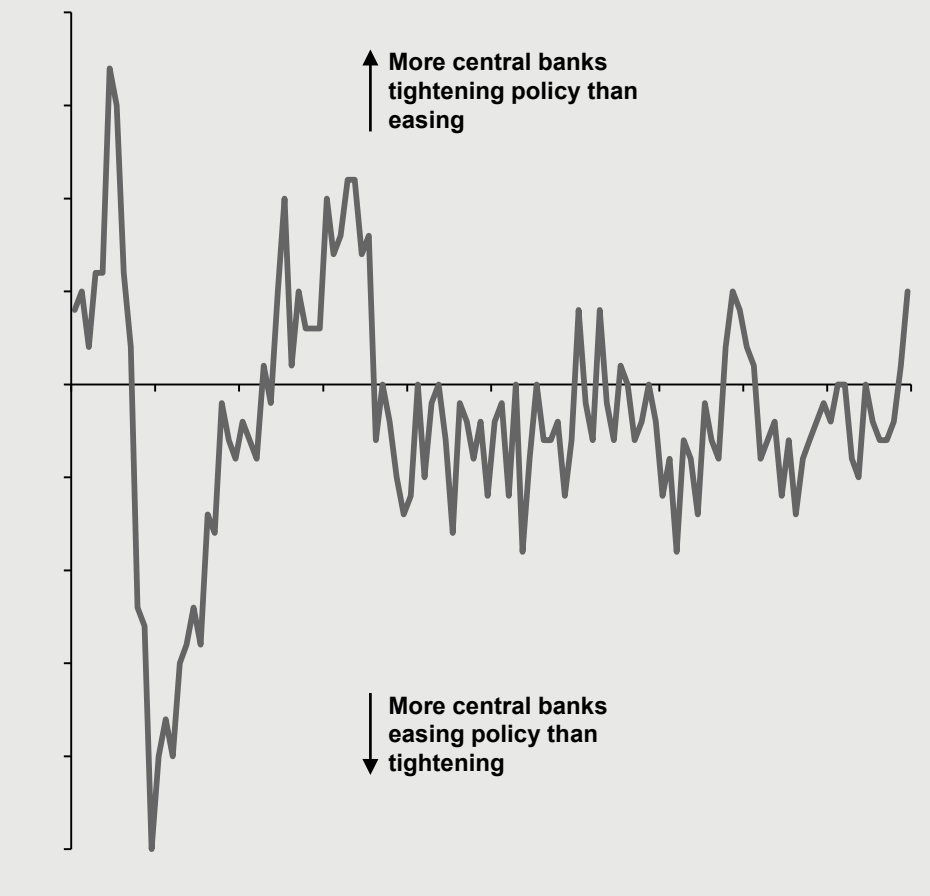
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G4 Central bank key policy rates



Central bank policy rate changes

Net number of central banks tightening policy***



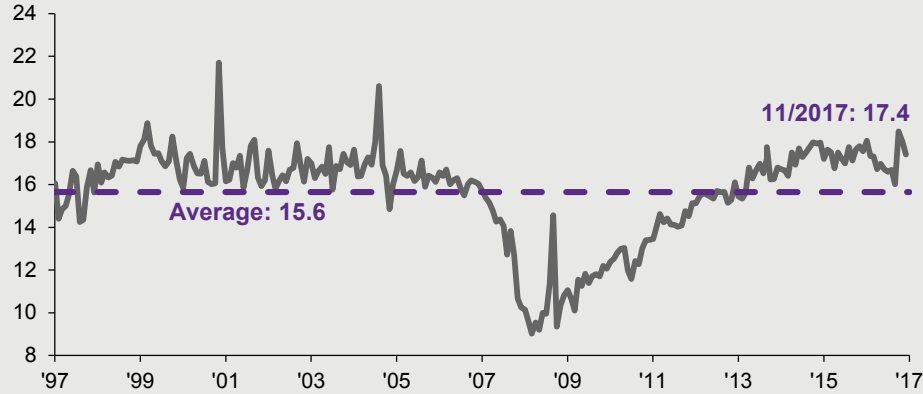
Source: Bloomberg Finance L.P., J.P. Morgan Asset Management; (Left) FactSet.

G4 are the Bank of England, the Bank of Japan, the European Central Bank and the U.S. Federal Reserve. *Key deposit rates that central banks charge commercial banks on their excess reserves. **The BoJ is adopting a three-tier system in which a negative interest rate of -0.1% will be applied to the policy rate balance of the aggregate amount of all financial institutions that have current accounts at the BoJ. ***Count includes 40 central banks. Past performance is not a reliable indicator of current and future results.

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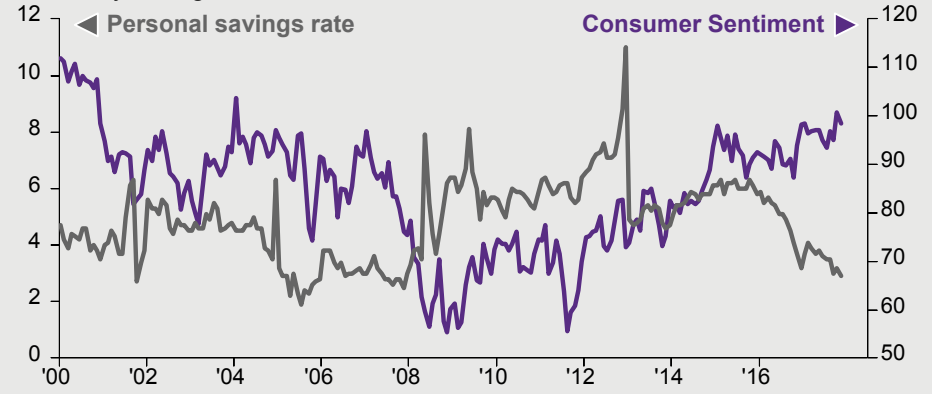
Light vehicle sales

Millions, seasonally adjusted annualized rate



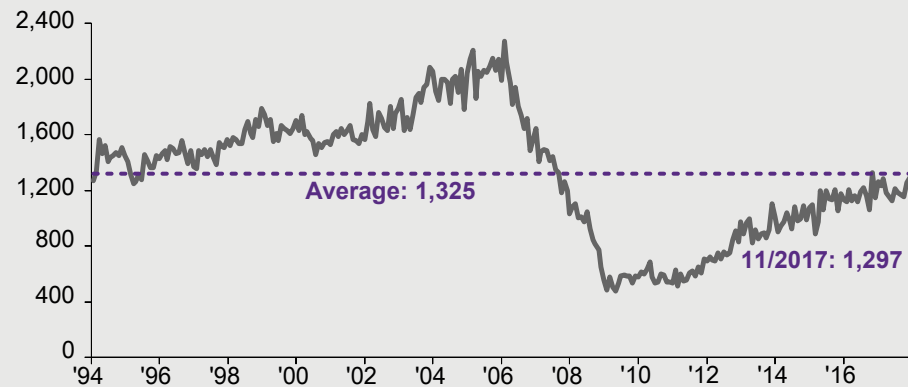
Savings and sentiment

Quarterly change



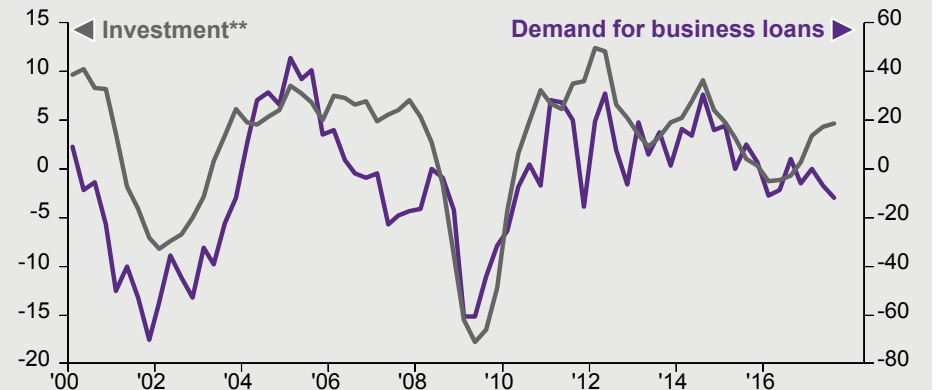
Housing starts

Thousands, seasonally adjusted annualized rate



Investment and demand for credit

Year-over-year change



Source: J.P. Morgan Asset Management; (Top left) U.S. Bureau of Economic Analysis; (Top right, bottom left and right) FactSet; (Bottom left and right) U.S. Census Bureau. *Net percent of participants in the Senior Loan Officer Survey. **Private investment in non-residential fixed assets in real terms. *Guide to the Markets – Asia*. Data reflect most recently available as of 31/12/17.

