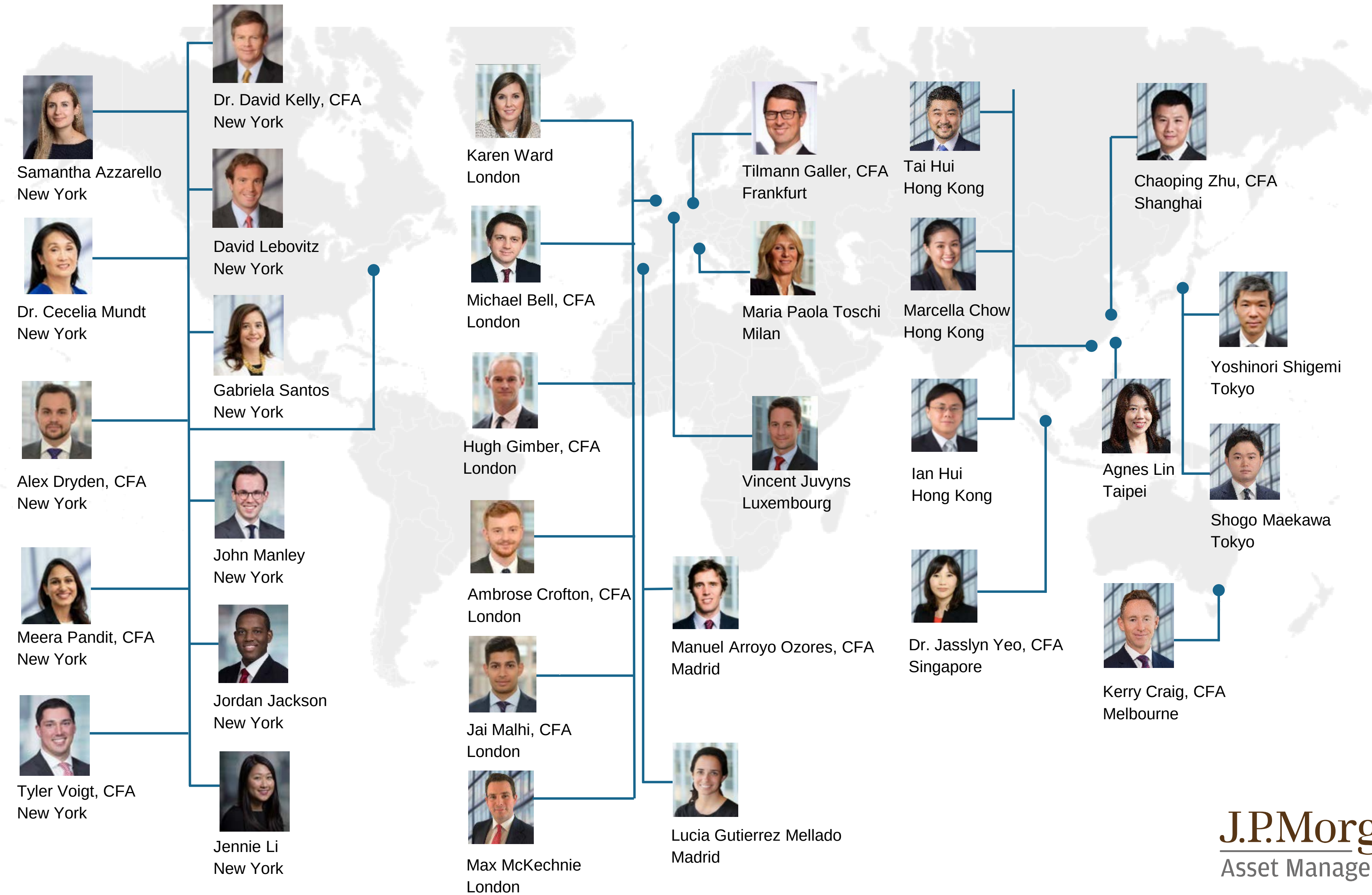
MARKET INSIGHTS

Guide to the Markets

Asia | 2Q 2020 | As of March 31, 2020

J.P.Morgan
Asset Management

Global Market Insights Strategy Team



J.P.Morgan
Asset Management

Page reference

Regional and local economy

Global economy

Equities

Fixed income

Other asset classes

Investing principles

J.P.Morgan
Asset Management

Regional and local economy

EM Asia ex-China* manufacturing PMI and real GDP growth

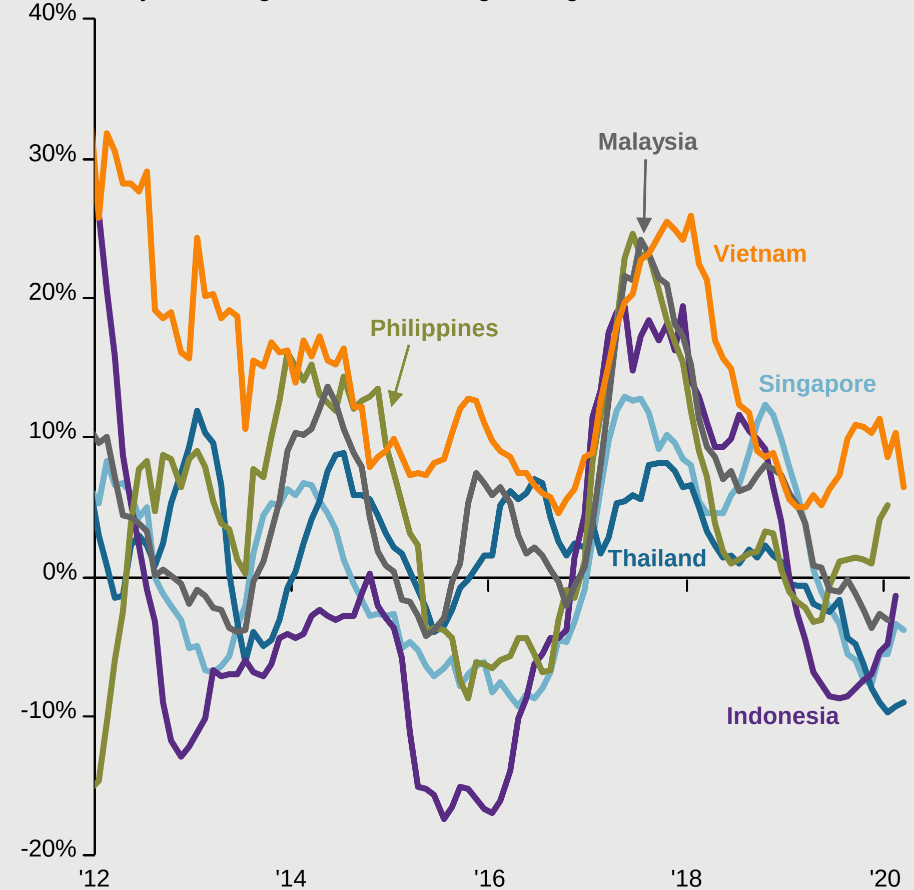
EM Asia ex-China* investment and exports

Source: IHS Markit, J.P. Morgan Economic Research, National Statistics Agencies, J.P. Morgan Asset Management; (Right) Netherlands Bureau of Policy Analysis.
PMI = Purchasing Managers' Index. PMIs are relative to 50, which indicates contraction (below 50) or expansion (above 50) of the sector.
*Emerging Market (EM) Asia ex-China includes Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan and Thailand.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

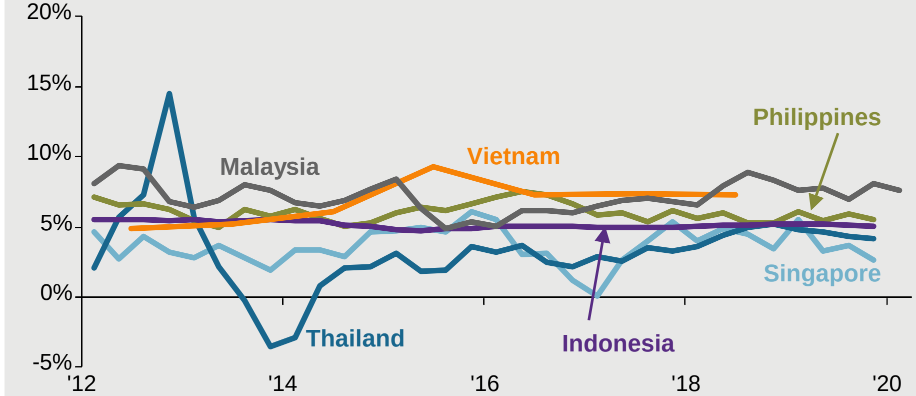
J.P.Morgan Asset Management

Regional and local economy

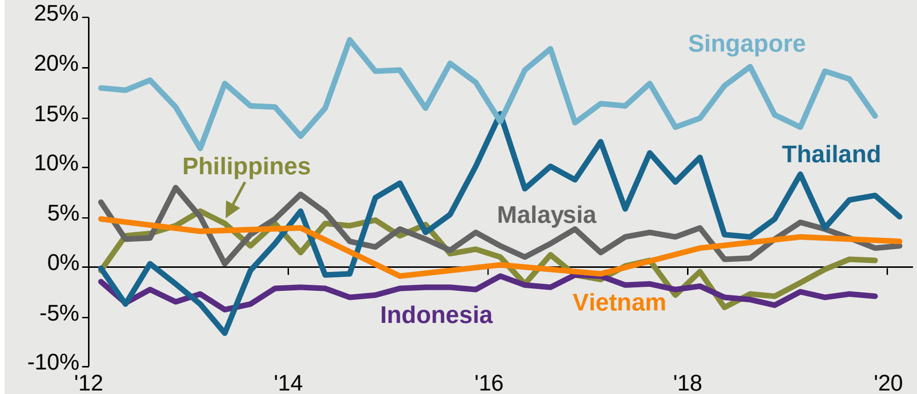
Exports
Year-over-year change, 6-month moving average



Consumption growth
Year-over-year change



Current account balance
Share of GDP



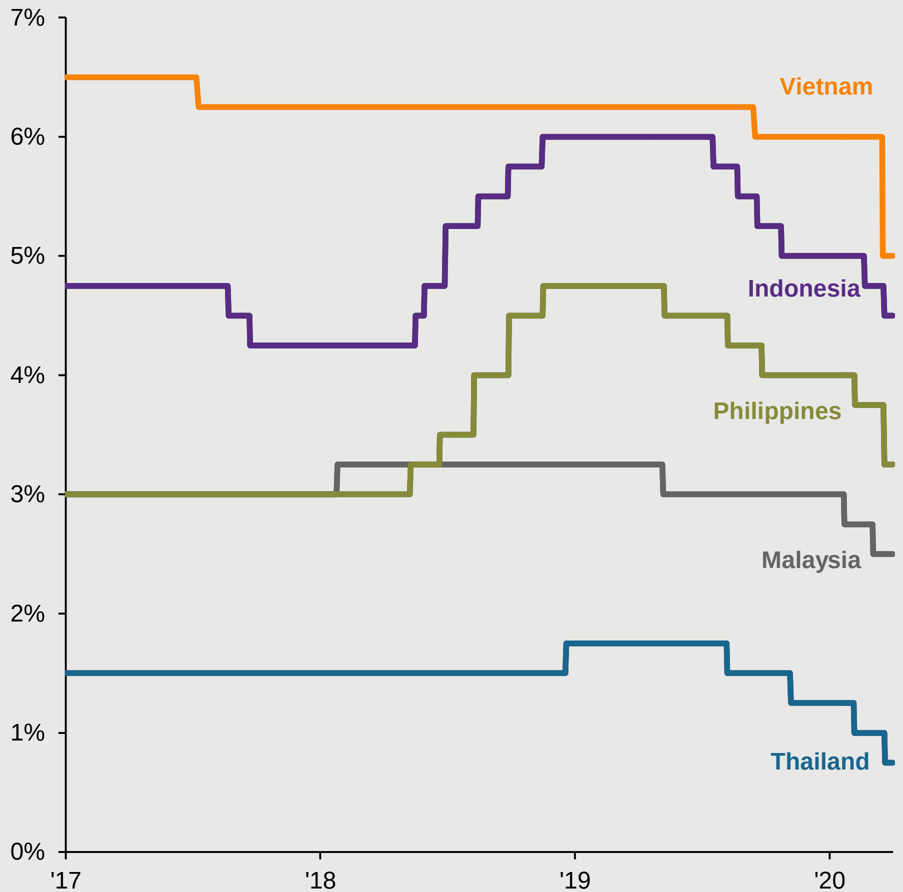
Source: FactSet, National Statistics Agencies, J.P. Morgan Asset Management; (Top right) OECD; (Bottom right) Bangko Sentral ng Pilipinas, Bank Indonesia, Bank Negara Malaysia, Bank of Thailand, State Bank of Vietnam, Statistics Singapore.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Regional and local economy

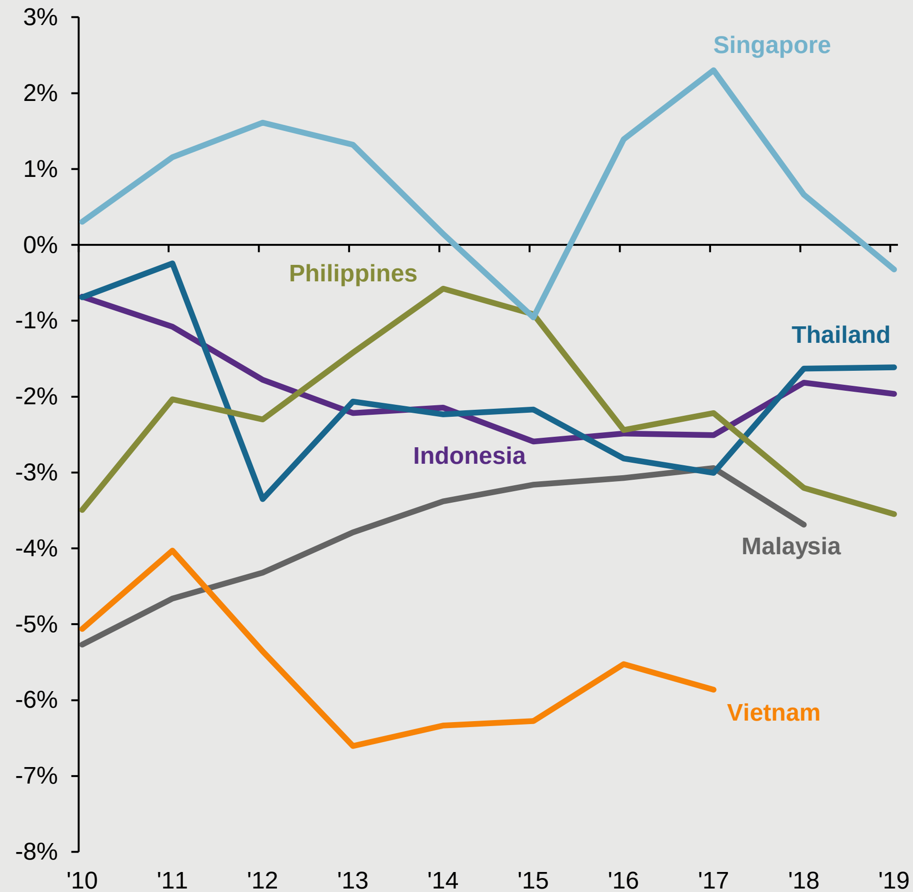
Central bank policy rates*

Per annum



Government deficit or surplus

Share of GDP



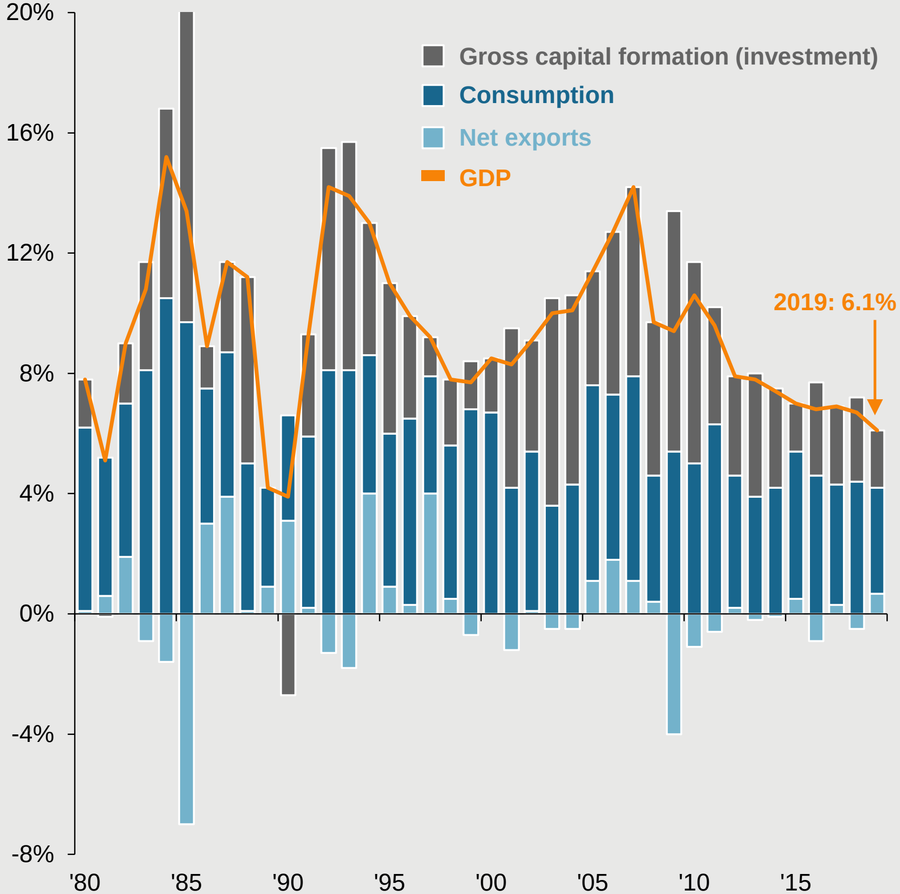
Source: Bangko Sentral ng Pilipinas, Bank Indonesia, Bank Negara Malaysia, Bank of Thailand, FactSet, State Bank of Vietnam, J.P. Morgan Asset Management; (Right) Bureau of Treasury Philippines, Ministry of Finance Indonesia, Statistics Singapore.
*The central banks' policy rates used are: Bank Indonesia 7-day reverse repo rate (*Indonesia*), overnight policy rate (*Malaysia*), Bangko Sentral ng Pilipinas overnight reverse repurchase facility (*Philippines*), one-day repurchase rate (*Thailand*) and Vietnam Base Rate (*Vietnam*). Singapore is not included as the Monetary Authority of Singapore targets the exchange rate of the Singapore dollar, rather than interest rates, to manage monetary policy.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Regional and local economy

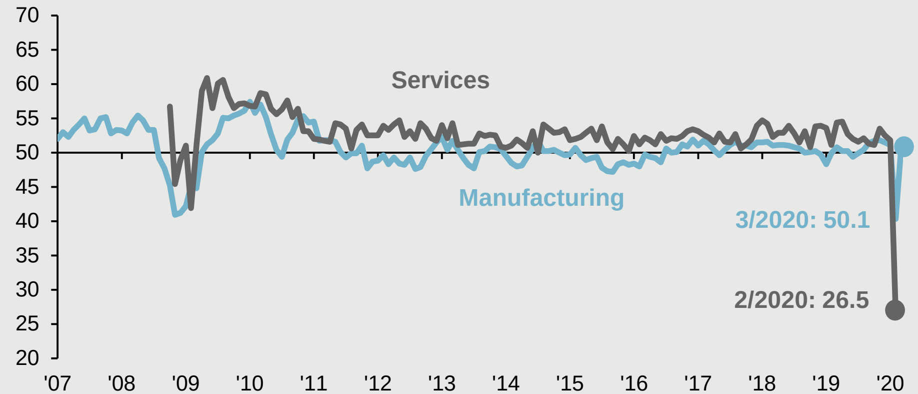
Contribution to real GDP growth

Year-over-year change



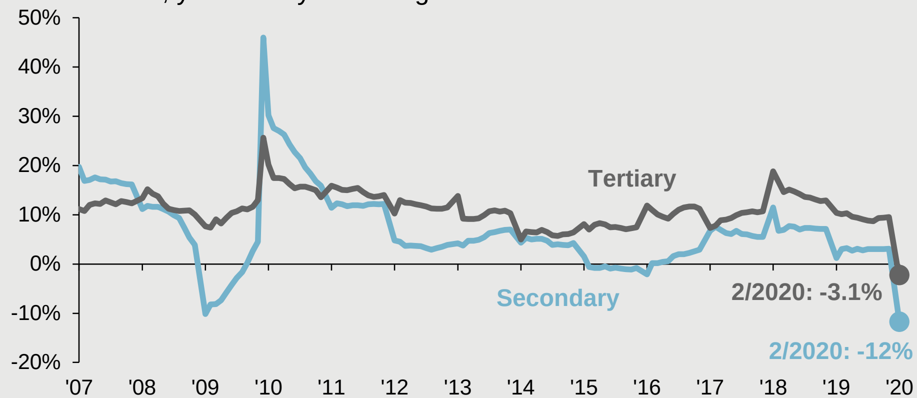
Caixin/Markit Purchasing Managers' Indices

Level



Electricity consumption

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



Source: J.P. Morgan Asset Management; (Left) CEIC, National Bureau of Statistics of China; (Top right) Caixin/Markit, J.P. Morgan Economic Research; (Bottom right) CEIC, China Electricity Council.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

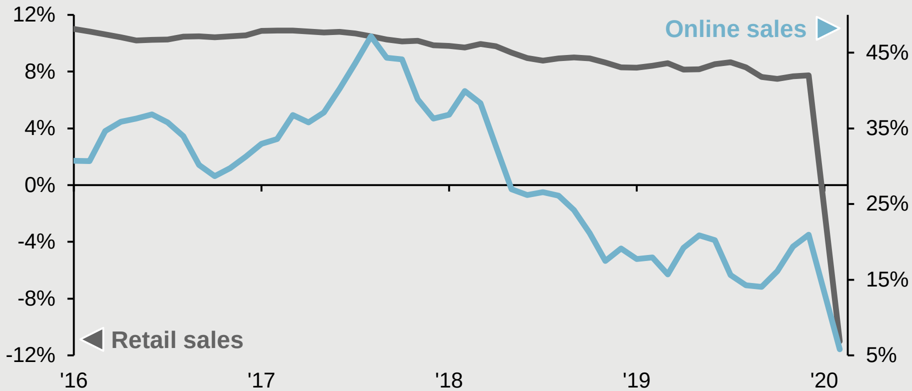
J.P.Morgan
Asset Management

China: Cyclical indicators

Regional and local economy

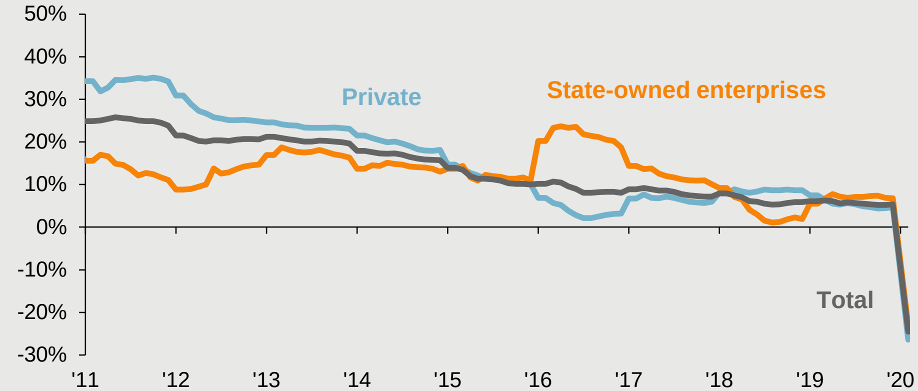
Retail and online sales

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



Fixed asset investment

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

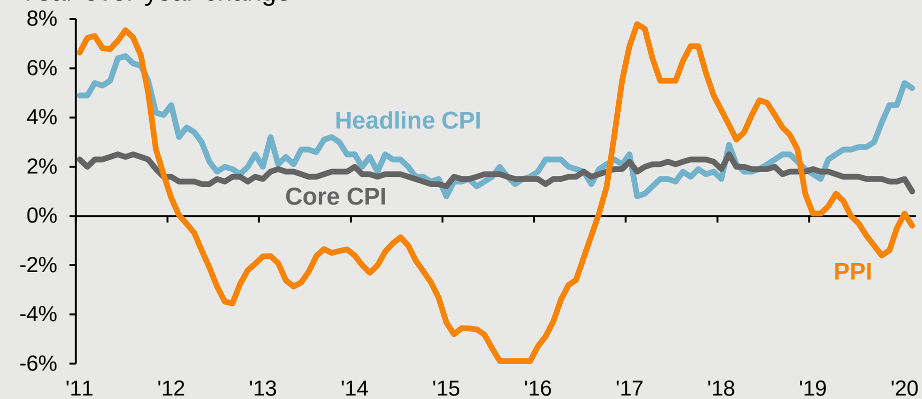


Property prices and land sales

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

CPI and PPI inflation

Year-over-year change



Source: CEIC, National Bureau of Statistics of China, J.P. Morgan Asset Management.
CPI = Consumer Price Index; PPI = Producer Price Index.
*Land area sold is cut off in 2011 to maintain a more reasonable scale, as growth in land area sold exceeded 90% year-over-year.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

China: Policy stimulus timeline

Chinese policy measures

Monetary policy

Fiscal policy

Monetary policy

- 2018: 50bps targeted RRR cuts; 200bps overall RRR cuts
- 1Q 2019: 100bps RRR cut
- 2Q 2019: Liquidity support to small and medium-sized banks
- 2Q 2019: RRR cut up to 350bps for small and medium-sized banks
- 3Q 2019: Loan prime rate (LPR) reform
- 3Q 2019: 50bps RRR cut, 100bps targeted RRR cut and 5bps drop in LPR rate
- 4Q 2019: 5bps cut in MLF, LPR and 7-day reverse repo rates. 5bps cut in 14-day reverse repo rate
- Jan 2020: 50bps RRR cut
- Feb 2020: 10bps rate cuts to reverse repo, MLF and LPR
- Feb 2020: RMB 800 billion re-lending loans to SMEs, with interest subsidy
- Mar 2020: Targeted RRR cuts of 50bps to 100bps
- Mar 2020: 20bps cut to 7-day reverse repo rate. Additional RMB 1 trillion re-lending loans to SMEs.

Fiscal policy

- 2018: RMB 1.95 trillion in local government special bonds issued
- 2018: 1ppt cut to value-added tax (VAT) rate; individual income tax cut
- 1Q 2019: Local government bond issuance push
- 1Q 2019: Special deductibles introduced to individual income tax system
- 2Q 2019: Cut in VAT rate and firms' social security contributions
- 2Q 2019: Policy support for infra-structure investment*
- 4Q 2019: RMB 1 trillion of 2020 special local government bond quota allocated early; equity capital requirement* loosened to promote investment
- Jan 2020: Advance special local bond issuance
- Feb 2020: Social security contribution waived, tax declaration postponed, VAT waiver or cut for small business to May 31
- Feb 2020: 5G, industrial internet, health care infrastructure highlighted in infrastructure investment plan
- Mar 2020: Purchase tax exemption extended to end-2022 for new energy vehicles.

Source: Various news sources, J.P. Morgan Asset Management.
Required Reserve Ratio (RRR), Medium-term Lending Facility (MLF), Loan Prime Rate (LPR), and reserve repo rates are all monetary policy tools. SMEs stand for small and medium enterprises.
*Under the new rules, some of the proceeds from local government special bond issuances can be used as equity capital and this capital can then be leveraged up with debt funding from financial institutions to amplify fiscal support for infrastructure investment.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

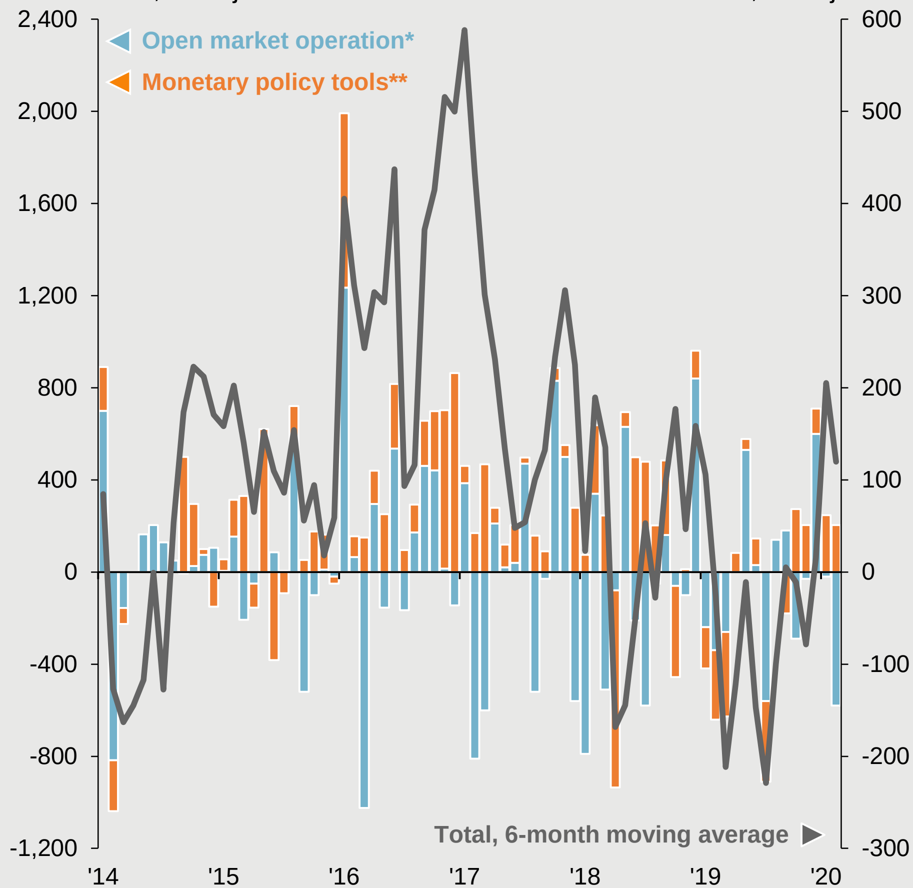
J.P.Morgan Asset Management

Regional and local economy

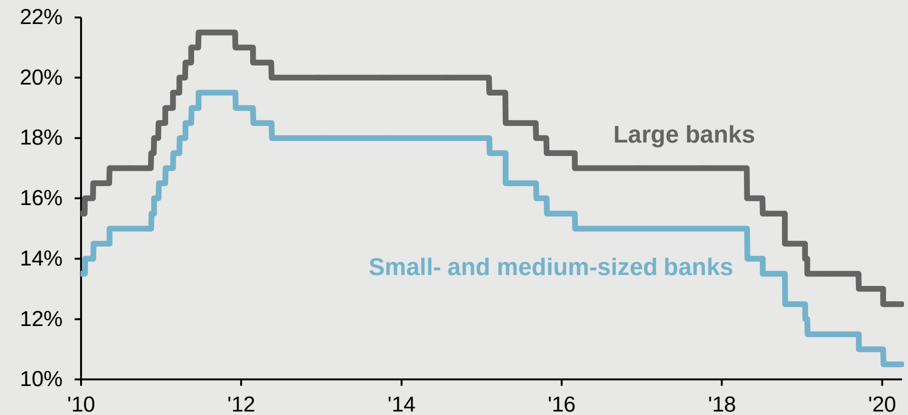
Liquidity injection by the PBoC

RMB billions, net injection

RMB billions, net injection

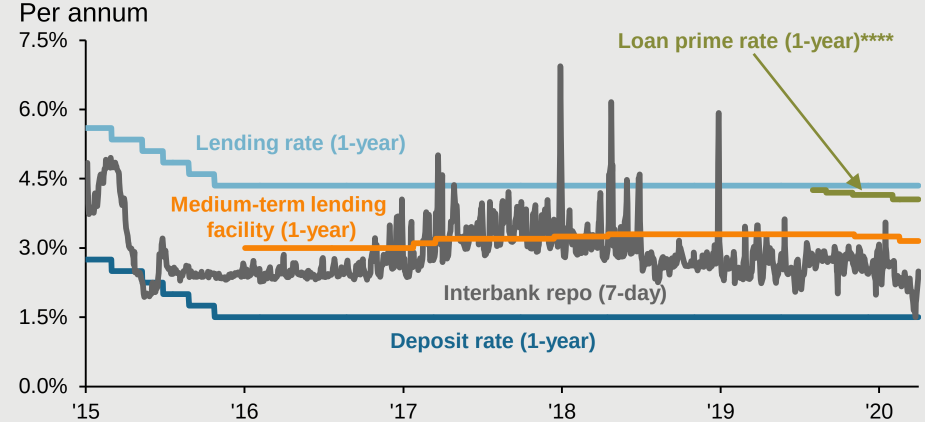


Reserve requirement ratio***



Key policy rates

Per annum



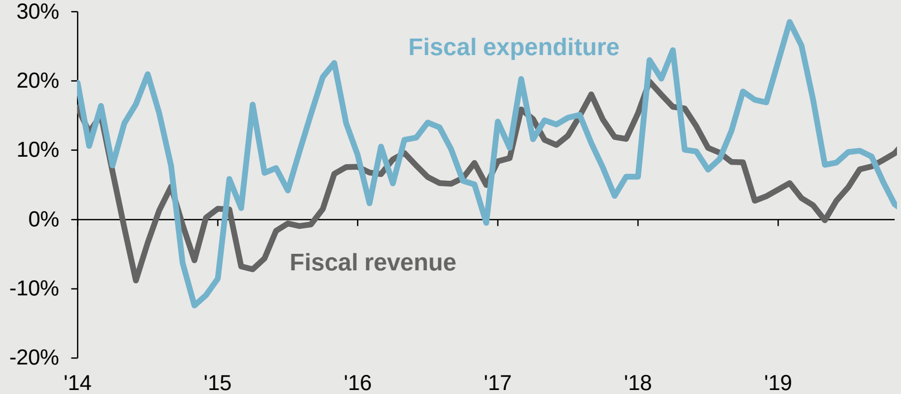
Source: CEIC, People's Bank of China (PBoC), J.P. Morgan Asset Management; (Bottom right) National Interbank Funding Center.
*Open market operation (OMO) includes reverse repo, repo and central bank bill issuance by the People's Bank of China.
**Monetary policy tools include short-term liquidity operations (SLO), standing liquidity facility (SLF), medium-term liquidity facility (MLF) and pledged supplementary lending (PSL). ***The PBoC also announced targeted RRR cuts in 2019 and 2020, the actual RRR rates implemented are 100 to 150 bps below the official RRR for most banks. ****Starting from August 2019, the PBoC releases a monthly 1-year and 5-year loan prime rate (LPR) based on quotes from 18 banks. For this new monthly quote, banks are required to submit them in the form of open market operation rates (especially MLF) plus a margin to the national inter-bank lending center. The central bank requests all commercial banks to reference the finalized LPR to price their new lending and use LPR as the benchmark rate in floating rate loan contracts going forward.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Regional and local economy

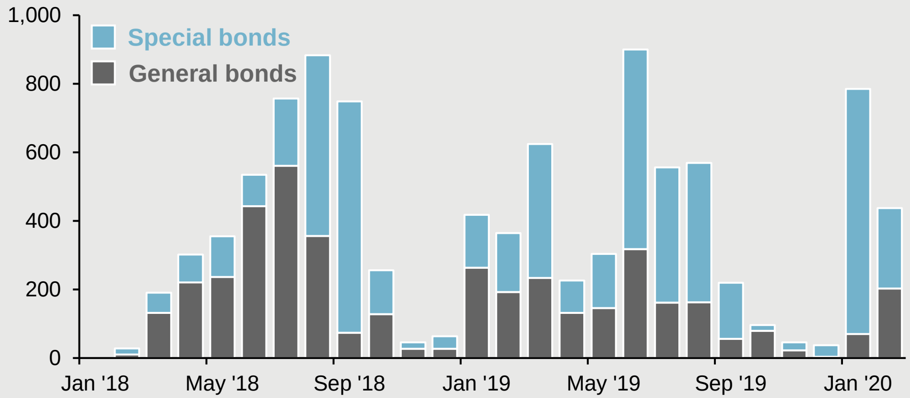
Fiscal revenue and expenditure*

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



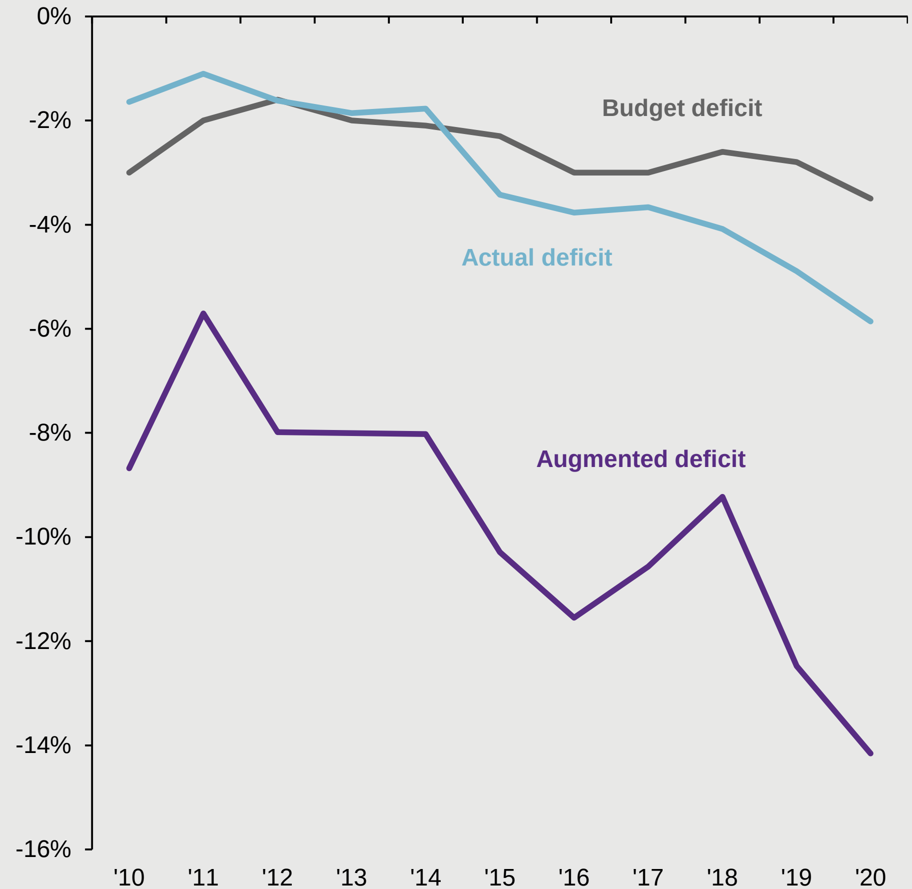
Local government bond issuance**

RMB billions



Fiscal balance***

% of nominal GDP



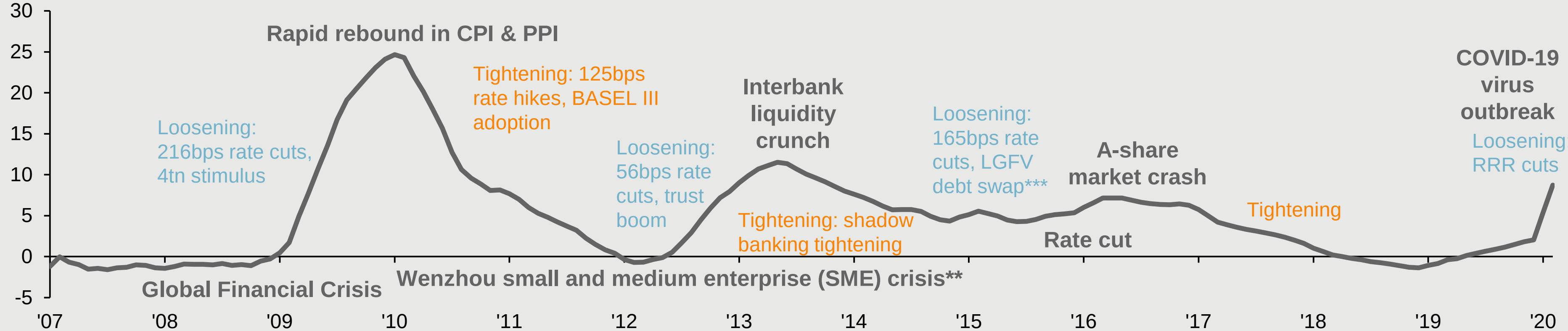
Source: CEIC, J.P. Morgan Asset Management; (Top and bottom left) Ministry of Finance of China; (Right) Agricultural Development Bank of China, China Development Bank, China Trustee Association, People's Bank of China, Wind. *Fiscal revenue includes taxes, government funds, which are mostly derived from local government land sales, and other government revenues. Fiscal expenditure includes government spending of funds raised from taxes, government funds and general bond issuance. **A general local government bond is issued to raise funds and offset fiscal deficit so as to maintain the ordinary operation of local government. It is backed by the future fiscal revenue of the local government. A special local government bond is issued to support the investment in a specific infrastructure or public project. It is backed by the future revenue from the project. ***Actual deficit = fiscal revenue - fiscal expenditure (as shown in top left chart). Budget deficit = actual deficit adjusted with the fiscal stability fund. Augmented deficit is an estimate of all the fiscal resources motivated by the government to support economic growth, i.e. fiscal balance plus investment via local government financing vehicles, policy banks and other channels. 2019 and 2020 are J.P. Morgan Asset Management estimates.

Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Regional and local economy

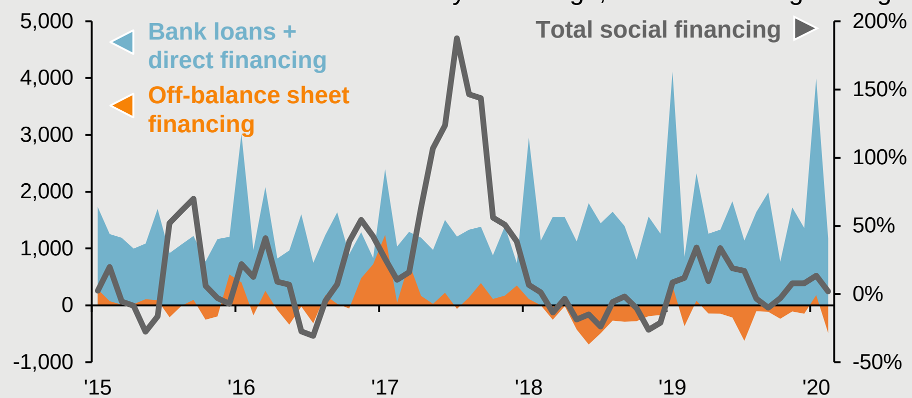
Difference between credit* growth and nominal GDP growth

Percentage points, year-over-year change, 3-month moving average



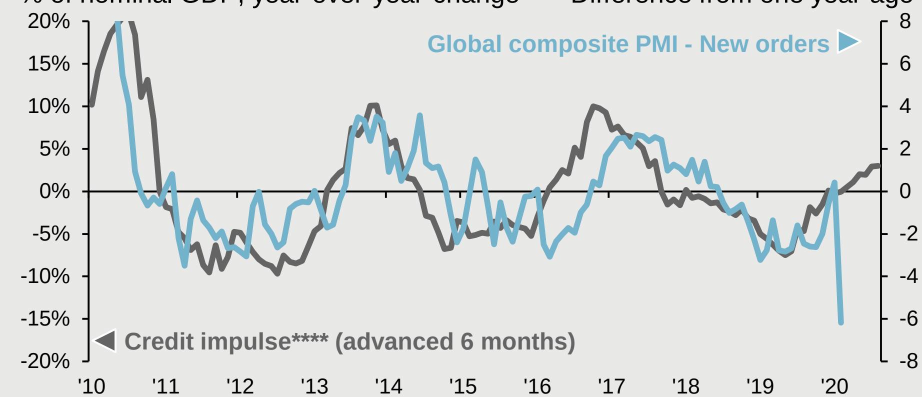
Total social financing

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



Chinese credit impulse and global new orders

% of nominal GDP, year-over-year change Difference from one year ago

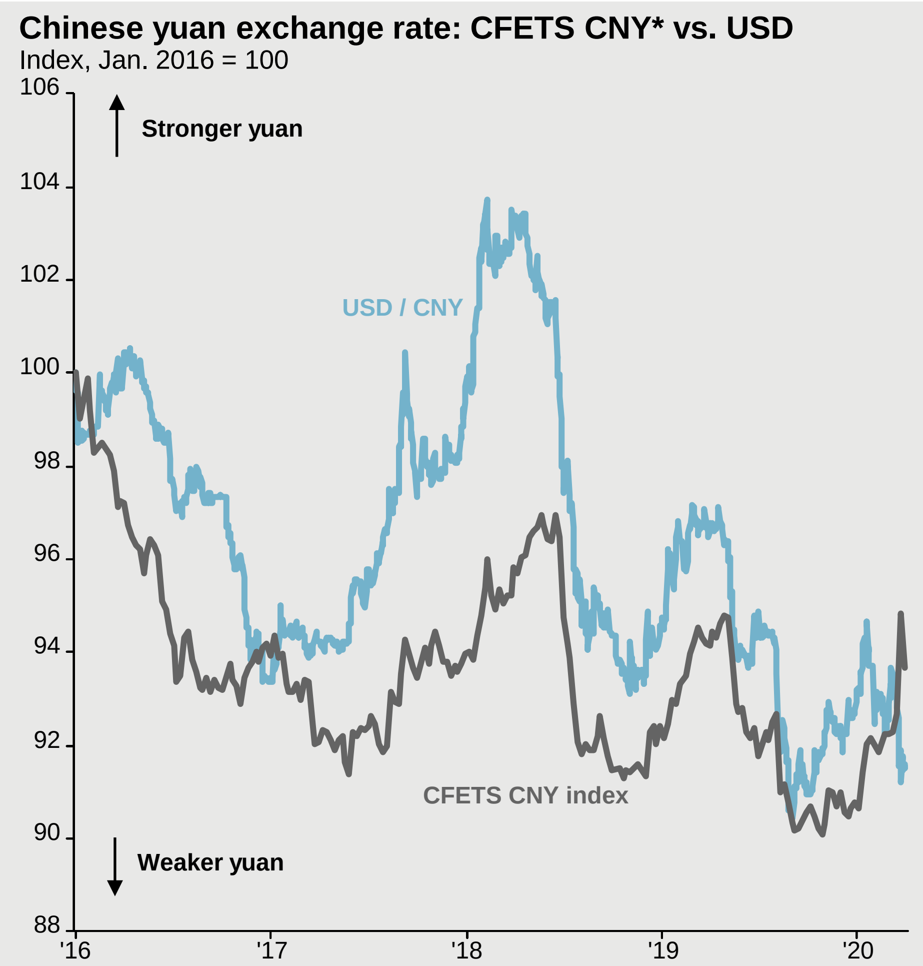


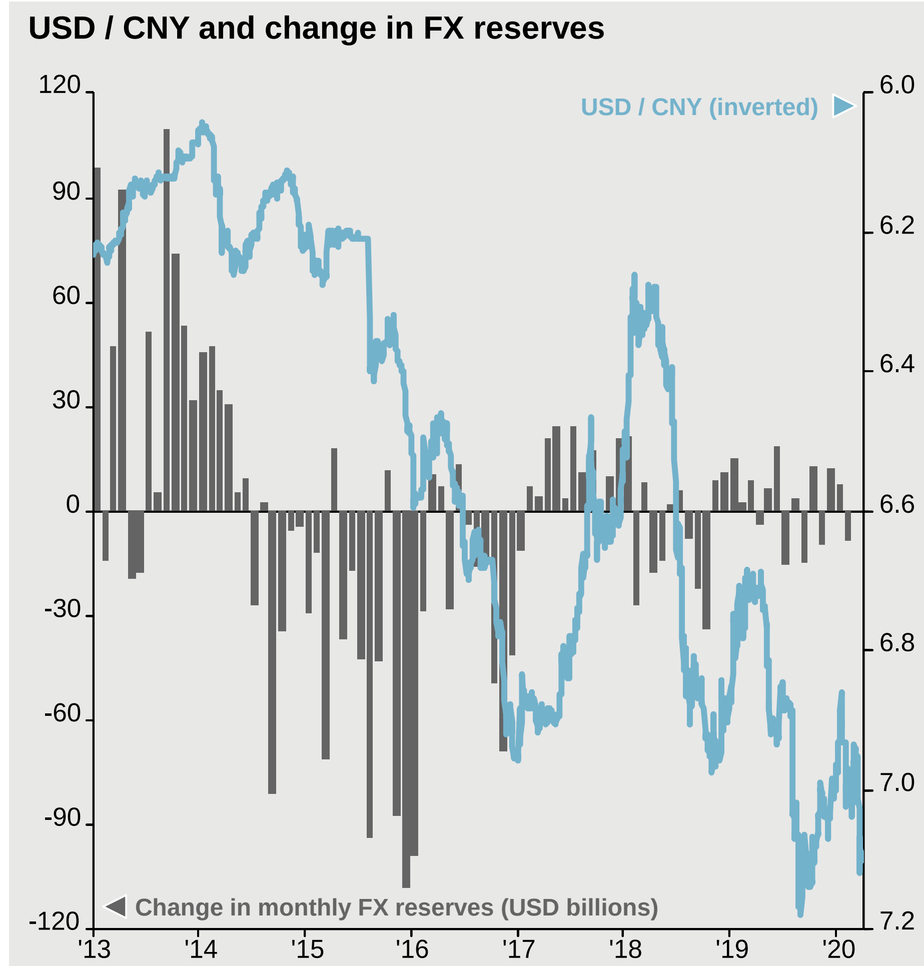
Source: CEIC, People's Bank of China, J.P. Morgan Asset Management; (Top) China Central Depository & Clearing Co., Shanghai Clearing House; (Bottom right) Ministry of Finance of China. Credit growth, and credit impulse, to GDP growth ratio utilize rolling 12-month nominal GDP and credit stock. CPI stands for consumer price index and PPI stands for producer price index. *Stock of credit to the real economy, defined as the net total social financing plus government financing. **Wenzhou SME crisis refers to the wave of bankruptcies and funding problems faced by a large number of SMEs in Wenzhou in 2011. ***LGFV refers to local government financing vehicle. ****Credit impulse measures the year-over-year change of credit flow (net total social financing plus government financing) as a percentage of nominal GDP.

Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Regional and local economy

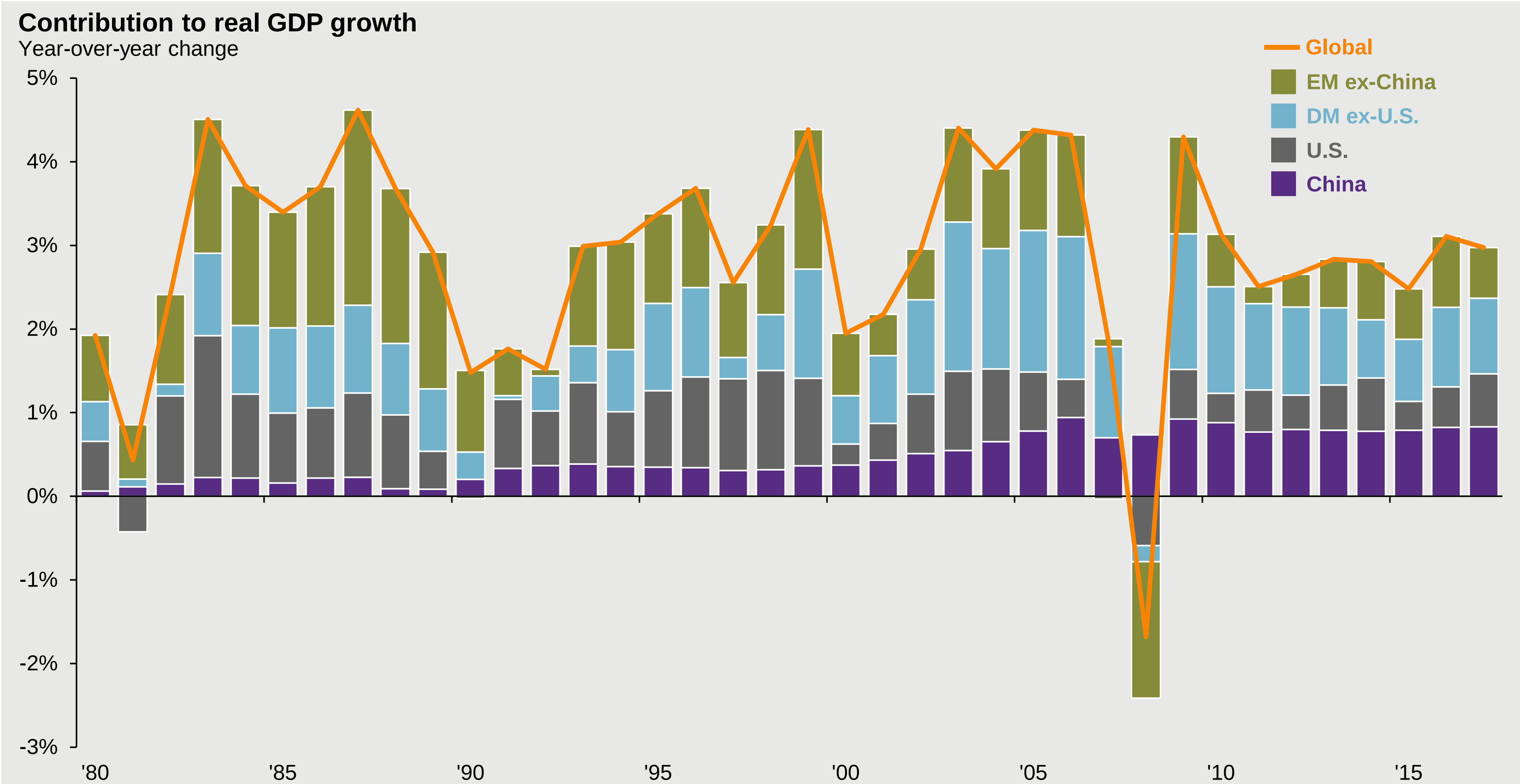




Source: FactSet, J.P. Morgan Asset Management; (Left) China Foreign Exchange Trade Center, J.P. Morgan Economic Research; (Right) People's Bank of China.
*CFETS RMB index is the China Foreign Exchange Trade System basket of 24 currencies traded against the Chinese renminbi. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

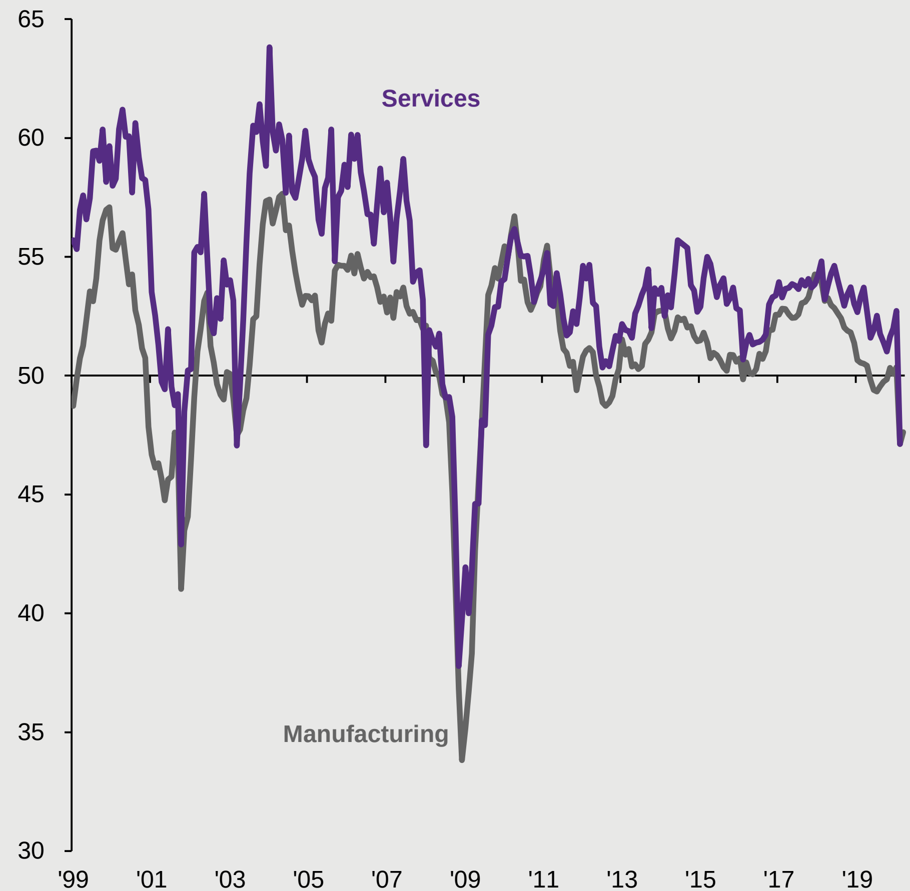


Source: World Bank, J.P. Morgan Asset Management. EM stands for emerging markets, DM for developed markets.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global Purchasing Managers' Index (PMI)

Global manufacturing and services PMI



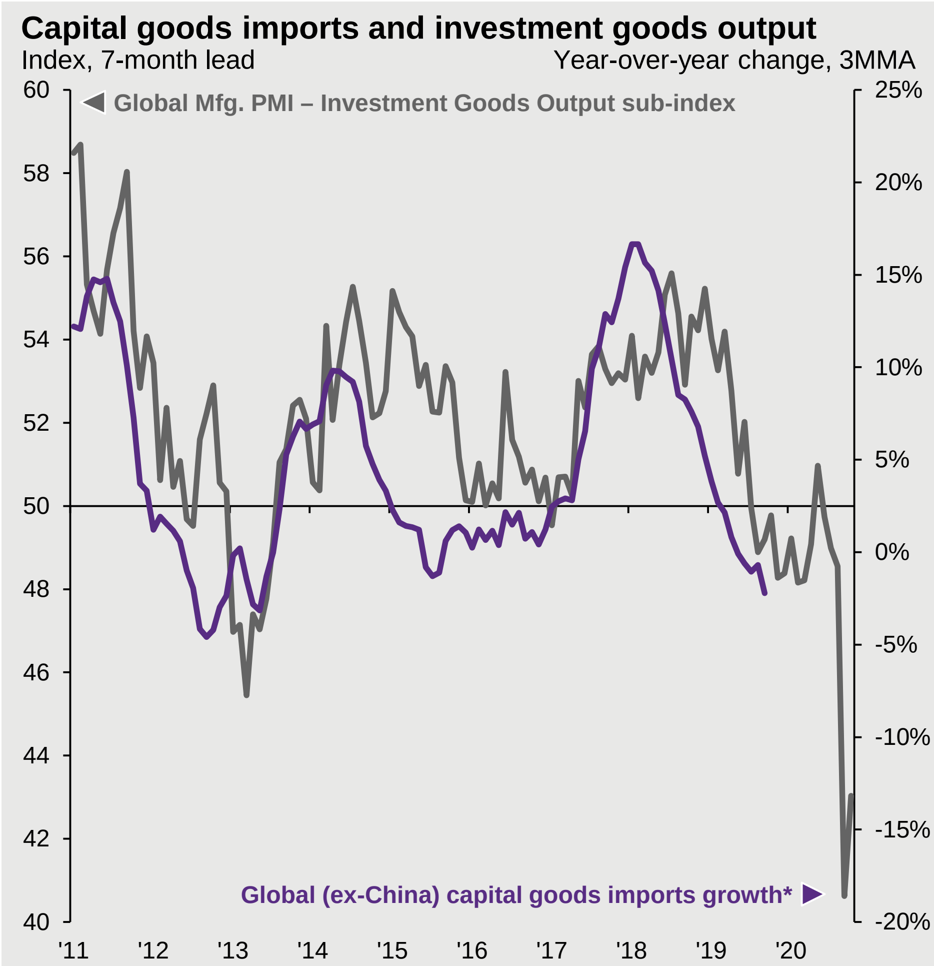
Global manufacturing PMI breakdown

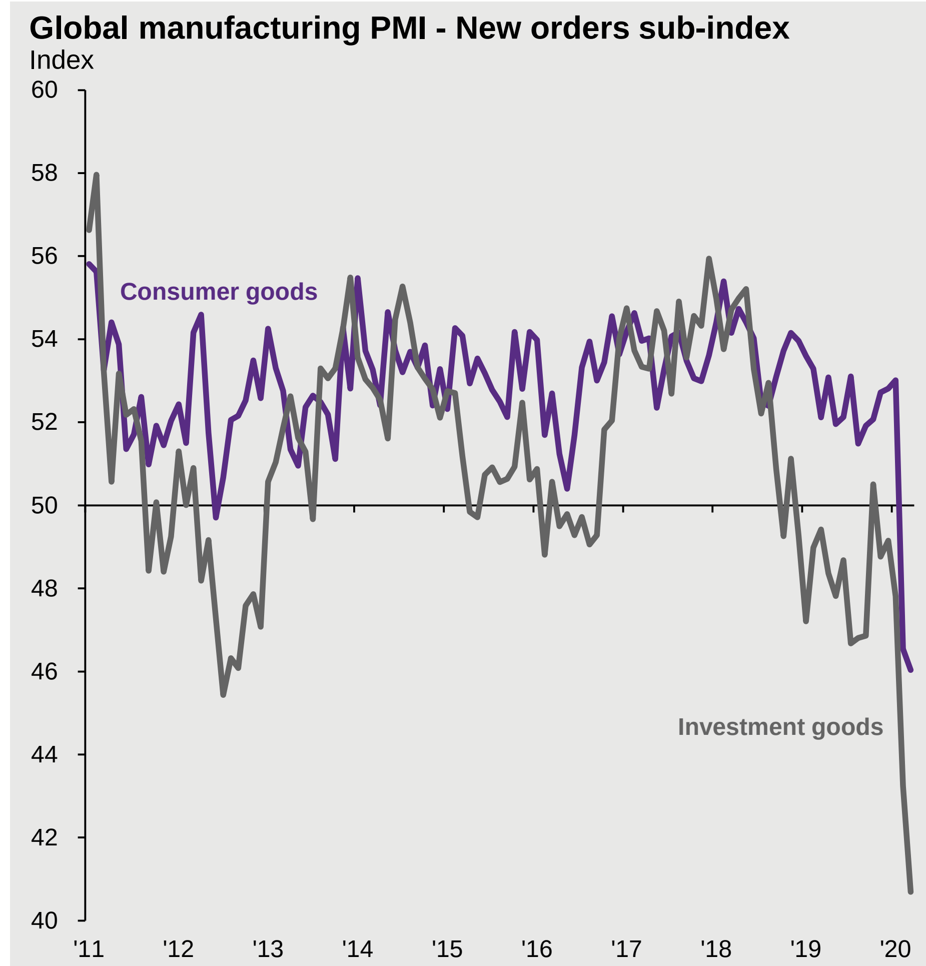
	Apr '19	May '19	Jun '19	Jul '19	Aug '19	Sep '19	Oct '19	Nov '19	Dec '19	Jan '20	Feb '20	Mar '20
Global											47.1	47.6
DM*											49.5	46.0
EM**											44.6	49.1
U.S. (Markit)											50.7	48.5
U.S. (ISM)											50.1	49.1
Euro area											49.2	44.5
Germany											48.0	45.4
France											49.8	43.2
Italy											48.7	40.3
Spain											50.4	45.7
UK											51.7	47.8
Australia											50.2	49.7
Japan											47.8	44.8
China (Markit)											40.3	50.1
China (NBS)											35.7	52.0
Korea											48.7	44.2
Taiwan											49.9	50.4
Indonesia											51.9	45.3
India											54.5	51.8
Russia											48.2	47.5
Brazil											52.3	48.4
Mexico											50.0	47.9
# markets above 50	13	9	6	3	6	6	6	5	7	7	7	3

Source: Australian Industry Group, Institute for Supply Management, 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. Japan December 2019 number is a flash estimate.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy





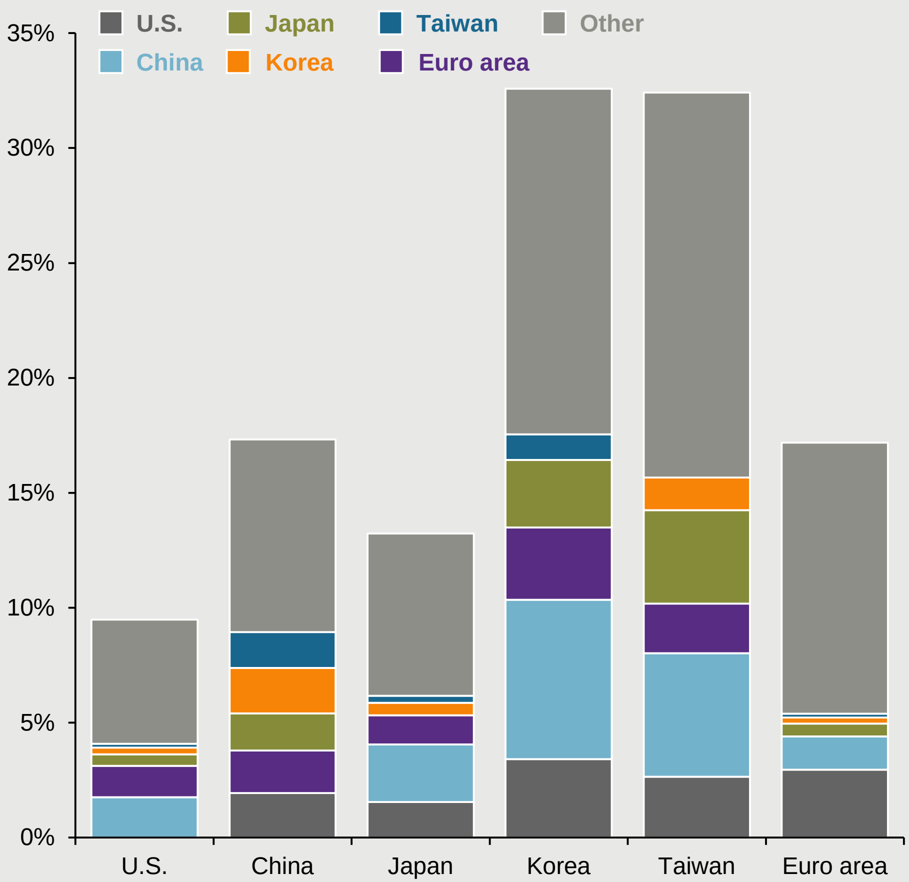
Source: Factset, J.P. Morgan Economic Research, National Statistics Agencies, J.P. Morgan Asset Management.
*The series aggregates monthly capital goods imports growth data of 29 developed and emerging markets, weighted by their nominal gross domestic product.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

Foreign value added in domestic exports

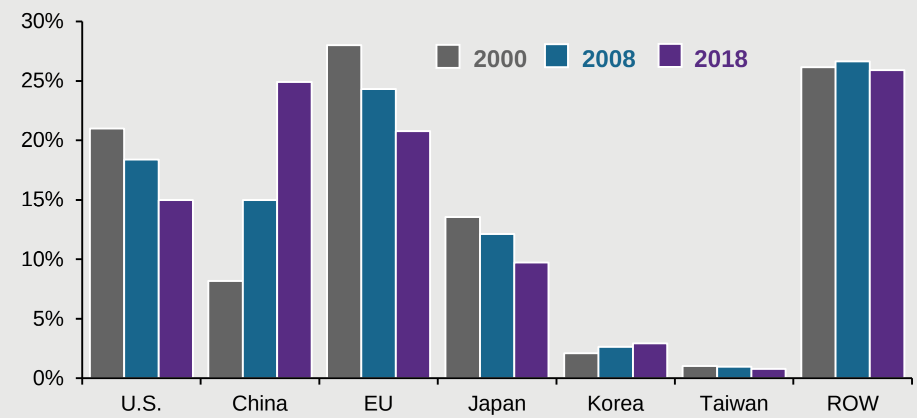
Source of foreign value add in exports as a % of total goods exports*, 2015



Supplier delivery times

Manufacturing PMI subindex, G4** average

Manufacturing as share of global total



Source: J.P. Morgan Asset Management; (Left) OECD Trade in Value Add; (Top right) J.P. Morgan Economics Research, Markit; (Bottom right) United Nations Industrial Development Organization.
*Origin country of value-added to goods exported from each country to the world, divided by gross exports from each country. 2015 is the latest year for which country by country data are available.
**G4 is defined as the four largest economies: China, Japan, Euro area, United States.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

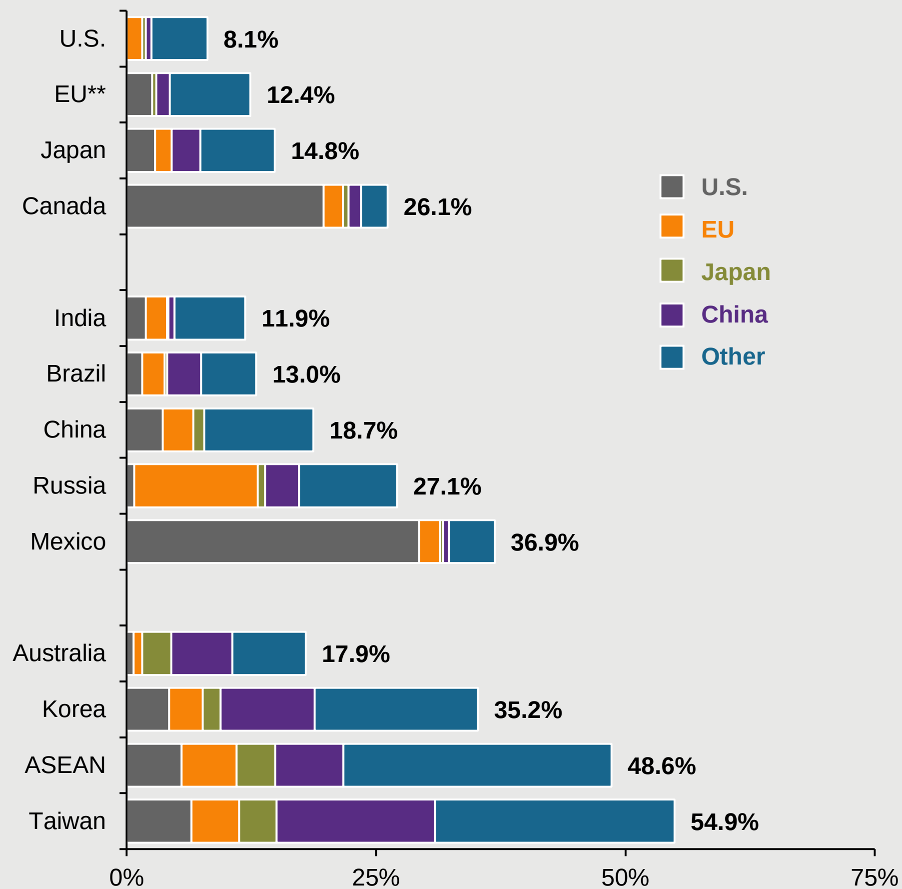
Global trade activity

Year-over-year change, 3MMA

Index, 4-month lead

Exports as a percentage of GDP – 2018

Goods share of GDP

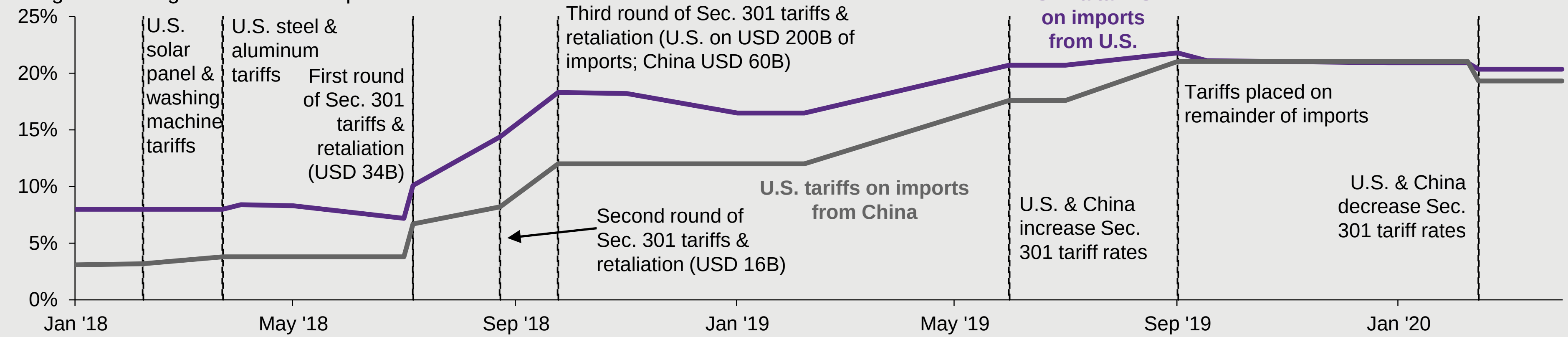


Source: FactSet, J.P. Morgan Asset Management; (Left) Markit, Netherlands Bureau of Policy Research; (Right) International Monetary Fund.
*Series shown is the Global Manufacturing Purchasing Managers' Index Sub-Index for new export orders.
**EU exports as a percentage of GDP exclude intra-EU trade as the European Union is considered one regional economy.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

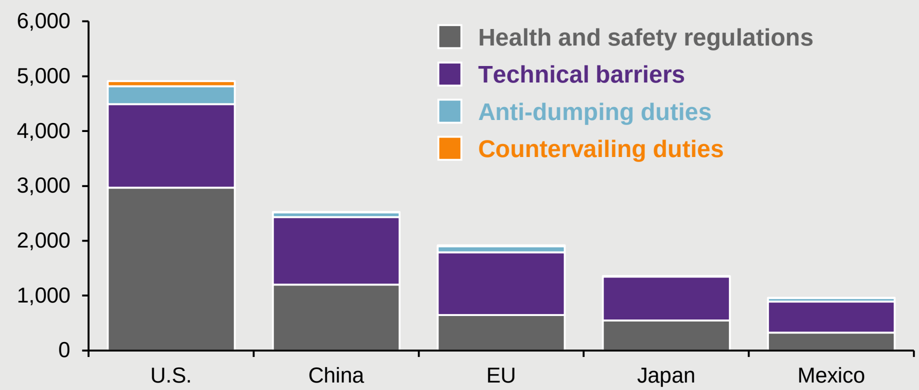
J.P.Morgan Asset Management

Global economy

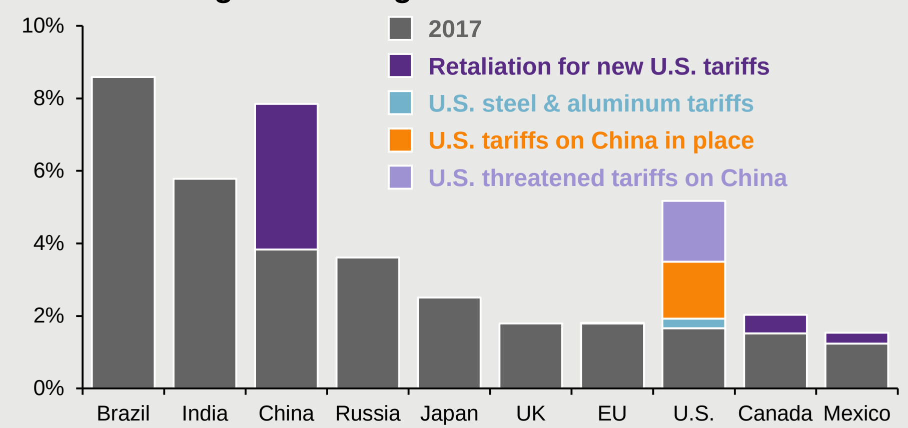
China & U.S. tariffs
Weighted average tariff rate on imports from other*



Non-tariff barriers to trade**
Number of measures in effect, 2017



Effective weighted average tariff rate***



Source: J.P. Morgan Asset Management; (Top) Chad Bown, China Ministry of Finance, International Trade Center, Peterson Institution for International Economics; (Top and bottom right) Office of the U.S. Trade Representative, U.S. International Trade Commission; (Bottom left) United Nations. *Trade-weighted average tariffs computed from product-level tariff and trade data, weighted by U.S. exports to the world and China's exports to the world in 2017. **Barriers can take the form of health and safety regulations—sanitary production requirements or health and invasive species restrictions; technical barriers—minimum standards or certifications for products sold in a certain country; anti-dumping duties—taxes on imports to prevent other countries offloading excess supply at artificially cheap prices; countervailing duties—taxes on imports to offset subsidies received elsewhere. ***Value of imports-weighted average tariff for 2017, plus additional tariffs from trade actions in 2018 or 2019 related to U.S. trade disputes calculated as the additional tariffs collected as a result of each new action as a percent of total imports for that year.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

Headline consumer prices

Year-over-year change, quarterly

Source: Department of Statistics Malaysia, DGBAS, Eurostat, FactSet, Goskomstat of Russia, IBGE, India Ministry of Statistics & Programme Implementation, INEGI, J.P. Morgan Economics Research, Korean National Statistical Office, Melbourne Institute, Ministry of Commerce Thailand, Ministry of Internal Affairs & Communications Japan, National Bureau of Statistics China, Office for National Statistics UK, Statistics Indonesia, Statistics Institute Turkey, Statistics South Africa, U.S. Department of Labor, J.P. Morgan Asset Management. Quarterly averages, with the exception of the two most recent figures, which are single month readings, are shown. Colors are based on z-score of year-over-year inflation rate relative to each country's own 10-year history where red (blue) indicates inflation above (below) long-run trend. EM represents emerging markets.

