Monthly Market Review

October 2019

When trying your best may not be enough

When a truck is stuck in mud, continuing to press the accelerator may not be very useful. Sometimes the truck could even dig itself in deeper. Often you need outside help, such as a plank, to give the wheels additional grip to get out of the sticky situation.

The global economy is in a similar situation. A number of political events, from trade wars to Brexit, are dampening corporate sentiment. There is a risk that this could spread to consumption, which has been a key engine preventing the global economy from cooling further. Central banks are working harder, with notable policy easing from the Federal Reserve (Fed) and the European Central Bank (ECB). However, like pressing the accelerator when stuck in mud, this is probably not enough to bring the global economy to a better growth path. Other policies, such as fiscal spending, and a more stable geopolitical environment, will be needed.

Never a dull moment in the world of politics

On top of U.S.-China trade tensions over the past 18 months, a number of political events are taking place that are hurting business confidence. In the UK, the Supreme Court has ruled that British Prime Minister Boris Johnson's suspension of Parliament was unlawful. This throws Brexit into more uncertainty with less than a month until the October 31 deadline. This creates uncertainties in the UK economy, as well as European economies with close economic ties to the UK. In the U.S., the Democratic Party has launched an impeachment inquiry against U.S. President Donald Trump in regard to his dealings with Ukraine.

In Asia, protests in Hong Kong and Indonesia are undermining their governments' ability to support their economies at a time when global trade is at a weak point. The attack on Saudi Arabia's oil facilities on September 15, which had an impact on approximately 5% of global production, pushed oil prices up by 20% overnight. Fortunately, the production disruption was temporary and oil prices soon eased. However, this raised the question of the potential impact on global energy markets if tensions between the U.S. and Iran persist, or even escalate.

Where can businesses hide?

These events are combining to create a tough operating environment for businesses. If these events took place one at a time, CEOs for multinational companies could still find other markets to provide some offset. However, when political and policy uncertainties are rising in multiple locations, there are fewer buffers to work with. As we have noted previously, corporate investment has already been slowing around the world for the past 12 months. A key worry is that this could start to reflect in the job market. A rise in the unemployment rate in Asia, Europe and the U.S. could dampen consumption's growth momentum. This is critical since personal spending represents a significant share of gross domestic product (GDP) in these economies and slower expansion would add more constraints on headline growth. Recession could still be avoided, but a slow growth environment is likely to limit earnings growth, with could then be problematic for equities.

We need more than central banks stepping on the accelerator

Global central banks have been trying their best to protect growth, even though at times the damage comes from suboptimal policy choices from their governments. The Fed cut rates for the second time this cycle by 25bps, while indicating that we could see one more cut before the end of the year, but not much more beyond that. Meanwhile, the ECB opted to cut rates and re-engage in quantitative easing. The Bank of Japan (BoJ) kept policy unchanged in September, but strongly hinted that a rate cut could come at its October policy meeting. In addition, Indonesia, the Philippines and Vietnam cut policy rates in September, alongside a large group of emerging market central banks.

One question is whether such policy easing is going help? In the U.S., the 10-year U.S. Treasury yield in real terms is already below zero, or inflation is higher than the 10-year bond yield. Nominal yields in a number of European countries (Denmark, Finland, Germany, Netherlands) and Japan are already negative. Cheap borrowing costs are good to help companies maintain healthy cash flow and reduce the risk of default. However, companies are slowing investment not because they are struggling to get funding, but rather they don't have the confidence to invest.

Given that many of these geopolitical problems cannot be resolved quickly, wishing for them to go away is not particularly helpful. Government spending should offer some support to the economy. If spent wisely, this can be the plank that helps to get the truck out of the mud. For example, the International Monetary Fund recommended Germany boost public investment, such as infrastructure, digitization and increasing women's participation in the workforce. It has plenty of fiscal resources to do so, but it is constrained by a self-imposed rule of a balanced budget. We did see individual countries propose fiscal boosts to their economies, such as South Korea's supplementary budget to offset the negative impact from its trade tension with Japan. India also announced a tax cut, equivalent to around 0.7% of GDP. We expect more Asian economies to follow suit, but this could be more challenging for the U.S. or European countries.

Tapered growth, tapered return expectations

As global growth ends 2019 on a soft note, monetary easing would help to reduce recession risk but not revive expansion momentum. This mediocre growth environment arguably benefits fixed income. Corporate debt is in a particularly interesting spot. Duration and corporate credit spread operate in opposite directions, providing a steady income opportunity for investors. This can also be extended to select emerging markets fixed income. Healthy household balance sheets should bode well for asset-backed securities in the U.S.

For equities, our emphasis on high dividend defensive stocks remains unchanged. Meanwhile, market corrections offer opportunity for long-term investors on companies that could benefit from structural growth around the world. This could be technology and health care in the U.S., or consumer demand and infrastructure investment in Asia and emerging markets.

Global economy:

- Political developments continue to dominate market sentiment. The U.S. and China have resumed negotiations and are expected to hold high level discussions in early October. The Democratic Party has launched an impeachment inquiry against President Trump. There is no clarity on the Brexit process with one month until the deadline. An attack on Saudi oil facilities has prompted concerns over geopolitical premiums on oil prices, even though the production impact has been limited. Corporate spending has weakened, while early signs of more cautious consumer sentiment is emerging. (GTMA P. 16, 17, 29)
- Given cautious corporate sentiment, central banks are taking a more active role in supporting growth. The Fed cut rates by 25bps as expected, but forecasts only modest rate cuts in the next 12-18 months. The ECB cut its deposit rate by 10bps and re-introduced quantitative easing. The BoJ kept policies unchanged in September, but strongly hinted at more monetary stimulus in the October meeting. (GTMA P. 23, 33)

Equities:

- September was a muted month for global equities. The MSCI All Country World Index was up 1.8%, with the S&P 500 up 1.2%. European and Japanese markets outperformed the U.S. given central bank stimulus. Emerging markets underperformed given a weak trade cycle and a strong U.S. dollar (USD). (GTMA P. 23, 35)
- In Asia, a surprise tax cut gave Indian equities a shot in the arm, with Sensex up 4% in September. The ASEAN market underperformed partly due to volatile oil prices, triggering concerns over weaker currencies, especially since markets such as Indonesia and the Philippines are oil importers and run current account deficits. Downgrades in earnings forecasts are also more significant for Asia relative to other emerging markets. (GTMA P. 35)

Fixed income:

- 10-year U.S. Treasury (UST) yields rose on the back of some positive surprises in economic data and a Fed that does not see the need for significant rate cuts. However, geopolitical uncertainties are prompting investors to be more defensive again. and yield fell to below 1.7%. The 2-10-year slope steepened by 10bps in the month. (GTMA P. 46)
- U.S. high yield corporate debt had a flat month as a modest rise in UST yields has been offset by credit spread tightening. Likewise, emerging markets hard currency high yield debt outperformed high quality due to spread tightening, despite a stronger USD. (GTMA P. 47, 48)

Other assets:

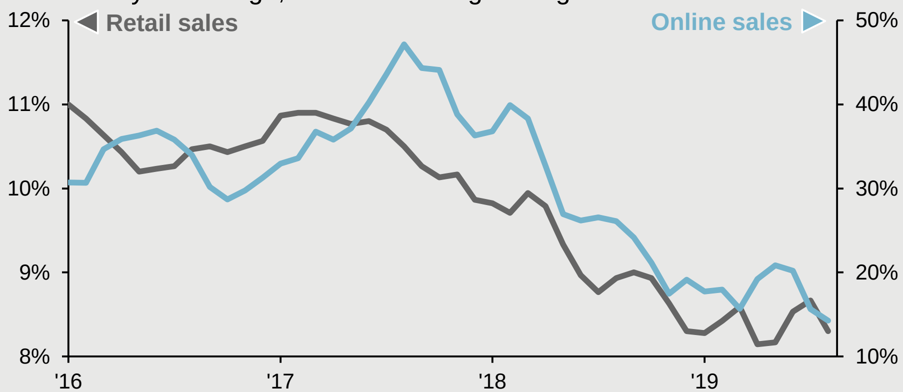
- An attack on key Saudi Arabia oil infrastructure saw the price of Brent crude shoot up by 20% to USD 69pb, but it soon fell back to around USD 60pb as supply disruption was not as serious as first believed. Nonetheless, this prompts markets to pay more attention to geopolitical tension between the U.S. and Iran, and cause a potential risk premium in energy prices. Gold was in consolidation along with the UST, with the price of gold pushing back to test the low of USD 1,500oz. (GTMA P. 60, 66)
- The USD was largely flat in September, with the USD index hugging around 99. The Japanese yen and euro weakened on the back of actual (ECB) and potential (BoJ) monetary easing. Meanwhile, the British pound and Canadian dollar appreciated. (GTMA P. 23, 64)