Equities

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	4Q '17	10-yrs ('08 - '17)	
													Ann. Ret.	Ann. Vol.
India	Japan	India	ASEAN	U.S.	HK	U.S.	India	Japan	Taiwan	China	India	U.S.	U.S.	India
73.1%	-29.1%	102.8%	32.4%	2.0%	28.3%	32.6%	23.9%	9.9%	19.6%	54.3%	11.8%	8.5%	30.2%	
China	U.S.	Taiwan	Korea	ASEAN	India	Japan	U.S.	U.S.	U.S.	Korea	Korea	Taiwan	Taiwan	Korea
66.2%	-37.1%	80.2%	27.2%	-6.1%	26.0%	27.3%	13.4%	1.3%	11.6%	47.8%	11.6%	6.4%	25.3%	
HK	Taiwan	ASEAN	HK	Europe	China	Europe	Taiwan	HK	Korea	Asia ex-JP	ASEAN	HK	HK	China
41.2%	-45.9%	75.0%	23.2%	-10.5%	23.1%	26.0%	10.1%	-0.5%	9.2%	42.1%	8.8%	5.3%	24.1%	
Asia ex-JP	Europe	Asia ex-JP	Taiwan	Korea	ASEAN	HK	China	Europe	ASEAN	India	Japan	ASEAN	ASEAN	ASEAN
40.5%	-46.1%	72.5%	22.7%	-11.8%	22.8%	11.1%	8.3%	-2.3%	6.2%	38.8%	8.5%	4.8%	23.0%	
ASEAN	ASEAN	Korea	India	Japan	Asia ex-JP	Taiwan	ASEAN	India	Asia ex-JP	HK	Asia ex-JP	Asia ex-JP	Asia ex-JP	HK
39.2%	-47.6%	72.1%	20.9%	-14.2%	22.7%	9.8%	6.4%	-6.1%	5.8%	36.2%	8.3%	4.1%	22.8%	
Korea	China	China	Asia ex-JP	HK	Korea	Korea	Asia ex-JP	Korea	Japan	ASEAN	China	Korea	Korea	Asia ex-JP
32.6%	-50.8%	62.6%	19.9%	-16.0%	21.5%	4.2%	5.1%	-6.3%	2.7%	30.1%	7.6%	4.0%	22.4%	
Europe	HK	HK	Japan	Asia ex-JP	Europe	China	HK	China	HK	Taiwan	HK	Japan	Japan	Taiwan
14.4%	-51.2%	60.2%	15.6%	-17.1%	19.9%	4.0%	5.1%	-7.6%	2.3%	28.5%	6.6%	3.4%	22.4%	
Taiwan	Asia ex-JP	Europe	U.S.	China	Taiwan	Asia ex-JP	Japan	Asia ex-JP	China	Europe	U.S.	China	China	Europe
9.1%	-52.2%	36.8%	15.4%	-18.2%	17.7%	3.3%	-3.7%	-8.9%	1.1%	26.2%	6.5%	3.2%	21.6%	
U.S.	Korea	U.S.	China	Taiwan	U.S.	India	Europe	Taiwan	Europe	Japan	Taiwan	Europe	Europe	Japan
6.0%	-55.1%	27.1%	4.8%	-20.2%	16.1%	-3.8%	-5.7%	-11.0%	0.2%	24.4%	4.0%	2.0%	16.9%	
Japan	India	Japan	Europe	India	Japan	ASEAN	Korea	ASEAN	India	U.S.	Europe	India	India	U.S.
-4.1%	-64.6%	6.4%	4.5%	-37.2%	8.4%	-4.5%	-10.7%	-18.4%	-1.4%	21.9%	2.3%	0.5%	16.4%	

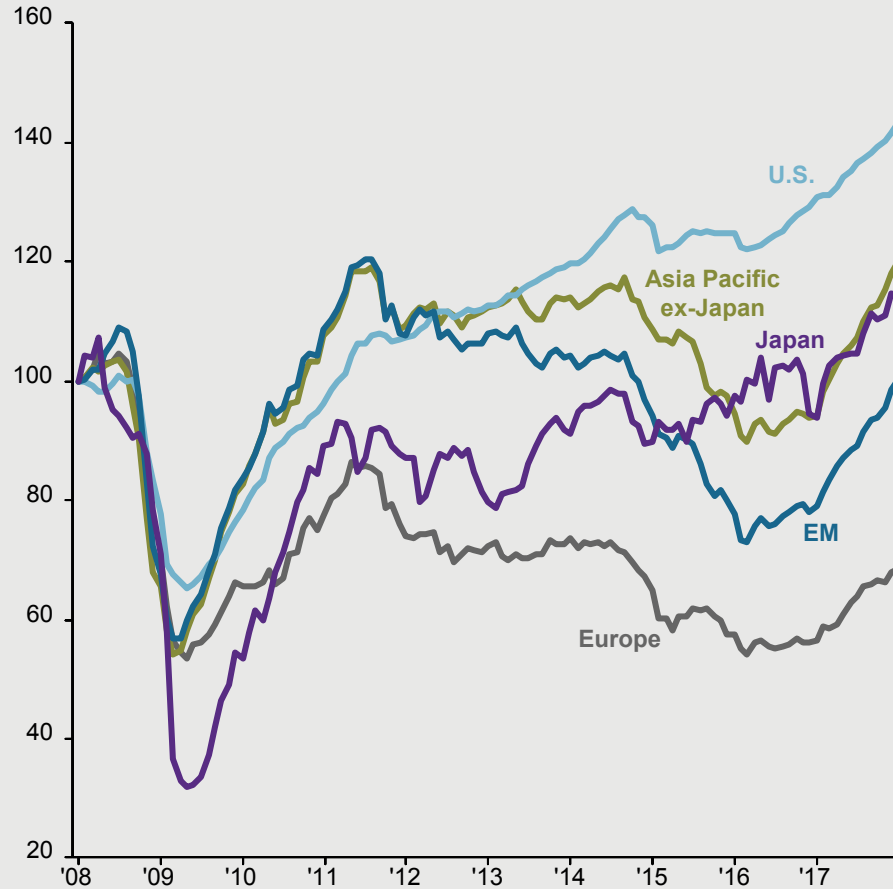
Source: FactSet, MSCI, J.P. Morgan Asset Management.

Returns are total returns based on MSCI indices in U.S. dollar terms. 10-yr total (net) return data is used to calculate annualized returns (Ann. Ret.) and 10-yr price return data is used to calculate annualized volatility (Ann. Vol.) and reflect the period 31/12/07 – 31/12/17. Past performance is not a reliable indicator of current and future results.