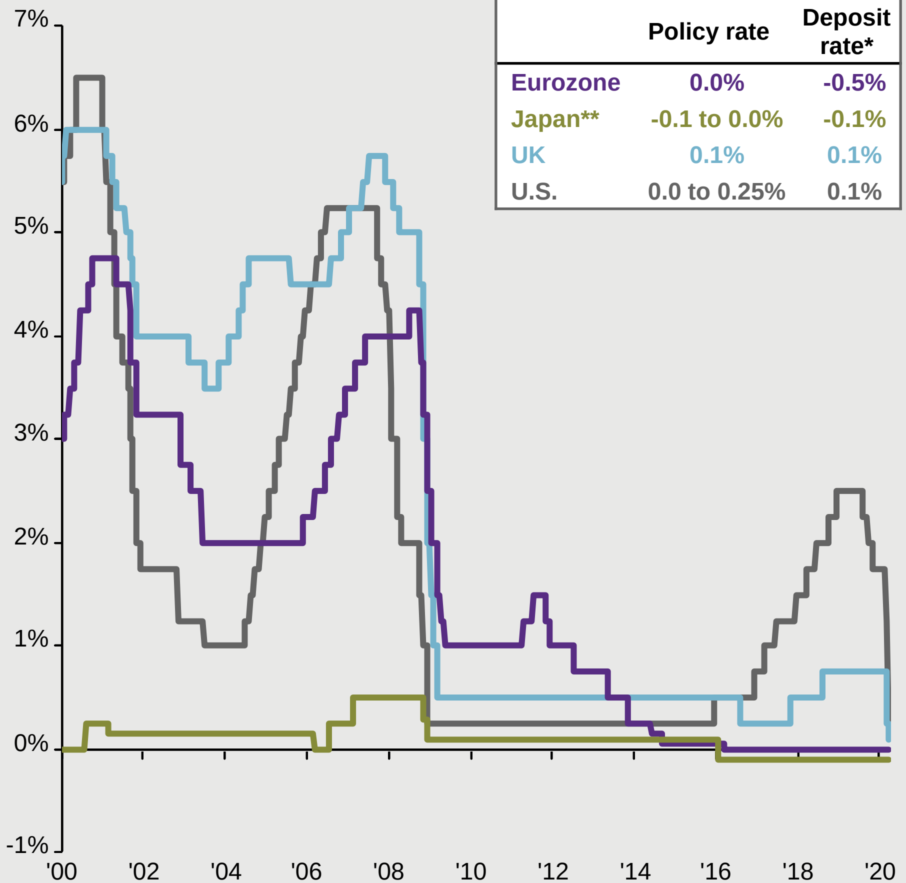
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

G4 central bank key policy rates

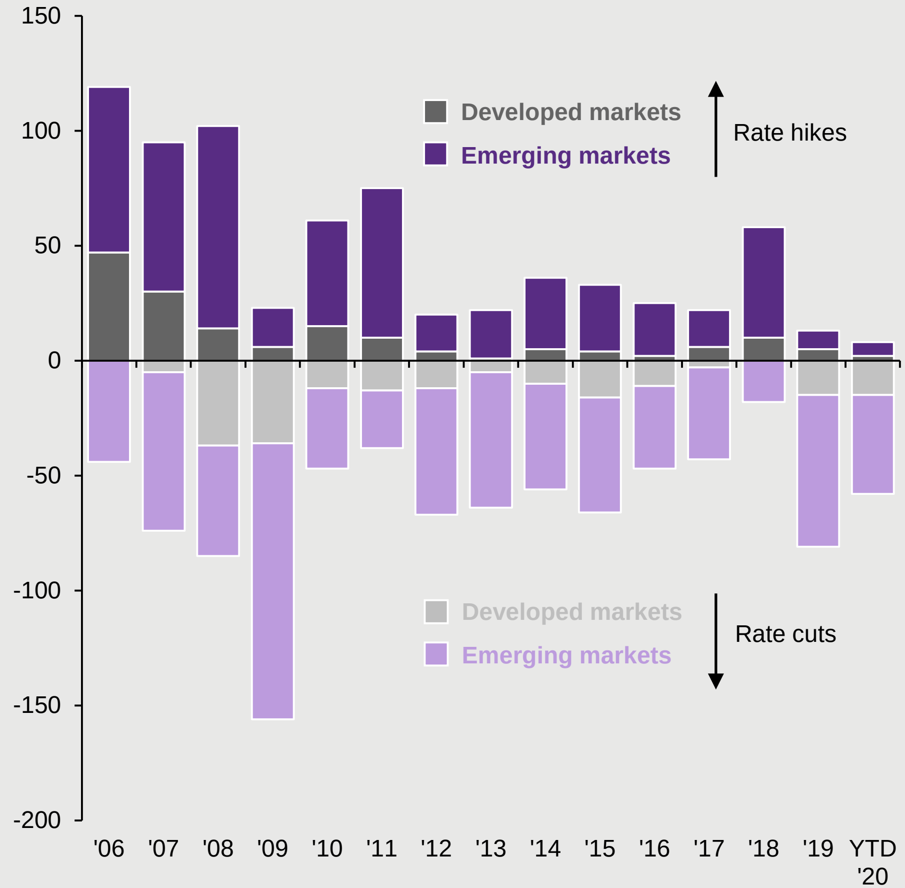
Per annum



	Policy rate	Deposit rate*
Eurozone	0.0%	-0.5%
Japan**	-0.1 to 0.0%	-0.1%
UK	0.1%	0.1%
U.S.	0.0 to 0.25%	0.1%

Changes in central bank policy rates

Number of hikes or cuts***



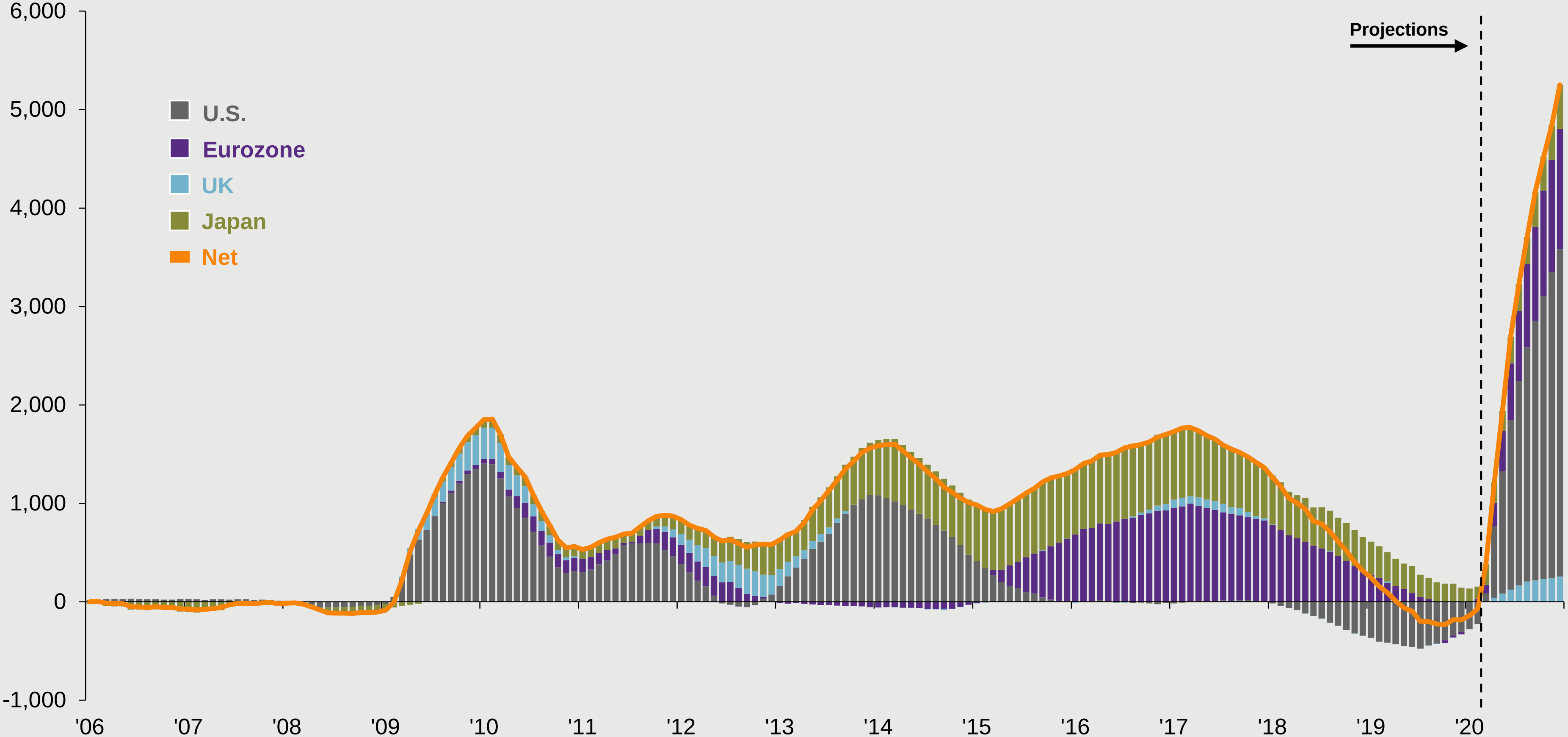
Source: J.P. Morgan Asset Management; (Left) FactSet; (Right) BIS.
G4 are the Bank of England, the Bank of Japan (BoJ), the European Central Bank and the U.S. Federal Reserve. *Key deposit rates that central banks charge commercial banks on their excess reserves. **The BoJ has adopted a three-tier system 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. ***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 25/03/20. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

Central bank bond purchases

12-month rolling flow of bond purchases by G4 central banks*, USD billions

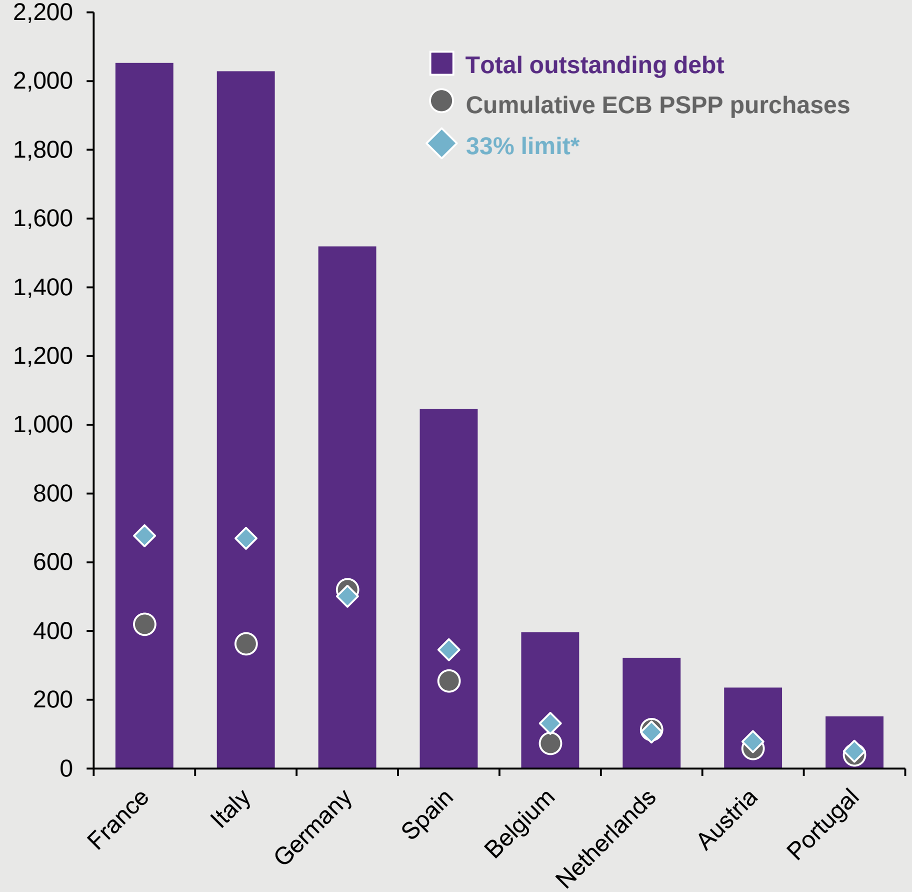


Source: Bank of England, Bank of Japan, Bloomberg Finance L.P., European Central Bank, U.S. Federal Reserve, J.P. Morgan Asset Management.
*New purchases of bonds are based on period to period changes in average holdings during the quarter across various asset purchase programs as reported by each respective G4 central bank (the Bank of England, the Bank of Japan, the European Central Bank and the U.S. Federal Reserve), announced purchase plans of these central banks and J.P. Morgan Asset Management projections, converted to common currency by average monthly exchange rates.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

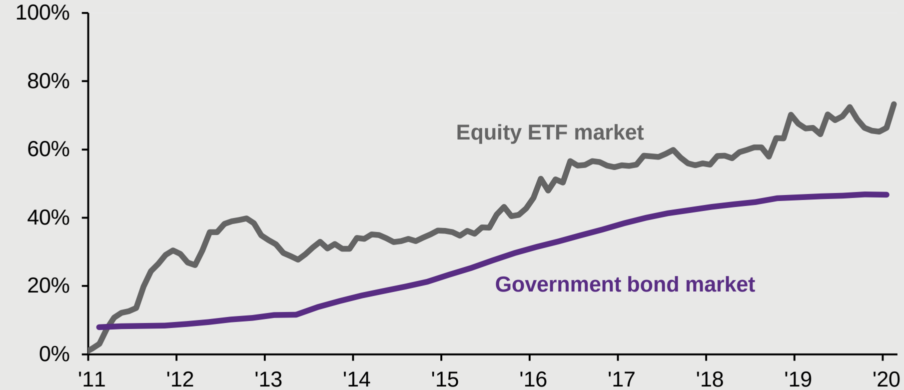
ECB bond purchases

Public sector bond purchases, EUR billions



Bank of Japan's holdings

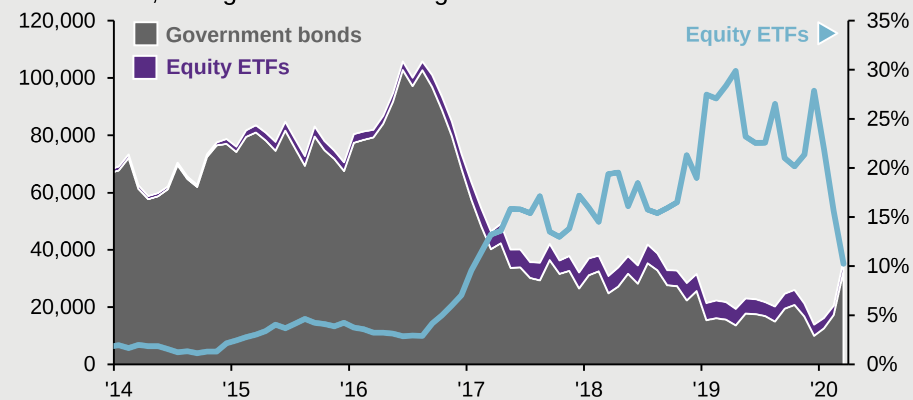
Share of market total



Bank of Japan pace of purchases

JPY billions, rolling six-month average

Share of total



Source: FactSet, J.P. Morgan Asset Management. (Left) ECB, Eurostat; (Top right) Bank of Japan, Investment Trusts Association of Japan; (Bottom right) Bank of Japan.

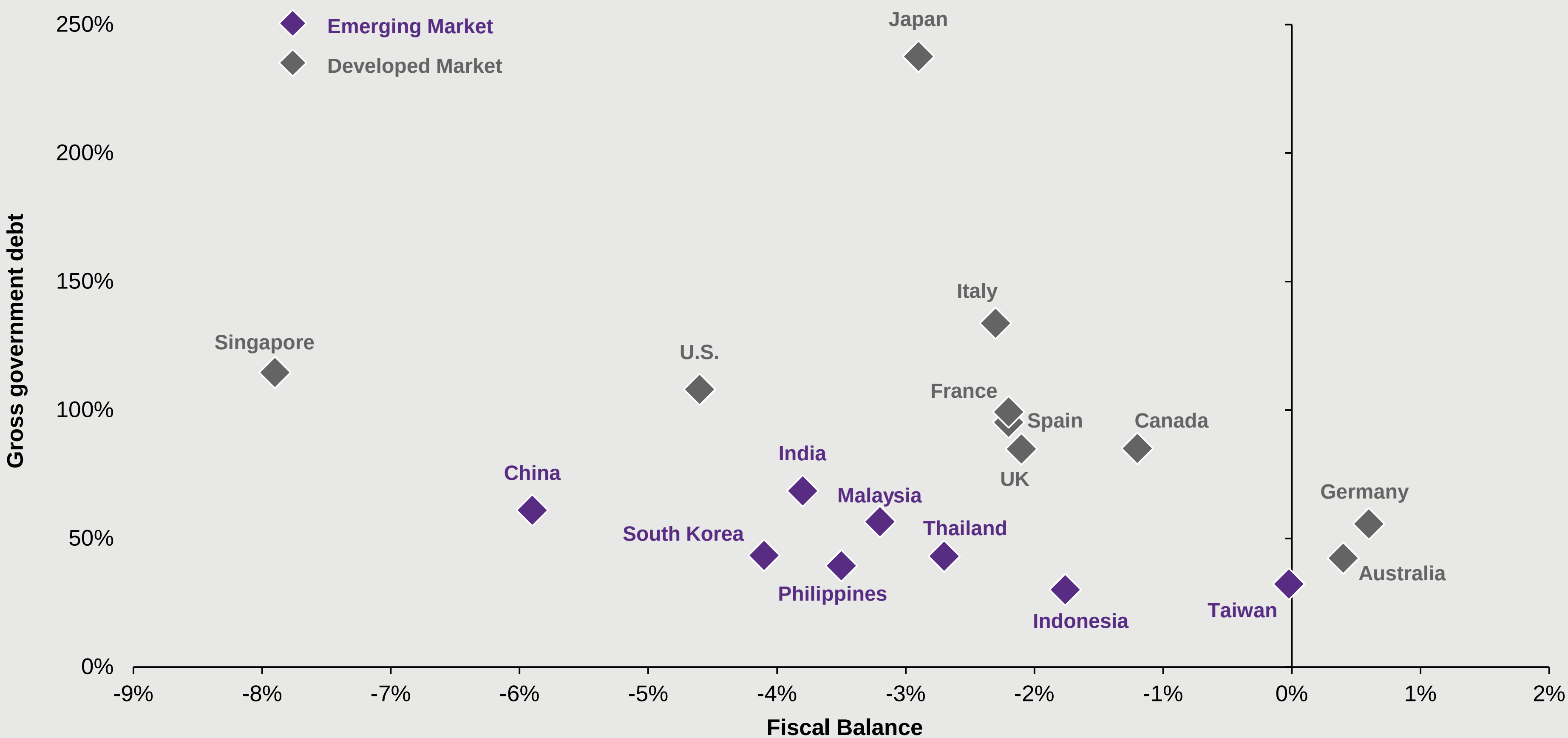
*The ECB public sector purchase program (PSPP) had a limit of 33% for maximum share of an issuer's outstanding securities that the ECB is prepared to buy. This limit was initially set at 25% at the start of the PSPP and was revised upwards to 33% in September 2015. The ECB asset purchase program will now include the pandemic emergency purchase program (PEPP) and PSPP where the 33% limit will not be binding.

Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Global economy

Gross government debt and fiscal balance

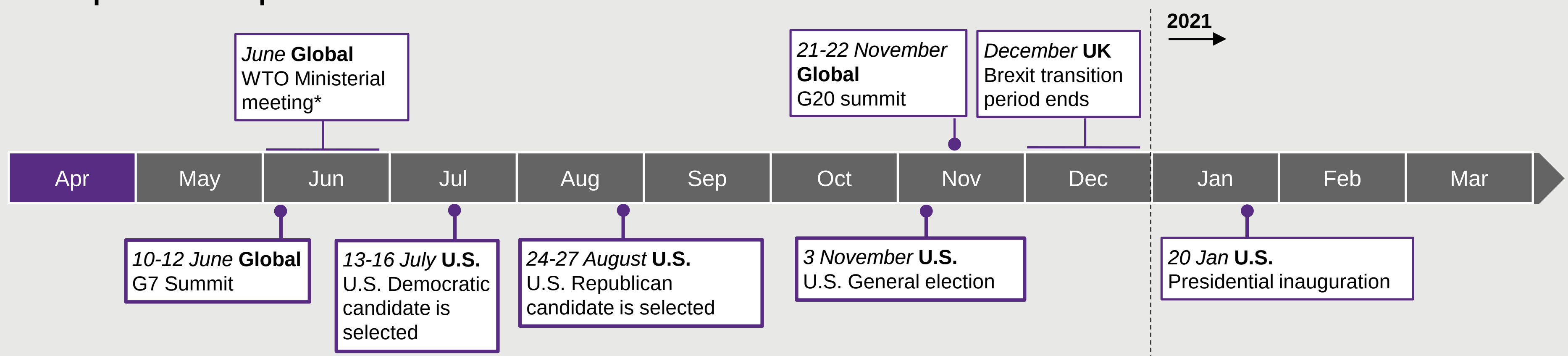
% of GDP, 2020 estimates



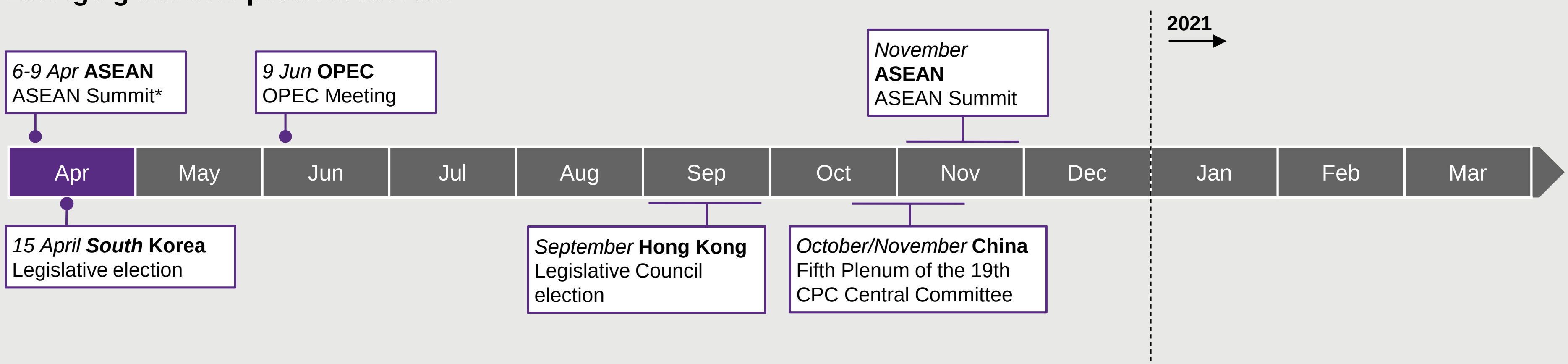
Source: Bloomberg, European Commission AMECO forecasts, Government Budgets, International Monetary Fund - World Economic Outlook, J.P. Morgan Asset Management. Emerging and developed markets classification based on MSCI 2019 Annual Market Classification Review.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Political calendar

Developed markets political timeline



Emerging markets political timeline

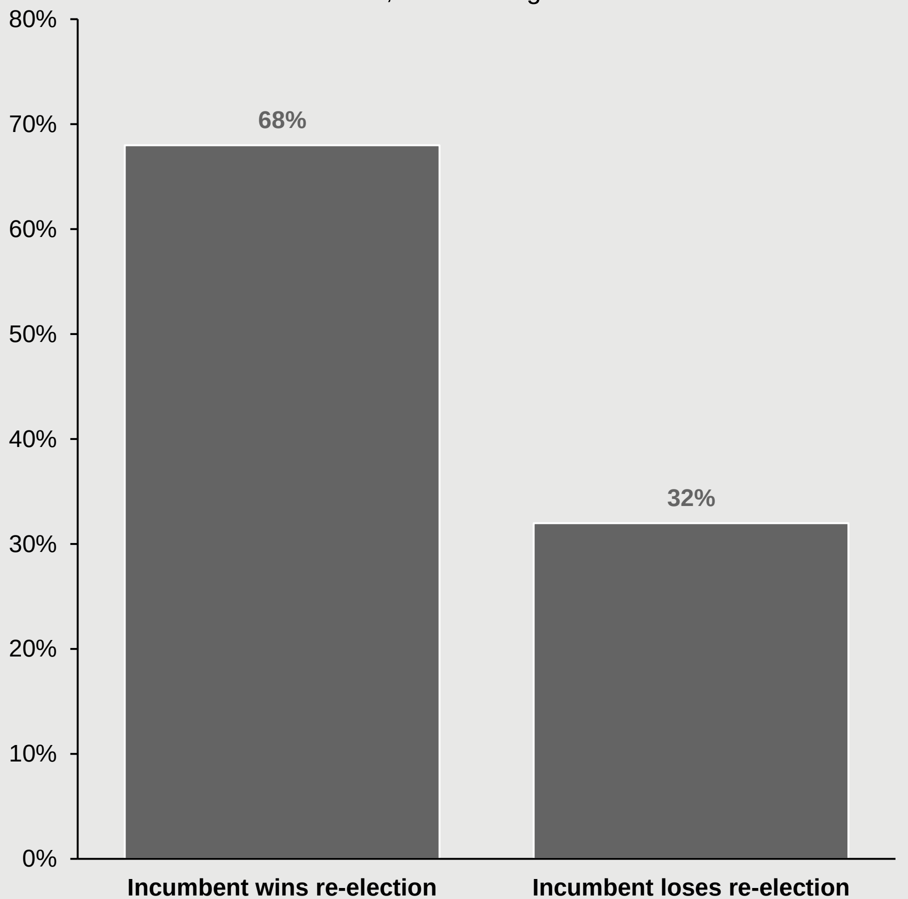


Source: Bloomberg Finance L.P., J.P. Morgan Asset Management. *Events have been postponed until further notice.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Global economy

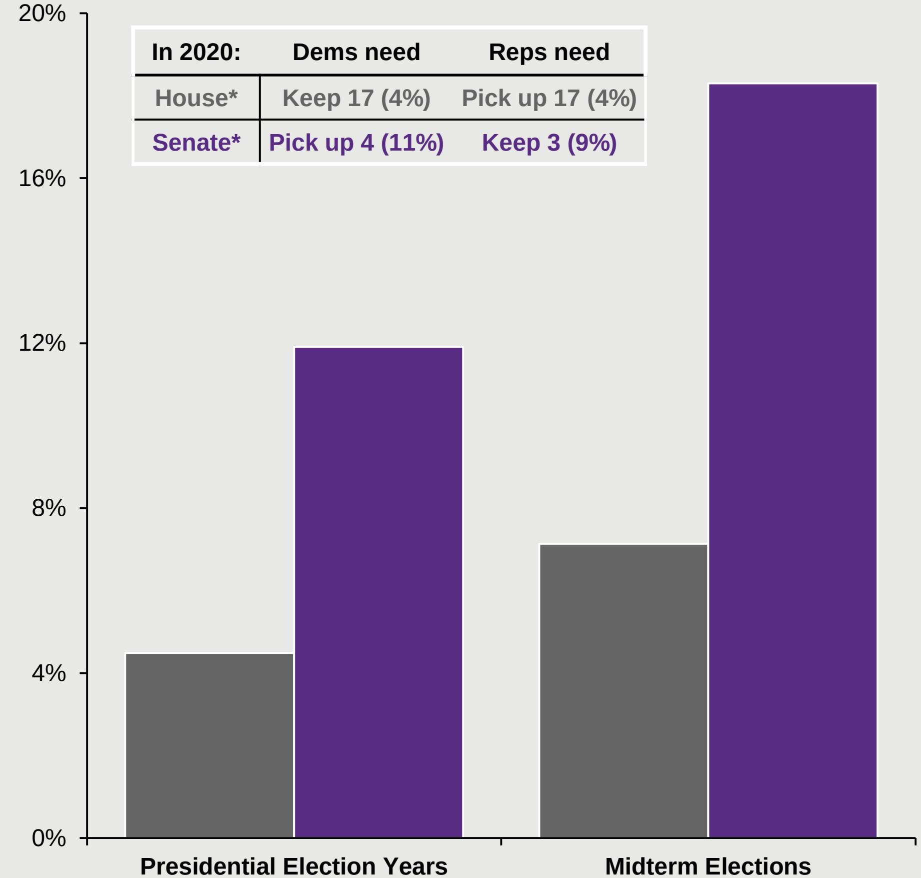
U.S. presidential elections and the incumbency factor

Percent of times result occurred, 1796 through 2016



Congressional seat gain/loss by chamber*

Avg. # of seats switching parties as a % of seats on ballot**



In 2020:	Dems need	Reps need
House*	Keep 17 (4%)	Pick up 17 (4%)
Senate*	Pick up 4 (11%)	Keep 3 (9%)

Source: J.P. Morgan Asset Management; (Left) 270toWin; (Right) U.S. House of Representatives, U.S. Senate. *Seats in the House of Representatives are filled by direct election every two years (members of the United States House of Representatives serve two-year terms), but only one-third of Senate seats are on the ballot every two years (United States Senators serve six-year terms). As a result, during every presidential election year, the entire House and one-third of the Senate are up for election. 2018 House of Representatives has one vacancy as the election result in one North Carolina district is still under dispute. The right chart assumes no change in the White House and thus, a Republican Vice President to break any tie in a Senate vote. **Covers period 1932 – present.

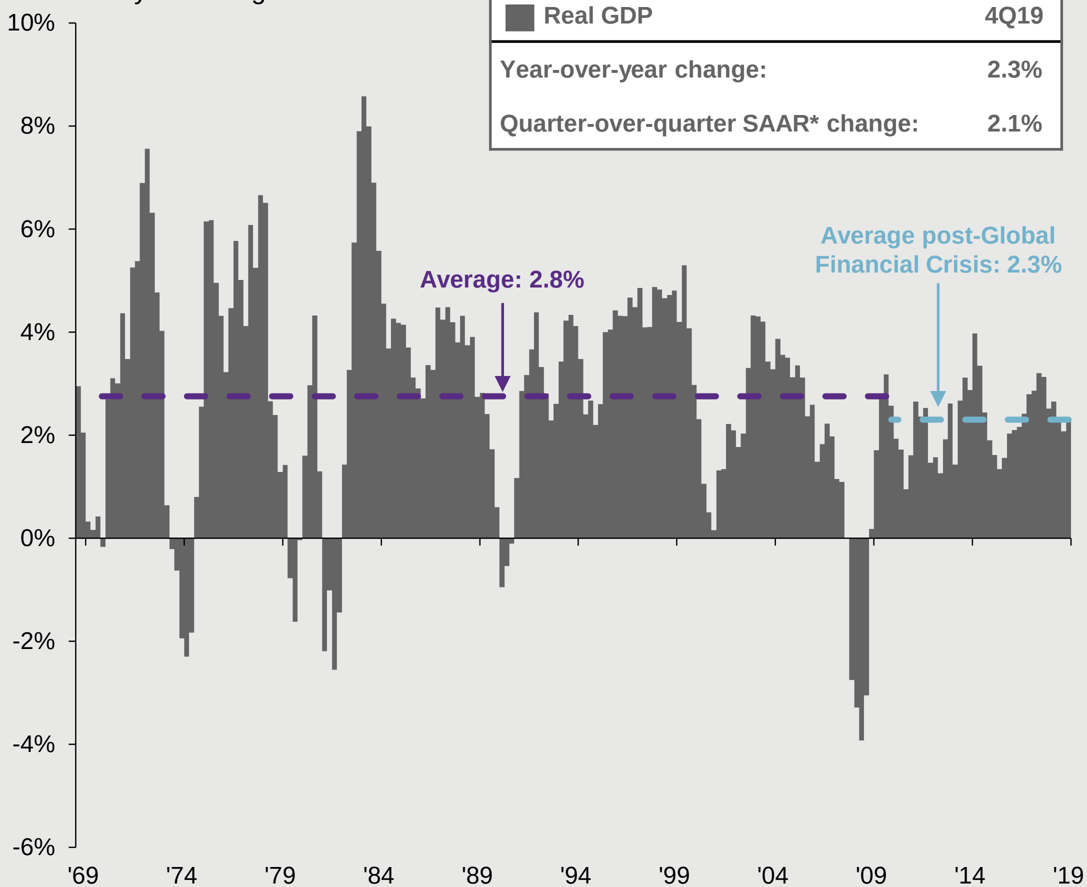
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Global economy

Real GDP

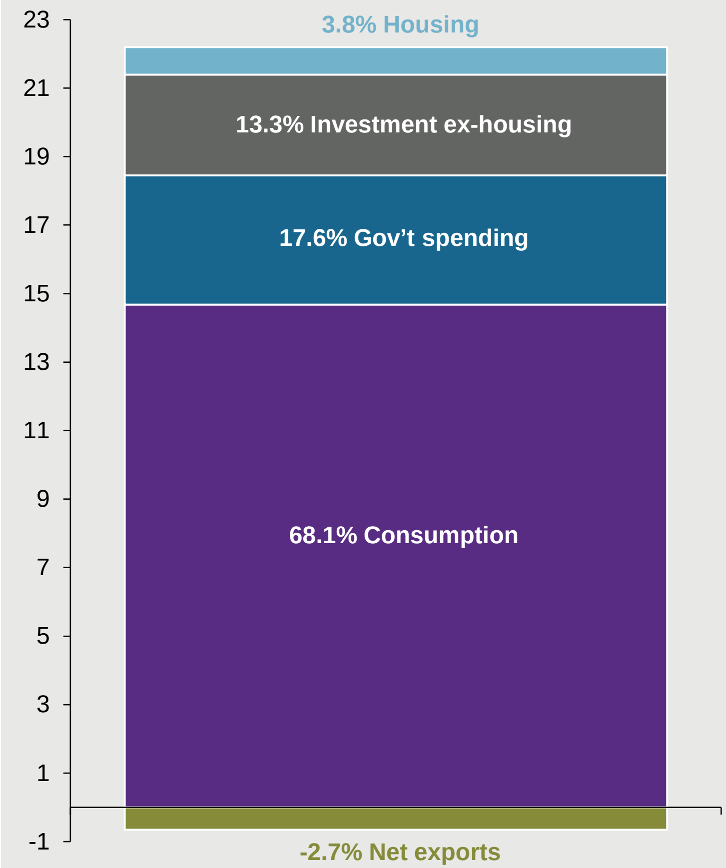
Year-over-year change

Real GDP	4Q19
Year-over-year change:	2.3%
Quarter-over-quarter SAAR* change:	2.1%



Components of GDP

4Q19 nominal GDP, USD trillions



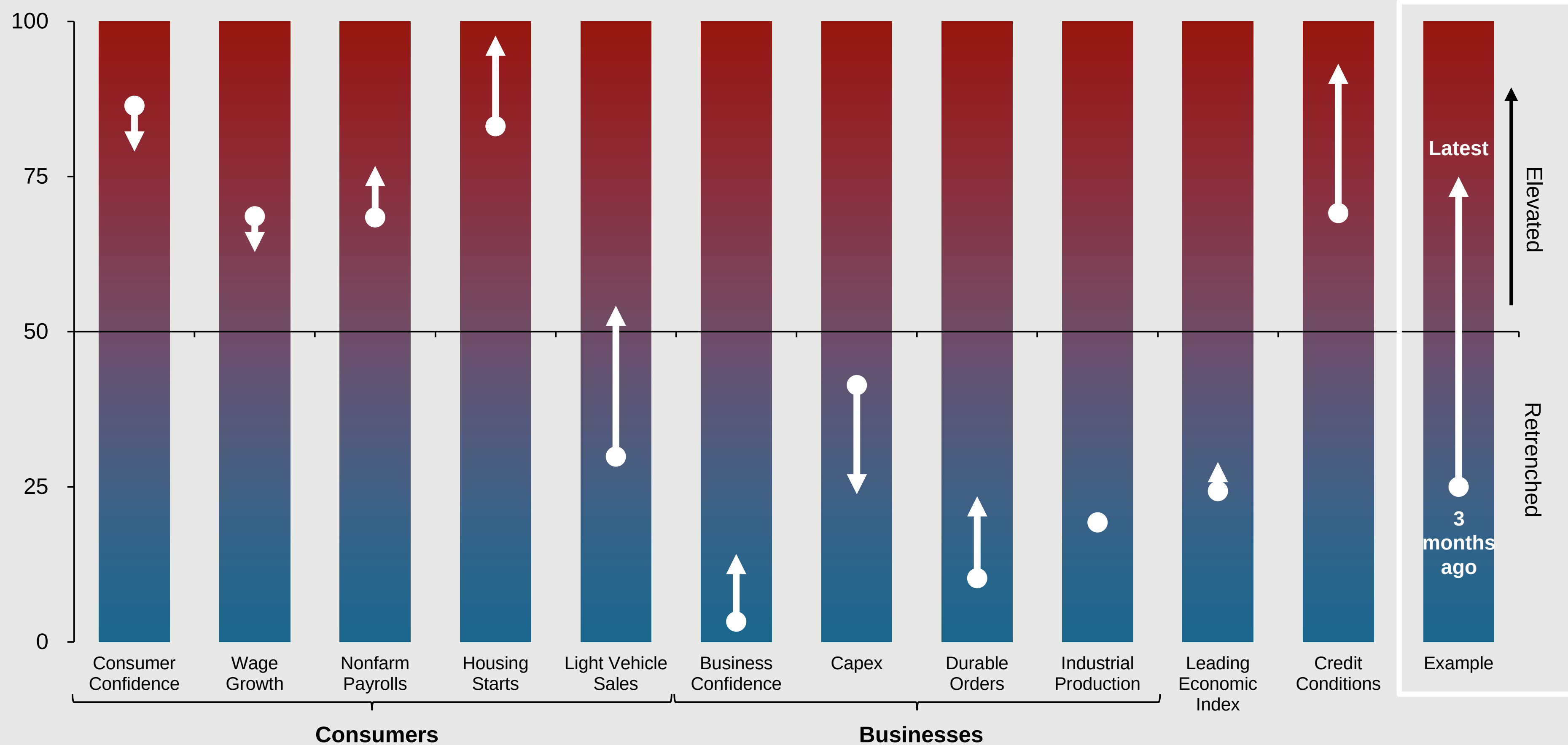
Source: Bureau of Economic Analysis, FactSet, J.P. Morgan Asset Management.
*SAAR stands for seasonally adjusted annualized rate.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