Market Bulletins - September:

- Super Mario goes out with a bang
- Entering uncharted waters: Understanding negative bond yields
- Not the same as last time

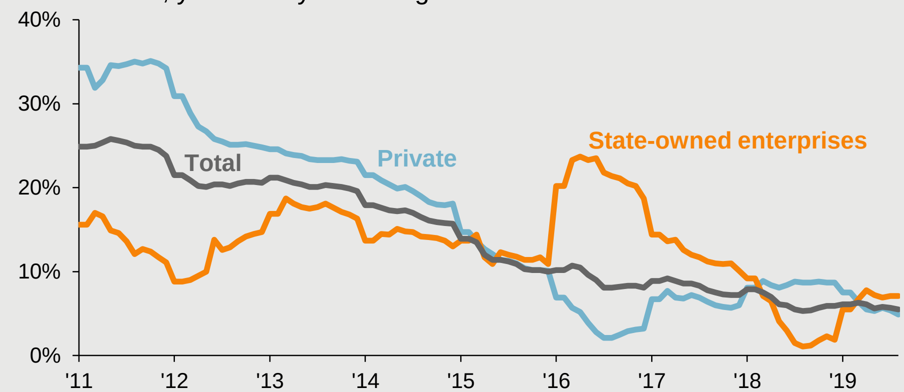
Retail and online sales

Year-over-year change, 3-month moving average



Fixed asset investment

Year-to-date, year-over-year change

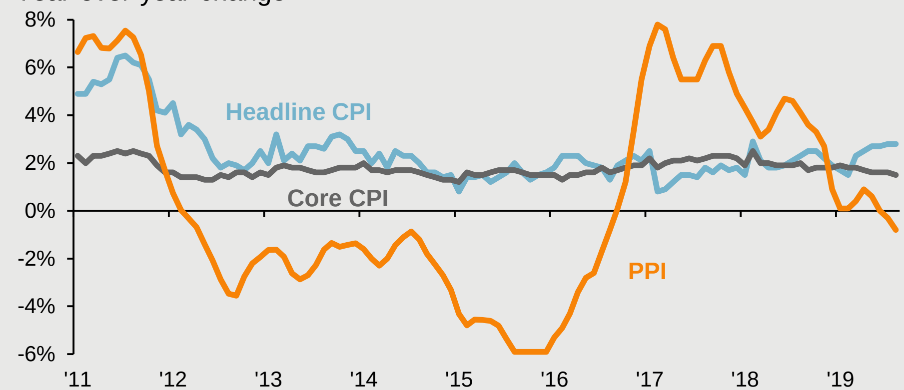


Sales of passenger vehicles

Number of units sold, year-over-year change, 3-month moving average

CPI and PPI Inflation

Year-over-year change



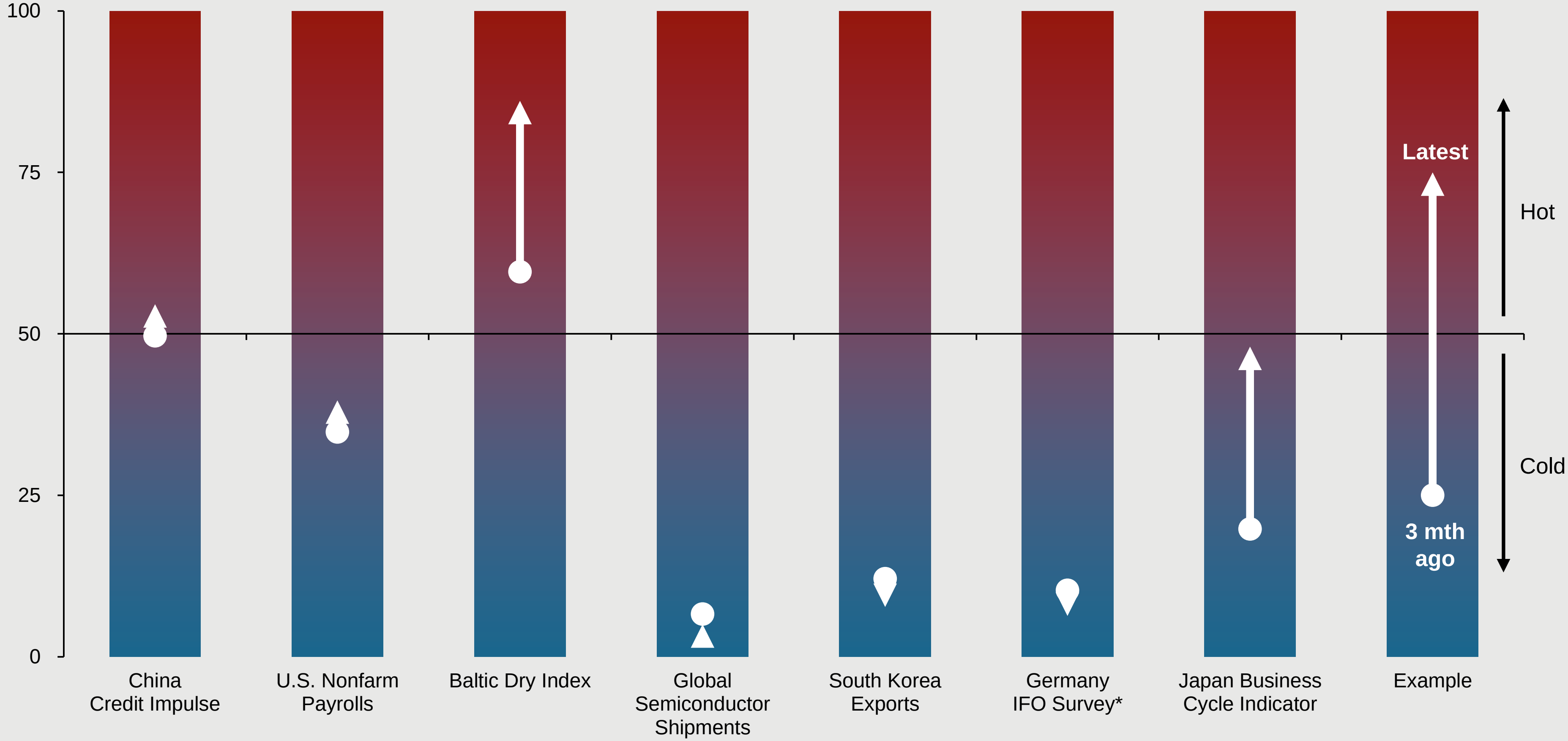
Source: CEIC, National Bureau of Statistics of China, J.P. Morgan Asset Management; (Bottom left) China Association of Automobile Manufacturers.
CPI = Consumer Price Index; PPI = Producer Price Index.
Guide to the Markets – Asia. Data reflect most recently available as of 30/09/19.

J.P.Morgan Asset Management

Global business cycle thermometer

Global business cycle indicators

Current percentile rank relative to past 15 years of historical data



Source: Baltic Exchange, Bloomberg, CEIC, CESifo Group Munich, China Central Depository & Clearing, Economic and Social Research Institute Japan, Korea International Trade Association, National Bureau of Statistics, Semiconductor Industry Association, The People's Bank of China, J.P. Morgan Asset Management.

*Data for Germany IFO Survey only available from January 2005 onwards.

Indicators are: *China Credit Impulse* – Year-over-year change of credit flow (net total social financing plus government financing) as a percentage of nominal GDP; *U.S. Nonfarm Payrolls* – Monthly change in U.S. nonfarm employment (three-month moving average); *Baltic Dry Index* – Composite index used as a proxy for dry bulk shipping stocks and a bellwether for the general global shipping market (Monthly change); *Global Semiconductor Shipments* – Year-over-year change in monthly semiconductor shipments; *South Korea Exports* – Year-over-year change of South Korean exports; *Germany IFO Survey* – Composite index measuring perception of current business climate and expectations for the next six months (Monthly change); *Japan Business Cycle Indicator* – Composite index aggregating leading indicators intended to forecast future Japan economic activity (Monthly change).