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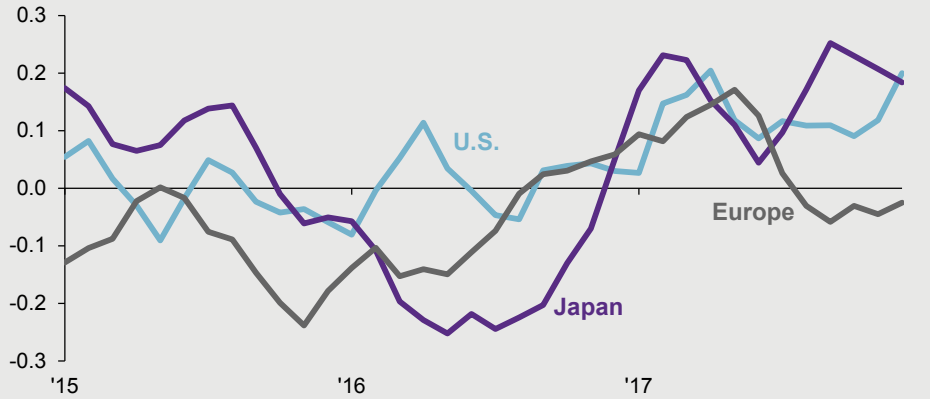
Forward earnings per share

Index, U.S. dollar, rebased to 100



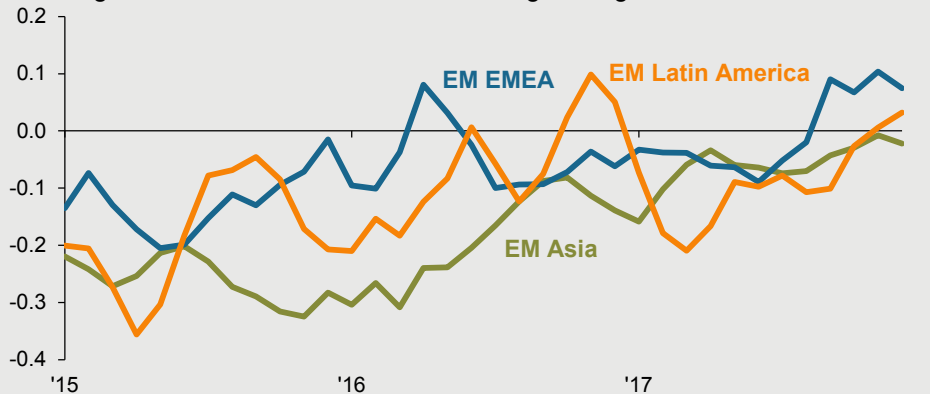
Developed market equities earnings momentum

Earnings revision ratio*, three-month moving average



Emerging market equities earnings momentum

Earnings revision ratio*, three-month moving average



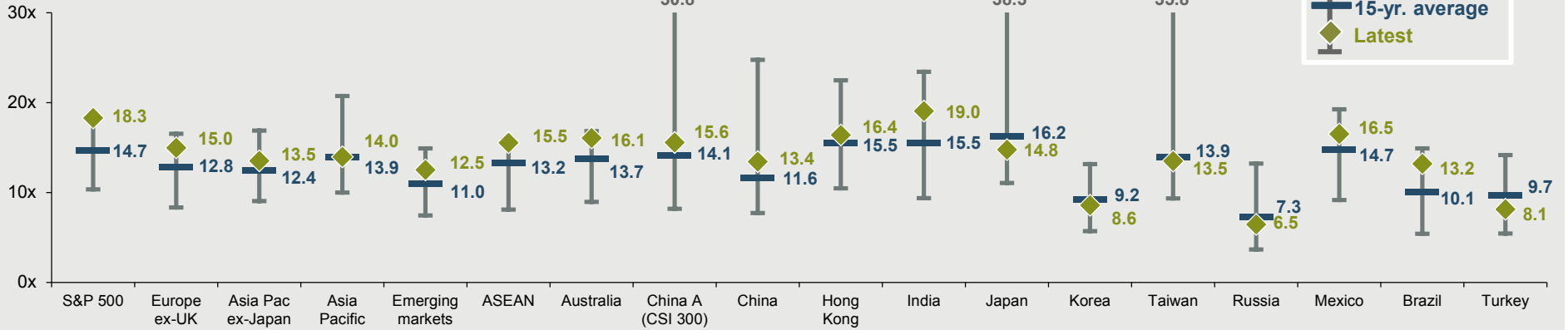
Source: MSCI, J.P. Morgan Asset Management; (Top right) Standard & Poor's.

*Earnings revision ratio is calculated by taking the difference between the number of analyst upgrades and analyst downgrades, divided by the total number of analyst revisions on a monthly basis. An earnings revision ratio above zero mean that there were more upgrade revisions than downgrade revisions. Past performance is not a reliable indicator of current and future results.

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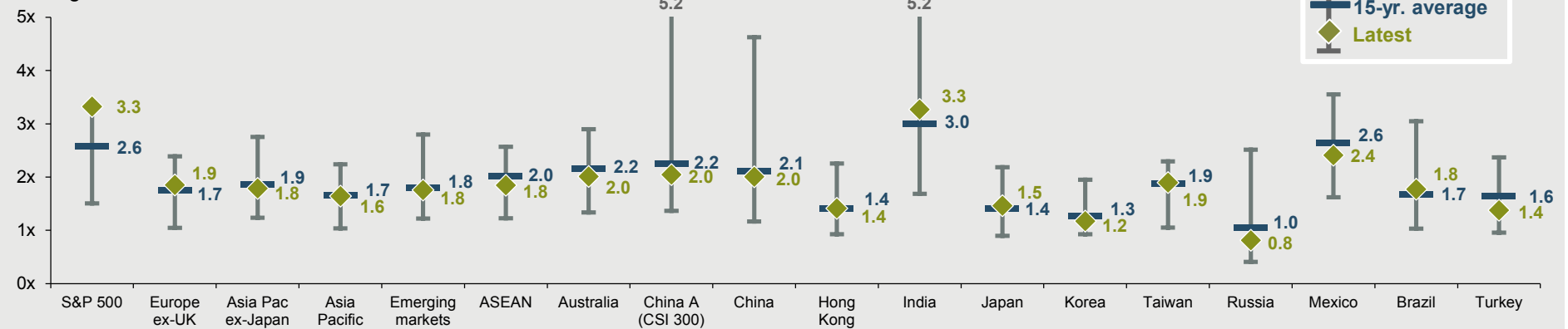
Equity market valuations – Price to earnings