U.S. business cycle indicators

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

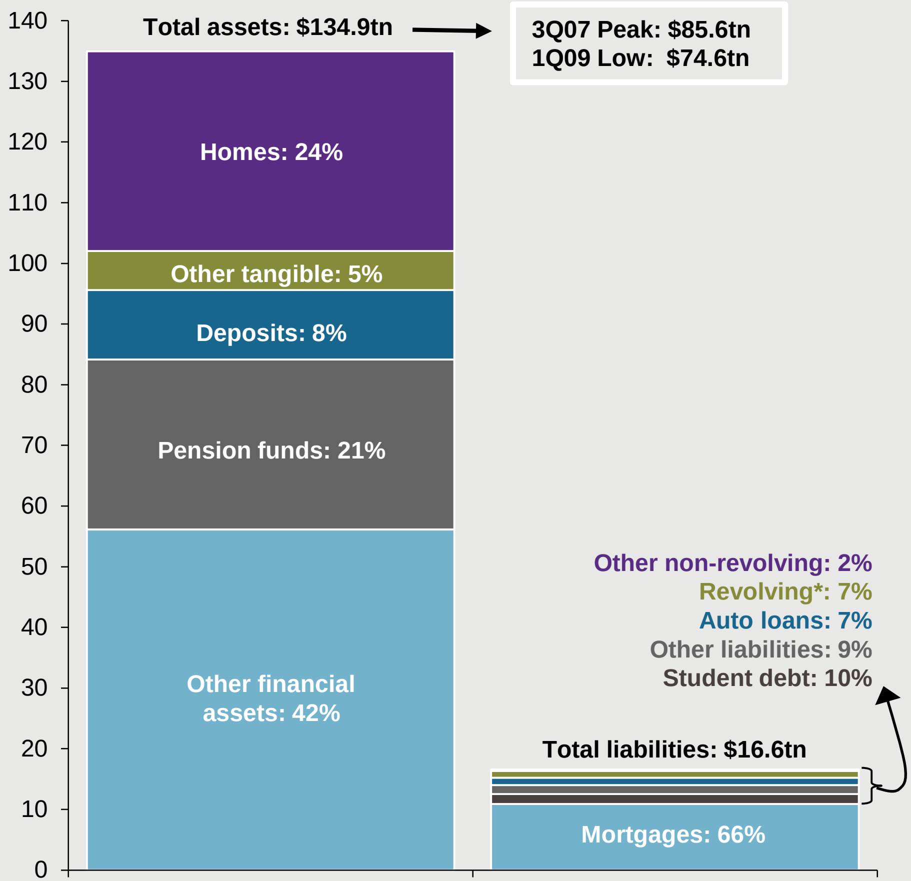


Source: BEA, Conference Board U.S., FactSet, U.S. Census Bureau, U.S. Department of Labor, Wards Intelligence, J.P. Morgan Asset Management.
Indicators are: *Consumer Confidence* – Monthly survey index of how consumers perceive their own financial status and the general economy; *Wage Growth* – Average 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. Durable Orders percentile rank change from 3 months ago is -0.6 and therefore does not appear on the chart.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

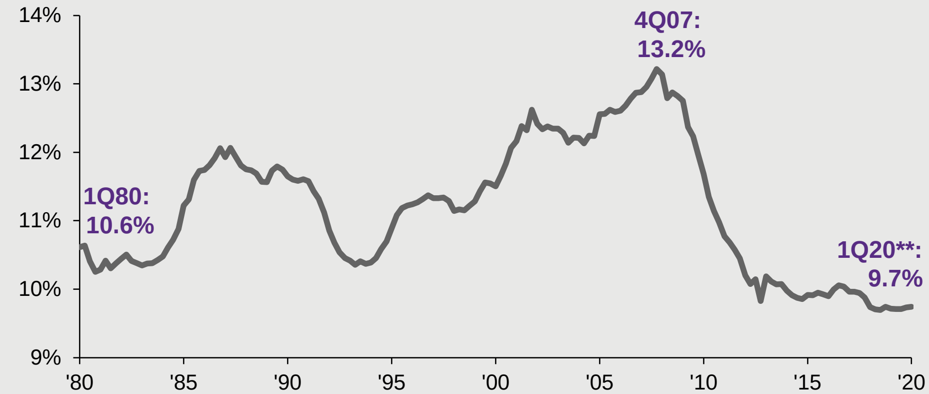
Consumer balance sheet

4Q19, USD trillions outstanding, not seasonally adjusted



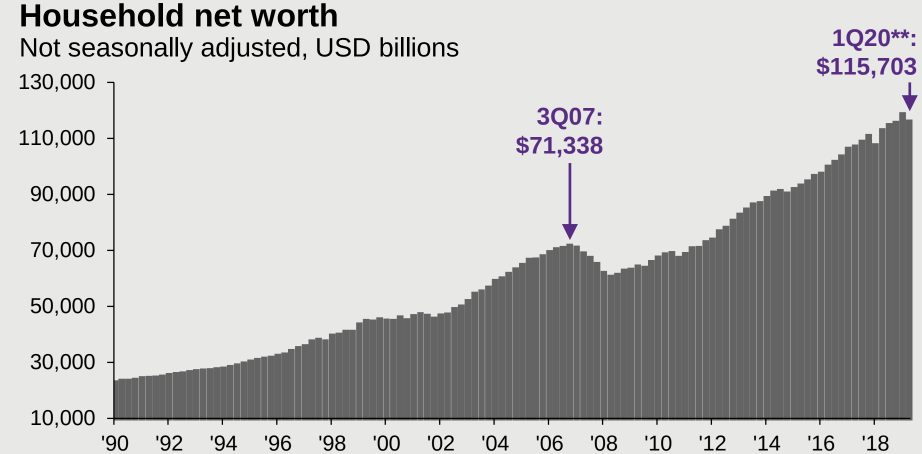
Household debt service ratio

Debt payments as % of disposable personal income, SA



Household net worth

Not seasonally adjusted, USD billions



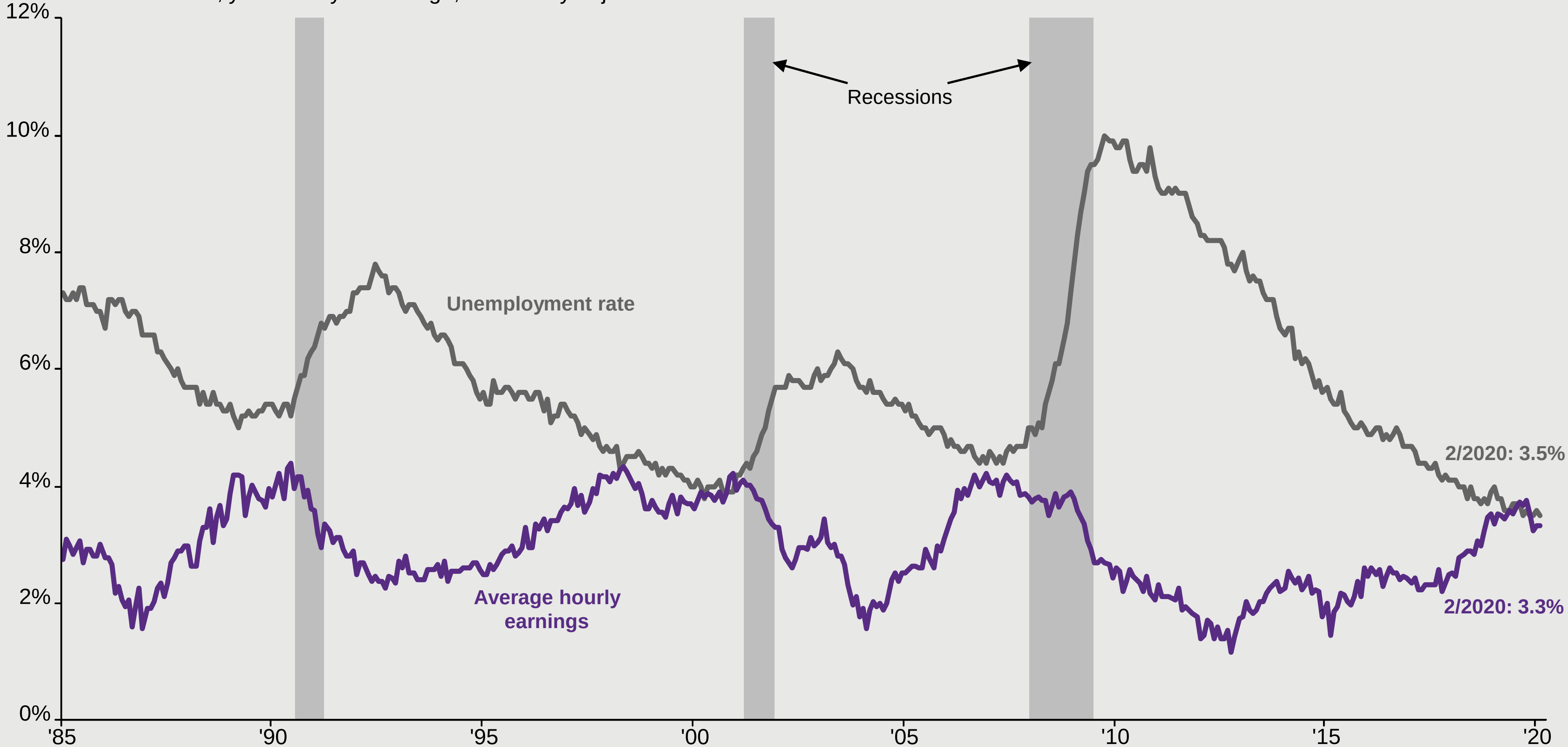
Source: FactSet, FRB, J.P. Morgan Asset Management; (Top and bottom right) Bureau of Economic Analysis.
Data include households and nonprofit organizations. SA stands for seasonally adjusted.
*Revolving includes credit cards. Values may not sum to 100% due to rounding. **1Q20 figures for debt service ratio and household net worth are J.P. Morgan Asset Management estimates.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

Unemployment rate and average hourly earnings*

Percent of labor force, year-over-year change, seasonally adjusted



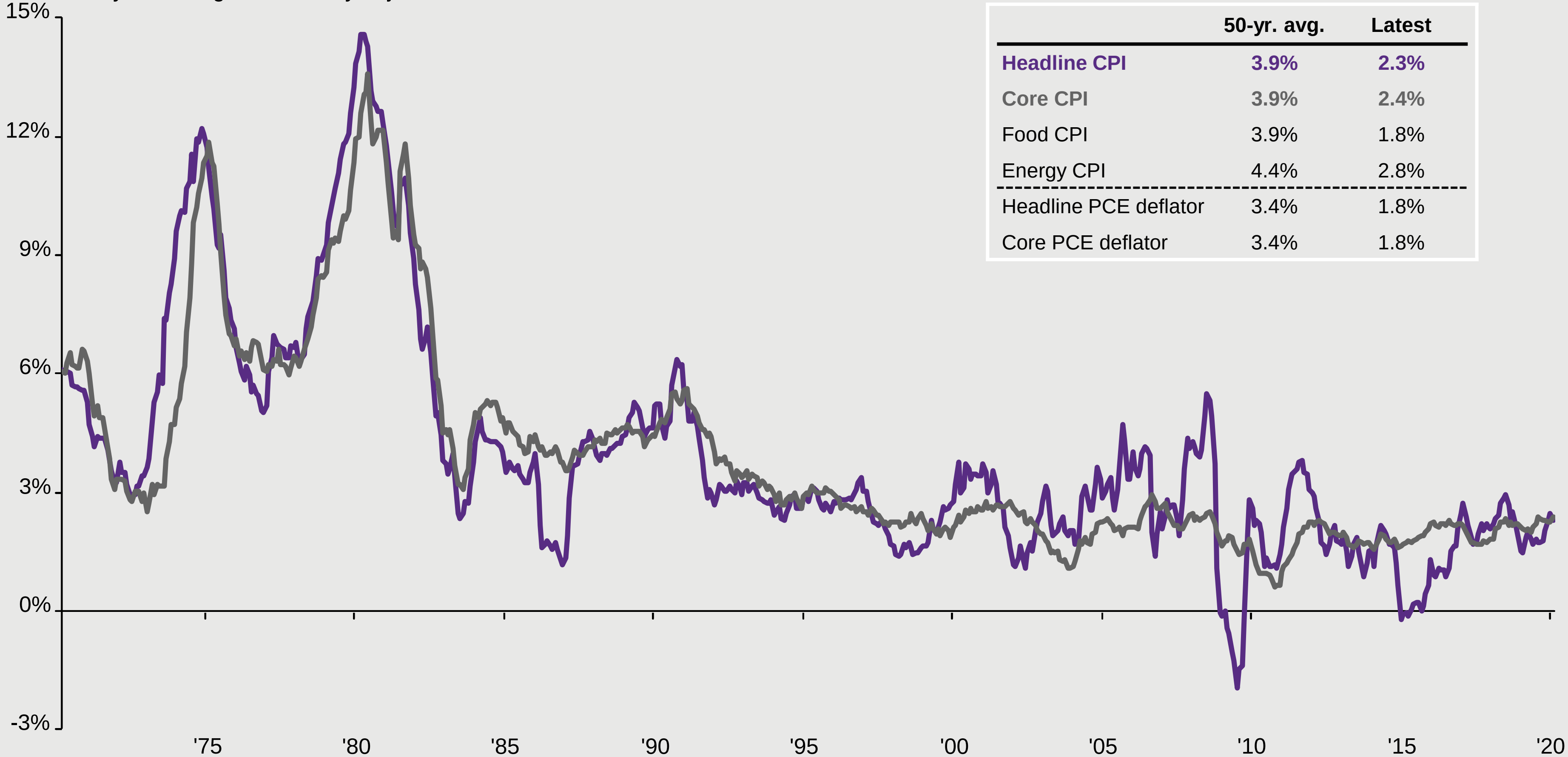
Source: FactSet, U.S. Bureau of Labor Statistics, J.P. Morgan Asset Management.
*Average hourly earnings are calculated from the wages of production and non-supervisory workers.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global economy

Headline and core consumer price index (CPI)

Year-over-year change, seasonally adjusted



	50-yr. avg.	Latest
Headline CPI	**3.9%**	**2.3%**
Core CPI	**3.9%**	**2.4%**
Food CPI	3.9%	1.8%
Energy CPI	4.4%	2.8%
Headline PCE deflator	3.4%	1.8%
Core PCE deflator	3.4%	1.8%

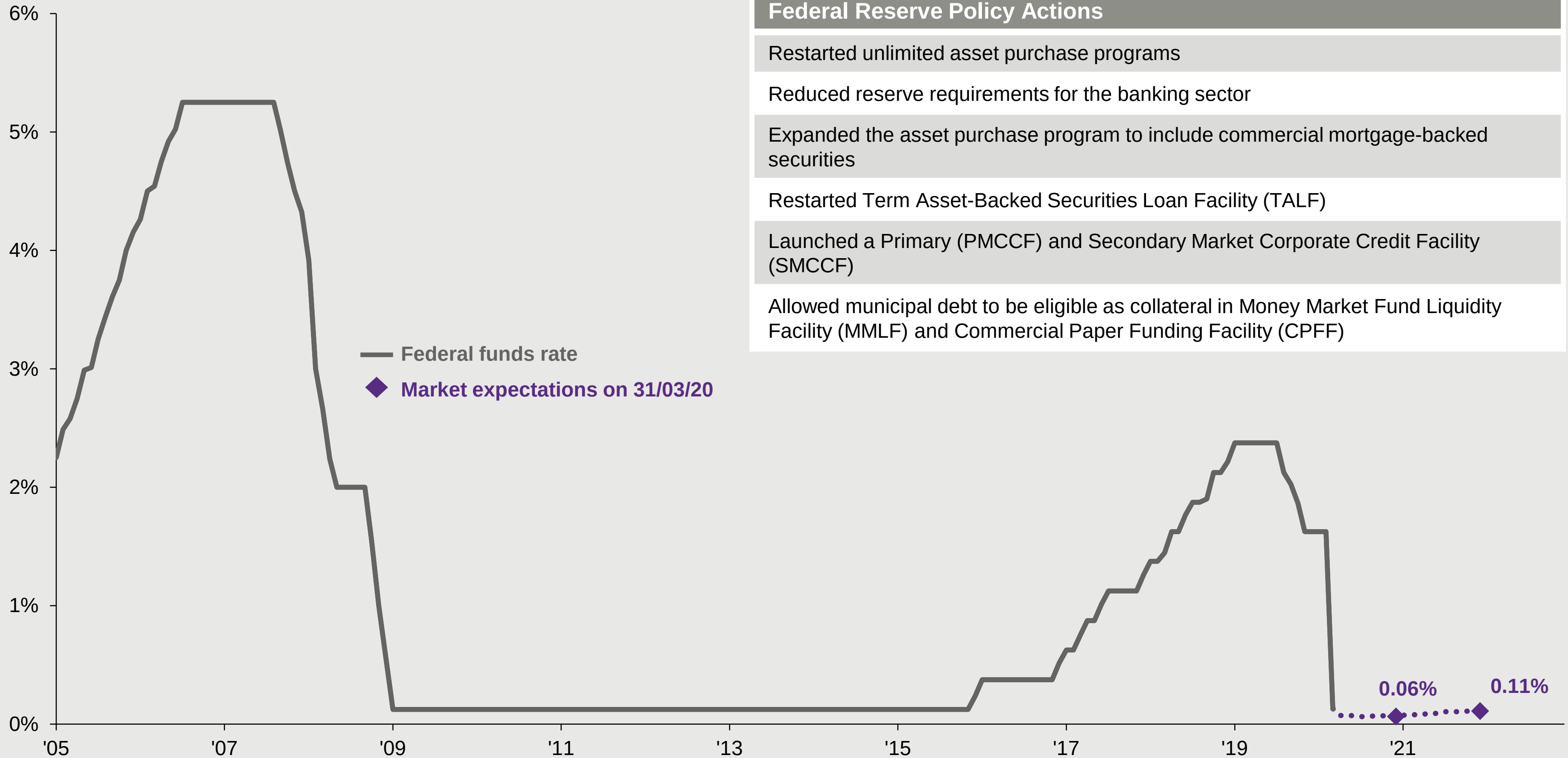
Source: Bureau of Economic Analysis, Department of Labor Statistics, FactSet, J.P. Morgan Asset Management.
Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations. Latest inflation numbers are February 2020 for CPI & sub-indexes and for PCE deflators.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan
Asset Management

Global economy

Federal funds rate expectations

Market expectations for the fed funds rate



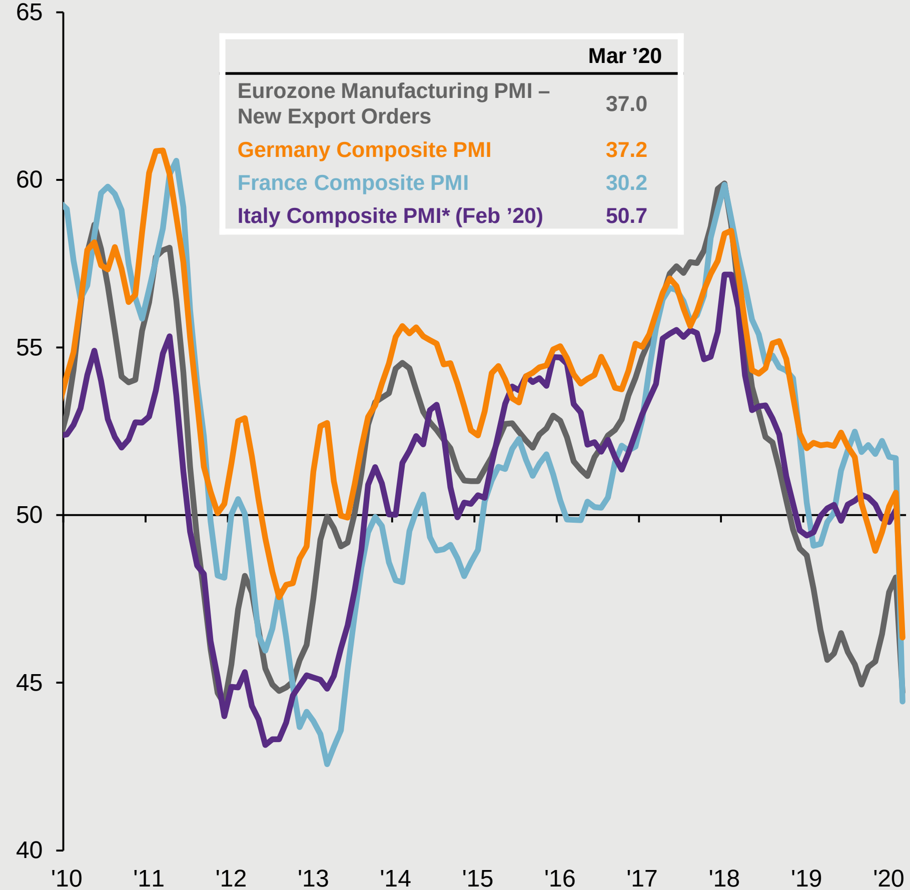
Federal Reserve Policy Actions
Restarted unlimited asset purchase programs
Reduced reserve requirements for the banking sector
Expanded the asset purchase program to include commercial mortgage-backed securities
Restarted Term Asset-Backed Securities Loan Facility (TALF)
Launched a Primary (PMCCF) and Secondary Market Corporate Credit Facility (SMCCF)
Allowed municipal debt to be eligible as collateral in Money Market Fund Liquidity Facility (MMLF) and Commercial Paper Funding Facility (CPFF)

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 31/03/20.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Global economy

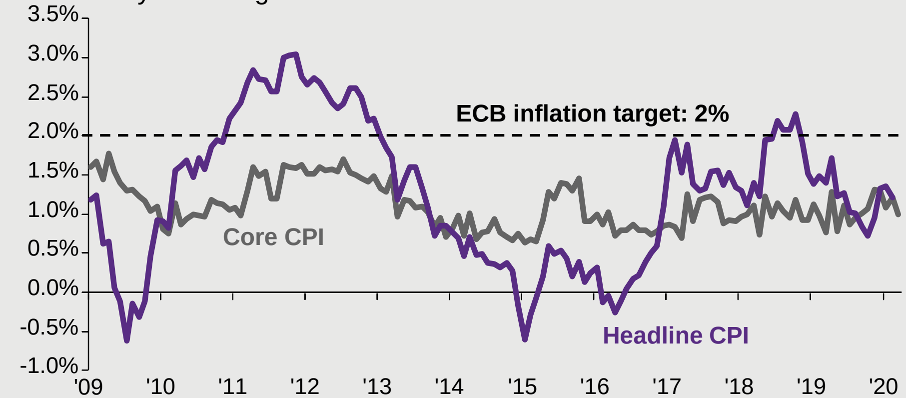
Eurozone PMIs

Index, 3-month moving average



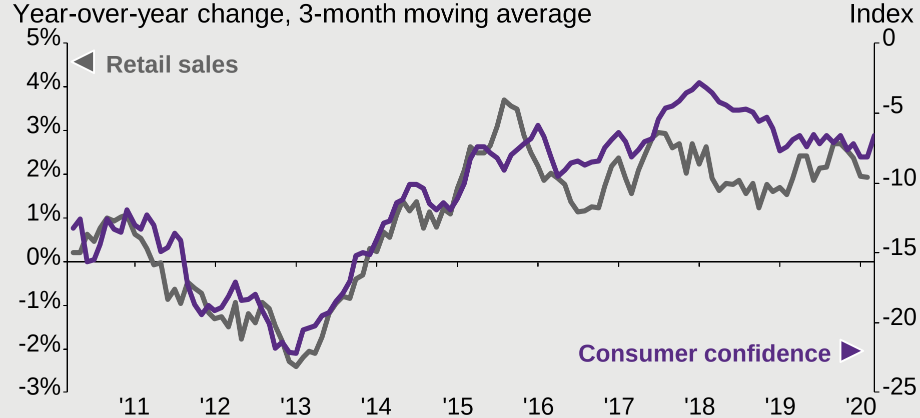
Eurozone CPI inflation

Year-over-year change



Consumer confidence** and retail sales

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



Source: FactSet, J.P. Morgan Asset Management; (Left) J.P. Morgan Economic Research, Markit; (Top and bottom right) Eurostat; (Bottom right) European Commission.
PMIs are relative to 50, which indicates contraction (below 50) or expansion (above 50) of the sector. Core CPI is defined as CPI excluding food and energy prices.
*Services component of Italy's Composite PMI for March 2020 is not available as of 31/03/20.
**Eurozone consumer confidence as reported by the European Commission, which measures the level of optimism that consumers have about the economy in relation to prior months and is typically below zero.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global and Asia equity market returns

Equities

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1Q '20	10-yrs ('10 - '20) 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 37.7%	China -10.2%	U.S. 10.5%	China A 24.5%
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%	China A 37.2%	China A -11.6%	Taiwan 7.3%	India 22.8%
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. 31.5%	Japan -16.6%	China 4.6%	Korea 20.6%
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 24.6%	Taiwan -19.0%	Japan 4.1%	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 23.7%	U.S. -19.6%	APAC ex-JP 3.5%	Europe 17.1%
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%	Japan 20.1%	APAC ex-JP -20.7%	Europe 3.1%	APAC ex-JP 16.9%
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%	APAC ex-JP 19.5%	Korea -22.4%	China A 2.6%	Taiwan 16.9%
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%	Korea 13.1%	Europe -24.2%	Korea 2.6%	ASEAN 16.4%
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%	ASEAN 8.8%	ASEAN -30.4%	ASEAN 1.4%	Japan 13.5%
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%	India 7.6%	India -31.1%	India -0.4%	U.S. 13.3%

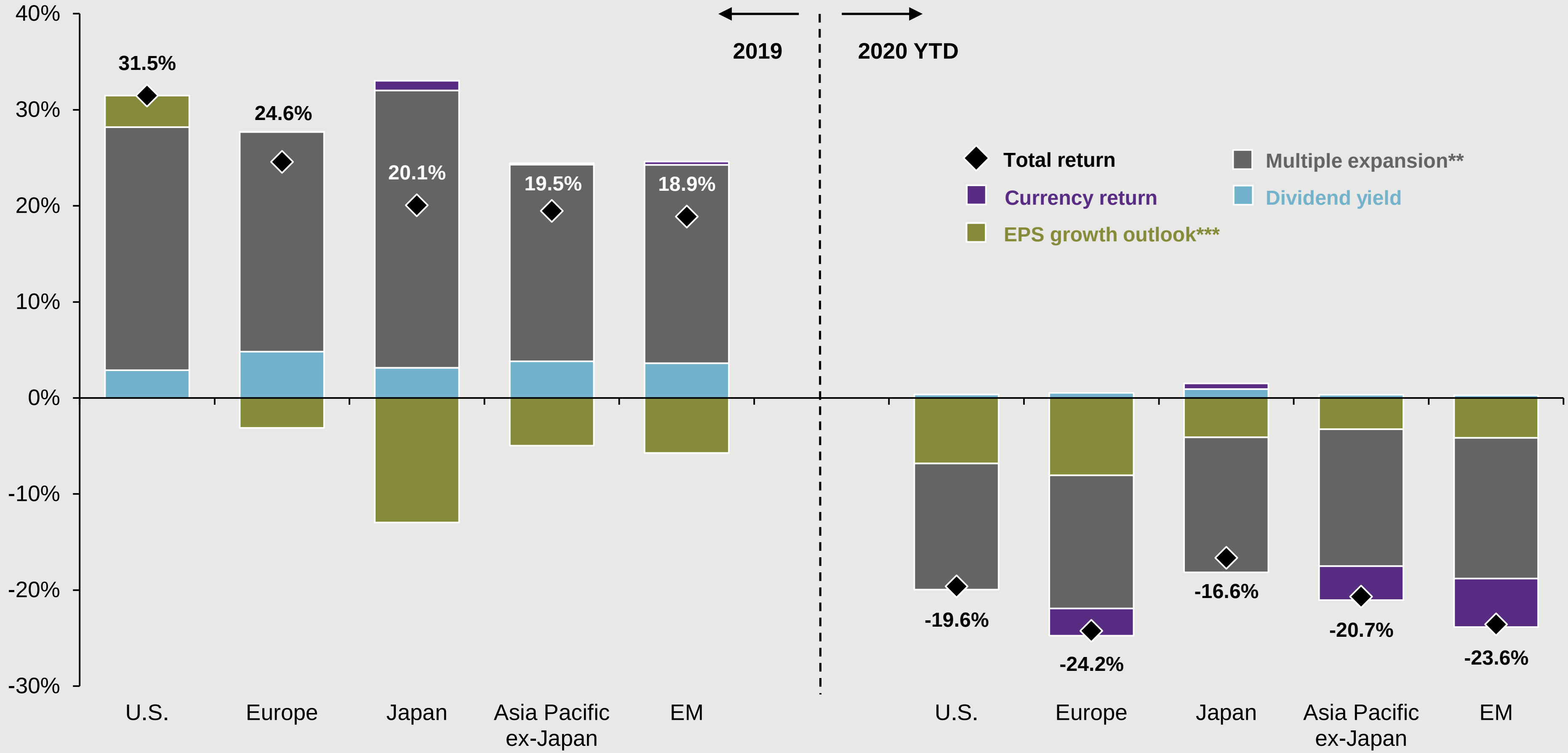
Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Returns are total returns based on MSCI indices, except the U.S., which is the S&P 500, and China A, which is the CSI 300 index in U.S. dollar terms. China return is based on the MSCI China index. 10-yr total (gross) return data is used to calculate annualized returns (Ann. Ret.) and annualized volatility (Ann. Vol.) and reflect the period 31/03/10 – 31/03/20. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Equities

Sources of global equity returns*

Total return, USD



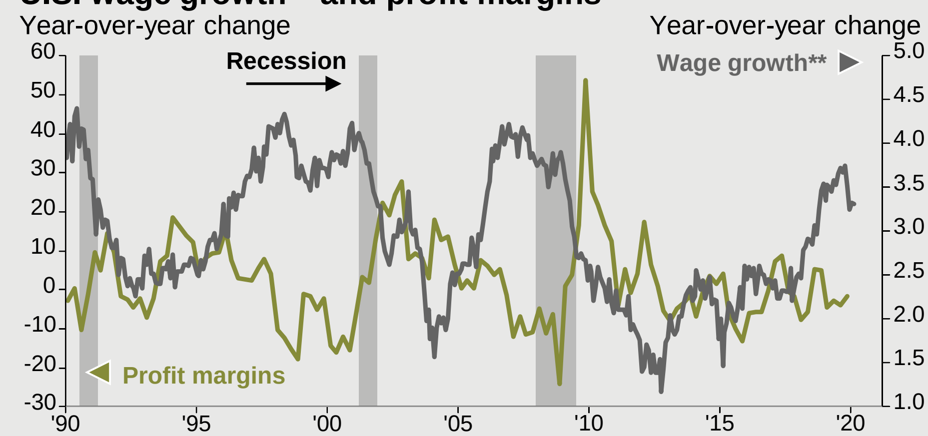
Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. *All return values are MSCI Gross Index (official) data, except the U.S., which is the S&P 500. **Multiple expansion is based on the forward price-to-earnings ratio. ***Earnings per share (EPS) growth outlook is based on next 12 month aggregate (NTMA) earnings estimates. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

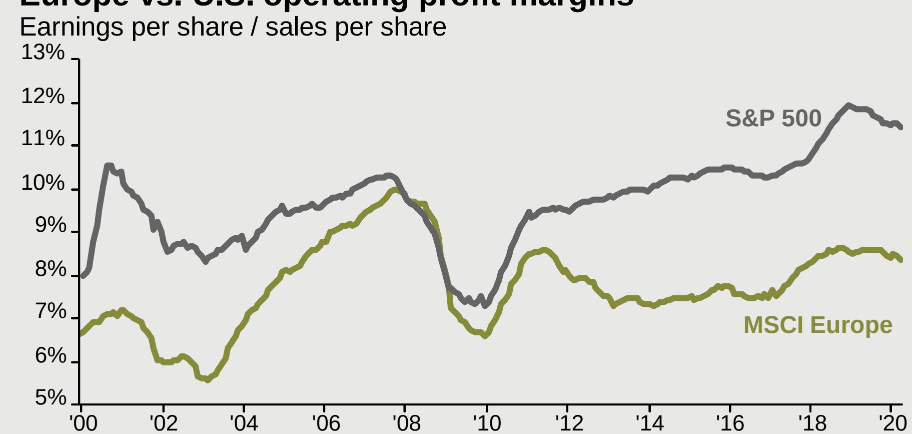
Equities

MSCI AC World EPS and developed market inflation

U.S. wage growth** and profit margins



Europe vs. U.S. operating profit margins



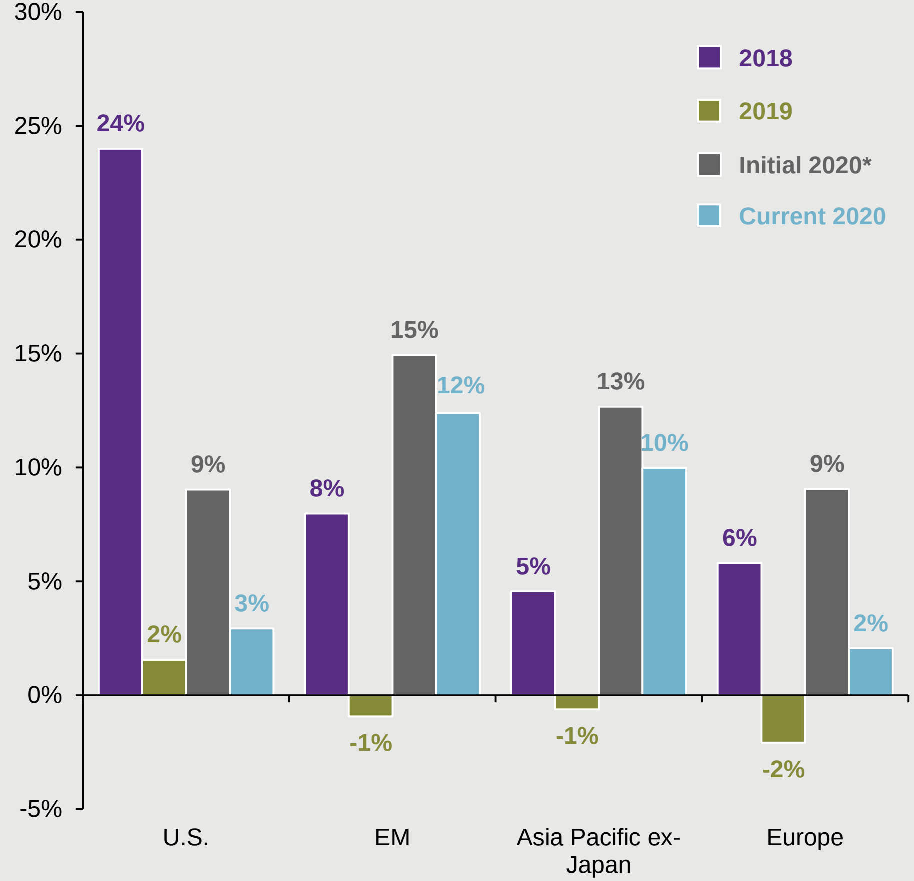
Source: FactSet, J.P. Morgan Asset Management; (Left) J.P. Morgan Economic Research; (Top right) U.S. Bureau of Economic Analysis, U.S. Department of Labor; (Bottom right) Standard & Poor's; (Left and bottom right) MSCI. *PPI is producer price index. **Wage growth is the year-over-year change in the average hourly earnings of production and non-supervisory workers.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Equities

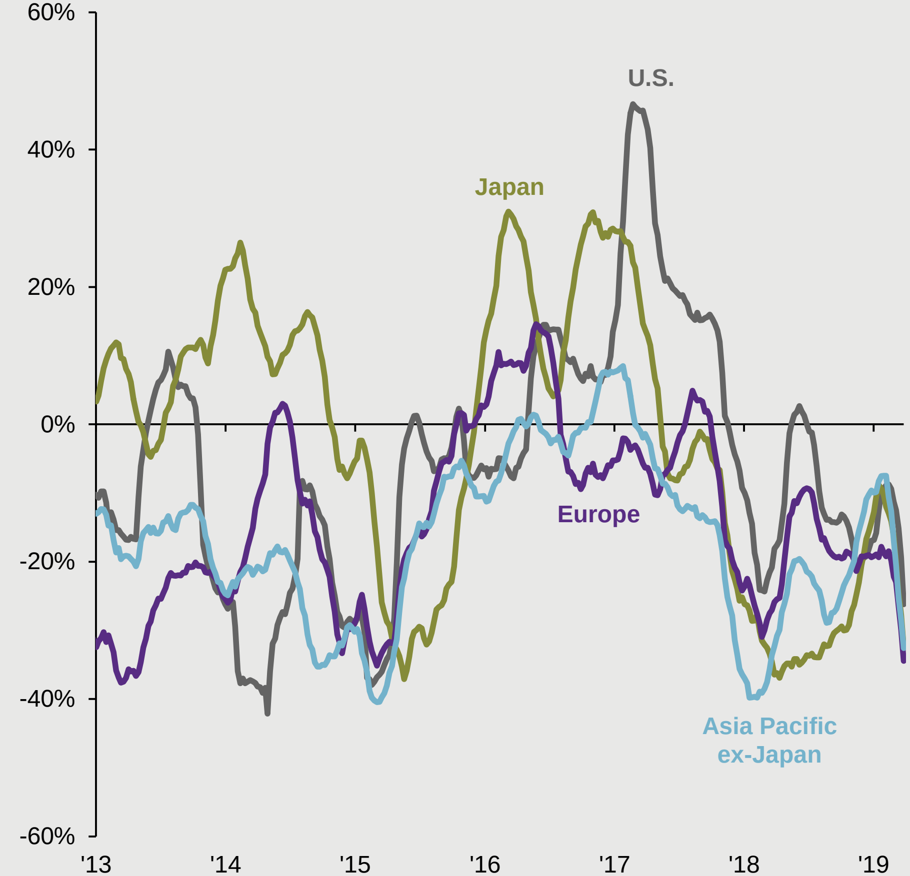
Earnings growth

Earnings per share, year-over-year change, consensus estimates



Earnings revisions ratios

Net earnings revisions to consensus estimates, 13-week moving average



Source: IBES, MSCI, Standard & Poor's, Thomson Reuters Datastream, J.P. Morgan Asset Management. Asia Pacific ex-Japan, EM, Europe and U.S. equity indices used are the MSCI Asia Pacific ex-Japan, MSCI Emerging Markets, MSCI Europe and S&P 500, respectively. *Initial 2020 earnings are 2020 earnings expectations as at 31/12/19. Consensus estimates used are calendar year estimates from IBES. Revisions are based on the current unreported year. Net earnings revisions is (number of companies with upward earnings revisions – number of companies with downward earnings revisions) / number of total companies. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