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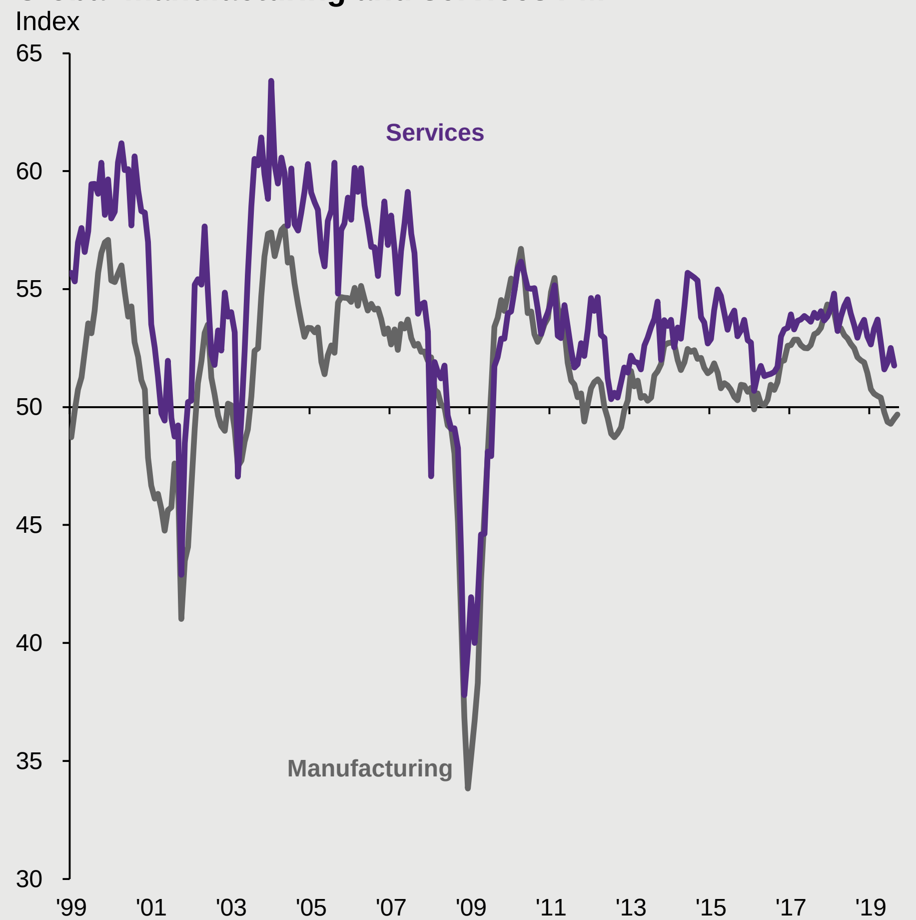
Global economy

Global manufacturing and services PMI



Global manufacturing PMI breakdown

	Oct '18	Nov '18	Dec '18	Jan '19	Feb '19	Mar '19	Apr '19	May '19	Jun '19	Jul '19	Aug '19	Sep '19
Global											49.5	49.7
DM*											48.8	48.6
EM**											50.4	51.0
U.S.											50.3	51.1
Euro area											47.0	45.7
Germany											43.5	41.7
France											51.1	50.1
Italy											48.7	47.8
Spain											48.8	47.7
UK											47.4	48.3
Australia											50.9	50.3
Japan											49.3	48.9
China (Markit)											50.4	51.4
China (NBS)											49.5	49.8
Korea											49.0	48.0
Taiwan											47.9	50.0
Indonesia											49.0	49.1
India											51.4	51.4
Russia											49.1	46.3
Brazil											52.5	53.4
Mexico											49.0	49.1
# markets above 50	14	12	10	10	9	9	13	9	6	3	6	6

Source: Australian Industry Group, J.P. Morgan Economic Research, Markit, J.P. Morgan Asset Management.
PMIs are relative to 50, which indicates deceleration (below 50) or acceleration (above 50) of the sector. Heatmap colors are based on PMI relative to the 50 level, with green (red) corresponding to acceleration (deceleration). *Developed market includes Australia, Canada, Denmark, Euro area, Japan, New Zealand, Norway, Sweden, Switzerland, UK and U.S. **Emerging market includes Brazil, Chile, China, Colombia, Croatia, Czech Republic, Hong Kong SAR, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Philippines, Poland, Romania, Russia, Saudi Arabia, Singapore, South Africa, Taiwan, Thailand, Turkey and Vietnam.
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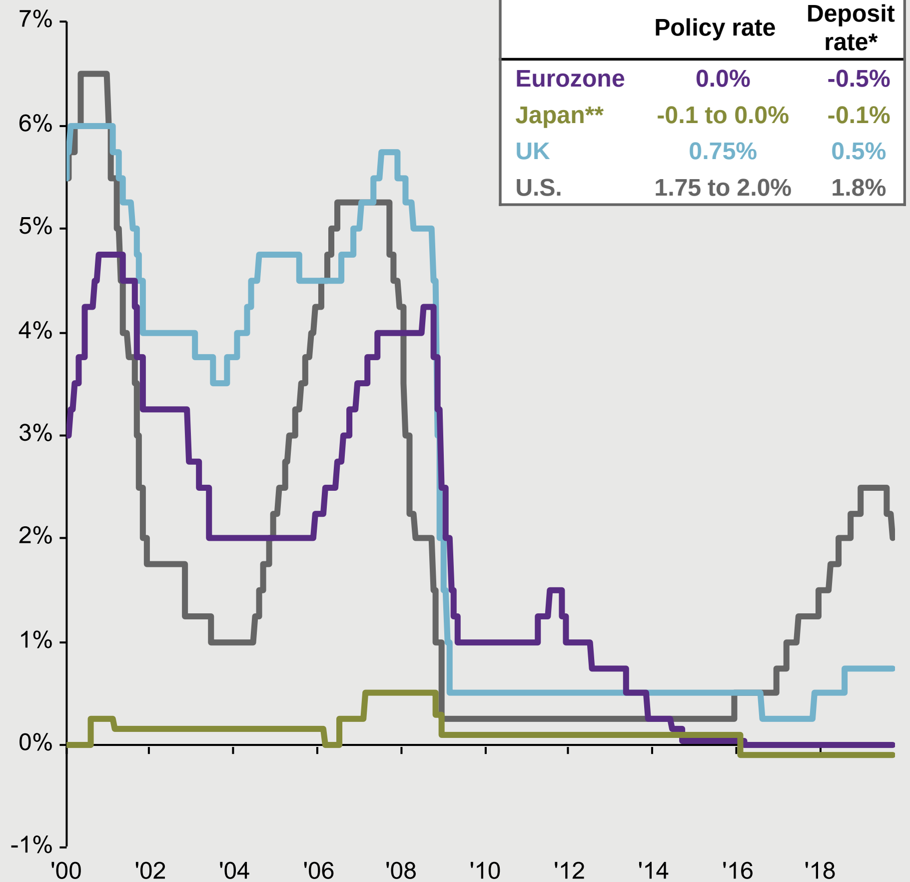
Global economy