Forward P/E ratios



Equity market valuations – Price to book

Trailing P/B ratios

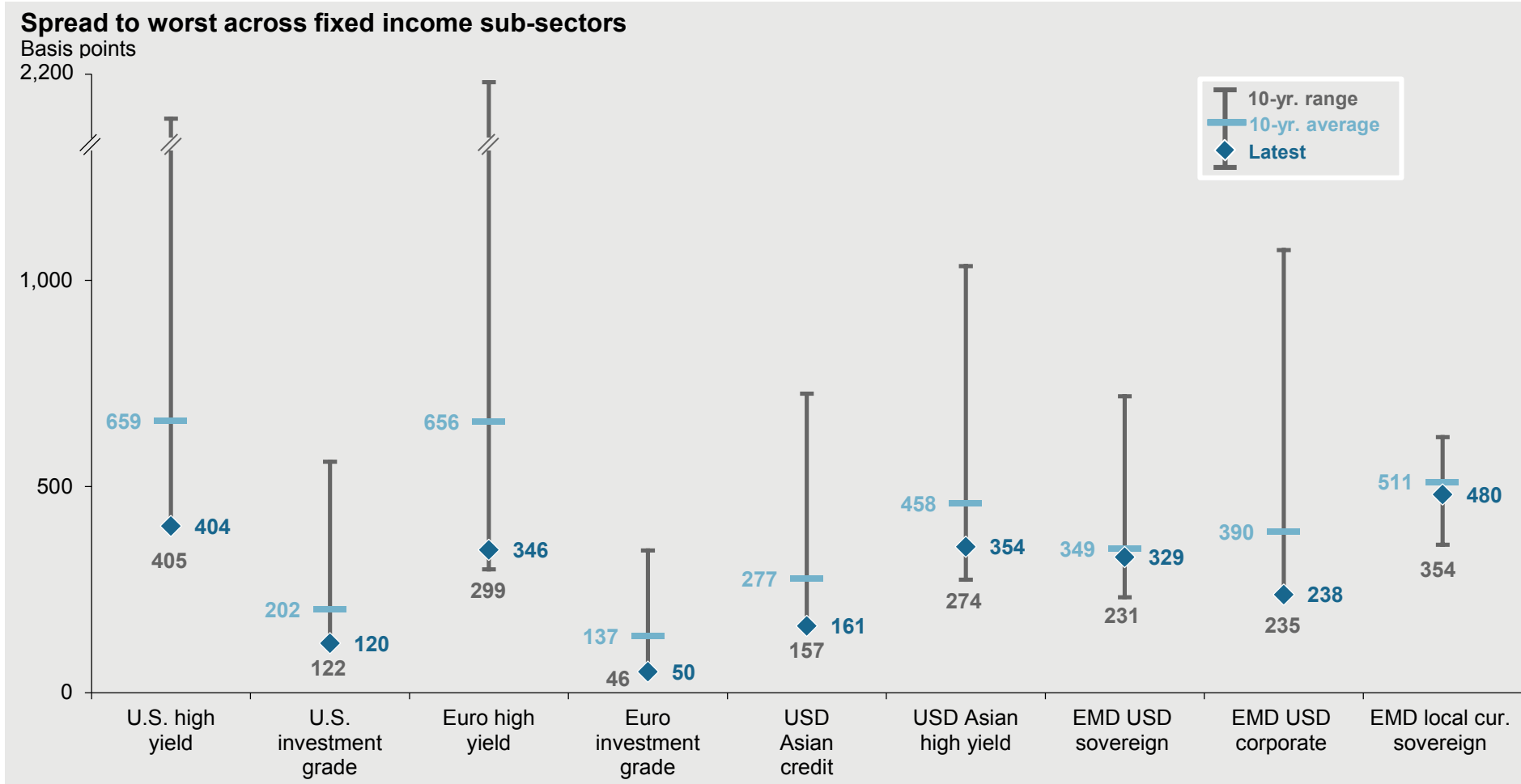


Source: Bloomberg Finance L.P., China Securities Index, FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Price-to-earnings (P/E) and price-to-book (P/B) ratios are in local currency terms. China A valuations based on the CSI300 Index and use 10 years of data due to availability. China H valuations are based on the MSCI China. 15-year range for P/E and P/B ratios are cut off to maintain a more reasonable scale for some indexes. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia*. Data reflect most recently available as of 31/12/17.

Global bond opportunities	YTM	Duration* (years)	Correl. to 10-year UST**
Local EMD	7.0%	4.5	0.08
Asia Corporate HY	7.0%	5.0	-0.08
U.S. Corporate HY	6.2%	3.9	-0.23
USD EMD	5.5%	7.0	0.23
USD Asian Bond	4.6%	5.5	0.25
Europe HY	3.3%	3.8	-0.24
U.S. Corporate IG	3.3%	7.6	0.45
U.S. Treasury	2.2%	6.2	0.99
DM Government Bond	1.5%	7.9	0.64
Cash	1.3%	0.2	0.10

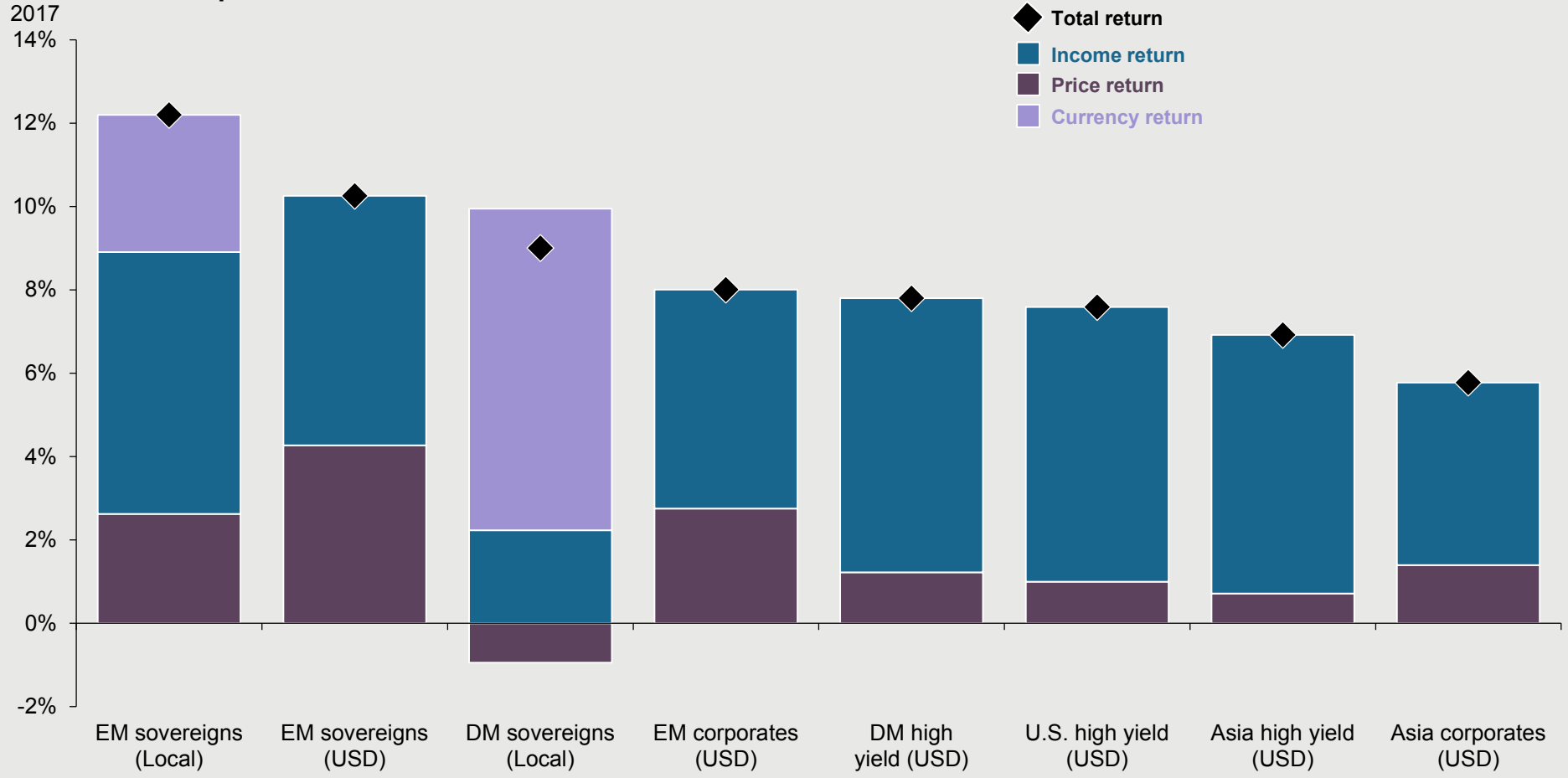
Fixed income sector returns							5-yr
2012	2013	2014	2015	2016	2017	4Q '17	Ann. Ret.
Europe HY 30.5%	Europe HY 14.9%	USD Asian 8.3%	Asia HY 5.8%	U.S. HY 17.1%	Europe HY 21.0%	Europe HY 2.2%	Asia HY 6.6%
Asia HY 25.4%	U.S. HY 7.4%	U.S. IG 7.5%	USD Asian 2.8%	Local EMD 11.4%	Local EMD 15.4%	U.S. IG 1.2%	U.S. HY 5.8%
Local EMD 19.9%	Asia HY 4.3%	Asia HY 5.5%	USD EMD 1.2%	Asia HY 11.4%	USD EMD 9.3%	DM Gov't 1.0%	Europe HY 4.5%
USD EMD 18.5%	Cash 0.0%	USD EMD 5.5%	U.S. Treas 0.8%	USD EMD 10.2%	U.S. HY 7.5%	Asia HY 0.7%	USD Asian 4.2%
U.S. HY 15.8%	USD Asian -1.4%	U.S. Treas 5.1%	Cash 0.0%	U.S. IG 6.1%	DM Gov't 6.8%	USD EMD 0.5%	USD EMD 3.8%
USD Asian 14.3%	U.S. IG -1.5%	U.S. HY 2.5%	U.S. IG -0.7%	USD Asian 5.8%	U.S. IG 6.4%	U.S. HY 0.5%	U.S. IG 3.5%
U.S. IG 9.8%	U.S. Treas -2.7%	DM Gov't 0.7%	DM Gov't -2.6%	Europe HY 3.4%	Asia HY 6.2%	USD Asian 0.4%	U.S. Treas 1.3%
U.S. Treas 2.0%	DM Gov't -4.5%	Cash 0.0%	U.S. HY -4.5%	DM Gov't 1.6%	USD Asian 5.8%	Cash 0.3%	DM Gov't 0.3%
DM Gov't 1.3%	Local EMD -5.5%	Europe HY -6.0%	Europe HY -7.6%	U.S. Treas 1.0%	U.S. Treas 2.3%	U.S. Treas 0.1%	Cash 0.2%
Cash 0.1%	USD EMD -6.6%	Local EMD -6.1%	Local EMD -18.0%	Cash 0.3%	Cash 0.8%	Local EMD -0.7%	Local EMD -1.3%