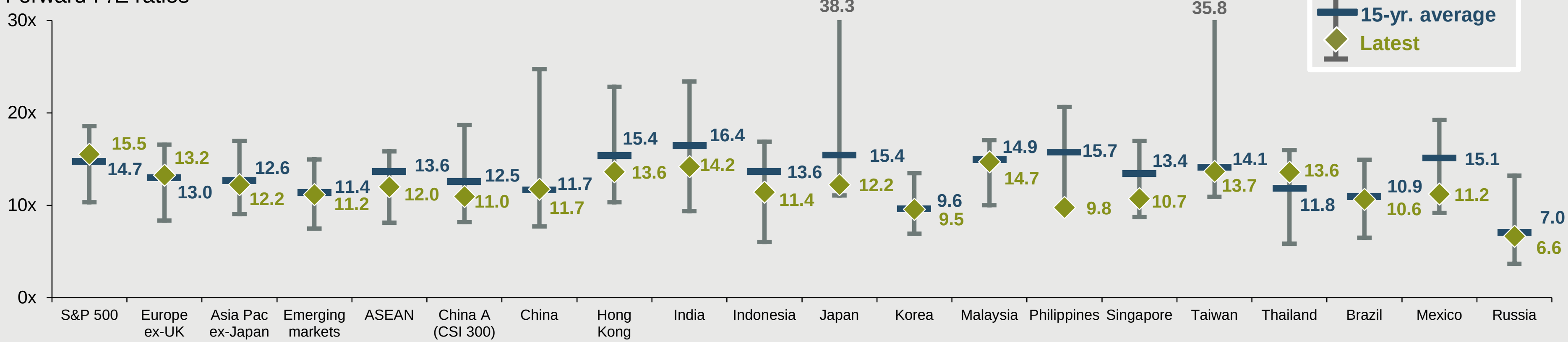
J.P.Morgan Asset Management

Global equities: Valuations

Equities

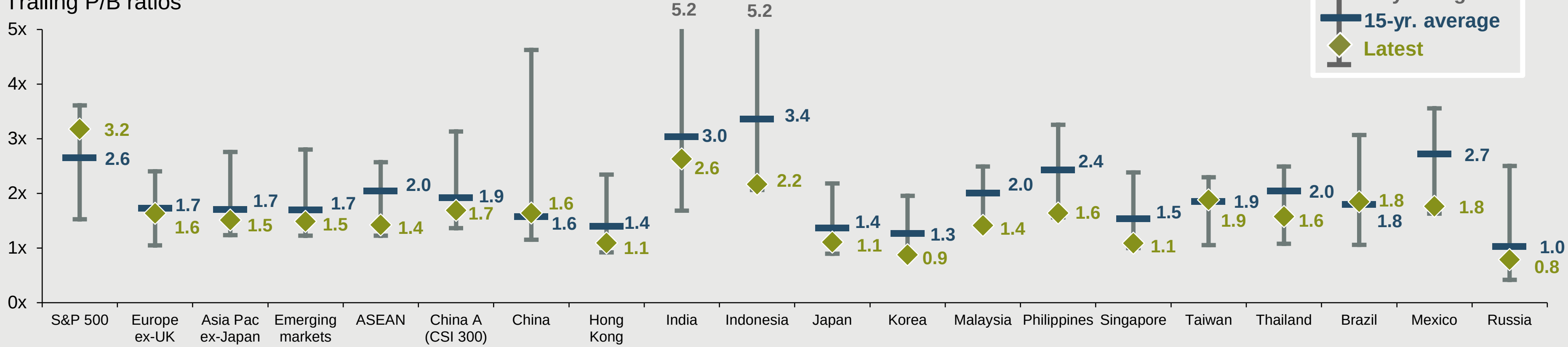
Equity market valuations – Price to earnings

Forward P/E ratios



Equity market valuations – Price to book

Trailing P/B ratios



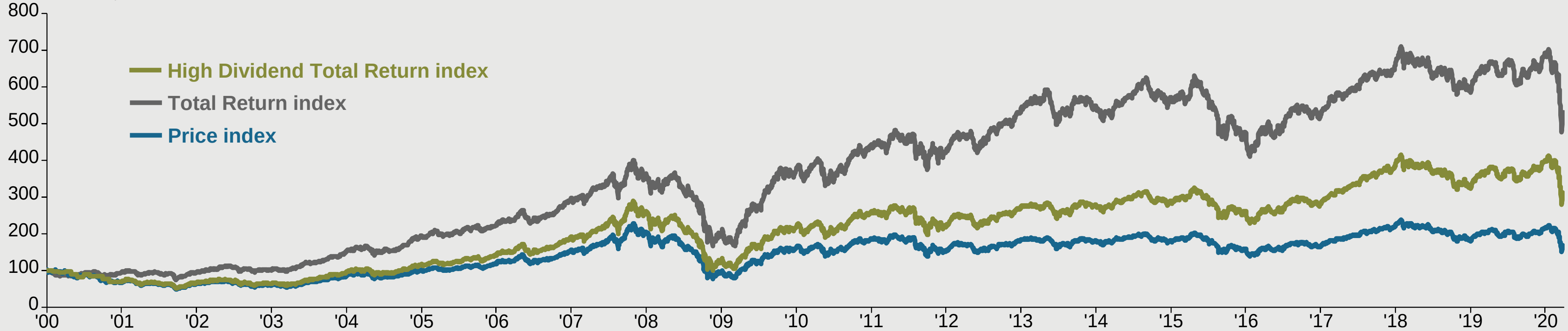
Source: Bloomberg Finance L.P., China Securities Index, FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Price-to-earnings (P/E) and price-to-book (P/B) ratios are in local currency terms. China A valuations based on the CSI 300 Index and use 10 years of data due to availability. China valuation is 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 indices.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P. Morgan Asset Management

Equities

MSCI AC Asia Pacific ex-Japan: Performance comparison*

USD index, Jan. 2000 = 100

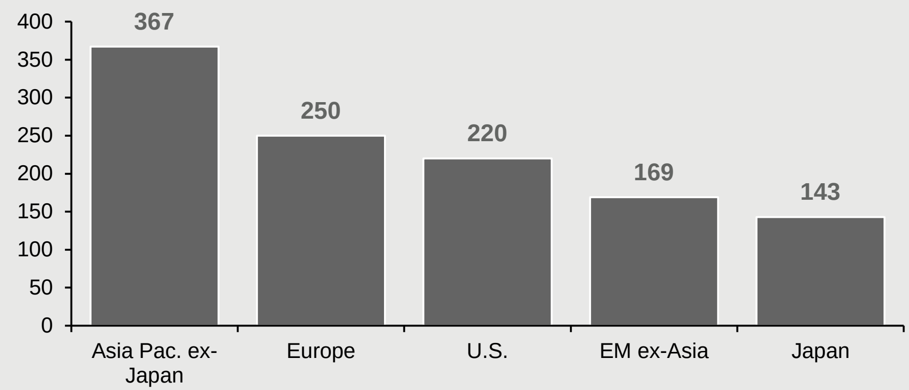


Risk and return profile**

	Annualized return	Annualized volatility	Risk-adjusted return
MSCI World (DM)	5.9%	15.2%	0.39
MSCI World (DM) High Dividend	8.0%	12.7%	0.63
MSCI AC Asia Pacific ex-Japan	6.6%	20.4%	0.33
MSCI AC APAC ex-JP High Div	9.5%	13.4%	0.71

Number of companies yielding greater than 3% by region

Constituents of MSCI AC World Index



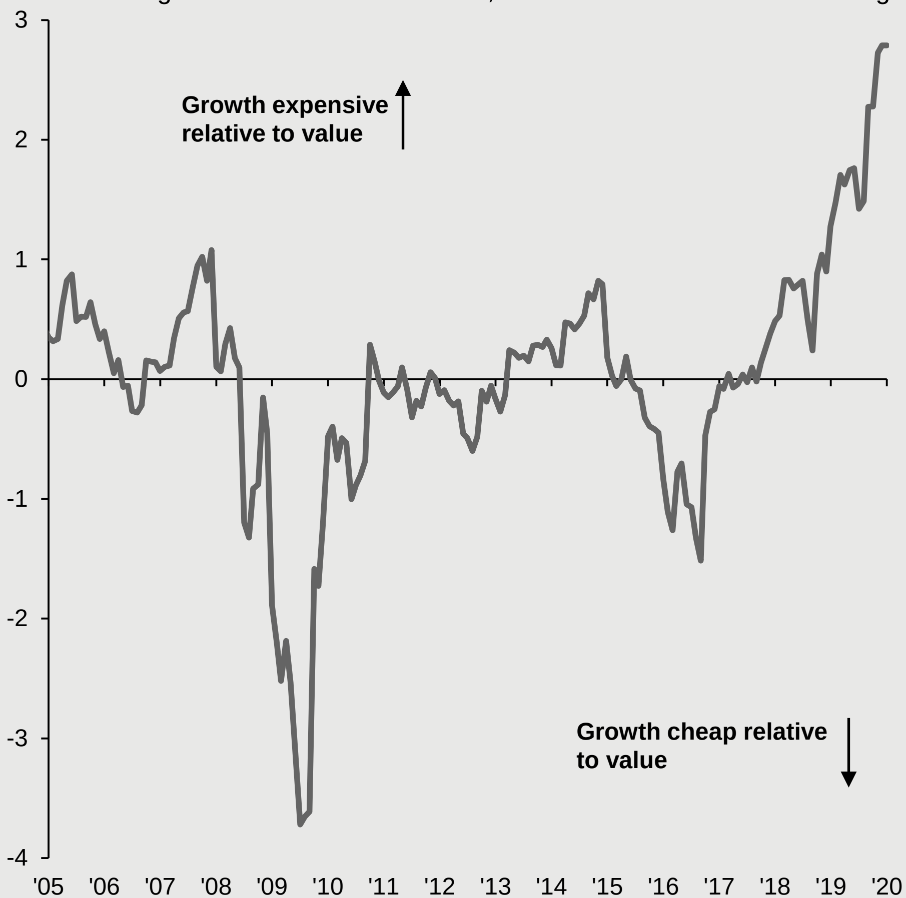
Source: FactSet, MSCI, J.P. Morgan Asset Management.
*Total returns based on MSCI indices in U.S. dollar terms. **Annualized return and volatility based on total monthly return data (USD) over the latest 15 years. Risk-adjusted return is calculated as annualized return / annualized volatility.
Positive 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 31/03/20.

J.P.Morgan Asset Management

Equities

Growth vs. value valuations*

MSCI World growth / value fwd. P/E ratio, # of std. dev. over / under average



Growth vs. value relative performance and rates

MSCI World value / growth performance — 10-2 year spread

Source: FactSet, MSCI, J.P. Morgan Asset Management.
*Growth is the MSCI World Growth index and value is the MSCI World Value index.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

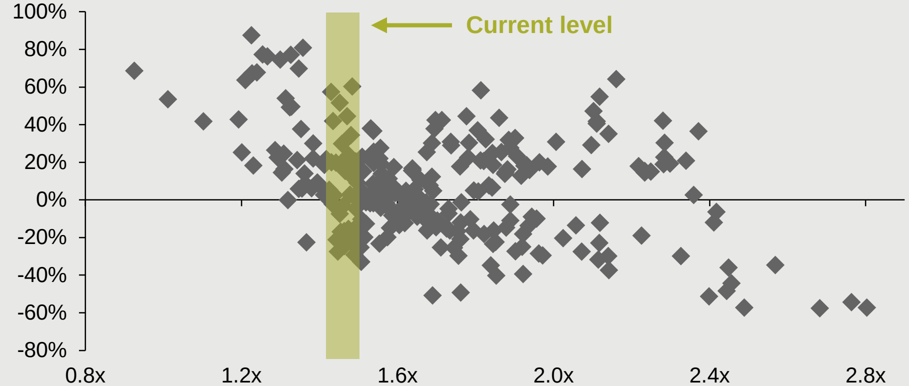
Equities

EM vs. DM growth and equity performance

%, next 12 months' growth estimates

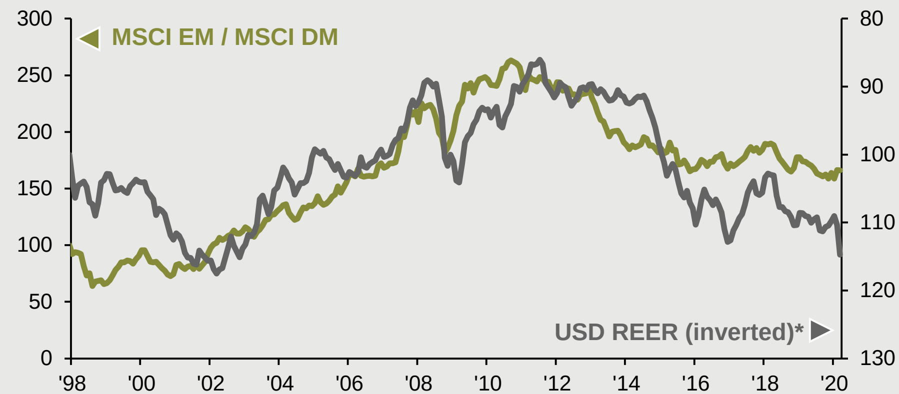
EM price to book and subsequent returns

%, next 12 months' price return in USD



Relative EM / DM equity performance and USD REER

Relative index level, Dec. 1997 = 100

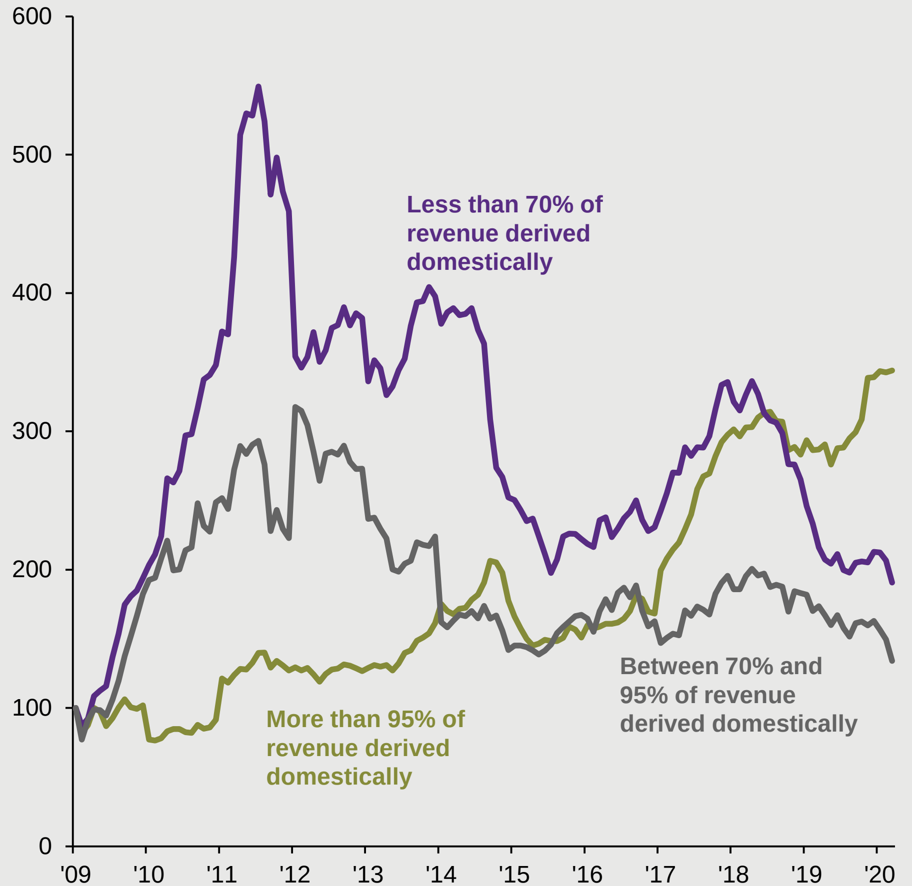


Source: FactSet, MSCI, J.P. Morgan Asset Management; (Left) J.P. Morgan Economic Research; (Top right) MSCI.
EM = Emerging markets; DM = Developed markets.
*REER is the real effective exchange rate. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

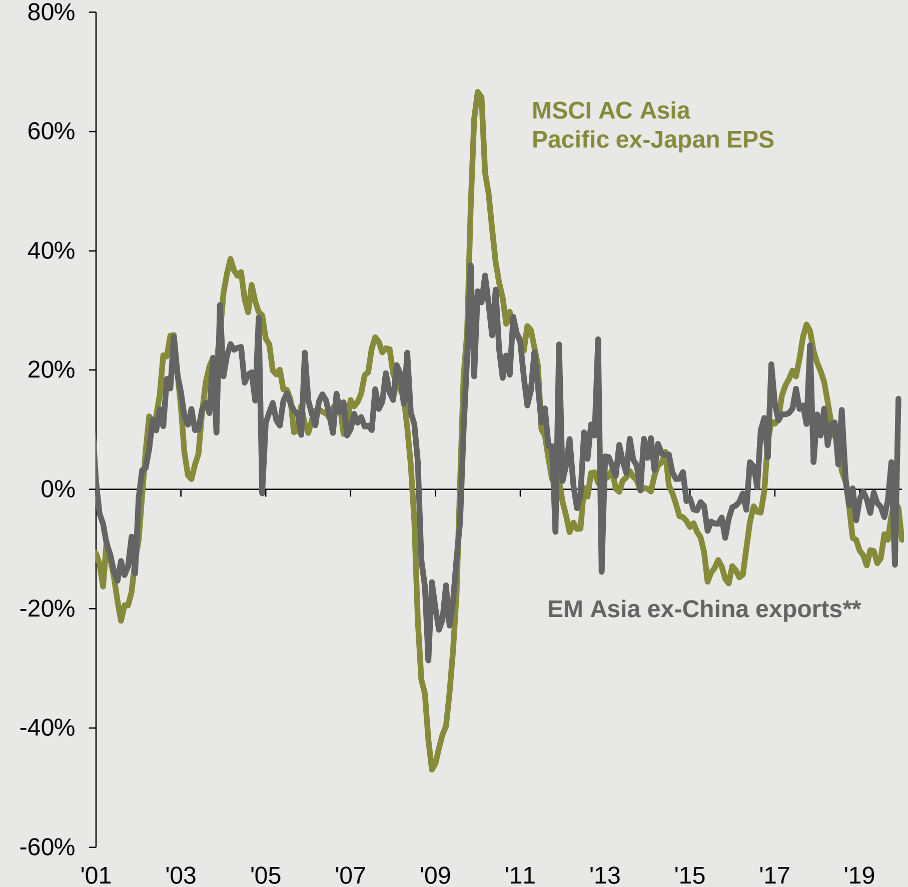
J.P.Morgan Asset Management

Equities

Domestic vs. exports-oriented Asian companies*
MSCI AC Asia Pacific ex-Japan, earnings per share, Jan. 2009 = 100



Growth in nominal exports and earnings per share
USD, year-over-year change



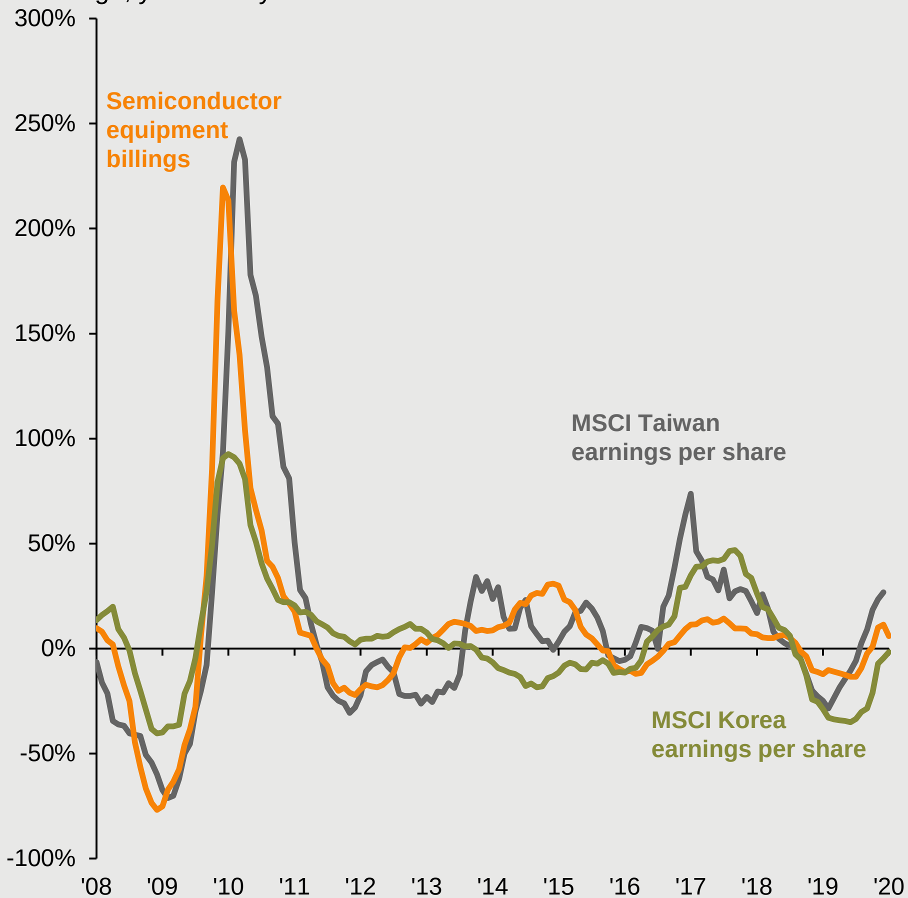
Source: FactSet, MSCI, J.P. Morgan Asset Management; (Right) CEIC, national statistics agencies.
Earnings per share (EPS) used is next 12 months' aggregate estimate. *Universe of stocks within the MSCI AC Asia Pacific ex-Japan index are split into three buckets depending on their revenue exposure to their domestic market. Over the time period examined (01/01/09 – 31/03/20), monthly adjustments are made to the buckets to reflect changes in a company's operations over time. Subsequently, earnings-per-share (EPS) for each bucket is calculated by summing the market-value weighted EPS for each company on a monthly basis over the examined period. Each EPS series is then indexed to 100 on 01/01/09. **EM Asia ex-China includes Hong Kong, Korea, Malaysia, Singapore, Taiwan, Thailand and Vietnam. Overall exports aggregate is gross domestic product (GDP)-weighted. Past performance is not a reliable indicator of current and future results. For illustrative purposes only.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan
Asset Management

Korea & Taiwan: Exports & earnings

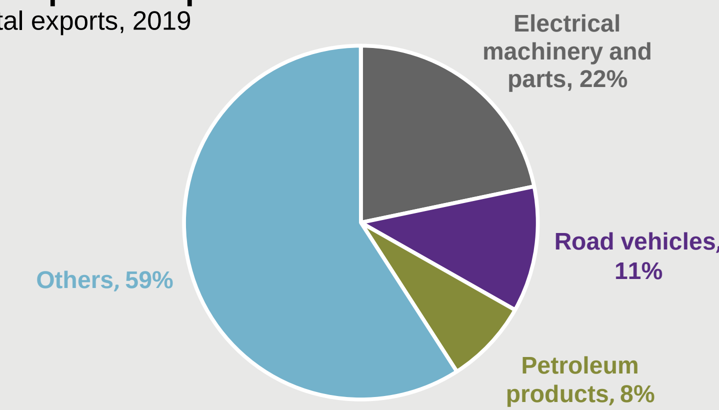
Semiconductor equipment billings and earnings growth

% change, year-over-year



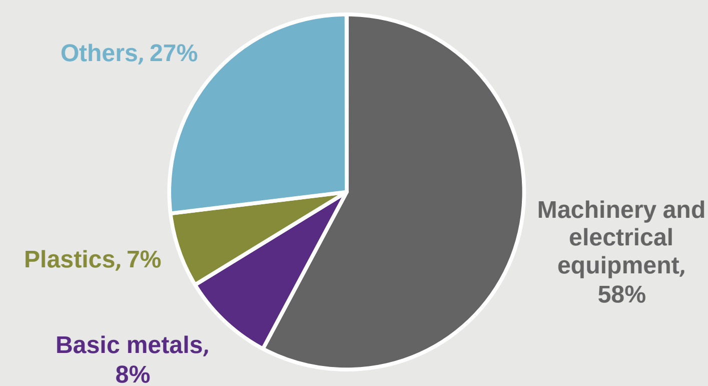
Korea export composition

% of total exports, 2019



Taiwan export composition

% of total exports, 2019



Source: FactSet, J.P. Morgan Asset Management; (Left) MSCI, Semiconductor Equipment and Materials International; (Top right) Korea International Trade Association; (Bottom right) Taiwan Bureau of Foreign Trade. Earnings in local currency. Semiconductor equipment billing data reflect year-over-year changes in 3-month average billings worldwide. Korea and Taiwan export composition based on Korea International Trade Association and Taiwan Bureau of Foreign Trade classifications, respectively, and only showing top three categories.

Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

China: Equities snapshot

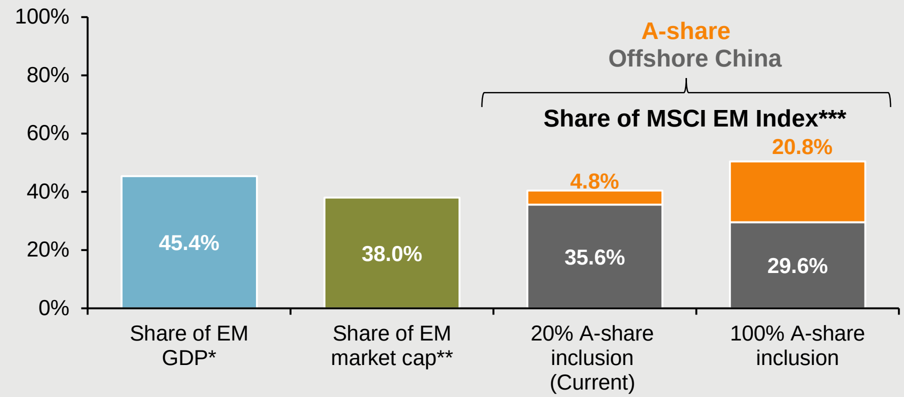
Equities

Corporate earnings

Next 12-month consensus earnings per share, USD, Jan. 2013 = 100

MSCI A-share inclusion

China's % share in selected emerging market indicators



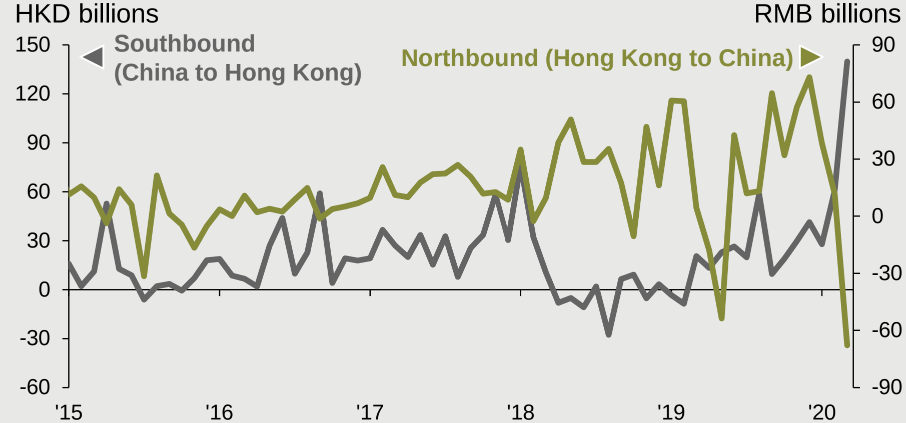
Foreign investors' holdings of onshore Chinese equities

RMB trillions

Stock Connect monthly net flows

HKD billions

RMB billions



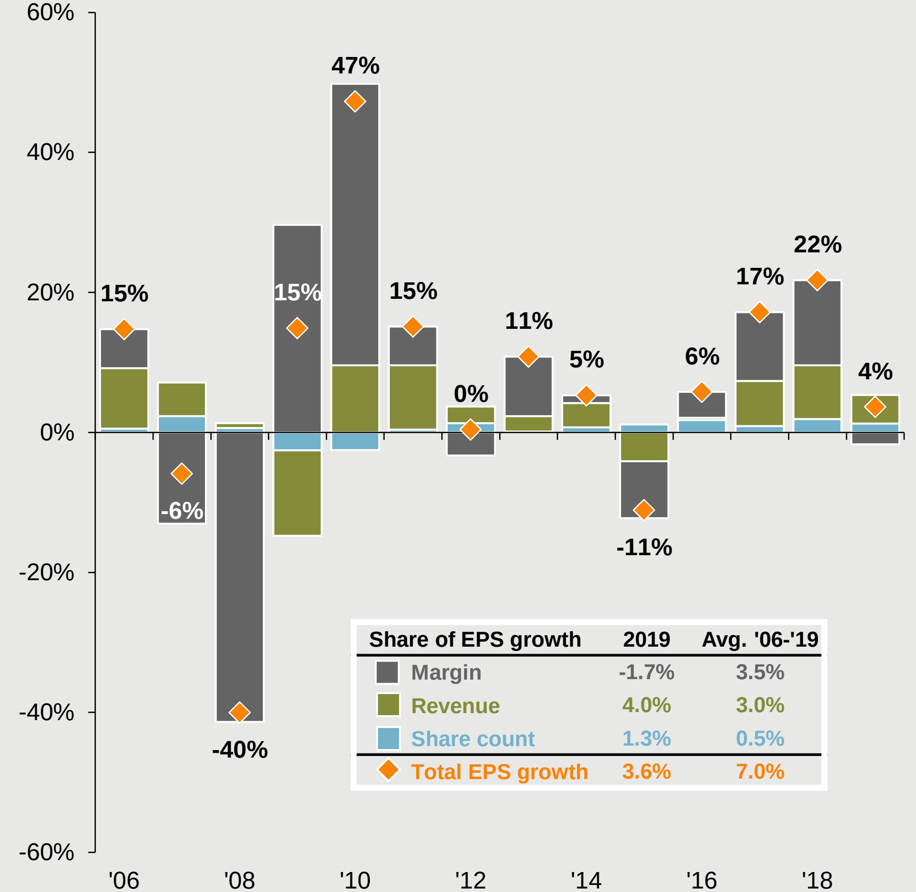
Source: J.P. Morgan Asset Management; (Top and bottom left) FactSet, MSCI; (Bottom left) Bloomberg Finance L.P.; (Top right) Bloomberg, MSCI, World Bank (Bottom right) CEIC, Hong Kong Exchanges and Clearing Limited. The CSI 300 represents onshore Chinese A-share large cap equities. MSCI China represents primarily offshore listed Chinese equities and the onshore equities included in MSCI benchmarks.*Share of EM GDP is for 2018 and is calculated as Chinese nominal GDP in USD as a percentage of all emerging markets within the MSCI EM index.**Share of EM market cap is for 2018 and is calculated as China's market capitalization of listed domestic companies as a percentage of all emerging markets' capitalization of listed domestic companies within the MSCI EM index. ***Currently, an index inclusion factor (IIF) of 20% is applied to China A Large Cap, ChiNext Large Cap and China A Mid Cap (including eligible ChiNext shares). 100% A-share inclusion is shown for illustrative purposes only. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Equities

S&P 500 year-over-year operating EPS growth

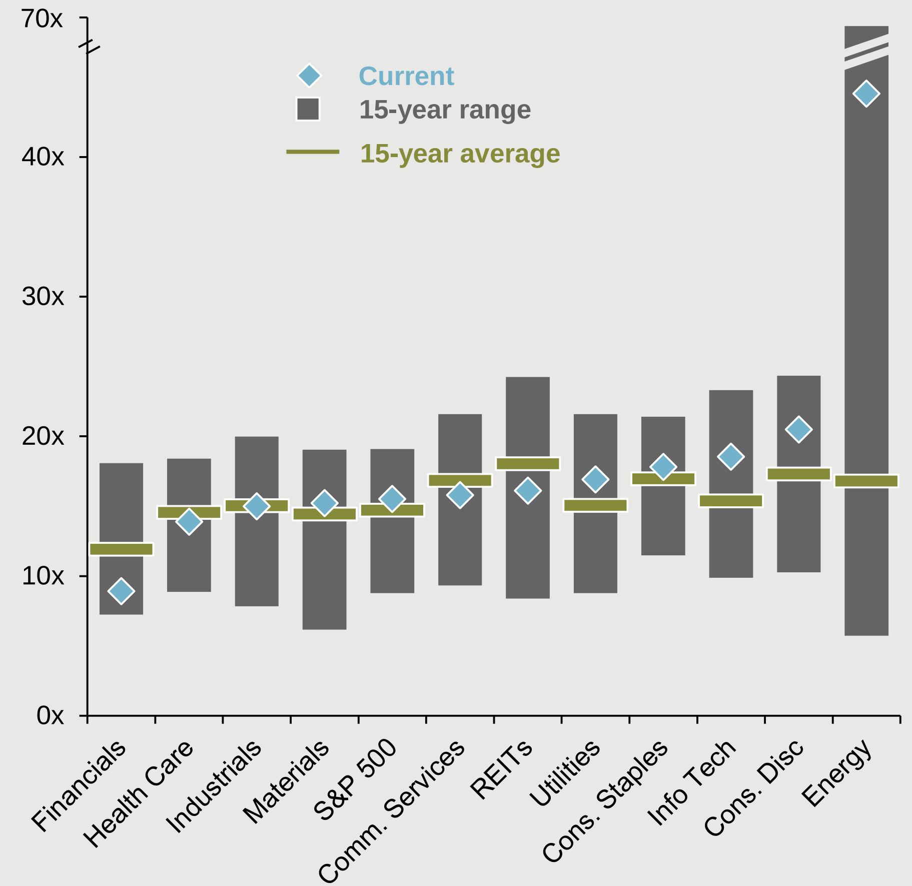
Annual growth contribution



Share of EPS growth	2019	Avg. '06-'19
Margin	-1.7%	3.5%
Revenue	4.0%	3.0%
Share count	1.3%	0.5%
Total EPS growth	3.6%	7.0%

S&P 500 price-to-earnings

Forward price-to-earnings ratio



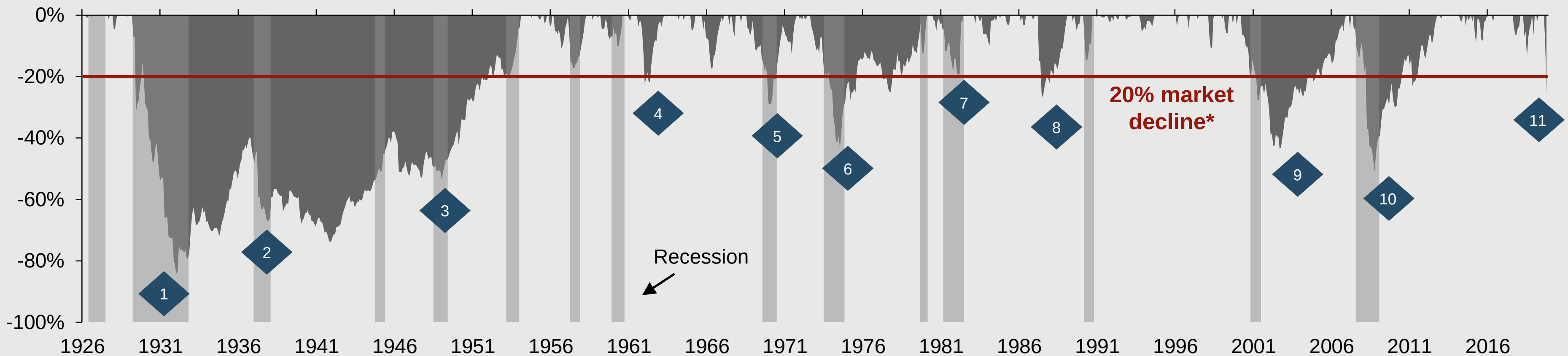
Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management; (Left) Compustat.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

United States: Bear markets and subsequent bull returns

Equities

S&P 500 Composite declines from all-time highs



Characteristics of bull and bear markets

Market corrections	Bear markets: Mkt. Peak	Bear markets: Bear return	Bear markets: Duration (mths)	P/E trough	Macro environment: Recession	Macro environment: Commodity spike	Macro environment: Aggressive Fed	Macro environment: Extreme valuations	Bull markets: Bull begin date	Bull markets: Bull return	Bull markets: Duration (mths)	P/E Peak
1 Crash of 1929	Sep 1929	-86%	32		◆			◆	Jul 1926	152%	37	
2 1937 Fed tightening	Mar 1937	-60	61		◆		◆		Mar 1935	129	23	
3 Post WWII crash	May 1946	-30	36		◆			◆	Apr 1942	158	49	
4 Flash crash of 1962. Cuban Missile Crisis	Dec 1961	-28	6					◆	Oct 1960	39	13	
5 Tech crash of 1970	Nov 1968	-36	17		◆	◆	◆		Oct 1962	103	73	
6 Stagflation. OPEC oil embargo	Jan 1973	-48	20		◆	◆			May 1970	74	31	
7 Volcker tightening	Nov 1980	-27	20		◆	◆	◆		Mar 1978	62	32	
8 1987 crash	Aug 1987	-34	3	9.6x				◆	Aug 1982	229	60	15.2x
9 Tech bubble	Mar 2000	-49	30	13.8x	◆			◆	Oct 1990	417	113	24.7x
10 Global financial crisis	Oct 2007	-57	17	10.2x	◆	◆	◆		Oct 2002	101	60	15.1x
11 Coronavirus pandemic	Feb 2020								Mar 2009	401	132	19.1x
Averages	**-**	**-45%**	**25**						**-**	**169%**	**57**	

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management. *A bear market represents a 20% or more decline from the previous market high using a monthly frequency. Periods of recession are defined using the NBER's business cycle dates. Commodity spike is defined by a significant upward movement in oil prices. Periods of extreme valuation are defined as periods where the forward P/E multiple on the S&P 500 were approximately two standard deviations above the long-run average. Aggressive Fed tightening is defined as Federal Reserve monetary tightening that was unexpected and/or significant in magnitude. Peak and trough Price-to-earnings ratios quoted are next twelve months forward P/Es.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Global bond opportunities

Sector	YTM	Duration* (years)	Correl. to MSCI AC World**	Correl. to 10-year UST
Asia HY	10.1%	4.2	0.68	-0.08
U.S. HY	9.5%	4.1	0.82	-0.25
Europe HY	7.7%	3.9	0.82	-0.34
USD EMD	6.5%	7.4	0.61	0.11
Local EMD	5.8%	4.8	0.68	-0.10
USD Asian	4.9%	5.2	0.54	0.24
U.S. IG	3.4%	8.0	0.31	0.49
DM Gov't	0.6%	8.7	0.13	0.57
U.S. Treasury	0.6%	7.0	-0.46	0.98
Cash	0.1%	0.2	-0.08	0.11