G4 central bank key policy rates

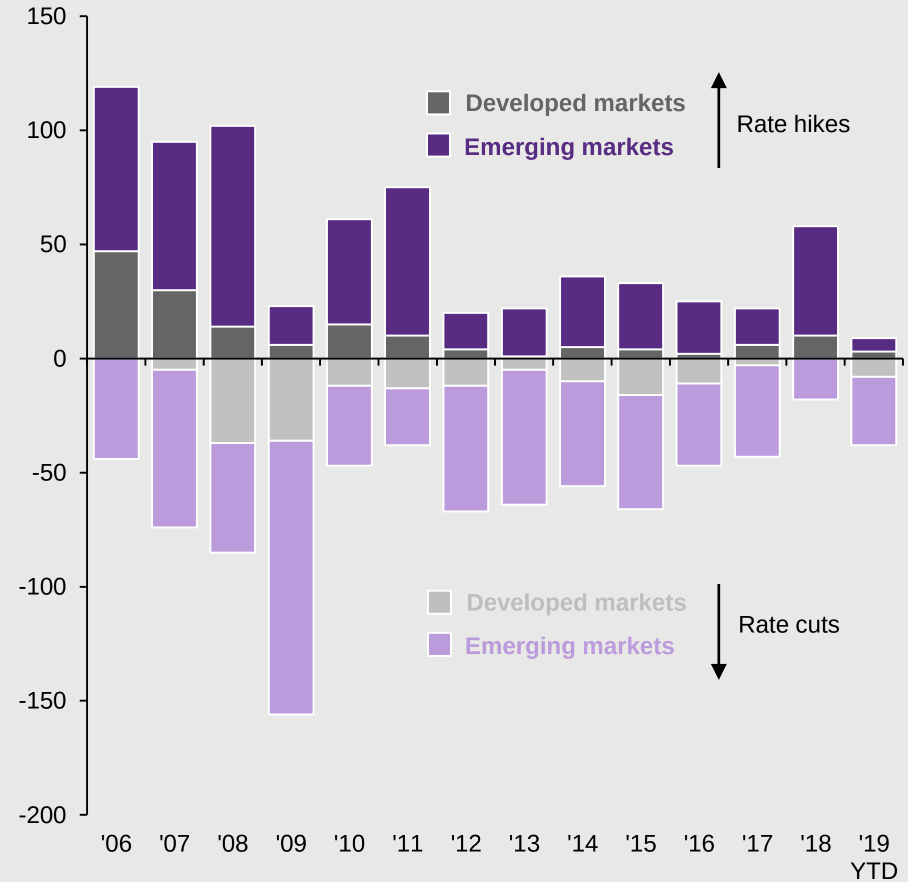
Per annum



	Policy rate	Deposit rate*
Eurozone	0.0%	-0.5%
Japan**	-0.1 to 0.0%	-0.1%
UK	0.75%	0.5%
U.S.	1.75 to 2.0%	1.8%

Changes in central bank policy rates

Number of hikes or cuts***



Source: J.P. Morgan Asset Management; (Left) FactSet; (Right) BIS.
G4 are the Bank of England, the Bank of Japan (BoJ), 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 has adopted 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 hold current accounts at the BoJ. The UK deposit rate has not been actively used as a monetary policy tool since late 2017. ***Count covers the 38 central banks included in the Bank for International Settlements' central bank policy monitor. Year-to-date data reflect most recently available as of 31/08/19. Past performance is not a reliable indicator of current and future results.
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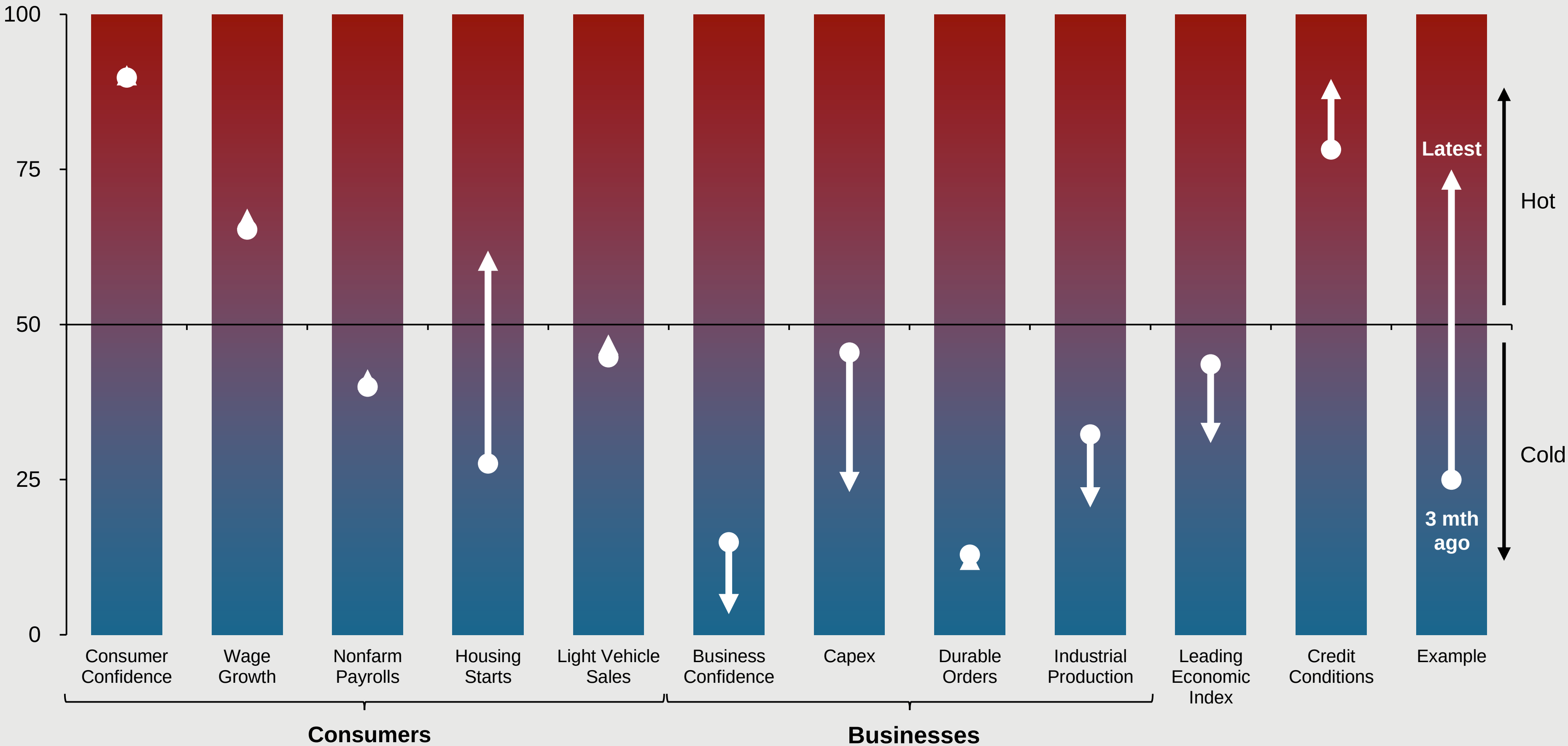
U.S. business cycle indicators

Current percentile rank relative to range of data since Jan. 1990



Source: BEA, Conference Board U.S., FactSet, U.S. Census Bureau, U.S. Department of Labor, Wards Intelligence, J.P. Morgan Asset Management.
Indicators are: *Consumer Confidence* – Monthly survey index of how consumers perceive their own financial status and the general economy; *Wage Growth* – Average hourly earnings of production and non-supervisory workers; *Nonfarm Payrolls* – Monthly change in U.S. nonfarm employment (three-month moving average); *Housing Starts* – Number of private housing units that construction has started within a specified timeframe; *Light Vehicle Sales* – Cars and passenger trucks sold in a given month; *Business Confidence* – Monthly survey of Chief Executive Officers about their outlook for the economy; *Capex* – Monthly new orders of non-defense capital goods (excluding aircraft); *Durable Orders* – Monthly new orders of durable goods in the manufacturing sector, seasonally adjusted; *Industrial Production* – Monthly output of the industrial sector; *Leading Economic Index* – An index aggregating values of 10 key variables intended to forecast future U.S. economic activity; *Credit Conditions* – Leading Credit Index that aggregates performance of six financial market instruments to track credit conditions in the U.S. economy.
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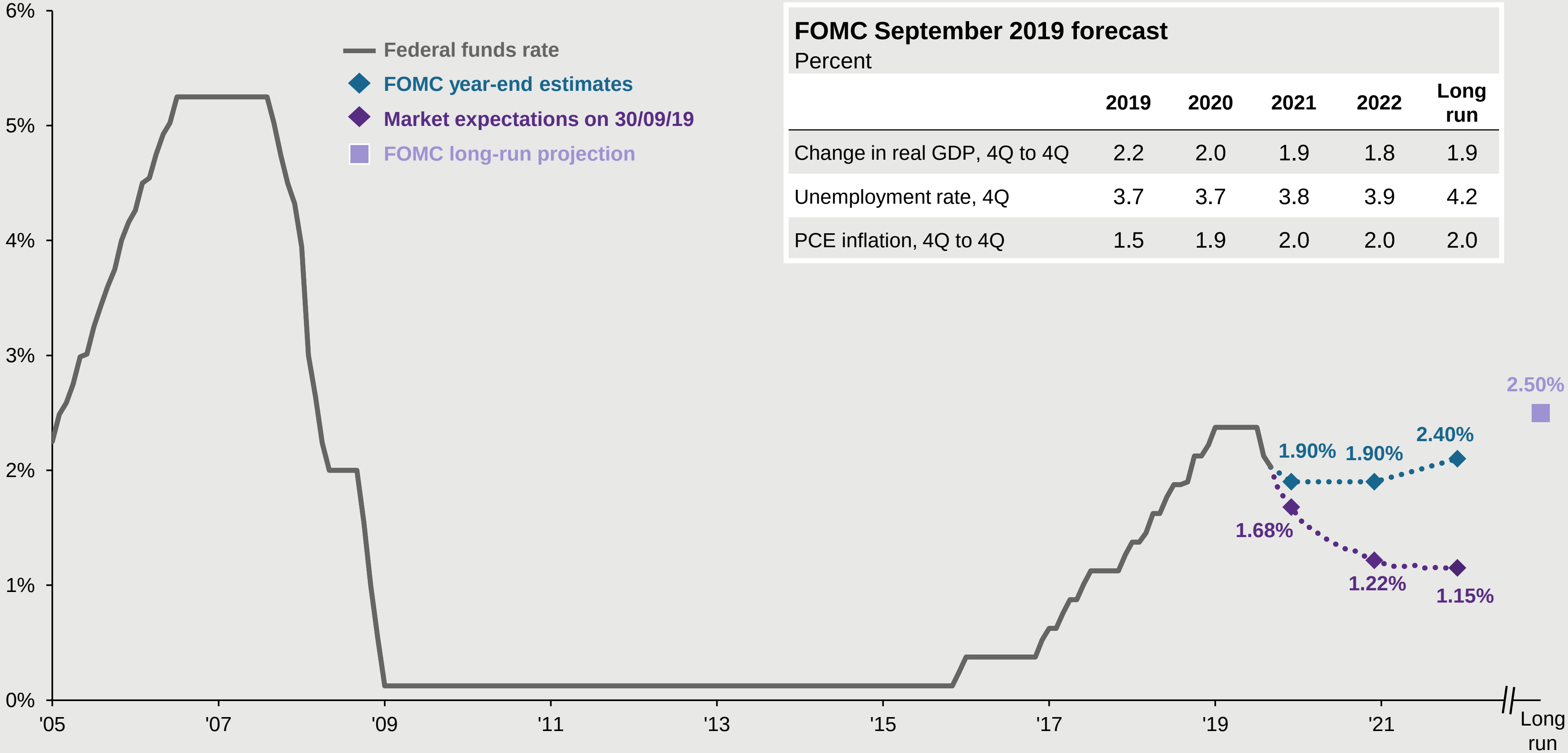
Global economy