Source: Bloomberg Finance L.P., FactSet, J.P. Morgan Economic Research, J.P. Morgan Asset Management. Based on Bloomberg Barclays U.S. Aggregate Credit - Corporate High Yield Index (U.S. Corporate HY), Bloomberg Barclays U.S. Aggregate Credit - Corporate Investment Grade Index (U.S. Corporate IG), J.P. Morgan Government Bond Index - EM Global (GBI-EM) (Local EMD), J.P. Morgan Emerging Market Bond Index Global (EMBIG) (USD EMD), J.P. Morgan Asia Credit Index (JACI) (USD Asian), Bloomberg Barclays Pan European High Yield (Europe HY), J.P. Morgan Government Bond Index - Global Traded (DM Gov't), J.P. Morgan Asia Credit Index - Non-investment Grade Corporate (Asia Corporate HY), Bloomberg Barclays Global U.S. Treasury - Bills (3-5 years) (U.S. Treasury) and Bloomberg Barclays U.S. Treasury - Bills (1-3 months) (Cash). 5-year data is used to calculate annualized returns (Ann. Ret.). Returns are in USD and reflect the period from 31/12/12 - 31/12/17. *Duration is a measure of the sensitivity of the price (the value of the principal) of a fixed-income investment to a change in interest rates and is expressed as number of years. Rising interest rates mean falling bond prices, while declining interest rates mean rising bond prices. **Correlation to the 10-year U.S. Treasury is a measure over 10 years of data. Positive yield does not imply positive return. Past performance is not a reliable indicator of current and future results. Guide to the Markets - Asia. Data reflect most recently available as of 31/12/17.



Source: BofA/Merrill Lynch, iBoxx, J.P. Morgan Economic Research, J.P. Morgan Asset Management. Based on J.P. Morgan Domestic High Yield Index (*U.S. High Yield*), J.P. Morgan U.S. Liquid Index (JULI) (*U.S. Investment Grade*), BofA/Merrill Lynch Euro Non-Financial High Yield Constrained (*Euro High Yield*), iBoxx EUR corporates (*Euro Investment Grade*), J.P. Morgan Asia Credit Index (JACI) (*USD Asian Credit*), J.P. Morgan Asia Credit High Yield Index (*USD Asian High Yield*), J.P. Morgan EMBI+ (*EMD USD Sovereign*), J.P. Morgan Corporate Emerging Markets Bond Index – CEMBI (*EMD USD Corporate*), J.P. Morgan GBI-EM (*EMD Local Cur. Sovereign*). Positive yield does not imply positive return. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia*. Data reflect most recently available as of 31/12/17.

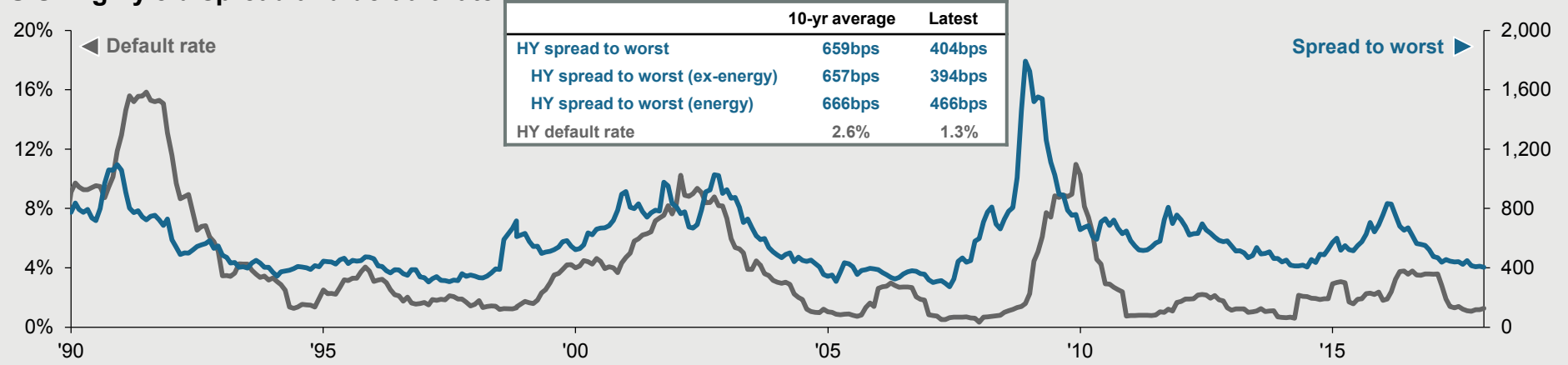
Debt return composition



Source: J.P. Morgan Economic Research, J.P. Morgan Asset Management.

Based on J.P. Morgan Developed Market HY (*DM USD high yield*), J.P. Morgan Domestic High Yield (*U.S. USD High Yield*), J.P. Morgan EMBI+ (*EM USD sovereigns*), J.P. Morgan CEMBI (*EM USD corporates*), JACI Asia HY (*Asian USD high yield*), J.P. Morgan GBI-EM (*EM local cur. sovereigns*), JACI Asia Credit (*Asian USD corporates*), J.P. Morgan GBI-DM (*DM local cur. sovereigns*). Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia*. Data reflect most recently available as of 31/12/17.