Fixed income sector returns

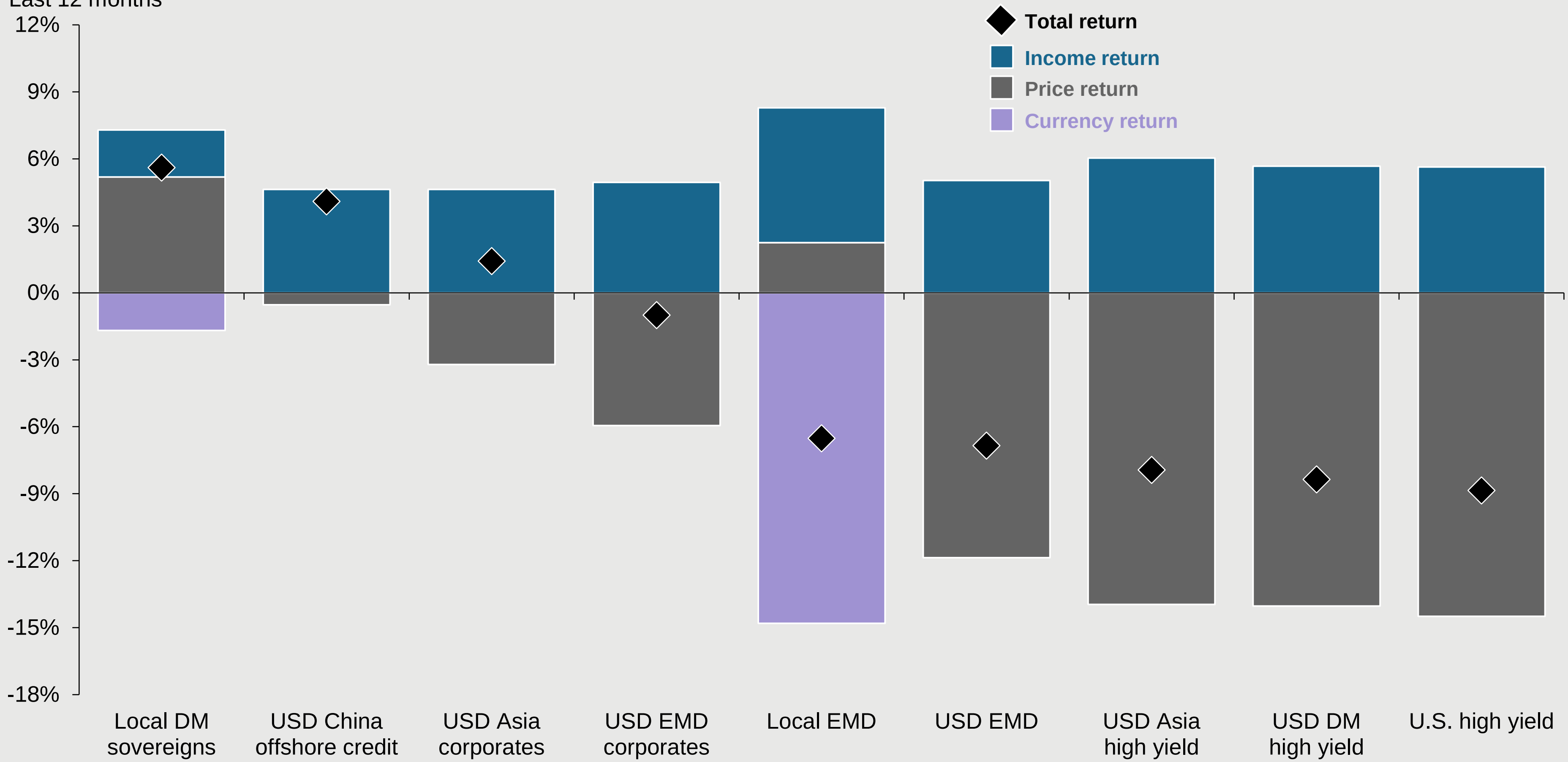
2014	2015	2016	2017	2018	2019	1Q '20	5-yrs Ann. Ret.
USD Asian 8.3%	Asia HY 5.2%	U.S. HY 17.1%	Europe HY 21.0%	Cash 1.8%	U.S. IG 14.5%	U.S. Treas 8.2%	USD Asian 3.7%
U.S. IG 7.5%	USD Asian 2.8%	Local EMD 11.4%	Local EMD 15.4%	U.S. Treas 0.9%	USD EMD 14.4%	DM Gov't 3.1%	U.S. Treas 3.6%
Asia HY 6.1%	USD EMD 1.2%	Asia HY 11.2%	USD EMD 9.3%	DM Gov't -0.7%	U.S. HY 14.3%	Cash 0.5%	U.S. IG 3.4%
USD EMD 5.5%	U.S. Treas 0.8%	USD EMD 10.2%	U.S. HY 7.5%	USD Asian -0.8%	Local EMD 13.1%	USD Asian -3.6%	Asia HY 3.3%
U.S. Treas 5.1%	Cash 0.0%	U.S. IG 6.1%	Asia HY 6.9%	U.S. HY -2.1%	Asia HY 12.8%	U.S. IG -3.6%	DM Gov't 3.2%
U.S. HY 2.5%	U.S. IG -0.7%	USD Asian 5.8%	DM Gov't 6.8%	U.S. IG -2.5%	USD Asian 11.3%	USD EMD -11.8%	USD EMD 2.8%
DM Gov't 0.7%	DM Gov't -2.6%	Europe HY 3.4%	U.S. IG 6.4%	Asia HY -3.2%	Europe HY 10.3%	Asia HY -12.0%	U.S. HY 2.8%
Cash 0.0%	U.S. HY -4.5%	DM Gov't 1.6%	USD Asian 5.8%	USD EMD -4.6%	U.S. Treas 6.9%	U.S. HY -12.7%	Cash 1.1%
Europe HY -6.0%	Europe HY -7.6%	U.S. Treas 1.0%	U.S. Treas 2.3%	Local EMD -6.7%	DM Gov't 6.0%	Local EMD -16.1%	Europe HY 0.9%
Local EMD -6.1%	Local EMD -18.0%	Cash 0.3%	Cash 0.8%	Europe HY -8.2%	Cash 2.2%	Europe HY -17.0%	Local EMD -0.1%

Source: Barclays, 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 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 31/03/15 – 31/03/20. *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.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Fixed income

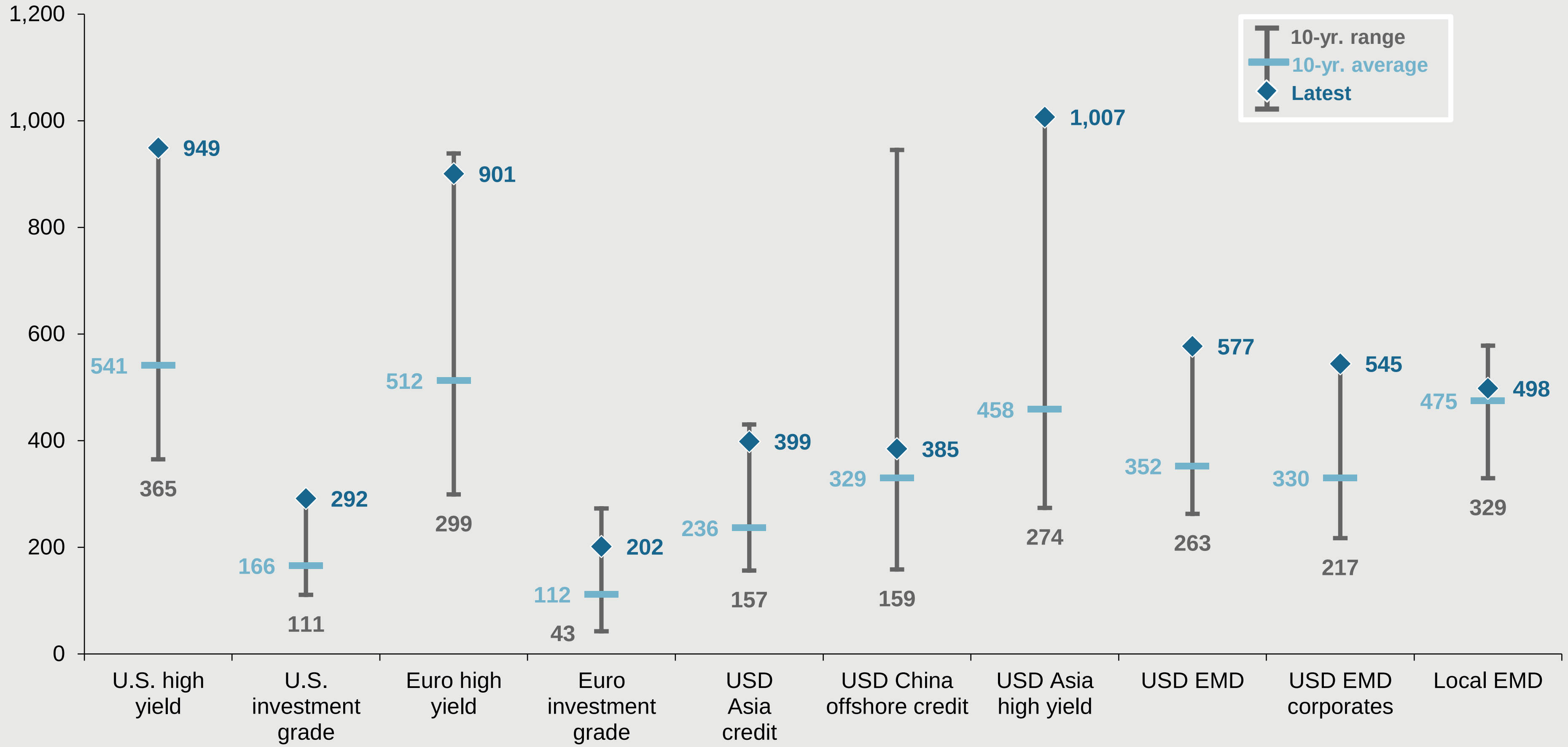
Debt return composition
Last 12 months



Source: J.P. Morgan Economics 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 Asia Credit China Index (*USD China offshore credit*), 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.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan
Asset Management

Spread to worst across fixed income sub-sectors
Basis points, last ten years

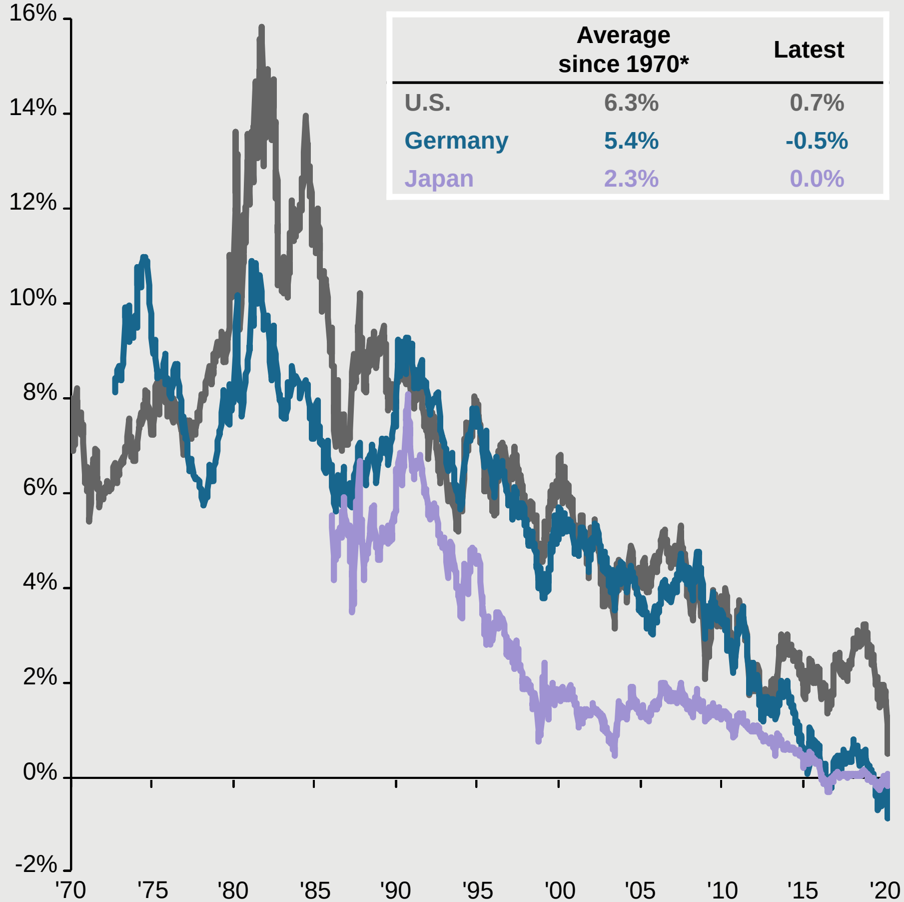


Source: iBoxx, ICE BofA Merrill Lynch, J.P. Morgan Economics Research, J.P. Morgan Asset Management.
Based on J.P. Morgan Domestic High Yield Index (*U.S. high yield*), J.P. Morgan U.S. Liquid Index (JULI) (*U.S. investment grade*), J.P. Morgan Euro High Yield Index (*Euro high yield*), iBoxx EUR corporates (*Euro investment grade)*, J.P. Morgan Asia Credit Index (JACI) (*USD Asia credit*), J.P. Morgan Asia Credit China Index (*USD China offshore 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 31/03/20.

J.P.Morgan Asset Management

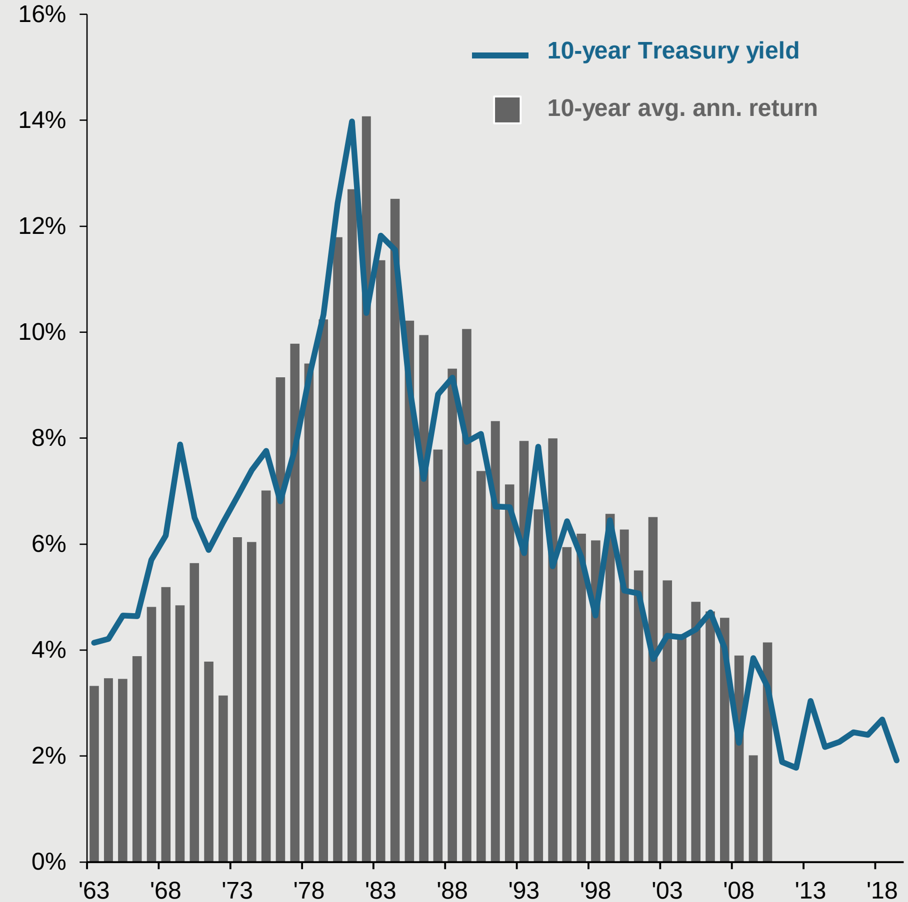
Fixed income

10-year government bond yields



	Average since 1970*	Latest
U.S.	6.3%	0.7%
Germany	5.4%	-0.5%
Japan	2.3%	0.0%

10-year Treasury yields and subsequent returns



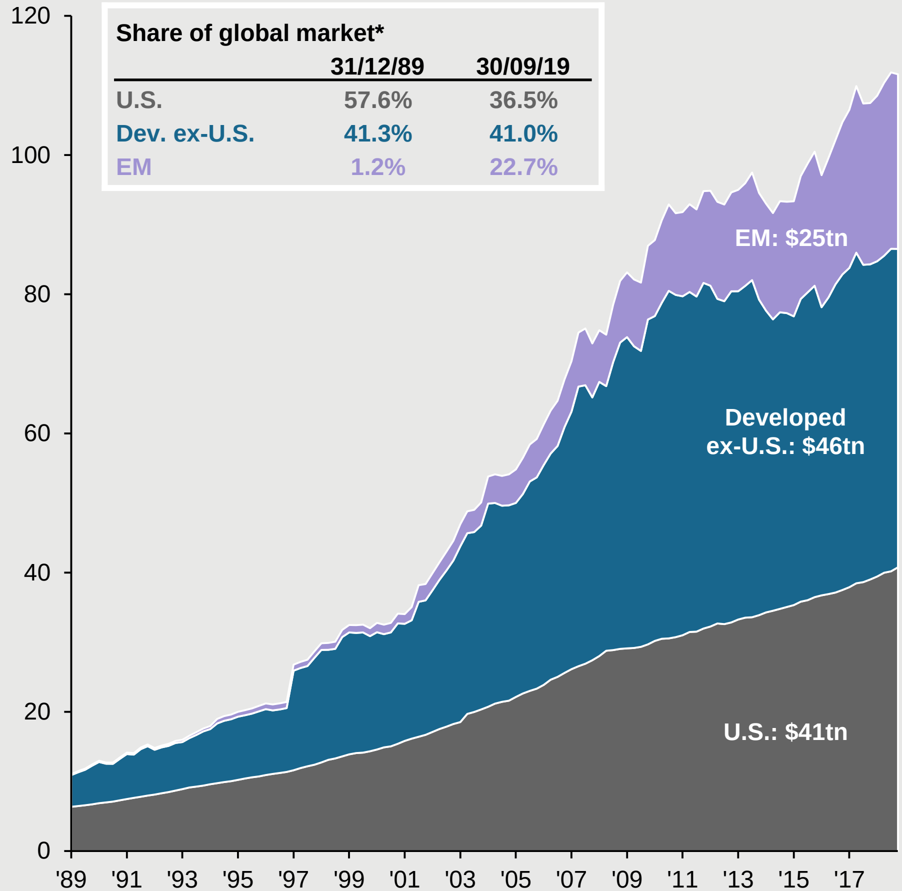
Source: FactSet, J.P. Morgan Asset Management; (Left) Tullet Prebon; (Right) U.S. Federal Reserve.
*Data begins, and averages calculated from, 01/01/70 for U.S. Treasuries, 02/10/72 for German Bunds and 03/02/86 for Japanese Government Bonds.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Fixed income

Global bond market

USD trillions

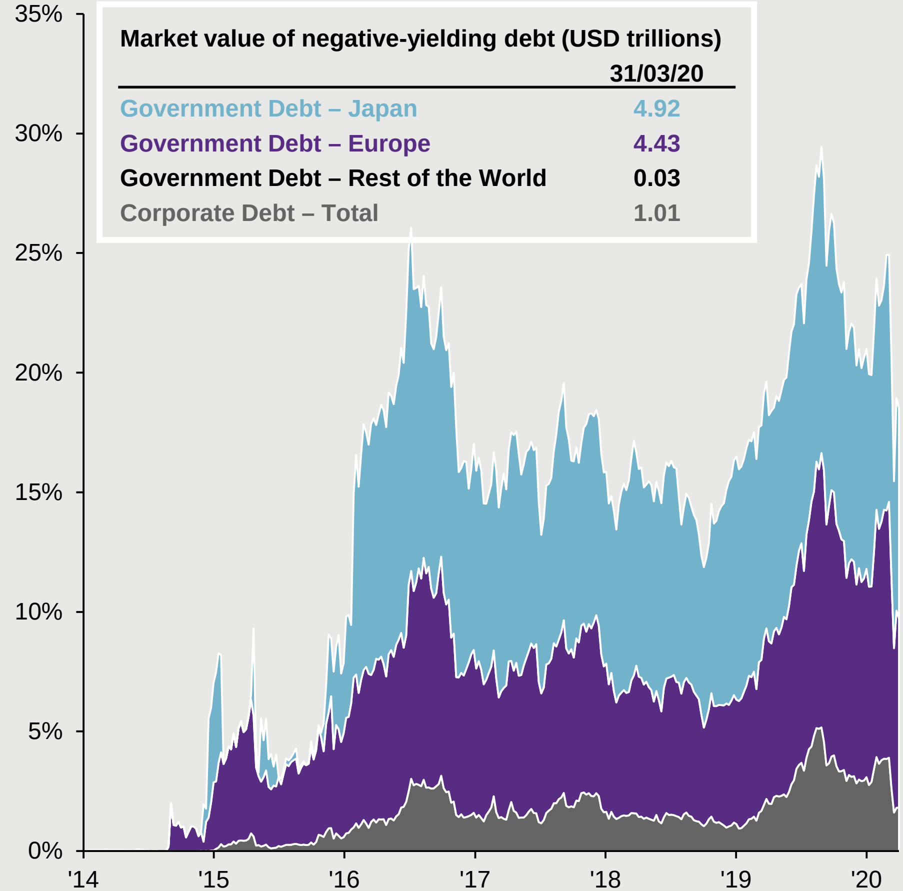


Share of global market*

	31/12/89	30/09/19
U.S.	57.6%	36.5%
Dev. ex-U.S.	41.3%	41.0%
EM	1.2%	22.7%

Size of negative-yielding debt market

Share of ICE BofAML Global Broad Market Index



Market value of negative-yielding debt (USD trillions)

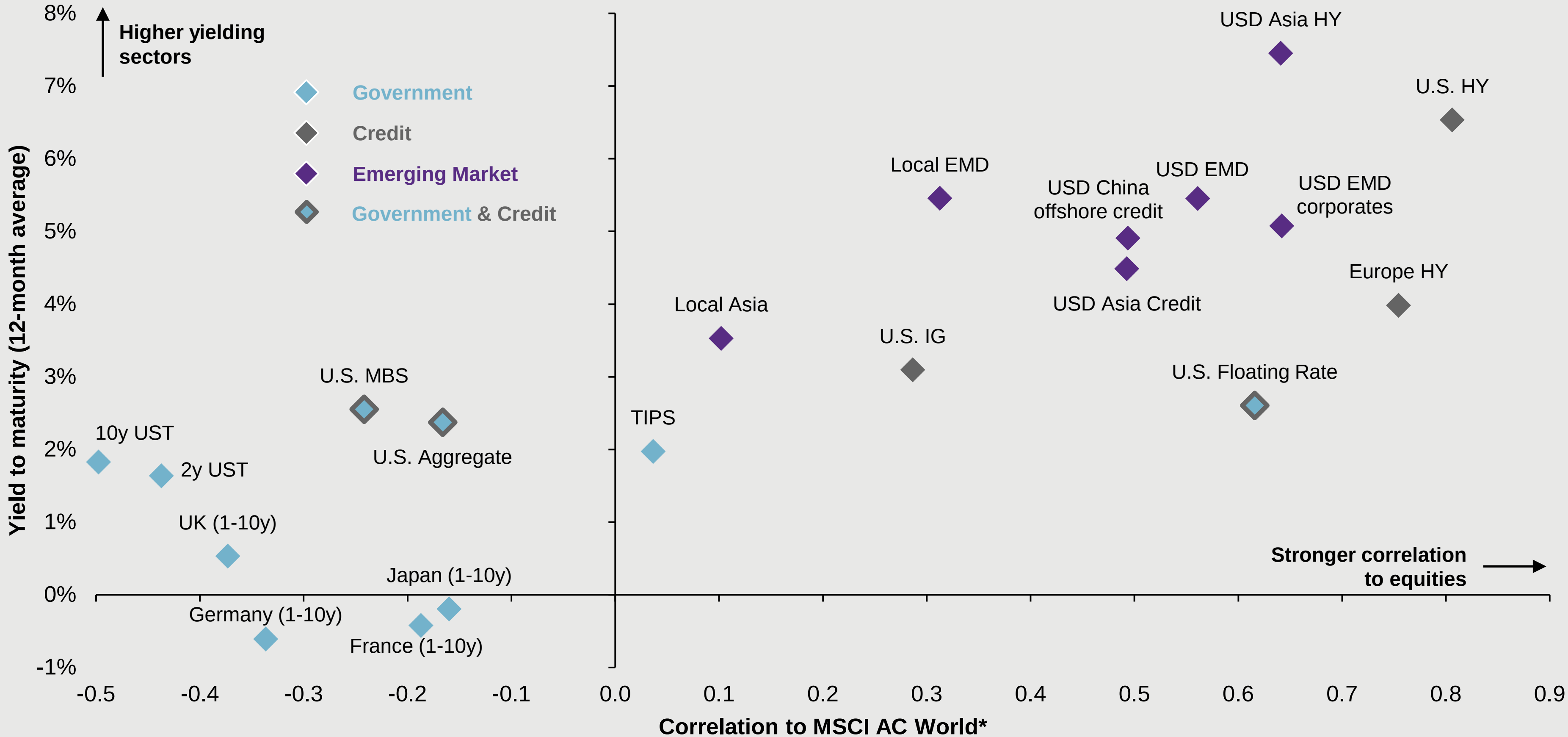
	31/03/20
Government Debt – Japan	4.92
Government Debt – Europe	4.43
Government Debt – Rest of the World	0.03
Corporate Debt – Total	1.01

Source: Bloomberg Finance L.P., ICE BofA Merrill Lynch, J.P. Morgan Asset Management.
*Sum may not add up to 100% due to rounding.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Yields and correlations of fixed income returns to equities

Yield, 10-year correlation between monthly total returns



Source: Barclays, Bloomberg Finance L.P., FactSet, ICE BofA Merrill Lynch, J.P. Morgan Economics Research, MSCI, J.P. Morgan Asset Management.
Based on Bloomberg Barclays U.S. Treasury (UST) Bellwether 2y & 10y (*2y & 10y UST*), Bloomberg Barclays Treasury Inflation-Protected Securities (*TIPS*), ICE BofAML Country Government (1-10y) (*France, Germany, Japan & UK (1-10y)*), Bloomberg Barclays U.S. Aggregate, Credit – Investment Grade & High Yield (*U.S. Aggregate, IG & HY*), Bloomberg Barclays U.S. Floating Rate (*U.S. Floating Rate*), Bloomberg Barclays U.S. Aggregate Securitized – Mortgage-Backed Securities (*U.S. MBS*), Bloomberg Barclays Pan-European High Yield (*Europe HY*), J.P. Morgan GBI-EM Global (*Local EMD*), J.P. Morgan EMBI Global (*USD EMD*), J.P. Morgan Asia Credit (JACI) (*USD Asia Credit*), J.P. Morgan Asia Credit (JACI) – High Yield (*USD Asia HY*), J.P. Morgan Asia Credit China Index (*USD China offshore credit*), J.P. Morgan CEMBI (*USD EM Corporate Credit*), J.P. Morgan Asia Diversified (JADE) (*Local Asia*). *Correlations are based on 10-years of monthly returns.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

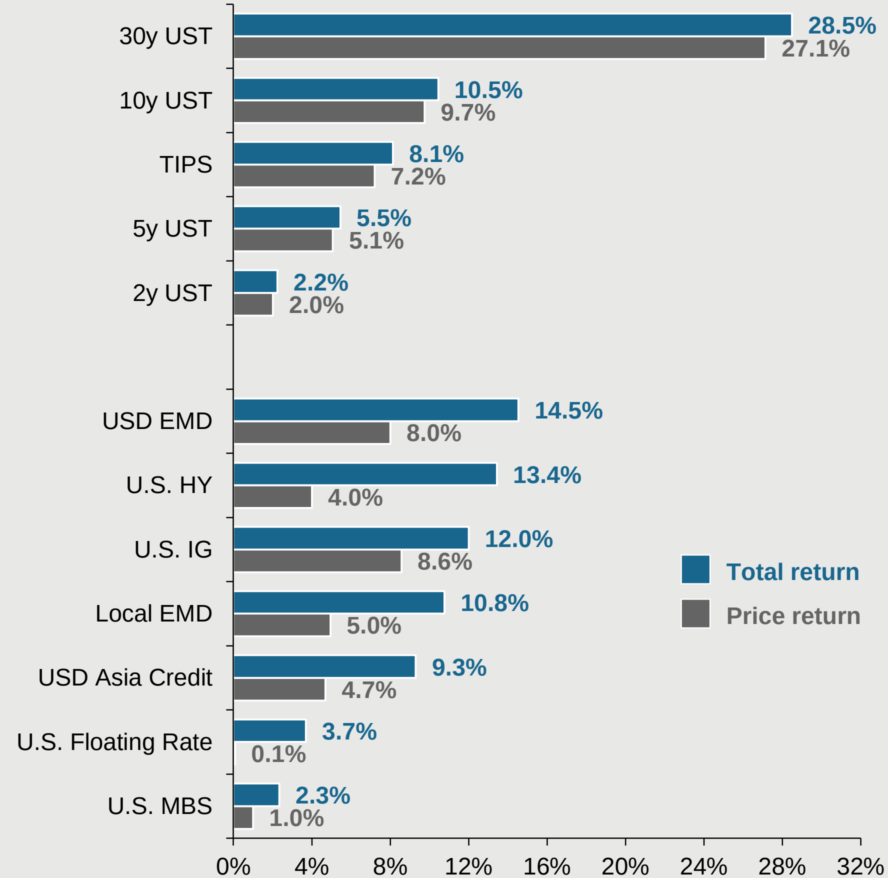
Global fixed income: Interest rate sensitivity

Fixed income

U.S. Treasuries	Yield / Yield to worst 31/03/20	Yield / Yield to worst 31/12/19	Duration* (years)	Correlation** to 10-year UST
2-Year	0.23%	1.58%	1.99	0.74
5-Year	0.37%	1.69%	4.94	0.93
TIPS	-0.17%	0.15%	6.73	0.66
10-Year	0.70%	1.92%	9.28	1.00
30-Year	1.35%	2.39%	23.8	0.93
Sector				
U.S. Floating Rate	3.61%	2.30%	0.07	-0.34
U.S. MBS	1.34%	2.54%	1.67	0.82
U.S. Investment Grade	3.43%	2.84%	7.98	0.49
U.S. High Yield	9.44%	5.19%	4.06	-0.25
USD EMD	6.54%	4.78%	7.37	0.11
USD Asia Credit	4.60%	3.73%	5.24	0.24
Local EMD	5.81%	5.91%	4.75	-0.10

Illustrative impact of a 100bps fall in interest rates

Assumes a parallel shift in the yield curve and steady spreads

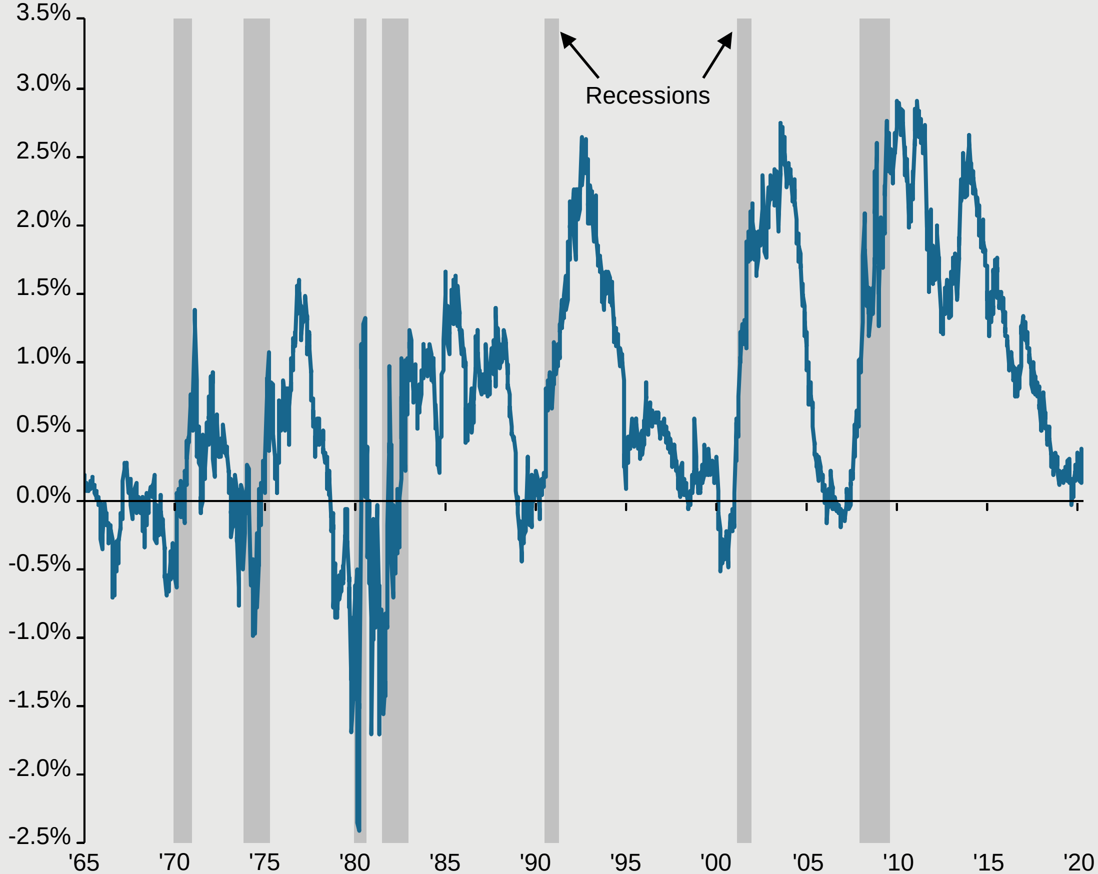


Source: Barclays, Bloomberg Finance L.P., FactSet, J.P. Morgan Economics Research, J.P. Morgan Asset Management. Based on Bloomberg Barclays U.S. Treasury Bellwethers Index (*2, 5, 10, 30-year U.S. Treasuries*), Bloomberg Barclays U.S. Treasury Inflation-Protected Notes Index (*TIPS*), Bloomberg Barclays U.S. Floating Rate Notes Index (*U.S. Floating Rate*), Bloomberg Barclays U.S. Aggregate Securitized – MBS Index (*U.S. MBS*), Bloomberg Barclays U.S. Aggregate Credit – Corporate – Investment Grade Index (*U.S. Corporates*), Bloomberg Barclays U.S. Aggregate Credit – Corporate – High Yield Index (*U.S. High Yield*), J.P. Morgan Emerging Market Bond Index Global (EMBIG) (*USD EMD*), J.P. Morgan Asia Credit Index (*USD Asia Credit*), J.P. Morgan Government Bond Index – EM Global (GBI-EM) (*Local EMD*). *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. **Correlation measured over past 10 years of monthly total returns. Rising interest rates mean falling bond prices, while declining interest rates mean rising bond prices. Change in bond price is calculated using both duration and convexity, assuming a 1% fall in relevant local interest rate. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Yield curve spread

The spread between the 2-year and 10-year U.S. Treasury yields



Yield curve inversions and recessions

Number of months

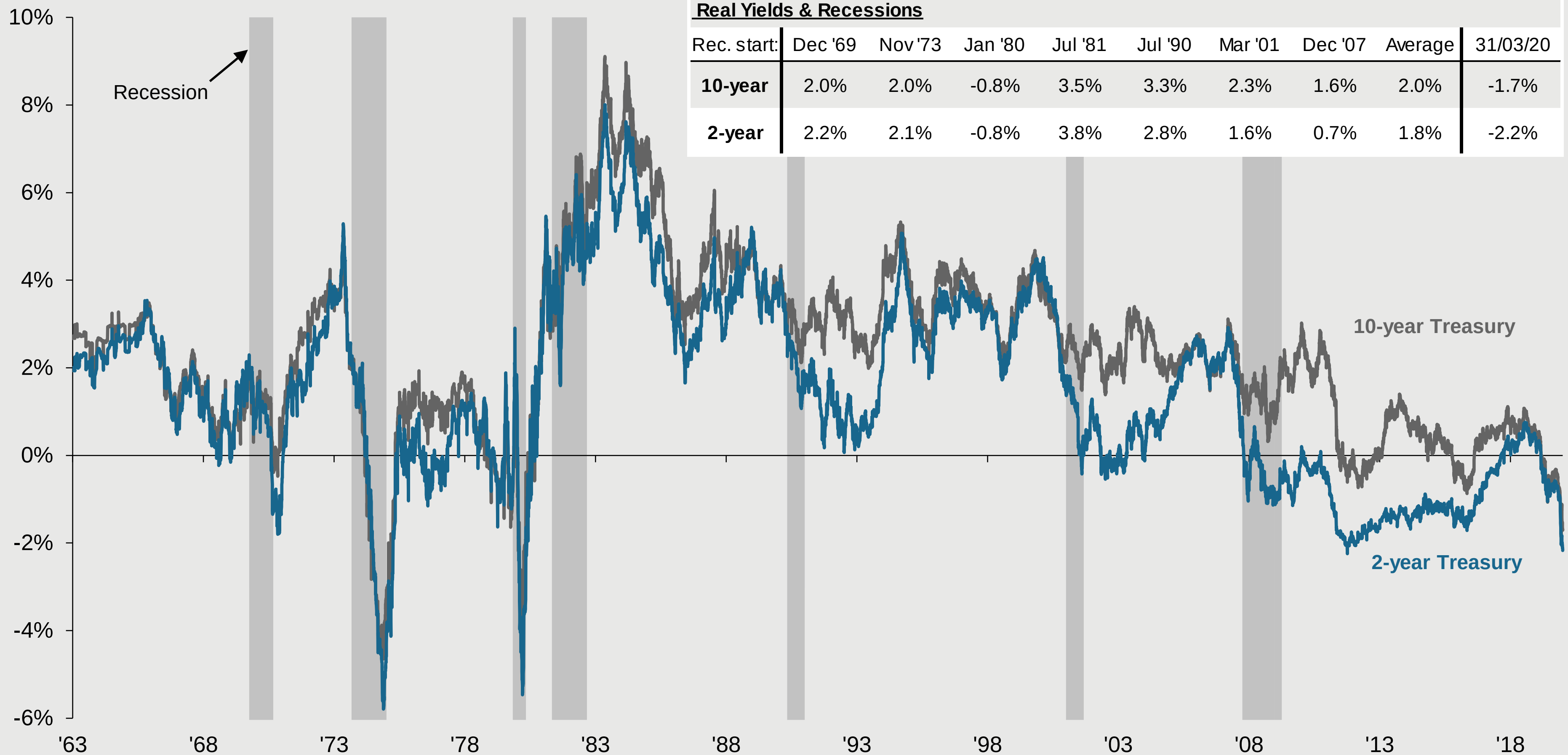
Yield curve inversion date	From curve inversion to S&P 500 peak	From S&P 500 peak to start of recession	From curve inversion to recession
Jan '69	4	8	12
Mar '73	0	9	9
Oct '78	15	0	15
Oct '80	1	8	9
Jan '89	19	1	19
Feb '00	2	12	14
Jun '06	16	3	19
Average	**8**	**6**	**14**

Source: FactSet, Federal Reserve, J.P. Morgan Asset Management; (Right) Standard & Poor's.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Real 10-year and 2-year U.S. Treasury yields

Real Yields & Recessions

Rec. start:	Dec '69	Nov '73	Jan '80	Jul '81	Jul '90	Mar '01	Dec '07	Average	31/03/20
10-year	2.0%	2.0%	-0.8%	3.5%	3.3%	2.3%	1.6%	2.0%	-1.7%
2-year	2.2%	2.1%	-0.8%	3.8%	2.8%	1.6%	0.7%	1.8%	-2.2%