Federal funds rate expectations

FOMC and market expectations for the fed funds rate



FOMC September 2019 forecast

Percent

	2019	2020	2021	2022	Long run
Change in real GDP, 4Q to 4Q	2.2	2.0	1.9	1.8	1.9
Unemployment rate, 4Q	3.7	3.7	3.8	3.9	4.2
PCE inflation, 4Q to 4Q	1.5	1.9	2.0	2.0	2.0

Source: Bloomberg Finance L.P., FactSet, U.S. Federal Reserve, J.P. Morgan Asset Management.
Market expectations are the federal funds rates priced into the Fed Fund futures market as of 30/09/19. Federal Reserve projections shown are median estimates of FOMC participants.
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Global and Asia equity market returns

Equities

												10-yrs ('09 - '19)	
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	3Q '19	YTD '19	Ann. Ret.	Ann. Vol.
India 102.8%	ASEAN 32.4%	U.S. 2.1%	India 26.0%	U.S. 32.4%	China A 52.1%	Japan 9.9%	Taiwan 19.6%	China 54.3%	U.S. -4.4%	Taiwan 5.9%	China A 24.6%	U.S. 13.2%	China A 25.8%
China A 98.5%	Korea 27.2%	ASEAN -6.1%	China 23.1%	Japan 27.3%	India 23.9%	China A 2.4%	U.S. 12.0%	Korea 47.8%	India -7.3%	Japan 3.3%	U.S. 20.6%	Taiwan 8.2%	India 21.7%
Taiwan 80.2%	Taiwan 22.7%	Europe -10.5%	ASEAN 22.8%	Europe 26.0%	U.S. 13.7%	U.S. 1.4%	Korea 9.2%	India 38.8%	Taiwan -8.2%	U.S. 1.7%	Taiwan 16.7%	ASEAN 6.0%	Korea 20.4%
ASEAN 75.0%	India 20.9%	Korea -11.8%	APAC ex-JP 22.6%	Taiwan 9.8%	Taiwan 10.1%	Europe -2.3%	APAC ex-JP 7.1%	APAC ex-JP 37.3%	ASEAN -8.4%	Europe -1.8%	Europe 14.4%	Japan 5.8%	China 20.3%
APAC ex-JP 73.7%	APAC ex-JP 18.4%	Japan -14.2%	Korea 21.5%	Korea 4.2%	China 8.3%	India -6.1%	ASEAN 6.2%	China A 32.6%	Japan -12.6%	China A -3.0%	Japan 11.5%	APAC ex-JP 5.7%	Taiwan 16.7%
Korea 72.1%	Japan 15.6%	APAC ex-JP -15.4%	Europe 19.9%	China 4.0%	ASEAN 6.4%	Korea -6.3%	Japan 2.7%	ASEAN 30.1%	APAC ex-JP -13.7%	APAC ex-JP -3.9%	APAC ex-JP 8.0%	Europe 5.2%	APAC ex-JP 16.5%
China 62.6%	U.S. 15.1%	China -18.2%	Taiwan 17.7%	APAC ex-JP 3.7%	APAC ex-JP 3.1%	China -7.6%	China 1.1%	Taiwan 28.5%	Europe -14.3%	Korea -4.5%	China 7.8%	China 5.1%	Europe 16.3%
Europe 36.8%	China 4.8%	Taiwan -20.2%	U.S. 16.0%	China A -2.6%	Japan -3.7%	APAC ex-JP -9.1%	Europe 0.2%	Europe 26.2%	China -18.7%	China -4.7%	ASEAN 4.6%	Korea 4.5%	ASEAN 14.9%
U.S. 26.5%	Europe 4.5%	China A -20.5%	China A 10.9%	India -3.8%	Europe -5.7%	Taiwan -11.0%	India -1.4%	Japan 24.4%	Korea -20.5%	India -5.2%	India 2.1%	India 4.1%	Japan 12.9%
Japan 6.4%	China A -8.4%	India -37.2%	Japan 8.4%	ASEAN -4.5%	Korea -10.7%	ASEAN -18.4%	China A -15.2%	U.S. 21.8%	China A -27.6%	ASEAN -5.7%	Korea -0.6%	China A 4.0%	U.S. 12.5%

Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Returns are total returns based on MSCI indices, except the U.S., which is the S&P 500 and China A, which are based on the CSI 300 index in U.S. dollar terms. China return is based on the MSCI China index. 10-yr total (gross) return data is used to calculate annualized returns (Ann. Ret.) and annualized volatility (Ann. Vol.) and reflect the period 30/09/09 – 30/09/19. Past performance is not a reliable indicator of current and future results.
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Global fixed income: Yields and returns

Global bond opportunities

Sector	YTM	Duration* (years)	Correl. to MSCI AC World**	Correl. to 10-year UST
Asia HY	7.5%	4.2	0.65	0.00
U.S. HY	6.3%	3.1	0.80	-0.20
Local EMD	6.0%	4.9	0.65	-0.03
USD EMD	5.2%	7.6	0.56	0.25
USD Asian	4.4%	5.4	0.50	0.34
Europe HY	3.7%	3.2	0.78	-0.28
U.S. IG	2.9%	7.8	0.20	0.67
Cash	1.8%	0.2	-0.01	0.07
U.S. Treasury	1.7%	6.6	-0.39	0.99
DM Gov't	0.8%	8.6	0.13	0.61