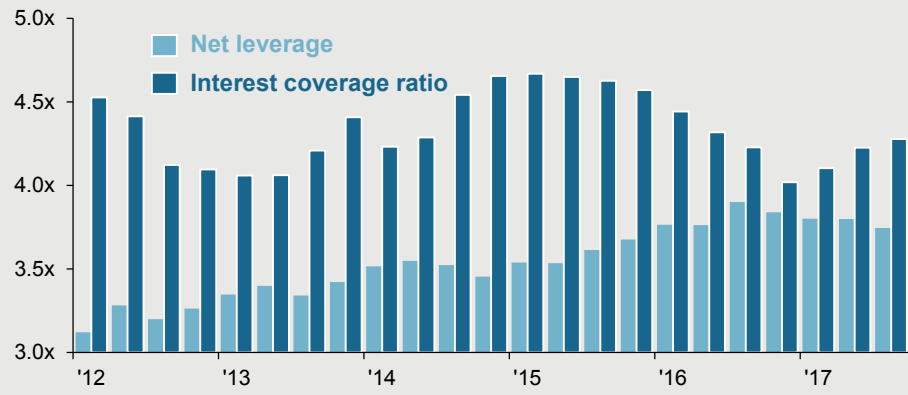
U.S. high yield spread and default rate*



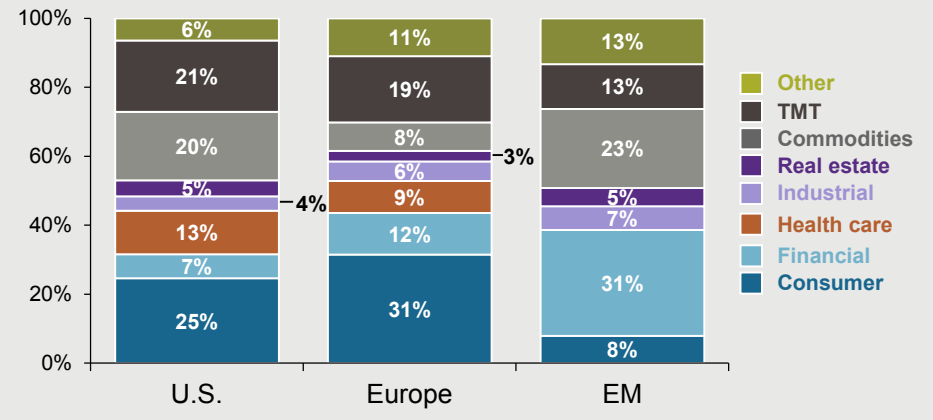
Fixed income

U.S. high yield leverage measures

Net leverage** and interest coverage ratio***



Sector breakdown across high yield indices



Source: J.P. Morgan Economic Research, J.P. Morgan Asset Management.

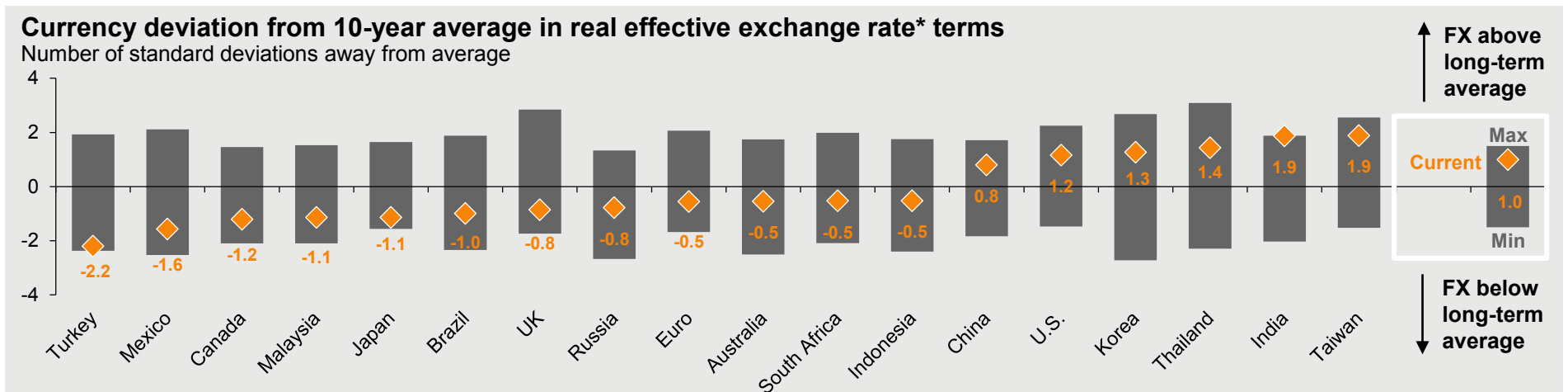
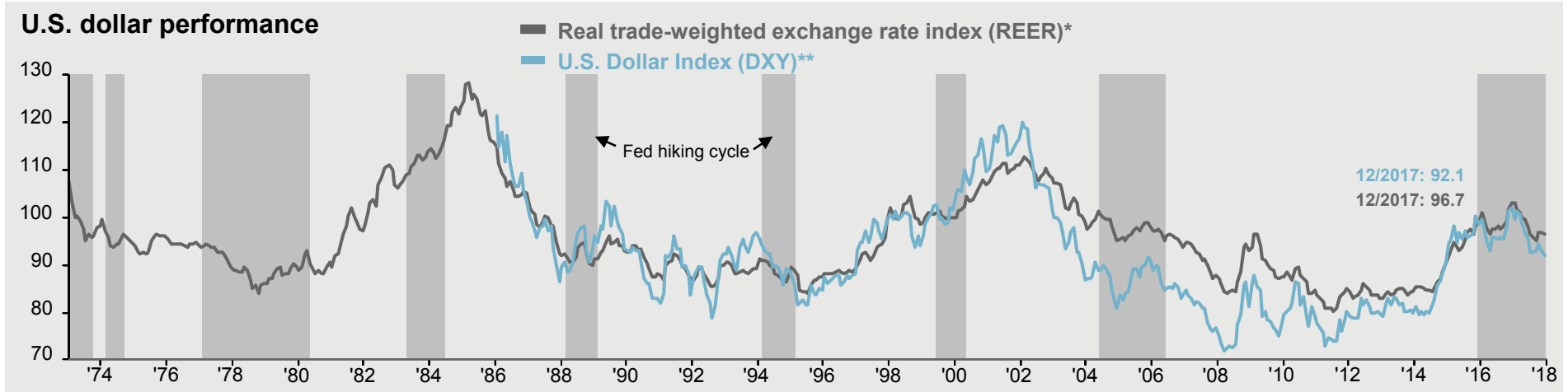
*Default rate is defined as the par value percentage of the total market trading at or below 50% of par value and includes any Chapter 11 filing, prepackaged filing or missed interest payments. Spreads indicated are benchmark yield-to-worst less comparable maturity Treasury yields. **Net leverage is net debt divided by adjusted earnings before interest, tax, depreciation and amortization (EBITDA). ***Interest coverage ratio is EBITDA over interest expense. U.S. corporate high yield is represented by the J.P. Morgan Domestic High Yield Index. Europe corporate high yield is represented by J.P. Morgan Euro High Yield Index. EM corporate high yield is represented by J.P. Morgan CEMBI NON-IG Index. TMT represents Telecommunications & Technology. Positive yield does not imply positive return. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia*. Data reflect most recently available as of 31/12/17.