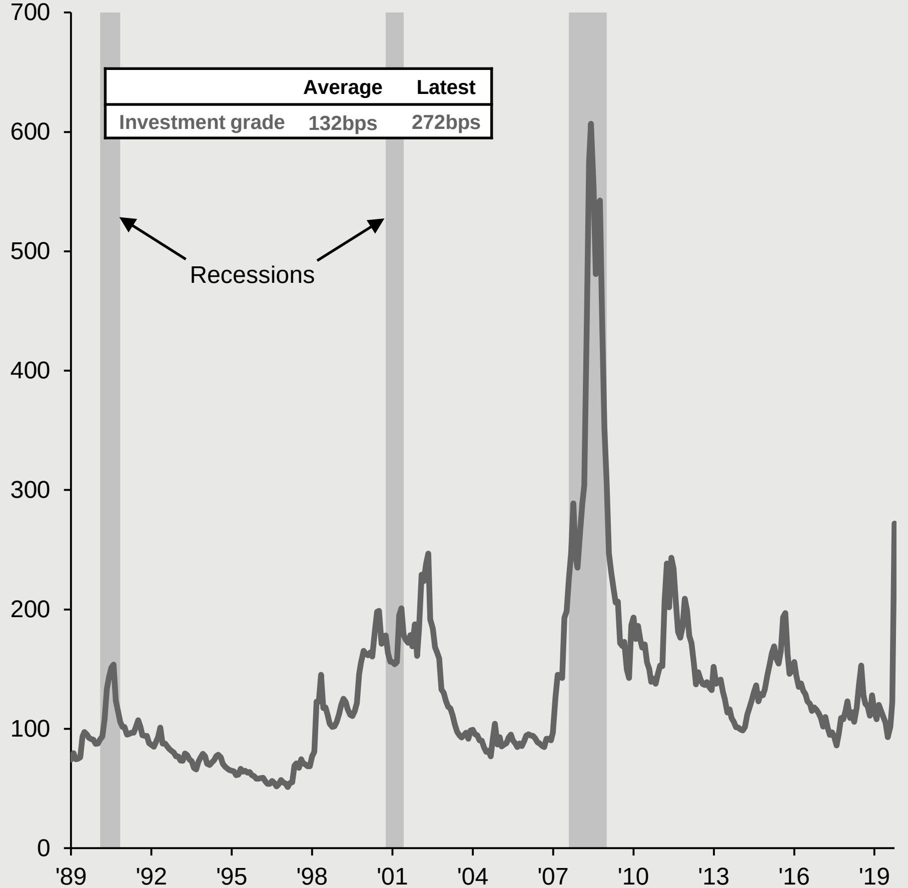
Source: FactSet, Federal Reserve, J.P. Morgan Asset Management.
Real 10-year and 2-year Treasury yields are calculated as the daily Treasury yields less year-over-year core consumer price index inflation for that month except for March 2020, where real yields are calculated by subtracting February 2020 year-over-year core inflation.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Fixed income

J.P.Morgan Asset Management

Corporate bond spread

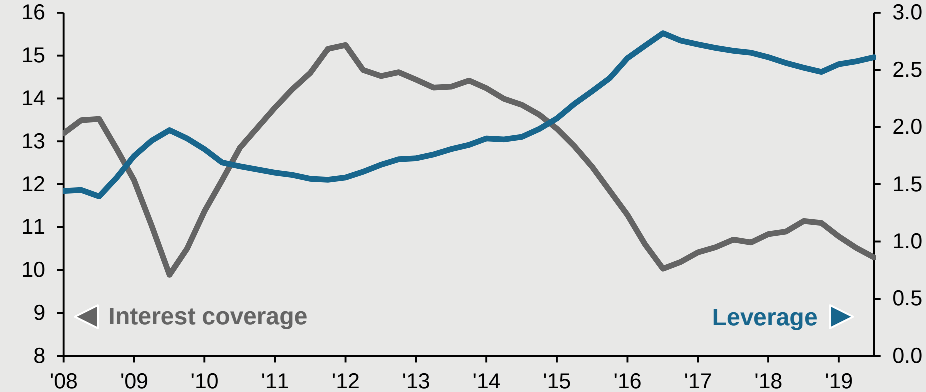
Spread over comparable government bond, basis points*



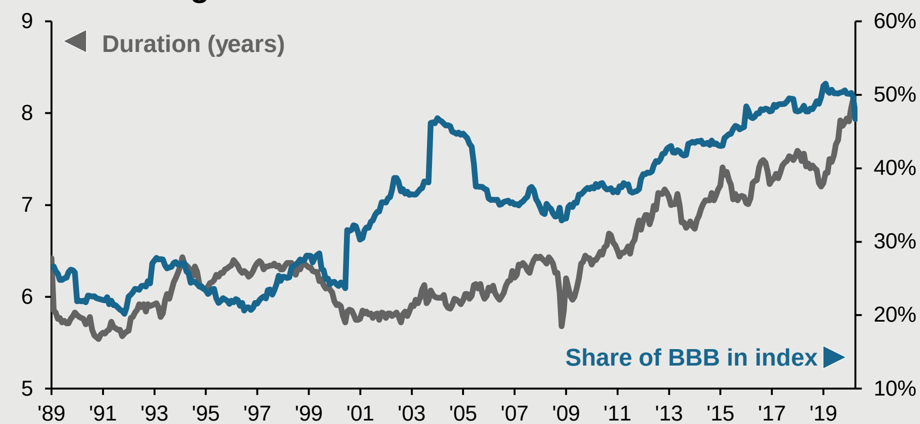
	Average	Latest
Investment grade	132bps	272bps

Investment grade leverage

EBITDA** / interest expense Debt / EBITDA



Credit rating and duration



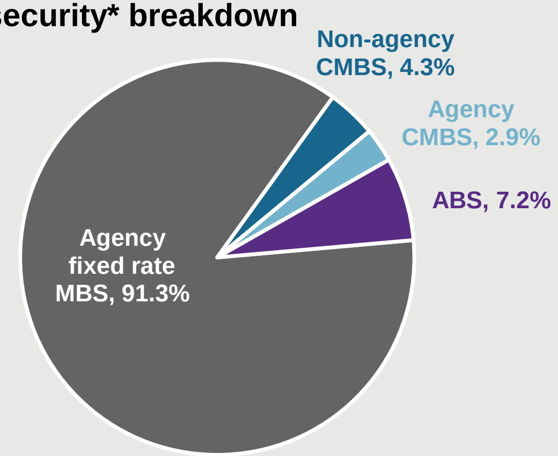
Source: J.P. Morgan Asset Management; (Left and bottom right) Barclays, Bloomberg Finance L.P., FactSet; (Left and top right) J.P. Morgan Economics Research;
*Investment grade is Bloomberg Barclays U.S. Aggregate Credit – Corporate Investment Grade Index. **EBITDA is earnings before interest, tax, depreciation and amortisation. Spreads indicated are benchmark yield-to-worst less comparable maturity Treasury yields.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Fixed income

J.P.Morgan Asset Management

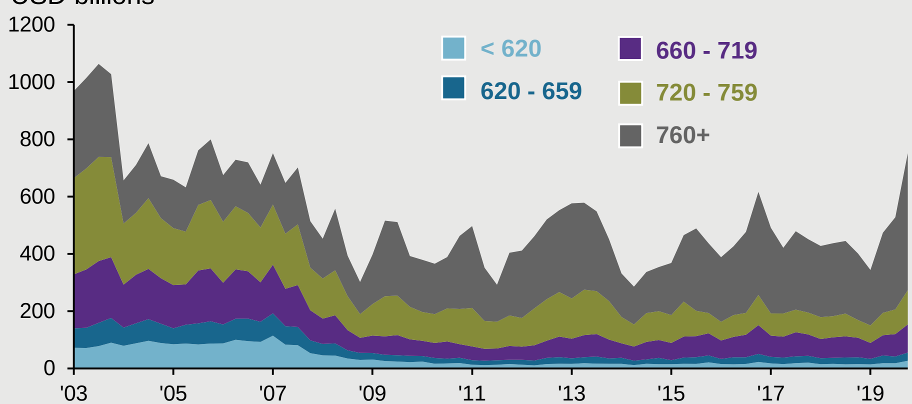
U.S. securitized assets

Asset-backed security* breakdown

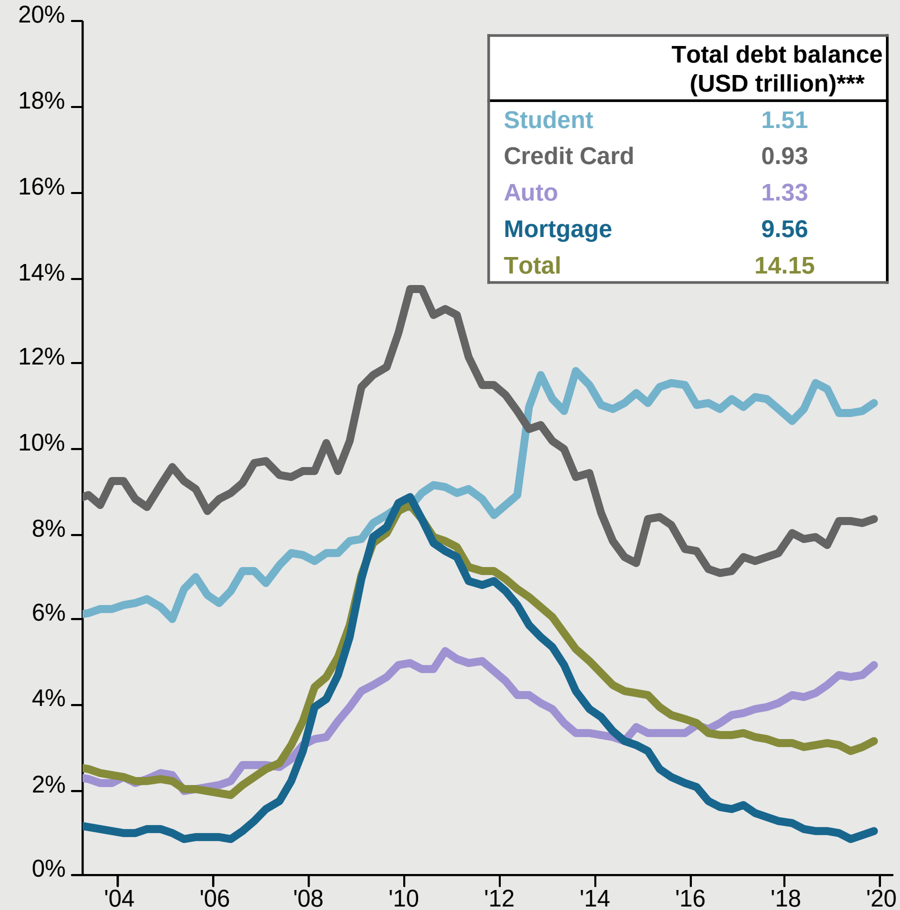


Mortgage originations by credit score****

USD billions



Consumer sector delinquency**



	Total debt balance (USD trillion)***
Student	1.51
Credit Card	0.93
Auto	1.33
Mortgage	9.56
Total	14.15

Source: FactSet, J.P. Morgan Asset Management; (Top left) Barclays, Bloomberg Finance L.P.; (Bottom left and right) Federal Reserve Bank of New York.
*Asset-backed securities as represented by the Bloomberg Barclays U.S. Aggregate Securitized ABS Index. MBS are Mortgage Backed Securities, CMBS are Commercial Mortgage Backed Securities, ABS are Asset Backed Securities.
**Delinquency rate is defined as loans at least 90 days late or more with payments.
***Sectors not shown but included in the total figure are Revolving Home Equity and Others. Latest data are as of 4Q19.
****Credit scores measure creditworthiness or likelihood of repayment of a borrower. The higher the score, the less risk of default. Scores less than 670 are considered subprime. Latest data are as of 4Q19.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Fixed income

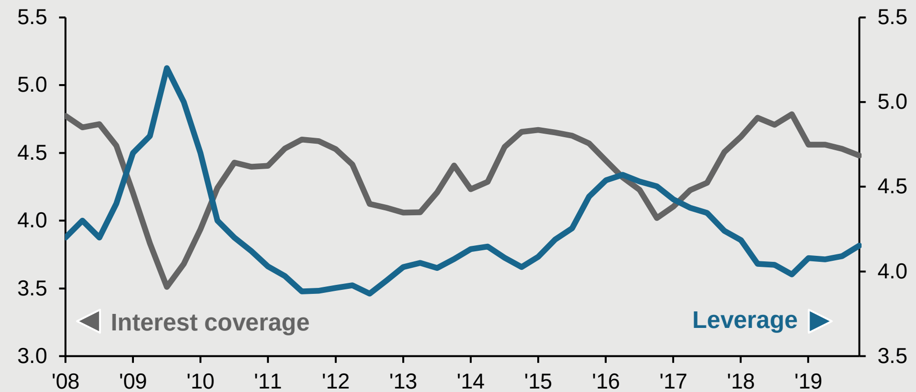
High yield spread and default rate*

	10-yr average	Latest
HY spread to worst	541bps	949bps
HY energy spread to worst	641bps	2137bps
HY default rate	1.9%	3.4%
HY ex-energy default rate	3.0%**	2.4%

High yield leverage

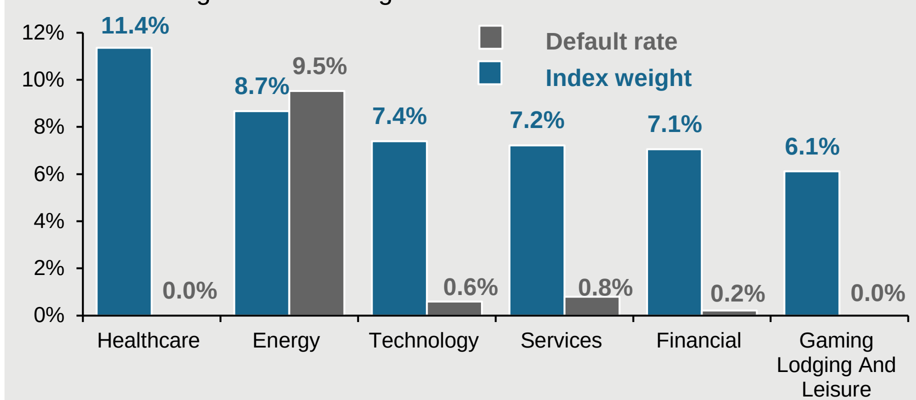
EBITDA*** / interest expense

Debt/EBITDA



Last twelve month sector default rates

Sectors with highest index weights



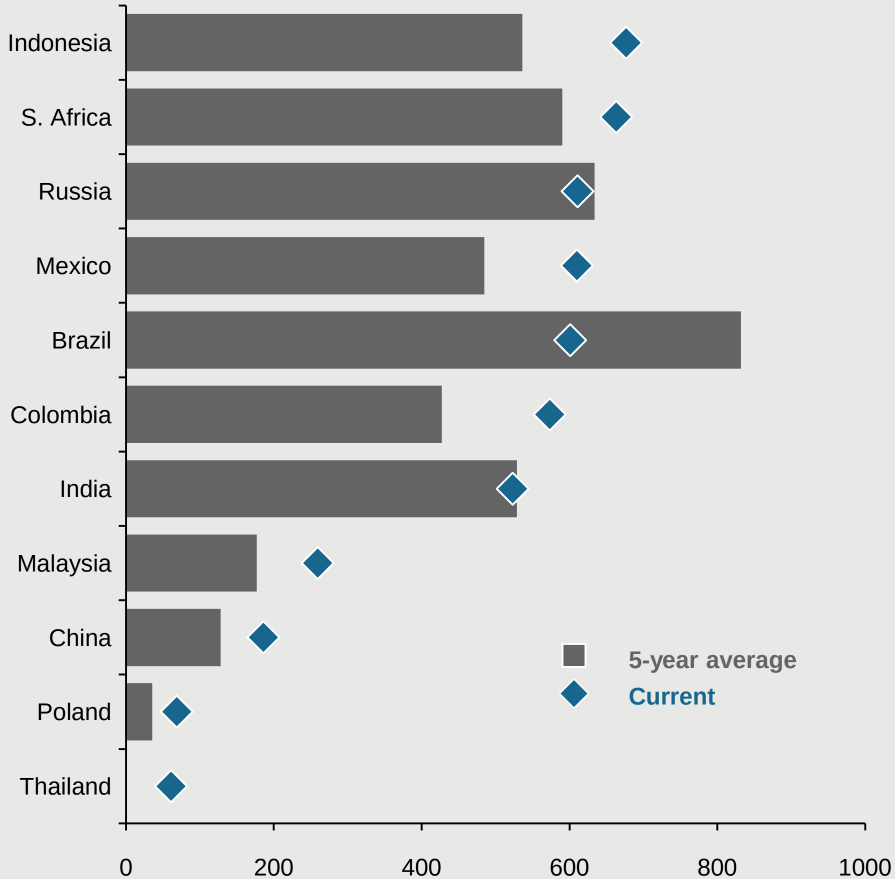
Source: J.P. Morgan Economics Research, J.P. Morgan Asset Management.
*Default rate is defined as the percentage of the total market trading at or below 50% of par value and includes any Chapter 11 filing, pre-packaged filing or missed interest payments. Spreads indicated are benchmark yield-to-worst less comparable maturity Treasury yields. **Data reflects 20-yr average and is as of 31/12/19.
***EBITDA is earnings before interest, tax, depreciation and amortisation. U.S. corporate high yield is represented by the J.P. Morgan Domestic High Yield Index.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Fixed income

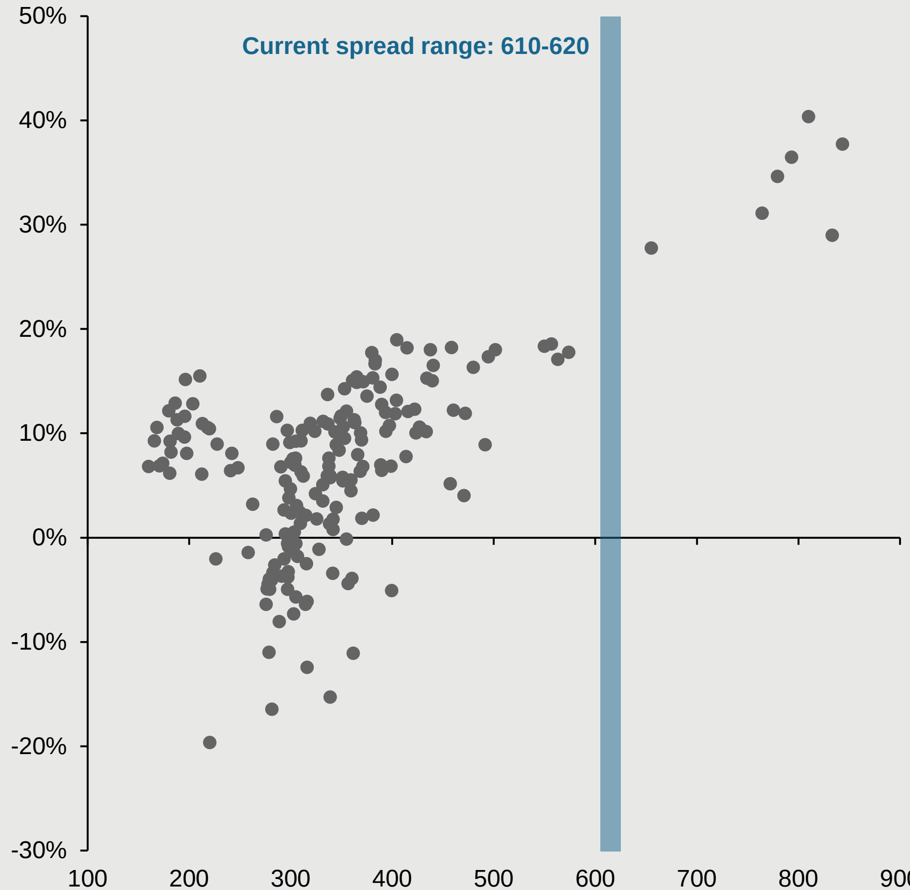
Spread between local rates and U.S. Treasuries

3-5 year local currency government bond index*, basis points



EM debt spreads to U.S. Treasuries and returns

12-month forward total return, spread in basis points**

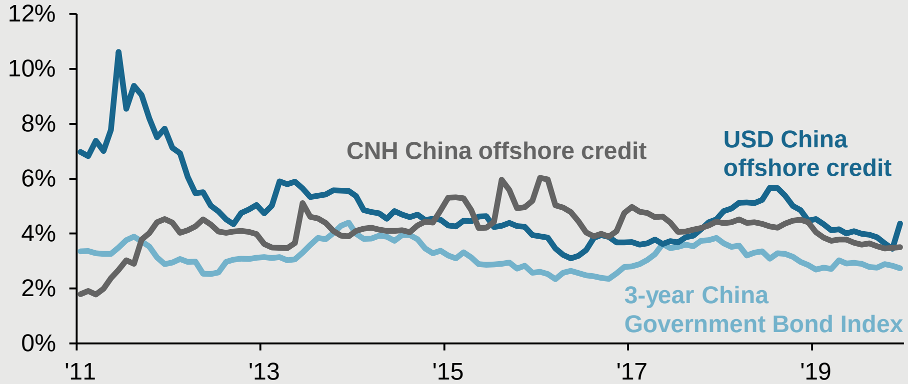


Source: Barclays, Bloomberg Finance L.P., J.P. Morgan Asset Management; (Left) J.P. Morgan Economics Research.
*J.P. Morgan GBI-EM Broad Diversified Index sub-component used for each country. Spread is the difference between the yield on each country's local 3-5 year government bond, except for South Africa which uses 1-5 year, and the yield on the Bloomberg Barclays U.S. Aggregate Government - Treasury (3-5 Year). **EM debt is represented by the J.P. Morgan Emerging Market Equal Weight Blended Index, which is an equal-weighted composite index of the J.P. Morgan GBI-EM Global Diversified, J.P. Morgan EMBI Global Diversified and J.P. Morgan CEMBI Broad Diversified indices. Spreads are the difference between the yield on EM debt securities and an equivalent maturity U.S. Treasury bond in basis points. Returns are calculated using monthly data from 31/01/03 – 31/03/20.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

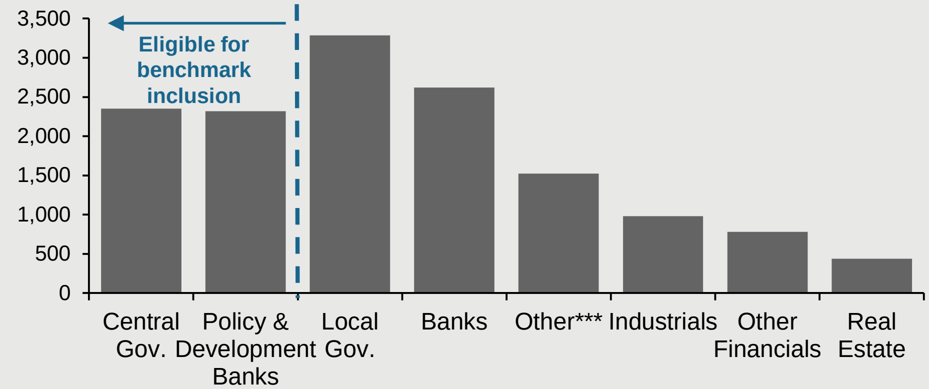
Bond yields*

% per annum



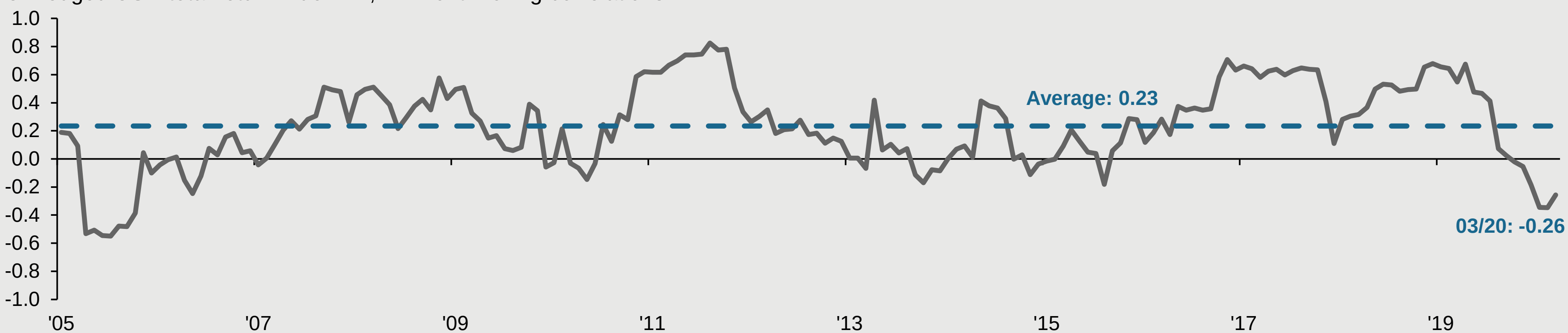
Onshore bond market outstanding** by issuer sector

USD billions



Chinese and global government bond correlations

Unhedged USD total return index****, 12-month rolling correlations



Source: J.P. Morgan Asset Management; (Top left) FTSE Russell, J.P. Morgan Economics Research, National Interbank Funding Center; (Top right and bottom) Bloomberg Finance L.P.

*Credit indices shown are yield-to-worst, government bond index shown displays yield-to-maturity. FTSE Dim Sum Bond Index (*CNH China offshore credit*), J.P. Morgan Asia Credit China Index (*USD China offshore credit*). **Bond market outstanding refers to the total U.S. dollar value of bonds (corporate and government) in the market and does not reflect mandatory prepayment. ***Other includes: Communications, Consumer Discretionary, Consumer Staples, Energy, Health Care, Materials, Technology, Utilities. ****Indices are Bloomberg Barclays Global Government Bond Index and Bloomberg Barclays China Onshore Government Bond Index.

Past performance is not a reliable indicator of current and future results.

Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

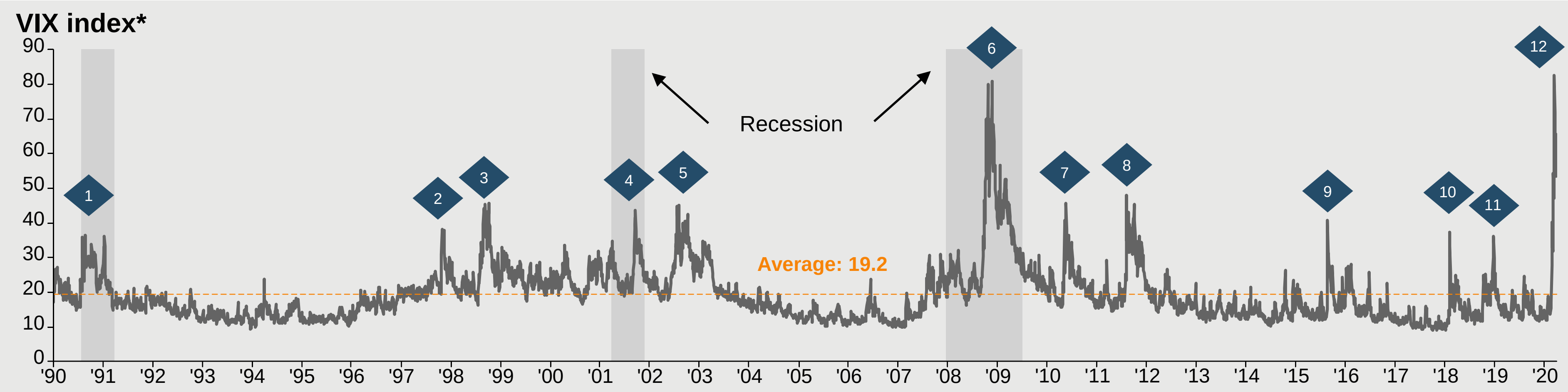
Asset class returns

Other asset classes

												10-yrs ('10 - '20)	
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	1Q '20	Ann. Ret.	Ann. Vol.
EM ex-Asia 91.3%	APAC ex-JP 18.4%	EMD 8.5%	APAC ex-JP 22.6%	DM Equities 27.4%	Asian Bonds 8.3%	Asian Bonds 2.8%	EM ex-Asia 27.1%	APAC ex-JP 37.3%	Cash 1.8%	DM Equities 28.4%	Cash 0.5%	DM Equities 7.2%	EM ex-Asia 23.1%
APAC ex-JP 73.7%	EM ex-Asia 16.6%	U.S. IG 8.1%	Global Corp HY 18.9%	Global Corp HY 8.4%	U.S. IG 7.5%	EMD 1.2%	Global Corp HY 14.0%	DM Equities 23.1%	Asian Bonds -0.8%	APAC ex-JP 19.5%	Global Bonds -0.3%	Asian Bonds 5.2%	APAC ex-JP 16.9%
Global Corp HY 63.9%	Global Corp HY 13.8%	Global Bonds 5.6%	EMD 18.5%	Diversified 5.4%	EMD 5.5%	Cash 0.0%	EMD 10.2%	EM ex-Asia 20.3%	Global Bonds -1.2%	EM ex-Asia 18.9%	Asian Bonds -3.6%	Global Corp HY 5.0%	DM Equities 13.8%
Diversified 40.5%	DM Equities 12.3%	Asian Bonds 4.1%	EM ex-Asia 17.0%	APAC ex-JP 3.7%	DM Equities 5.5%	DM Equities -0.3%	Diversified 8.2%	Diversified 17.0%	U.S. IG -2.5%	Diversified 16.5%	U.S. IG -3.6%	U.S. IG 4.9%	Diversified 9.0%
DM Equities 30.8%	Diversified 12.2%	Global Corp HY 2.6%	DM Equities 16.5%	Cash 0.0%	APAC ex-JP 3.1%	U.S. IG -0.7%	DM Equities 8.2%	Global Corp HY 10.3%	Global Corp HY -3.5%	U.S. IG 14.5%	EMD -11.8%	EMD 4.8%	Global Corp HY 7.8%
Asian Bonds 28.3%	EMD 12.0%	Cash 0.1%	Diversified 15.5%	Asian Bonds -1.4%	Diversified 3.0%	Global Bonds -3.2%	APAC ex-JP 7.1%	EMD 9.3%	EMD -4.6%	EMD 14.4%	Diversified -13.5%	Diversified 4.4%	EMD 7.6%
EMD 28.2%	Asian Bonds 10.6%	Diversified -2.4%	Asian Bonds 14.3%	U.S. IG -1.5%	Global Bonds 0.6%	Diversified -3.3%	U.S. IG 6.1%	Global Bonds 7.4%	Diversified -5.8%	Global Corp HY 13.4%	Global Corp HY -13.6%	APAC ex-JP 3.5%	U.S. IG 4.8%
U.S. IG 18.7%	U.S. IG 9.0%	DM Equities -5.0%	U.S. IG 9.8%	Global Bonds -2.6%	Global Corp HY 0.2%	Global Corp HY -4.9%	Asian Bonds 5.8%	U.S. IG 6.4%	EM ex-Asia -6.8%	Asian Bonds 11.3%	APAC ex-JP -20.7%	Global Bonds 2.5%	Global Bonds 4.7%
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%	Asian Bonds 5.8%	DM Equities -8.2%	Global Bonds 6.8%	DM Equities -20.9%	Cash 0.6%	Asian Bonds 4.6%
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%	Cash 2.2%	EM ex-Asia -38.3%	EM ex-Asia -5.0%	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 Bloomberg Barclays U.S. Aggregate Credit – Corporate Investment Grade Index (*U.S. IG*) 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 31/03/10 – 31/03/20. 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 31/03/20.

J.P.Morgan Asset Management



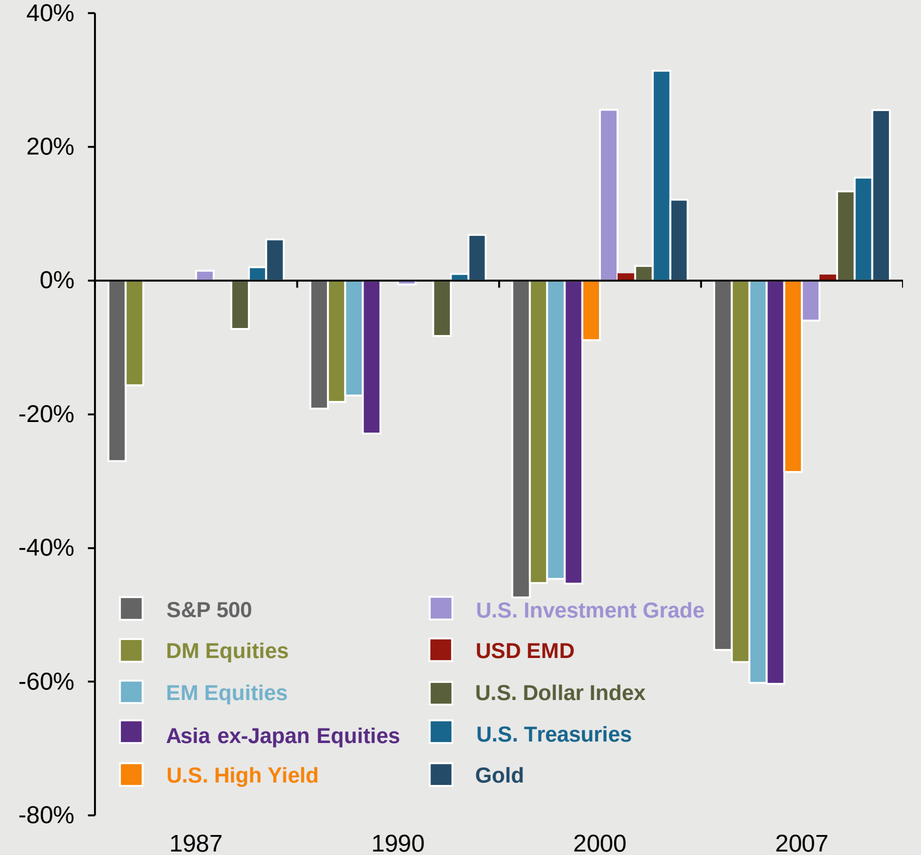
VIX breaks 35 in six months**		Related event	S&P 500 Performance				VIX returns to long-term average***(days)
			On the day	After 1 month	After 3 months	After 12 months	
1	6-Aug-90	Recession – oil price shock and rate hikes	-3.0%	-4.2%	-5.9%	16.8%	218
2	30-Oct-97	Asian crisis	-1.7%	7.5%	9.1%	21.6%	113
3	27-Aug-98	Long-Term Capital Management	-3.8%	0.6%	13.8%	29.3%	309
4	17-Sep-01	Recession – collapse of dot-com bubble	-4.9%	2.9%	9.2%	-15.9%	172
5	15-Jul-02	Enron accounting scandal	-0.4%	1.3%	-8.3%	9.0%	304
6	17-Sep-08	Recession – global financial crisis	-4.7%	-14.8%	-21.8%	-7.9%	476
7	7-May-10	Greece bailout package, austerity imposed	-1.5%	-5.0%	1.0%	21.2%	157
8	8-Aug-11	European debt crisis, U.S. credit downgrade	-6.7%	5.9%	12.7%	25.2%	165
9	24-Aug-15	Chinese yuan devaluation	-3.9%	2.1%	10.2%	15.5%	44
10	5-Feb-18	Bond market re-pricing growth and rate hikes	-4.1%	3.4%	0.9%	3.4%	9
11	24-Dec-18	Global growth and market liquidity fears	-2.7%	12.4%	19.0%	37.1%	18
12	27-Feb-20	Coronavirus pandemic****	-4.4%	-14.7%	-	-	-
	Median		**-3.8%**	**2.1%**	**9.1%**	**16.8%**	
	Average		**-3.4%**	**1.2%**	**3.7%**	**14.1%**	

Source: FactSet, J.P. Morgan Asset Management.
*The VIX-CBOE Volatility Index measures market expectations of near-term volatility conveyed by S&P 500 Index (SPX) option prices. **First day when VIX breaks 35; subsequent spikes above 35 within the next six months are not included. ***Number of days for VIX to return to its long-term average after initial VIX spikes above 35. ****Event is ongoing.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Asset class performance during S&P 500 peak to trough periods*

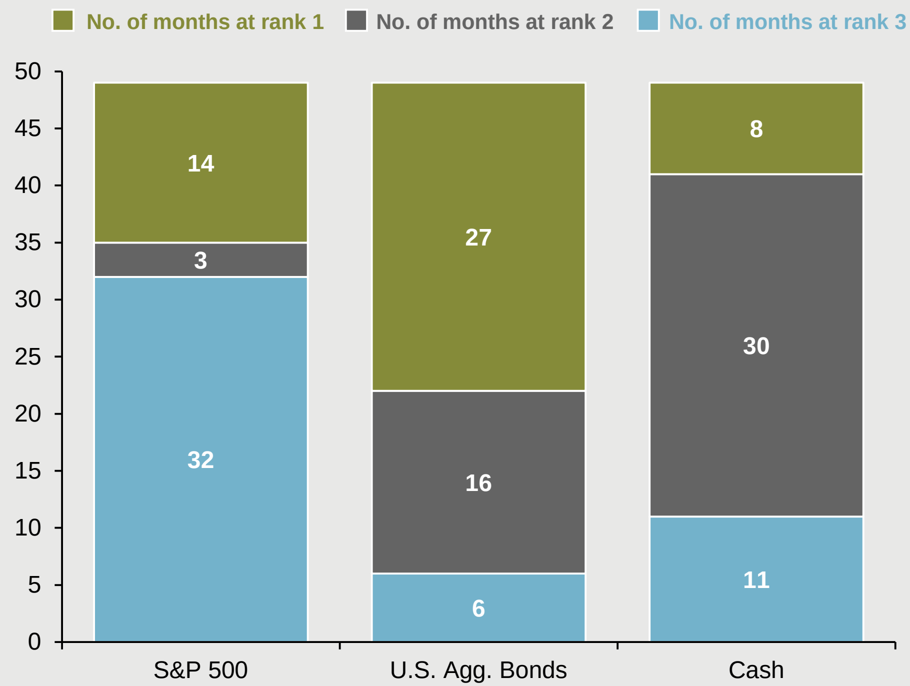
Total returns in U.S. dollars



Asset class performance in the past two U.S. equity bear markets**

Number of months at ranking

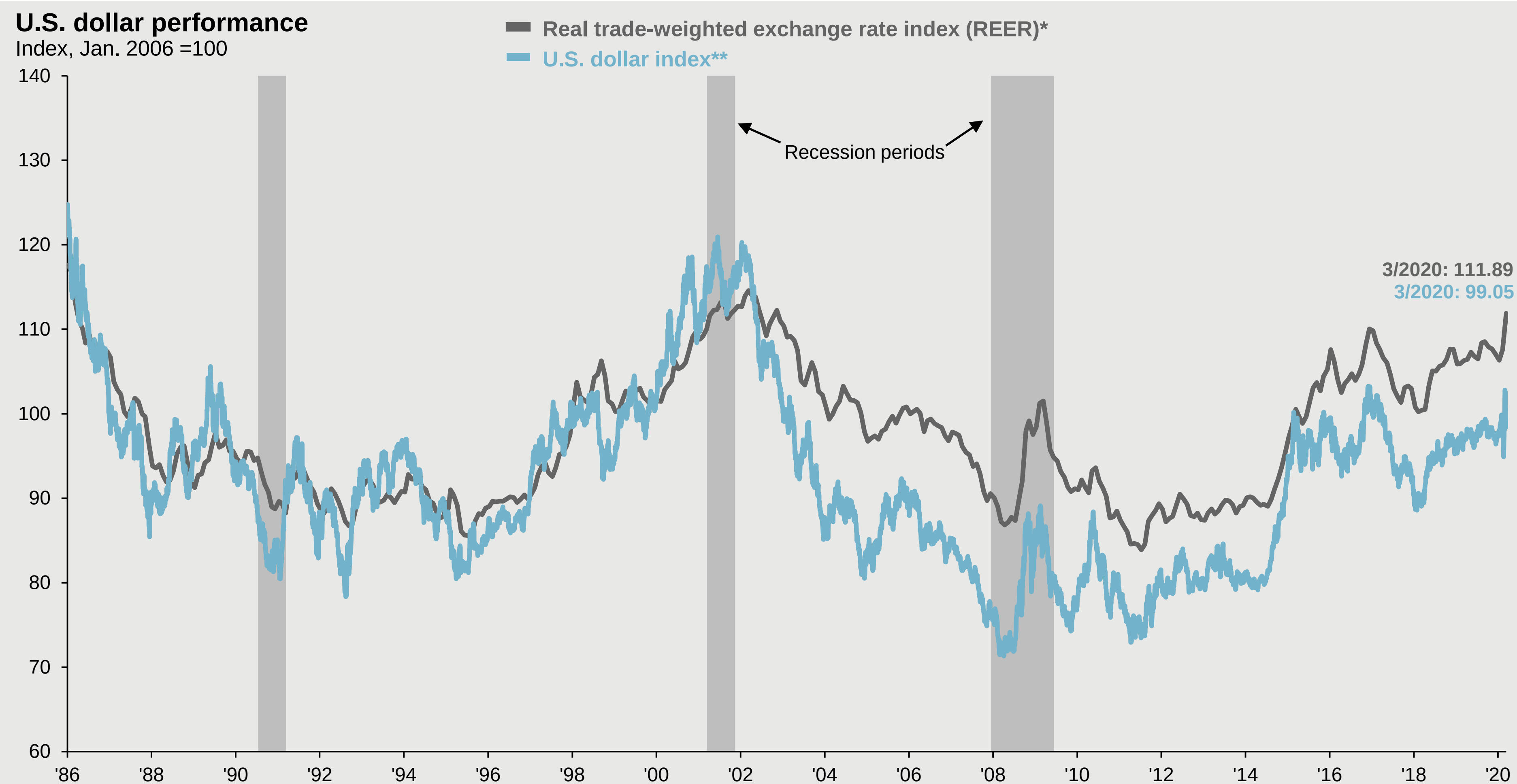
Average Total Return	S&P 500	U.S. Aggregate	Cash
Dot Com Bust (31 months)	-44%	29%	10%
Financial Crisis (18 months)	-47%	8%	2%



Other asset classes

Source: FactSet, MSCI, J.P. Morgan Asset Management; (Left) Barclays, Bloomberg Finance L.P., J.P. Morgan Economic Research, Standard & Poor's.
*Based on S&P 500 (*S&P 500*), MSCI World Index (*DM Equities*), MSCI Emerging Markets Index (*EM Equities*), MSCI Asia ex-Japan Index (*Asia ex-Japan Equities*), Bloomberg Barclays U.S. Aggregate Credit High Yield Corporate Index (*U.S. High Yield*), Bloomberg Barclays U.S. Aggregate Credit Corporate Investment Grade Index (*U.S. Investment Grade*), J.P. Morgan Emerging Market Bond Index Global (EMBIG) (*USD EMD*), U.S. Dollar DXY Index (*U.S. Dollar Index*), Bloomberg Barclays U.S. Aggregate Government Treasury Index (*U.S. Treasuries*), Gold NYM $/ozt (*Gold*). Peak to trough periods are 25/08/87-04/12/87, 16/07/90-11/10/90, 24/03/00-09/10/02, 09/10/07-09/03/09. **Returns are price returns based on S&P 500, Bloomberg Barclays U.S. Aggregate Index and Bloomberg Barclays U.S. Treasury Bills (1-3 Months) Index. Past two U.S. equity bear markets were the Dot Com Bust (31 months, 11/03/00-09/10/02) and Financial Crisis (09/10/07-09/03/09).
Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia.* Data reflect most recently available as of 31/03/20.