Fixed income sector returns

2014	2015	2016	2017	2018	3Q '19	YTD '19	5-yrs Ann. Ret.
USD Asian 8.3%	Asia HY 5.2%	U.S. HY 17.1%	Europe HY 21.0%	Cash 1.8%	U.S. IG 3.0%	U.S. IG 13.2%	Asia HY 5.7%
U.S. IG 7.5%	USD Asian 2.8%	Local EMD 11.4%	Local EMD 15.4%	U.S. Treas 0.9%	U.S. Treas 2.4%	USD EMD 12.1%	U.S. HY 5.4%
Asia HY 6.1%	USD EMD 1.2%	Asia HY 11.2%	USD EMD 9.3%	DM Gov't -0.7%	USD Asian 1.9%	U.S. HY 11.4%	USD EMD 5.1%
USD EMD 5.5%	U.S. Treas 0.8%	USD EMD 10.2%	U.S. HY 7.5%	USD Asian -0.8%	USD EMD 1.3%	USD Asian 10.1%	USD Asian 5.0%
U.S. Treas 5.1%	Cash 0.0%	U.S. IG 6.1%	Asia HY 6.9%	U.S. HY -2.1%	U.S. HY 1.3%	Asia HY 10.1%	U.S. IG 4.7%
U.S. HY 2.5%	U.S. IG -0.7%	USD Asian 5.8%	DM Gov't 6.8%	U.S. IG -2.5%	DM Gov't 1.1%	U.S. Treas 7.7%	U.S. Treas 2.9%
DM Gov't 0.7%	DM Gov't -2.6%	Europe HY 3.4%	U.S. IG 6.4%	Asia HY -3.2%	Cash 0.5%	DM Gov't 6.6%	DM Gov't 2.1%
Cash 0.0%	U.S. HY -4.5%	DM Gov't 1.6%	USD Asian 5.8%	USD EMD -4.6%	Asia HY 0.1%	Local EMD 6.5%	Europe HY 1.4%
Europe HY -6.0%	Europe HY -7.6%	U.S. Treas 1.0%	U.S. Treas 2.3%	Local EMD -6.7%	Local EMD -1.9%	Europe HY 4.5%	Cash 0.9%
Local EMD -6.1%	Local EMD -18.0%	Cash 0.3%	Cash 0.8%	Europe HY -8.2%	Europe HY -2.7%	Cash 1.8%	Local EMD -0.4%

Source: Barclays, Bloomberg, 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 Bond*), Bloomberg Barclays Pan European High Yield (*Europe HY*), J.P. Morgan Government Bond Index – Global Traded (*DM Government Bond*), J.P. Morgan Asia Credit High Yield Index (*Asia 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 U.S. dollars and reflect the period from 30/09/14 – 30/09/19. *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 MSCI AC World Index 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.
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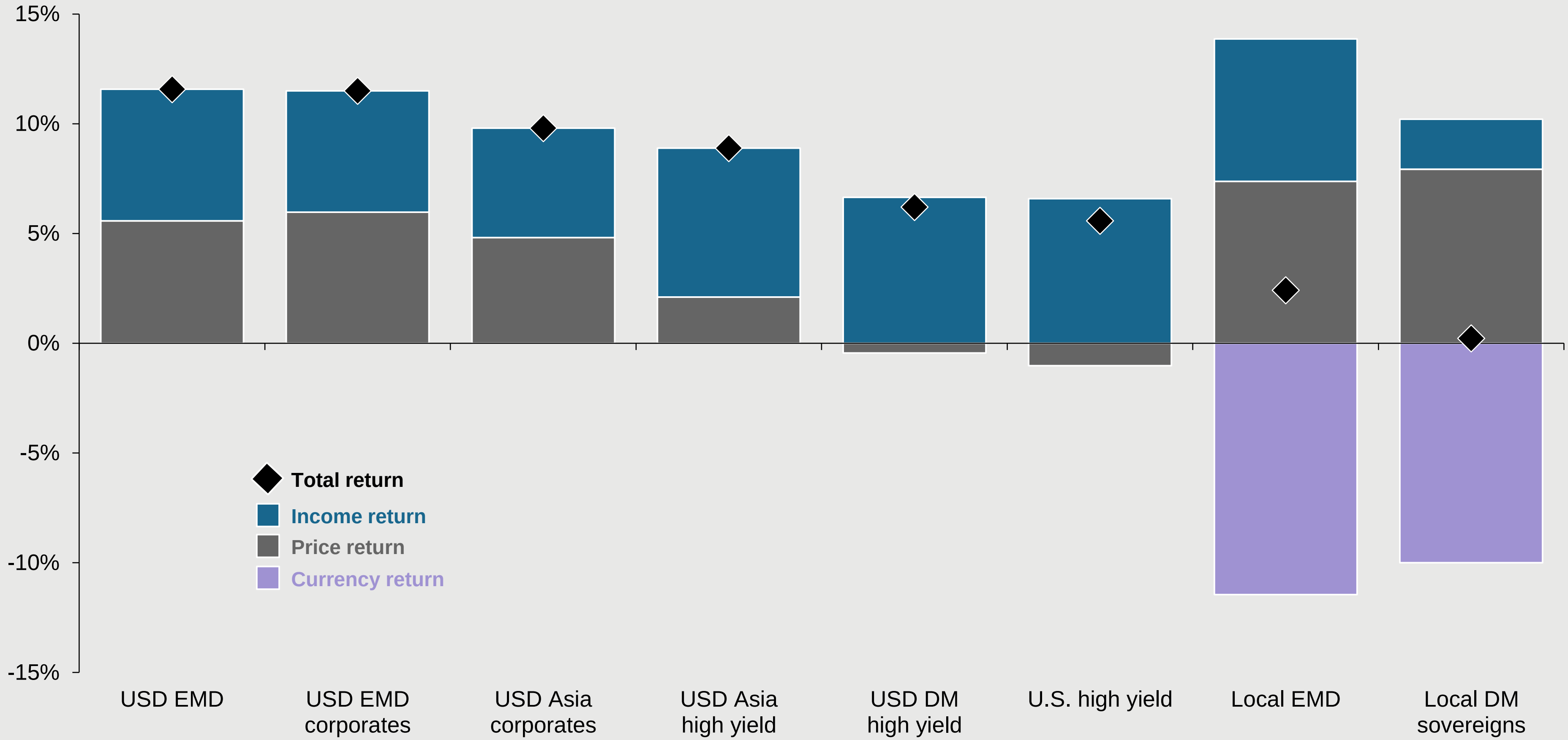
Debt return composition
Last 12 months



Source: J.P. Morgan Economic Research, J.P. Morgan Asset Management.
Based on J.P. Morgan Asia Credit High Yield Index (*USD Asia high yield*), J.P. Morgan CEMBI (*USD EMD corporates*), J.P. Morgan EMBI Global (*USD EMD*), J.P. Morgan Asia Credit Corporates Index (*USD Asia corporates*), J.P. Morgan Developed Market HY Index (*USD DM high yield*), J.P. Morgan Domestic High Yield Index (*U.S. high yield*), J.P. Morgan GBI-EM Global (*Local EMD*), J.P. Morgan GBI-DM (*Local DM sovereigns*). Past performance is not a reliable indicator of current and future results.
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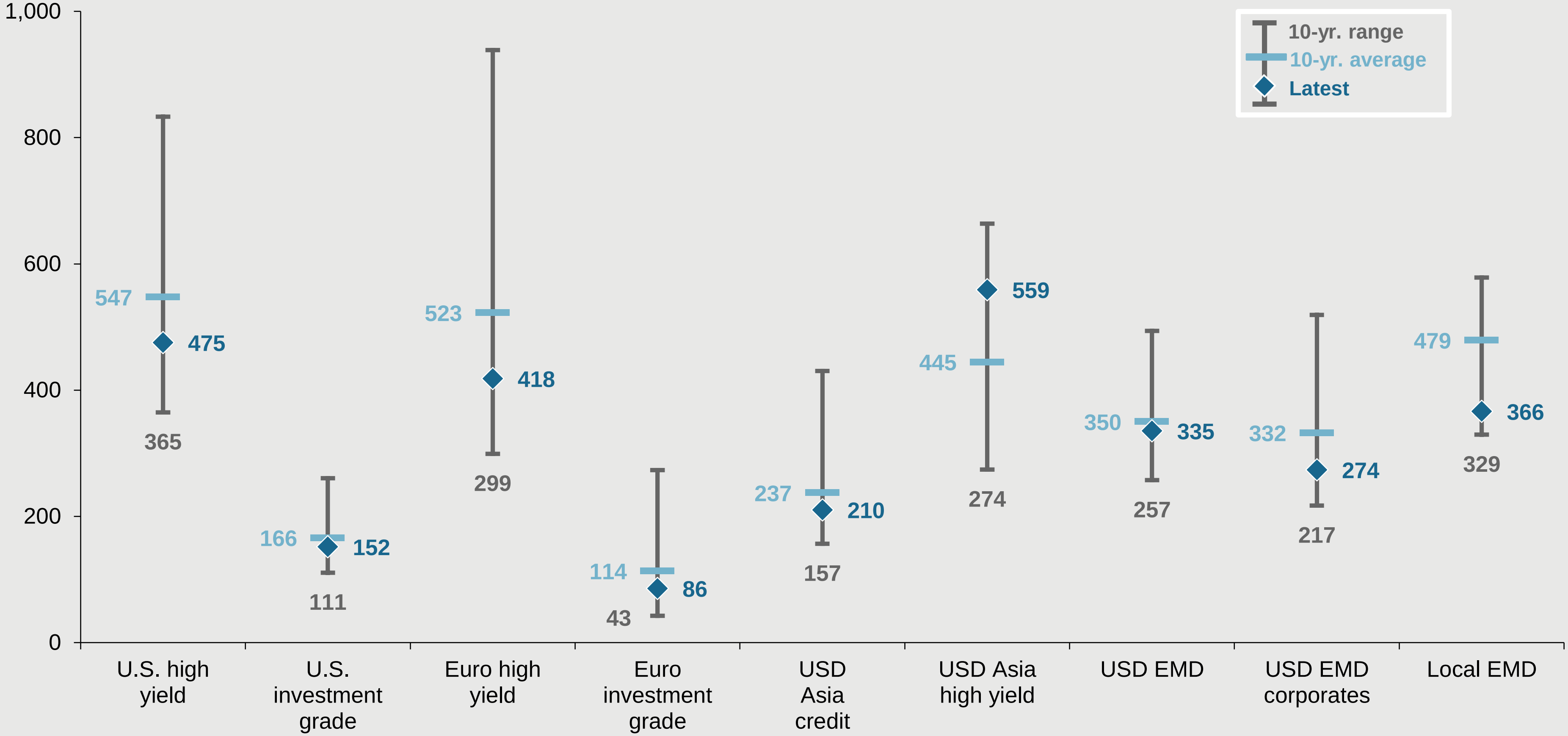
Spread to worst across fixed income sub-sectors