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	4Q '17	10-yrs ('08 - '17)	
											Ann. Ret.	Ann. Vol.
Global Bonds 4.8%	EM ex-Asia 91.3%	U.S. REITs 28.5%	U.S. REITs 8.7%	Asia ex-Japan 22.7%	DM Equities 27.4%	U.S. REITs 30.4%	Asian Bonds 2.8%	EM ex-Asia 27.1%	Asia ex-Japan 42.1%	Asia ex-Japan 8.3%	Global Corp HY 7.9%	EM ex-Asia 27.7%
Cash 1.8%	Asia ex-Japan 72.5%	Asia ex-Japan 19.9%	EMD 8.5%	Global Corp HY 18.9%	Global Corp HY 8.4%	Asian Bonds 8.3%	U.S. REITs 2.5%	Global Corp HY 14.0%	DM Equities 23.1%	DM Equities 5.6%	U.S. REITs 7.4%	U.S. REITs 26.5%
Asian Bonds -9.8%	Global Corp HY 63.9%	EM ex-Asia 16.6%	Global Bonds 5.6%	EMD 18.5%	Diversified 5.6%	EMD 5.5%	EMD 1.2%	EMD 10.2%	EM ex-Asia 20.3%	Diversified 3.2%	EMD 7.1%	Asia ex-Japan 22.8%
EMD -10.9%	Diversified 40.8%	Global Corp HY 13.8%	Asian Bonds 4.1%	U.S. REITs 17.8%	Asia ex-Japan 3.3%	DM Equities 5.5%	Cash 0.0%	U.S. REITs 8.6%	Diversified 17.9%	U.S. REITs 1.4%	Asian Bonds 6.5%	DM Equities 17.1%
Global Corp HY -27.9%	DM Equities 30.8%	Diversified 13.4%	Global Corp HY 2.6%	EM ex-Asia 17.0%	U.S. REITs 2.5%	Asia ex-Japan 5.1%	DM Equities -0.3%	DM Equities 8.2%	Global Corp HY 10.3%	Global Bonds 1.1%	DM Equities 5.6%	Diversified 12.6%
Diversified -28.1%	U.S. REITs 28.6%	DM Equities 12.3%	Cash 0.1%	DM Equities 16.5%	Cash 0.0%	Diversified 4.5%	Diversified -3.1%	Diversified 8.1%	EMD 9.3%	EM ex-Asia 1.1%	Diversified 5.2%	Global Corp HY 11.7%
U.S. REITs -38.0%	Asian Bonds 28.3%	EMD 12.0%	Diversified -2.8%	Diversified 15.9%	Asian Bonds -1.4%	Global Bonds 0.6%	Global Bonds -3.2%	Asian Bonds 5.8%	Global Bonds 7.4%	Global Corp HY 0.9%	Asia ex-Japan 4.1%	EMD 9.3%
DM Equities -40.3%	EMD 28.2%	Asian Bonds 10.6%	DM Equities -5.0%	Asian Bonds 14.3%	Global Bonds -2.6%	Global Corp HY 0.2%	Global Corp HY -4.9%	Asia ex-Japan 5.8%	Asian Bonds 5.8%	EMD 0.5%	Global Bonds 3.1%	Asian Bonds 7.8%
Asia ex-Japan -52.2%	Global Bonds 6.9%	Global Bonds 5.5%	Asia ex-Japan -17.1%	Global Bonds 4.3%	EMD -6.6%	Cash 0.0%	Asia ex-Japan -8.9%	Global Bonds 2.1%	U.S. REITs 5.1%	Asian Bonds 0.4%	Cash 0.3%	Global Bonds 2.8%
EM ex-Asia -57.2%	Cash 0.1%	Cash 0.1%	EM ex-Asia -21.2%	Cash 0.1%	EM ex-Asia -8.5%	EM ex-Asia -20.2%	EM ex-Asia -22.7%	Cash 0.3%	Cash 0.8%	Cash 0.3%	EM ex-Asia -2.9%	Cash 0.1%

Other asset classes

Source: Bloomberg Finance L.P., Dow Jones, FactSet, J.P. Morgan Economic Research, MSCI, J.P. Morgan Asset Management.

The "Diversified" portfolio assumes the following weights: 20% in the MSCI The World Index (*DM Equities*), 20% in the MSCI AC Asia ex-Japan (*Asia ex-Japan*), 5% in the average of the MSCI EM Latin America and MSCI EM EMEA Indices (*EM ex-Asia*), 10% in the J.P. Morgan EMBIG Index (*EMD*), 10% in the Bloomberg Barclays Aggregate (*Global Bonds*), 10% in the Bloomberg Barclays Global Corporate High Yield Index (*Global Corporate High Yield*), 15% in J.P. Morgan Asia Credit Index (*Asian Bonds*), 5% in MSCI U.S. REITs Index (*U.S. REITs*) and 5% in Bloomberg Barclays U.S. Treasury – Bills (1-3 months) (*Cash*). Diversified portfolio assumes annual rebalancing. All data represent total return in U.S. dollar terms for the stated period. 10-year total return data is used to calculate annualized returns (Ann. Ret.) and 10-year price return data is used to calculate annualized volatility (Ann. Vol.) and reflects the period 31/12/07 – 31/12/17. Please see disclosure page at end for index definitions. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia*. Data reflect most recently available as of 31/12/17.



Source: FactSet, J.P. Morgan Asset Management; (Top) Bloomberg Finance L.P., U.S. Federal Reserve; (Bottom) J.P. Morgan Economic Research.
 *The real trade-weighted exchange rate index is the weighted average of a country's currency relative to a basket of other major currencies adjusted for the effects of inflation. The weights are determined by comparing the relative trade balances, in terms of one country's currency, with other countries within the basket.
 **The Dollar Index is a trade-weighted index calculated using seven major U.S. trade partners' currencies – Australian dollar, British pound, Canadian dollar, euro, Japanese yen, Swedish kroner and Swiss franc. Past performance is not a reliable indicator of current and future results.
 Guide to the Markets – Asia. Data reflect most recently available as of 31/12/17.

J.P. Morgan Asset Management: Index Definitions

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. This world-renowned index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. Although the S&P 500 Index focuses on the large-cap segment of the market, with approximately 75% coverage of U.S. equities, it is also an ideal proxy for the total market. An investor cannot invest directly in an index.

The **Tokyo Stock Price Index (TOPIX)** is a composite index of all common stocks listed on the First Section of Tokyo Stock Exchange (TSE). The index is basically a measure of the changes in aggregate market value of TSE common stocks. The base for the index is the aggregate market value of its component stocks as of the close on January 4, 1968. The aggregate market value is calculated by multiplying the number of listed shares of each component stock by its price and totaling the products derived there from.

The **Bombay Exchange Sensitive Index (SENSEX)**, first compiled in 1986, was calculated on a "Market Capitalization-Weighted" methodology of 30 component stocks representing large, well-established and financially sound companies across key sectors. The base year of SENSEX was taken as 1978-79. SENSEX today is widely reported in both domestic and international markets through print as well as electronic media. It is scientifically designed and is based on globally accepted construction and review methodology. Since September 1, 2003, SENSEX is being calculated on a free-float market capitalization methodology.

The **Korea Composite Stock Price Index (KOSPI)** is market capitalization based index on all common stocks listed on the Stock Market Division of the Korea Exchange (KRX) and excludes preferred stocks. The stock price index is calculated using the actual price traded on the market and not the "base price" used for market management such as establishment of price change limits. When no market price is available for issues that are not being traded or have halted trading, the latest closing price is used. KOSPI was assigned a base index of 100 set to January 4, 1980.

The **China Shenzhen Composite Index** is an actual market-cap weighted index that tracks the stock performance of all the A-share and B-share lists on Shenzhen Stock Exchange. The index was developed on April 3, 1991 with a base price of 100.

The **Euro Stoxx 600 Index** represents large, mid and small capitalization companies across 18 European countries.

The **MSCI® EAFE (Europe, Australia, Far East) Net Index** is recognized as the pre-eminent benchmark in the United States to measure international equity performance. It comprises 21 MSCI country indexes, representing the developed markets outside of North America.