Basis points



Source: iBoxx, ICE BofA Merrill Lynch, 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*), J.P. Morgan Euro High Yield Index (*Euro high yield*), iBoxx EUR corporates (*Euro investment grade)*, J.P. Morgan Asia Credit Index (JACI) (*USD Asia credit*), J.P. Morgan Asia Credit High Yield Index (*USD Asia high yield*), J.P. Morgan EMBI Global (*EMD USD*), J.P. Morgan Corporate Emerging Markets Bond Index – CEMBI (*EMD USD corporates*), J.P. Morgan GBI-EM Global (*Local EMD*). 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 30/09/19.

Asset class returns

												10-yrs ('09 - '19)	
2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**3Q '19**	**YTD '19**	**Ann. Ret.**	**Ann. Vol.**
EM ex-Asia 91.3%	U.S. REITs 28.5%	U.S. REITs 8.7%	APAC ex-JP 22.6%	DM Equities 27.4%	U.S. REITs 30.4%	Asian Bonds 2.8%	EM ex-Asia 27.1%	APAC ex-JP 37.3%	Cash 1.8%	U.S. REITs 7.7%	U.S. REITs 26.8%	U.S. REITs 13.0%	EM ex-Asia 21.1%
APAC ex-JP 73.7%	APAC ex-JP 18.4%	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%	Asian Bonds -0.8%	Asian Bonds 1.9%	DM Equities 18.1%	DM Equities 9.6%	APAC ex-JP 16.4%
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%	Global Bonds -1.2%	EMD 1.3%	EMD 12.1%	Global Corp HY 7.3%	U.S. REITs 15.6%
Diversified 41.0%	Global Corp HY 13.8%	Asian Bonds 4.1%	U.S. REITs 17.8%	APAC ex-JP 3.7%	DM Equities 5.5%	Cash 0.0%	U.S. REITs 8.6%	Diversified 17.0%	Global Corp HY -3.5%	Global Bonds 0.7%	Diversified 11.4%	Diversified 6.7%	DM Equities 13.0%
DM Equities 30.8%	Diversified 13.1%	Global Corp HY 2.6%	EM ex-Asia 17.0%	U.S. REITs 2.5%	Diversified 4.1%	DM Equities -0.3%	Diversified 8.3%	Global Corp HY 10.3%	U.S. REITs -4.6%	DM Equities 0.7%	Asian Bonds 10.1%	EMD 6.5%	Diversified 8.7%
U.S. REITs 28.6%	DM Equities 12.3%	Cash 0.1%	DM Equities 16.5%	Cash 0.0%	APAC ex-JP 3.1%	Global Bonds -3.2%	DM Equities 8.2%	EMD 9.3%	EMD -4.6%	Cash 0.5%	Global Corp HY 9.7%	Asian Bonds 6.1%	Global Corp HY 6.8%
Asian Bonds 28.3%	EMD 12.0%	Diversified -2.4%	Diversified 15.9%	Asian Bonds -1.4%	Global Bonds 0.6%	Diversified -3.2%	APAC ex-JP 7.1%	Global Bonds 7.4%	Diversified -5.9%	Global Corp HY 0.4%	EM ex-Asia 8.5%	APAC ex-JP 5.7%	EMD 6.4%
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%	Asian Bonds 5.8%	Asian Bonds 5.8%	EM ex-Asia -6.8%	Diversified 0.1%	APAC ex-JP 8.0%	Global Bonds 2.3%	Global Bonds 4.8%
Global Bonds 6.9%	Global Bonds 5.5%	APAC ex-JP -15.4%	Global Bonds 4.3%	EMD -6.6%	Cash 0.0%	APAC ex-JP -9.1%	Global Bonds 2.1%	U.S. REITs 5.1%	DM Equities -8.2%	APAC ex-JP -3.9%	Global Bonds 6.3%	Cash 0.5%	Asian Bonds 4.2%
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%	APAC ex-JP -13.7%	EM ex-Asia -4.7%	Cash 1.8%	EM ex-Asia 0.3%	Cash 0.2%

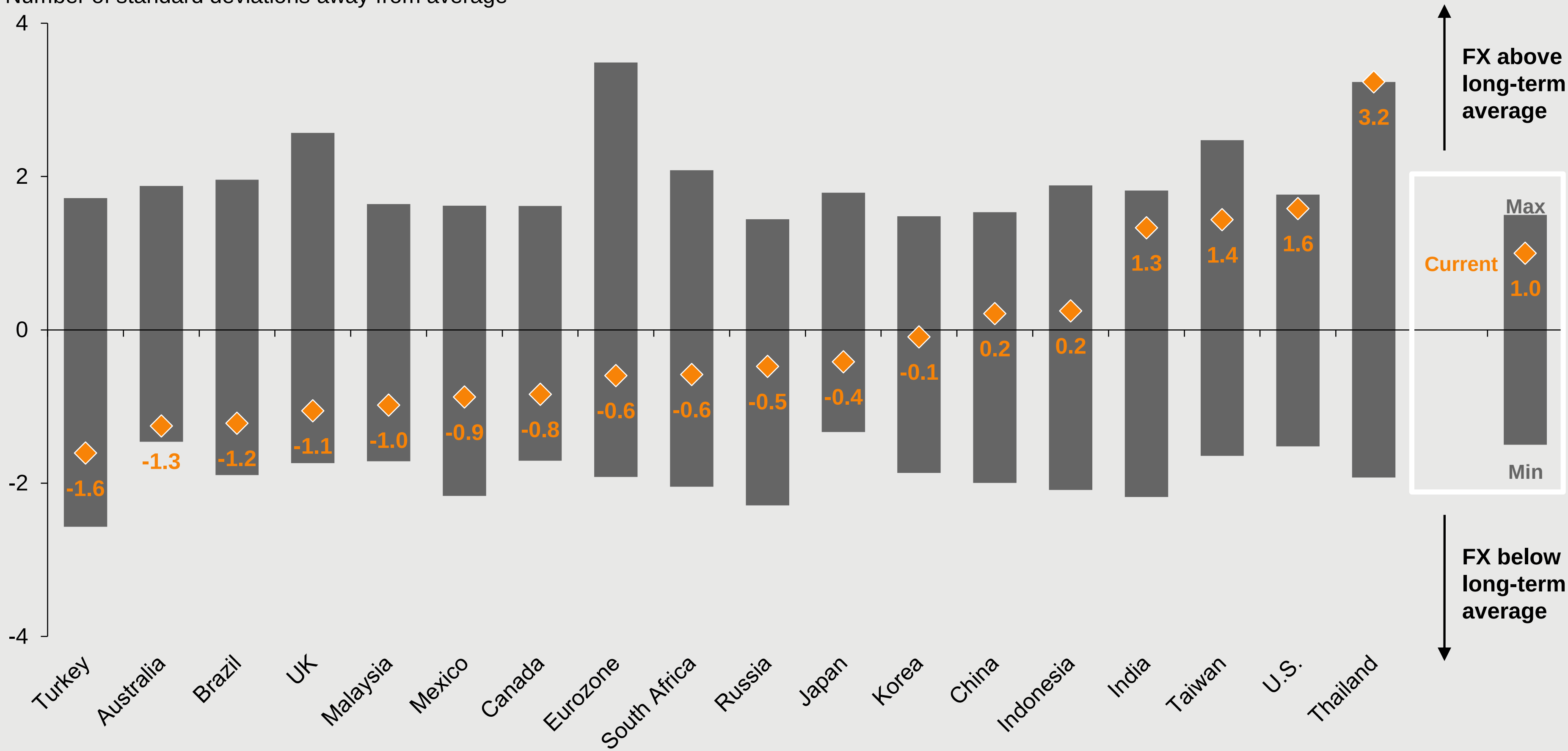
Source: Bloomberg Finance L.P., Dow Jones, FactSet, J.P. Morgan Economic Research, MSCI, J.P. Morgan Asset Management.
The "Diversified" portfolio assumes the following weights: 20% in the MSCI World Index (*DM Equities*), 20% in the MSCI AC Asia Pacific ex-Japan (*APAC ex-JP*), 5% in the average of 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 30/09/09 – 30/09/19. 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 30/09/19.

Other asset classes

J.P.Morgan Asset Management

Currency deviation from 10-year average in real effective exchange rate* terms

Number of standard deviations away from average



Source: FactSet, J.P. Morgan Economic Research, J.P. Morgan Asset Management.
*The real trade-weighted exchange rate index is the weighted average of a market'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 market's currency, with other markets within the basket.
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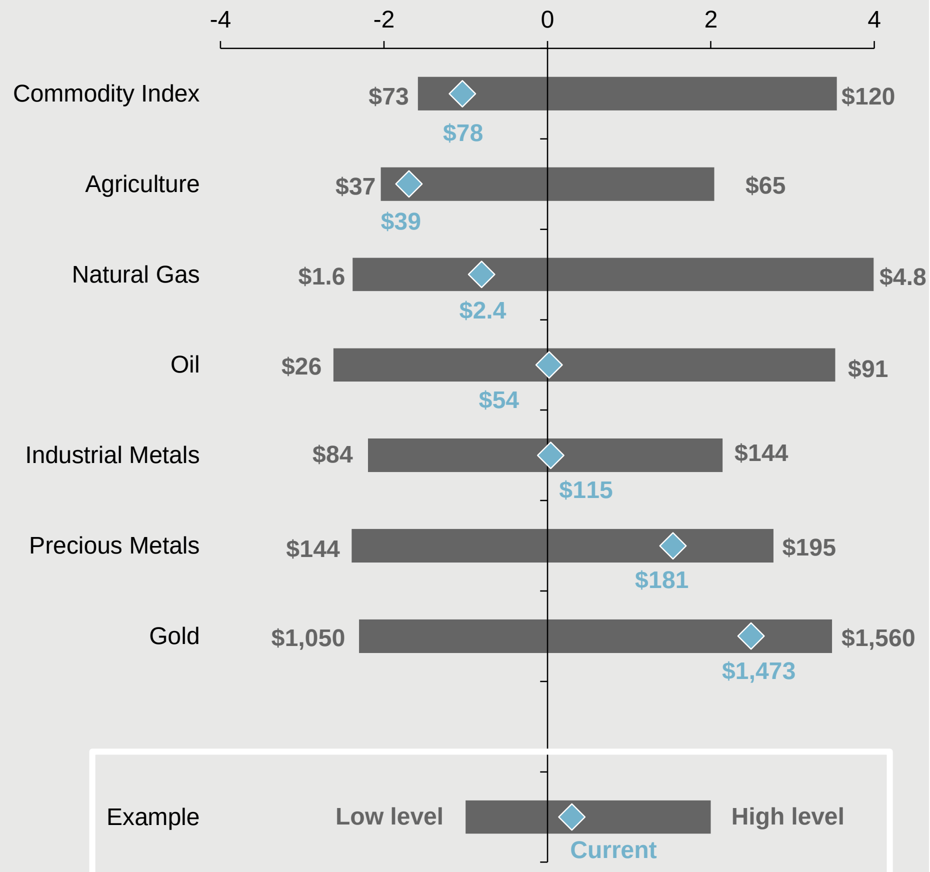
Guide to the Markets – Asia. Data reflect most recently available as of 30/09/19.

J.P.Morgan Asset Management

Commodity prices

Commodity price z-scores for the past five years, USD per unit



Returns

2014	2015	2016	2017	2018	3Q '19	2014 - 2019 Ann. Ret.	2014 - 2019 Ann. Vol.
Euro M&M (FI) 8.6%	Energy (FI) -7.3%	Gold (E) 62.9%	M&M (E) 37.5%	Euro M&M (FI) -0.9%	Gold (E) 6.0%	EM M&M (FI) 6.6%	Gold (E) 35.7%
Energy (FI) 2.1%	EM M&M (FI) -10.9%	M&M (E) 57.8%	Agri. (E) 20.3%	US M&M (FI) -3.5%	EM M&M (FI) 2.3%	Gold (E) 5.0%	M&M (E) 24.3%
Agri. (E) -0.2%	Agri. (E) -13.7%	US M&M (FI) 45.5%	EM M&M (FI) 14.7%	Energy (FI) -3.7%	Energy (FI) 1.4%	US M&M (FI) 4.4%	Energy (E) 19.4%
EM M&M (FI) -0.8%	Euro M&M (FI) -16.1%	EM M&M (FI) 32.4%	US M&M (FI) 9.9%	EM M&M (FI) -4.1%	Euro M&M (FI) 0.9%	Energy (FI) 3.4%	Comdty. 13.7%
US M&M (FI) -4.4%	Energy (E) -20.6%	Energy (E) 29.2%	Gold (E) 9.4%	Agri. (E) -8.9%	US M&M (FI) 0.8%	Agri. (E) 3.4%	US M&M (FI) 13.2%
Energy (E) -15.1%	US M&M (FI) -23.7%	Euro M&M (FI) 21.9%	Energy (E) 9.1%	Comdty. -11.2%	Comdty. -1.8%	Euro M&M (FI) 2.3%	Agri. (E) 11.8%
Gold (E) -16.4%	Comdty. -24.7%	Agri. (E) 15.7%	Energy (FI) 9.0%	Energy (E) -11.4%	Agri. (E) -3.0%	M&M (E) -1.1%	EM M&M (FI) 10.8%
Comdty. -17.0%	Gold (E) -26.3%	Comdty. 11.8%	Euro M&M (FI) 3.9%	Gold (E) -13.0%	Energy (E) -6.3%	Energy (E) -2.8%	Euro M&M (FI) 8.2%
M&M (E) -19.0%	M&M (E) -40.1%	Energy (FI) 11.1%	Comdty. 1.7%	M&M (E) -17.8%	M&M (E) -11.8%	Comdty. -7.2%	Energy (FI) 5.8%

Source: Bloomberg Finance L.P., FactSet, J.P. Morgan Asset Management; (Left) CME; (Right) Barclays, J.P. Morgan Economic Research, MSCI. Commodities are represented by the appropriate Bloomberg Commodity sub-index priced in U.S. dollars. Crude oil shown is West Texas Intermediate (WTI) crude. Other commodity prices are represented by futures contracts. Z-scores are calculated using daily prices over the past five years. Based on Bloomberg Commodity Index *(Comdty.)*; MSCI ACWI Select – Energy Producers IMI, Metals & Mining Producers ex Gold & Silver IMI, Gold Miners IMI, Agriculture Producers IMI *(Energy (E), M&M (E), Gold (E), Agri. (E))*; Bloomberg Barclays Global Aggregate Credit – Corporate Energy Index *(Energy (FI))*; Bloomberg Barclays U.S. Aggregate Credit – Corporate High Yield Metals & Mining Index (*U.S. M&M (FI)*); Bloomberg Barclays Euro Aggregate Credit – Corporate Metals & Mining Index *(Euro M&M (FI))*; J.P. Morgan Emerging Market Corporate Credit – Corporate Metals & Mining Index *(EM M&M (FI)).* 5-year total return data is used to calculate annualized returns (Ann. Ret.) and 5-year price return data is used to calculate annualized volatility (Ann. Vol.) and reflects the period 30/09/14 – 30/09/19. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia.* Data reflect most recently available as of 30/09/19.

Other asset classes

J.P.Morgan Asset Management

Monthly Market Review

Asia Pacific | October 2019

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