The **MSCI Emerging Markets IndexSM** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets. As of June 2007, the MSCI Emerging Markets Index consisted of the following 25 emerging market country indices: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Israel, Jordan, Korea, Malaysia, Mexico, Morocco, Pakistan, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

The **MSCI ACWI (All Country World Index) Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. As of June 2009 the **MSCI ACWI** consisted of 45 country indices comprising 23 developed and 22 emerging market country indices.

The following **MSCI Total Return IndicesSM** are calculated with gross dividends:
This series approximates the maximum possible dividend reinvestment. The amount reinvested is the dividend distributed to individuals resident in the country of the company, but does not include tax credits.

The **MSCI Europe IndexSM** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe. As of June 2007, the MSCI Europe Index consisted of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The **MSCI Pacific IndexSM** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region. As of June 2007, the MSCI Pacific Index consisted of the following 5 Developed Market countries: Australia, Hong Kong, Japan, New Zealand, and Singapore.

The **MSCI Europe ex UK IndexSM** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe, excluding the United Kingdom. The

MSCI Europe ex UK Index consists of the following 15 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, and Switzerland.

The **MSCI Pacific ex Japan IndexSM** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region, excluding Japan. As of June 2007, the MSCI Pacific Index consisted of the following 4 Developed Market countries: Australia, Hong Kong, New Zealand, and Singapore.

The **MSCI USA IndexSM** is designed to measure the performance of the large and mid cap segments of the U.S. market. With 586 constituents, the index covers approximately 84% of the free float-adjusted market capitalization in the U.S.. The MSCI USA Index was launched on December 31, 1969.

The **MSCI China IndexSM** captures large and mid cap representation across China H shares, B shares, Red chips and P chips. With 148 constituents, the index covers about 84% of this China equity universe. The MSCI China Index was launched on December 31, 1992.

The **MSCI Indonesia IndexSM** is designed to measure the performance of the large and mid cap segments of the Indonesian market. With 25 constituents, the index covers about 84% of the Indonesian equity universe. The MSCI Indonesia Index was launched on December 31, 1990.

The **MSCI Korea IndexSM** is designed to measure the performance of the large and mid cap segments of the South Korean market. With 105 constituents, the index covers about 84% of the Korean equity universe. The MSCI Korea Index was launched on December 31, 1989.

The **MSCI India IndexSM** is designed to measure the performance of the large and mid cap segments of the Indian market. With 71 constituents, the index covers about 84% of the Indian equity universe. The MSCI India Index was launched on December 31, 1993.

The **MSCI Japan IndexSM** is designed to measure the performance of the large and mid cap segments of the Japan market. With 315 constituents, the index covers approximately 84% of the free float-adjusted market capitalization in Japan. The MSCI Japan Index was launched on December 31, 1969.

The **MSCI Hong Kong IndexSM** is designed to measure the performance of the large and mid cap segments of the Hong Kong market. With 42 constituents, the index covers approximately 84% of the free float-adjusted market capitalization of the Hong Kong equity universe. The MSCI Hong Kong Index was launched on December 31, 1972.

The **MSCI Taiwan IndexSM** is designed to measure the performance of the large and mid cap segments of the Taiwan market. With 113 constituents, the index covers approximately 84% of the free float-adjusted market capitalization in Taiwan. The MSCI Taiwan Index was launched on December 31, 1989.

The **MSCI Environmental, Social and Governance (ESG) Universal Indices** are designed to address the needs of asset owners who may look to enhance their exposure to ESG while maintaining a broad and diversified universe to invest in. By re-weighting free-float market cap weights based upon certain ESG metrics tilting away from free-float market cap weights, the indices enhance exposure to those companies that demonstrate both a higher MSCI ESG Rating and a positive ESG trend, while maintaining a broad and diversified investment universe.

J.P. Morgan Asset Management: Index Definitions, Risks and Disclosures

West Texas Intermediate (WTI) is the underlying commodity for the New York Mercantile Exchange's oil futures contracts.

The **Bloomberg Commodity Index** is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight caps are applied at the commodity, sector and group level for diversification. Roll period typically occurs from 6th-10th business day based on the roll schedule.

The **Bloomberg Commodity Subindexes** represent commodity groups and sectors, as well as single commodities, that make up the Bloomberg Commodity Index. The subindexes track exchange-traded futures of physical commodities, and the commodity groups and sectors, like in the case of the broad index, are weighted to account for economic significance and market liquidity. The various subindexes include Agriculture, Energy, Livestock, Grains, Industrial Metals, Precious Metals and Softs.

The **Bloomberg Barclays High Yield Index** covers the universe of fixed rate, non-investment grade debt. Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, and 144-As are also included.

The **Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed rate and non convertible.

The **Bloomberg Barclays Corporate Bond Index** is the Corporate component of the U.S. Credit index.

The **Bloomberg Barclays TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.

The **J.P. Morgan EMBI Global Index** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.

The **J.P. Morgan GBI-EM Global Diversified** consists of regularly traded, liquid fixed-rate, domestic currency government bonds to which international investors can gain exposure. The weightings among the countries are more evenly distributed within this index.

The **J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI)**: The CEMBI tracks total returns of US dollar-denominated debt instruments issued by corporate entities in Emerging Markets countries, and consists of an investable universe of corporate bonds.

The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.

The **VIX-CBOE Volatility Index** measures market expectations of near-term volatility conveyed by S&P 500 Index (SPX) option prices.

The **MOVE-Merrill Lynch Option Volatility Index** is a blended implied normal volatility for constant one-month at-the-money options on U.S. Treasuries.

Price to forward earnings is a measure of the price-to-earnings ratio (P/E) using forecasted earnings. **Price to book value** compares a stock's market value to its book value. **Price to cash flow** is a measure of the market's expectations of a firm's future financial health. **Price to dividends** is the ratio of the price of a share on a stock exchange to the dividends per share paid in the previous year, used as a measure of a company's potential as an investment.

Bonds are subject to interest rate risks. Bond prices generally fall when interest rates rise.

The price of **equity** securities may rise, or fall because of changes in the broad market or changes in a company's financial condition, sometimes rapidly or unpredictably. These price movements may result from factors affecting individual companies, sectors or industries, or the securities market as a whole, such as changes in economic or political conditions. Equity securities are subject to "stock market risk" meaning that stock prices in general may decline over short or extended periods of time.

Small-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies since smaller companies generally have a higher risk of failure. Historically, smaller companies' stock has experienced a greater degree of market volatility than the average stock.

Mid-capitalization investing typically carries more risk than investing in well-established "blue-chip" companies. Historically, mid-cap companies' stock has experienced a greater degree of market volatility than the average stock.

Real estate investments may be subject to a higher degree of market risk because of concentration in a specific industry, sector or geographical sector. Real estate investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrower.

International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies can raise or lower returns. Also, some markets may not be as politically and economically stable as other nations. Investments in **emerging markets** can be more volatile. The normal risks of international investing are heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

Investments in **commodities** may have greater volatility than investments in traditional securities, particularly if the instruments involve leverage. The value of commodity-linked derivative instruments may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Use of leveraged commodity-linked derivatives creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

There is no guarantee that the use of **long and short positions** will succeed in limiting an investor's exposure to domestic stock market movements, capitalization, sector swings or other risk factors. Investing using long and short selling strategies may have higher portfolio turnover rates. Short selling involves certain risks, including additional costs associated with covering short positions and a possibility of unlimited loss on certain short sale positions.

Monthly Market Review

Asia Pacific | January 2018

The Market Insights program provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision-making, the program explores the implications of current economic data and changing market conditions.

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