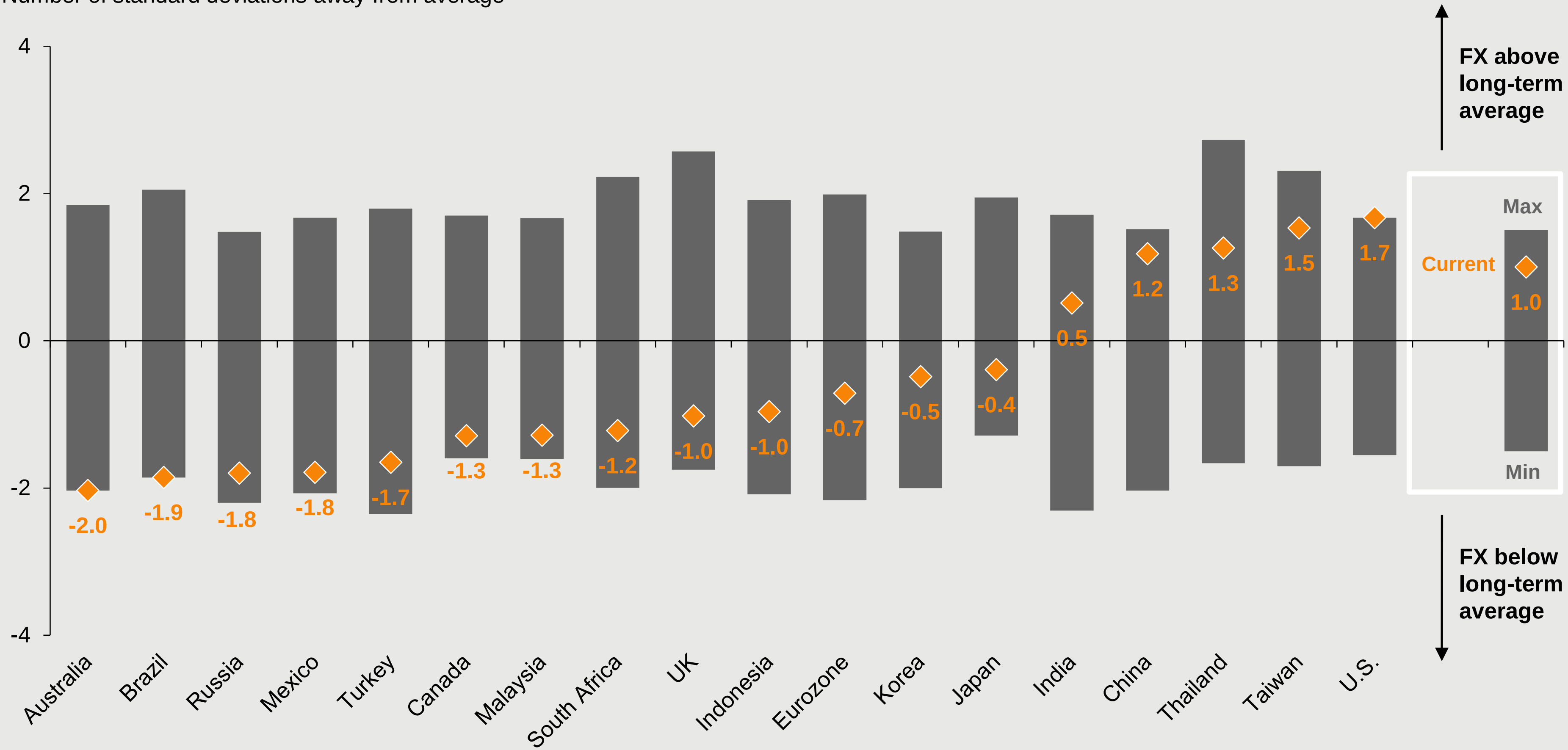
J.P.Morgan Asset Management



Source: Bloomberg Finance L.P., FactSet, U.S. Federal Reserve, J.P. Morgan Asset Management.
*The real broad trade-weighted exchange rate index is the weighted average of a market's currency relative to a basket of trading partners' 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.
**The U.S. dollar index shown here is a nominal trade-weighted index of major trading partners' currencies. Major currencies are: 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 31/03/20.

J.P.Morgan Asset Management

Currency deviation from 10-year average in real effective exchange rate* terms
Number of standard deviations away from average



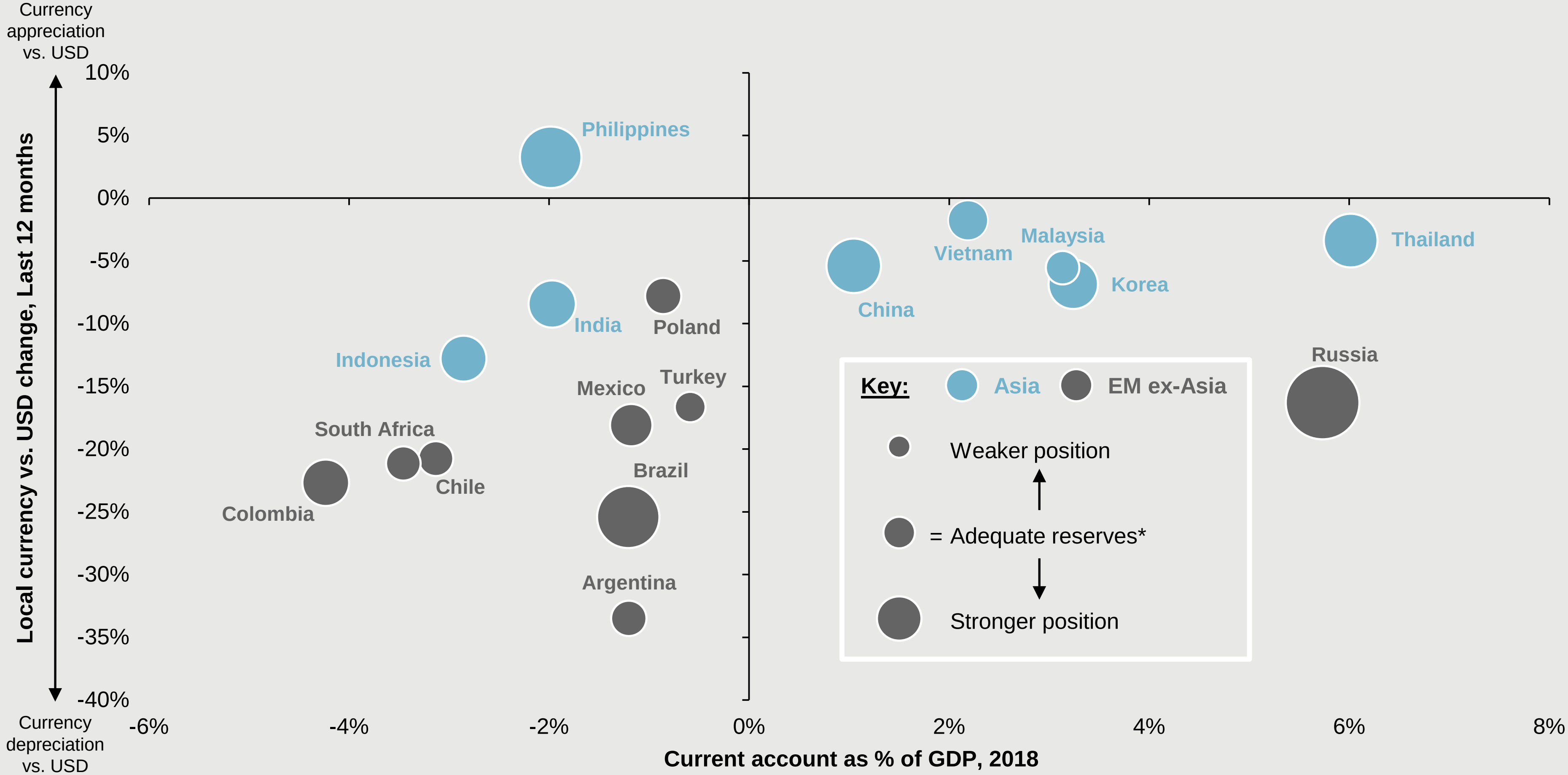
Source: FactSet, J.P. Morgan Economic Research, J.P. Morgan Asset Management.
*The real trade-weighted exchange rate index is the weighted average of a market's currency relative to a basket of other major currencies adjusted for the effects of inflation. The weights are determined by comparing the relative trade balances, in terms of one market's currency, with other markets within the basket.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Other asset classes

J.P.Morgan Asset Management

Emerging market external positions

Current account positions, currency movements and reserve adequacy

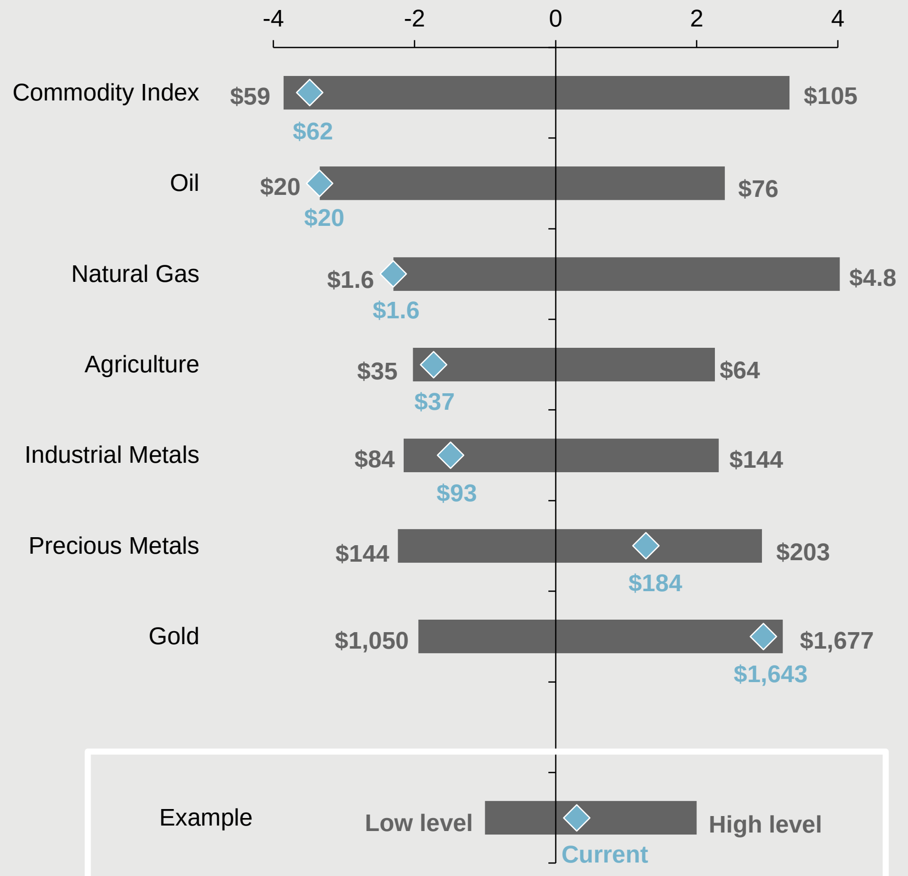


Source: FactSet, International Monetary Fund, J.P. Morgan Asset Management.
*Adequate reserves are stocks of a country's foreign exchange reserves that can cover 3 months of imports (the amount of times available reserves can cover 3 months' worth of imports) and cover short-term debt due in the next year (the amount of times available reserves can pay off debt maturing in the next 12 months and any payments on longer-term debt due in the next 12 months). The larger the bubble, the larger the amount of reserve coverage.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Commodity prices

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



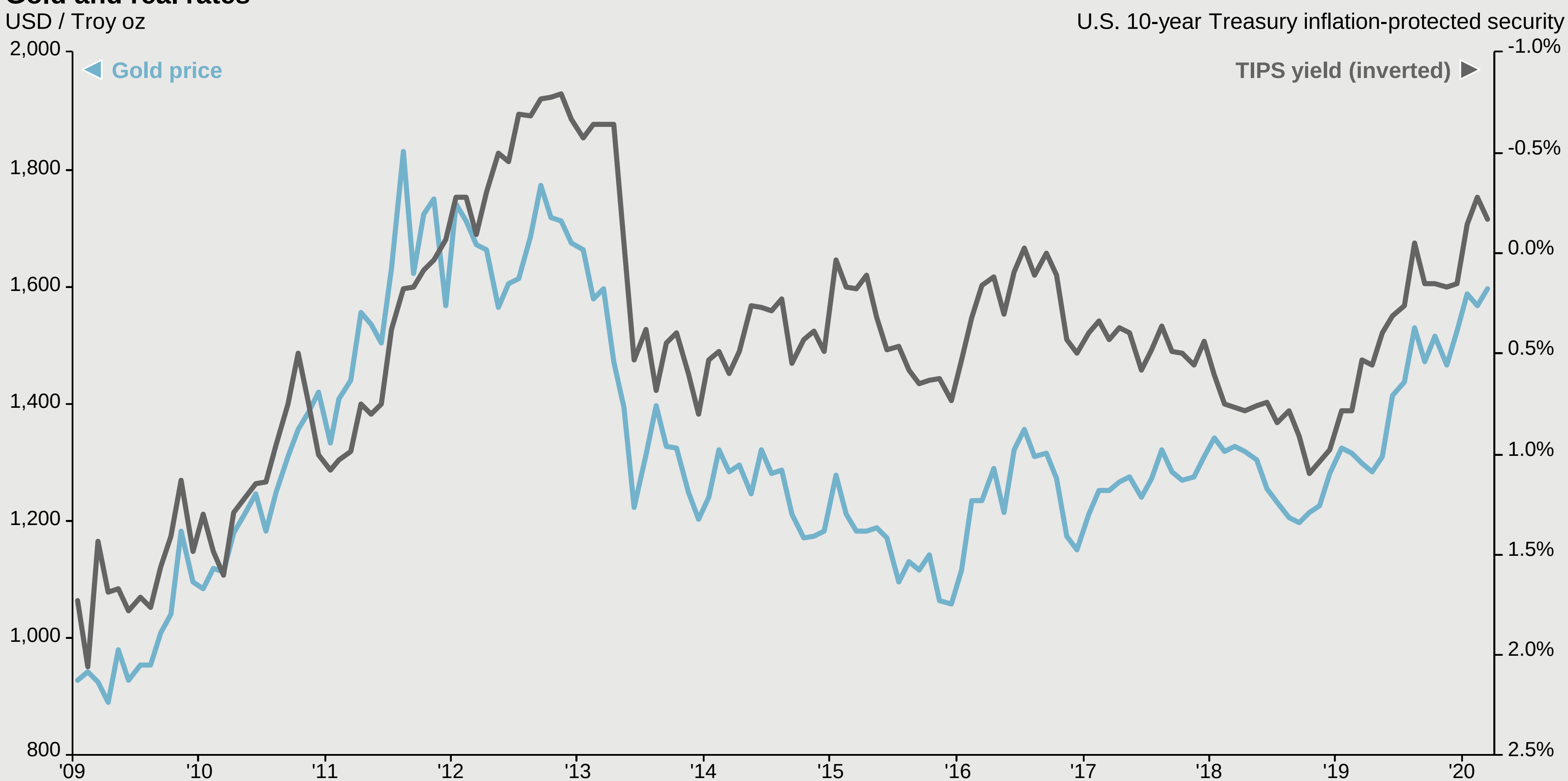
Returns

2015	2016	2017	2018	2019	1Q '20	2015 - 2020 Ann. Ret.	2015 - 2020 Ann. Vol.
Energy (FI) -7.3%	Gold (E) 62.9%	M&M (E) 37.5%	Euro M&M (FI) -0.9%	Gold (E) 51.1%	Euro M&M (FI) -9.2%	Gold (E) 7.0%	Gold (E) 35.4%
EM M&M (FI) -10.9%	M&M (E) 57.8%	Agri. (E) 20.3%	US M&M (FI) -3.5%	M&M (E) 17.1%	US M&M (FI) -11.9%	EM M&M (FI) 4.1%	M&M (E) 29.6%
Agri. (E) -13.7%	US M&M (FI) 45.5%	EM M&M (FI) 14.7%	Energy (FI) -3.7%	EM M&M (FI) 16.5%	EM M&M (FI) -16.1%	US M&M (FI) 3.4%	Energy (E) 26.9%
Euro M&M (FI) -16.1%	EM M&M (FI) 32.4%	US M&M (FI) 9.9%	EM M&M (FI) -4.1%	US M&M (FI) 14.0%	Energy (FI) -16.2%	Energy (FI) 0.4%	Comdty. 16.0%
Energy (E) -20.6%	Energy (E) 29.2%	Gold (E) 9.4%	Agri. (E) -8.9%	Agri. (E) 13.8%	Gold (E) -19.2%	Euro M&M (FI) -0.1%	Agri. (E) 15.9%
US M&M (FI) -23.7%	Euro M&M (FI) 21.9%	Energy (E) 9.1%	Comdty. -11.2%	Energy (FI) 13.4%	Comdty. -23.3%	Agri. (E) -0.8%	US M&M (FI) 14.5%
Comdty. -24.7%	Agri. (E) 15.7%	Energy (FI) 9.0%	Energy (E) -11.4%	Energy (E) 9.5%	Agri. (E) -24.3%	M&M (E) -3.1%	EM M&M (FI) 13.1%
Gold (E) -26.3%	Comdty. 11.8%	Euro M&M (FI) 3.9%	Gold (E) -13.0%	Comdty. 7.7%	M&M (E) -35.6%	Comdty. -7.8%	Energy (FI) 9.6%
M&M (E) -40.1%	Energy (FI) 11.1%	Comdty. 1.7%	M&M (E) -17.8%	Euro M&M (FI) 5.2%	Energy (E) -45.0%	Energy (E) -9.1%	Euro M&M (FI) 9.5%

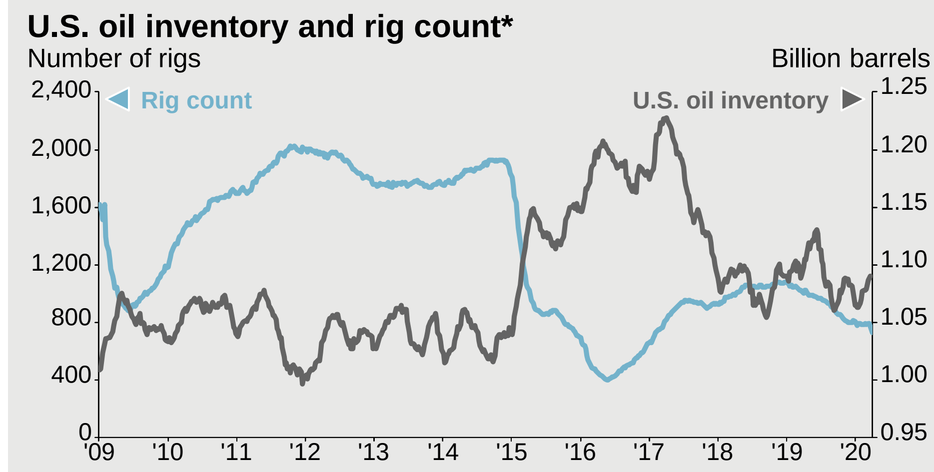
Source: Bloomberg Finance L.P., FactSet, J.P. Morgan Asset Management; (Left) CME; (Right) Barclays, J.P. Morgan Economic Research, MSCI. Commodities are represented by the appropriate Bloomberg Commodity sub-index priced in U.S. dollars. Crude oil shown is West Texas Intermediate (WTI) crude. Other 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 31/03/15 – 31/03/20. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia.* Data reflect most recently available as of 31/03/20.

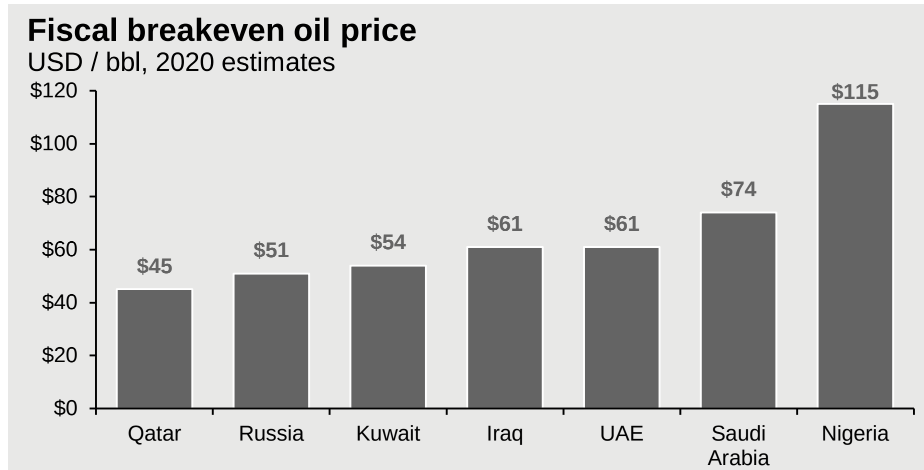
J.P.Morgan Asset Management

Gold and real rates



Source: FactSet, U.S. Federal Reserve, J.P. Morgan Asset Management.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

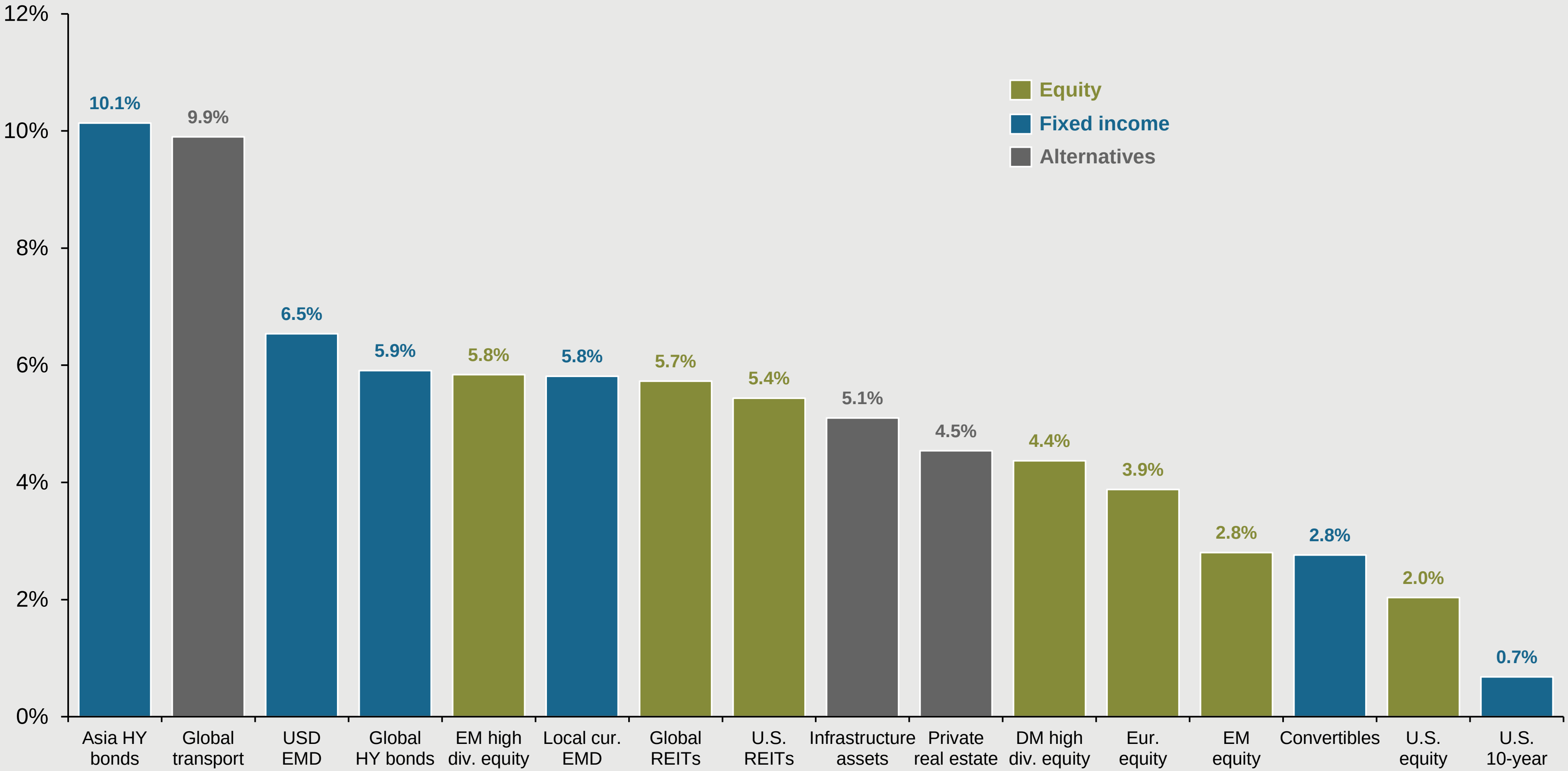




Source: FactSet, J.P. Morgan Asset Management; (Top right) Baker Hughes, U.S. Department of Energy; (Bottom right) J.P. Morgan EM Macro bites, J.P. Morgan Securities.
*Weekly U.S. crude oil and petroleum ending inventory includes strategic petroleum reserve, and active rig count represents both natural gas and oil rigs. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Asset class yields

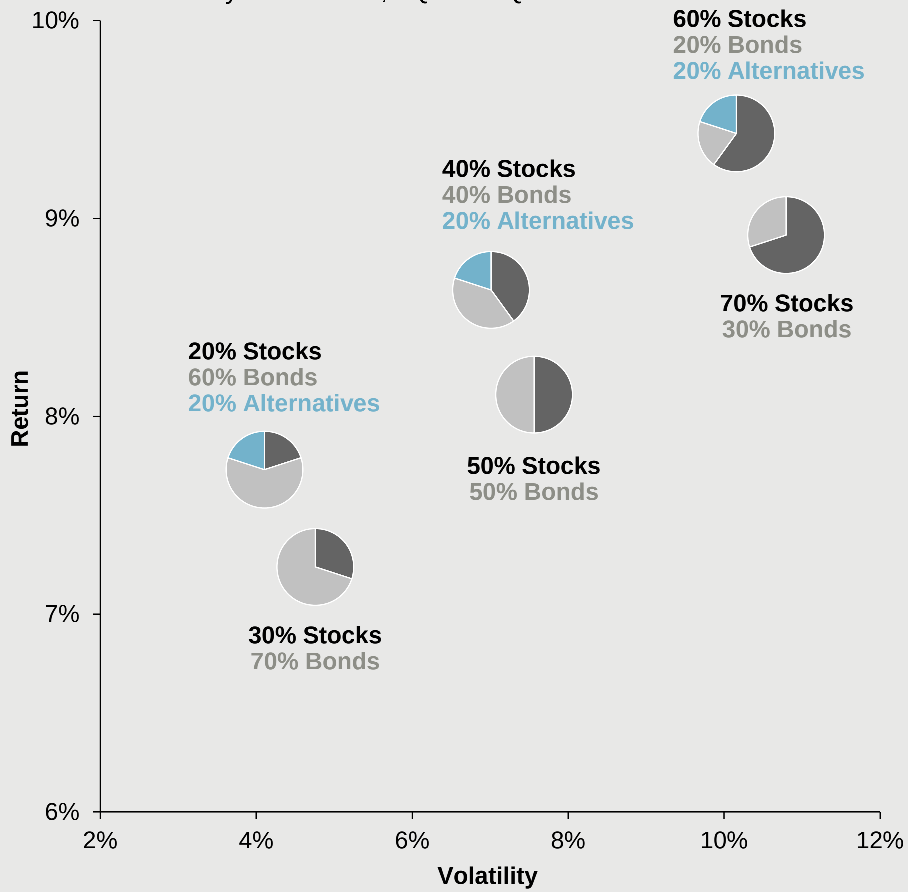


Source: Alerian, Bank of America, Bloomberg Finance L.P., Clarkson, Drewry Maritime Consultants, FactSet, Federal Reserve, FTSE, MSCI, NCREIF, Standard & Poor's, J.P. Morgan Asset Management. *Global Transport*: Levered yields for transport assets are calculated as the difference between charter rates (rental income), operating expenses, debt amortization and interest expenses, as a percentage of equity value. Yields for each of the sub-vessel types above are calculated and respective weightings are applied to each of the sub-sectors to arrive at the current levered yields for Global Transportation; asset classes are based on NCREIF ODCE (*Private Real Estate*), FTSE NAREIT Global/USA REITs (*Global/U.S. REITs*), MSCI Global Infrastructure Asset Index (*Infrastructure Assets*), Bloomberg Barclays U.S Convertibles Composite (*Convertibles*), Bloomberg Barclays Global High Yield Index (*Global HY bonds*), 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 Non-investment Grade (*Asia HY bonds*), MSCI Emerging Markets (*EM Equity*), MSCI Emerging Markets High Dividend Yield Index (*EM High Div. Equity*), MSCI World High Dividend Yield Index (*DM High Div. Equity*), MSCI Europe (*Eur. Equity*), MSCI USA (*U.S. Equity*). Transport yield is as of 31/12/19, Infrastructure 30/09/19, EM High Div. Equity and DM High Div. Equity 28/02/20. Past performance is not a reliable indicator of current and future results. *Guide to the Markets – Asia.* Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Alternatives and portfolio risk/return*

Annualized volatility and returns, 3Q94 – 3Q19



Public and private market correlations

10-years, quarterly returns

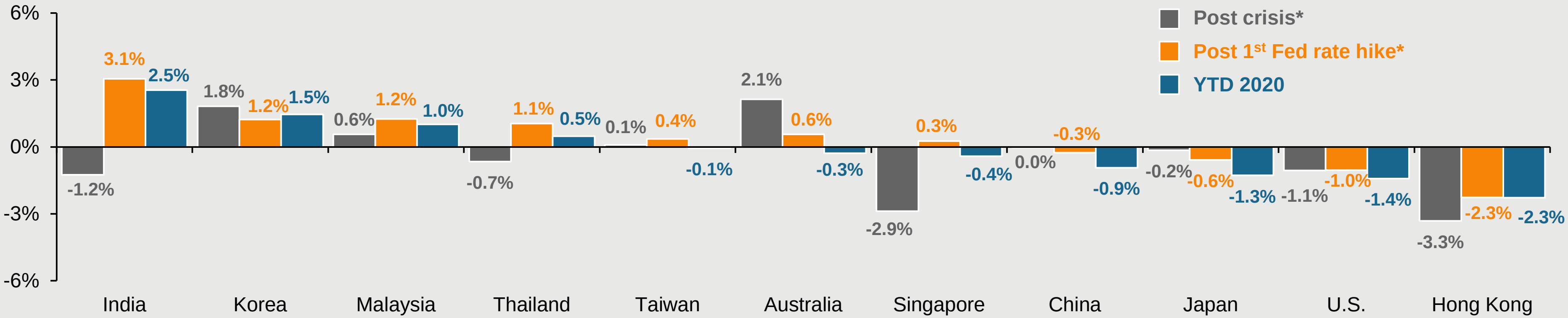
	Financial assets		Global real estate		Other real assets	Private markets		Hedge funds		
	Global bonds	Global equities	U.S. core RE	APAC core RE	Global infra.	U.S. direct lending	U.S. private equity	Equity long/ short	Rel. value	Global macro
Global Bonds	1.0									
Global equities	0.3	1.0								
U.S. core RE	-0.3	-0.5	1.0							
APAC core RE	-0.3	-0.4	0.8	1.0						
Global infra.	-0.2	-0.4	0.4	0.2	1.0					
U.S. direct lending	0.1	0.5	-0.1	-0.3	0.1	1.0				
U.S. private equity	0.2	0.8	-0.3	-0.2	-0.1	0.6	1.0			
Equity long/short	0.2	1.0	-0.4	-0.4	-0.3	0.6	0.9	1.0		
Relative value	0.3	0.9	-0.6	-0.6	-0.3	0.7	0.7	0.9	1.0	
Global macro	0.3	0.5	-0.2	-0.2	-0.3	0.2	0.3	0.5	0.4	1.0

Source: Barclays, Bloomberg, Cambridge Associates, FactSet, HFRI, NCREIF, J.P. Morgan Asset Management; (Left) Standard & Poor's; (Right) Cliffwater MSCI.
*Stocks: S&P 500. Bonds: Bloomberg Barclays U.S. Aggregate. Alternatives: equally weighted composite of hedge funds (HFR FW Comp.), private equity and private real estate. The volatility and returns are based on data from 30/09/94 – 30/09/19. RE – real estate. Global equities: MSCI AC World Index. Global bonds: Bloomberg Barclays Global Aggregate Index. U.S. core real estate: NCREIF Property Index – Open End Diversified Core Equity component. Asia Pacific (APAC) core real estate: IPD Global Property Fund Index – Asia-Pacific. Global infrastructure (infra.): MSCI Global Quarterly Infrastructure Asset Index (equal-weighted blend). U.S. direct lending: Cliffwater Direct Lending Index. U.S. private equity: Cambridge Associates U.S. Private Equity Index. Hedge fund indices include equity long/short, relative value and global macro and are all from HFRI. All correlation coefficients are calculated based on USD quarterly total return data for the period 30/09/09 – 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 31/03/20.

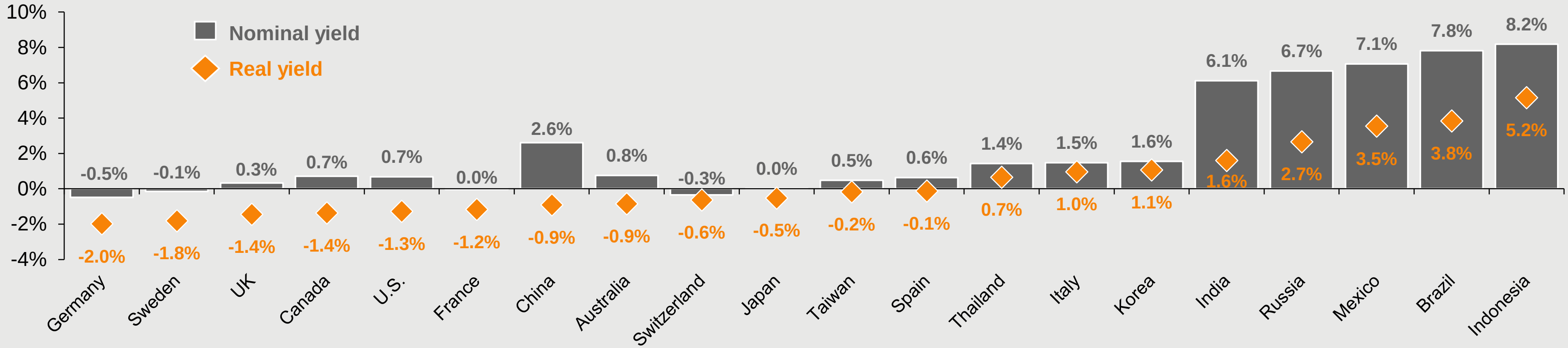
J.P.Morgan Asset Management

Average annual real deposit rate

Based on respective market's deposit rate less year-over-year inflation



Real and nominal yields**

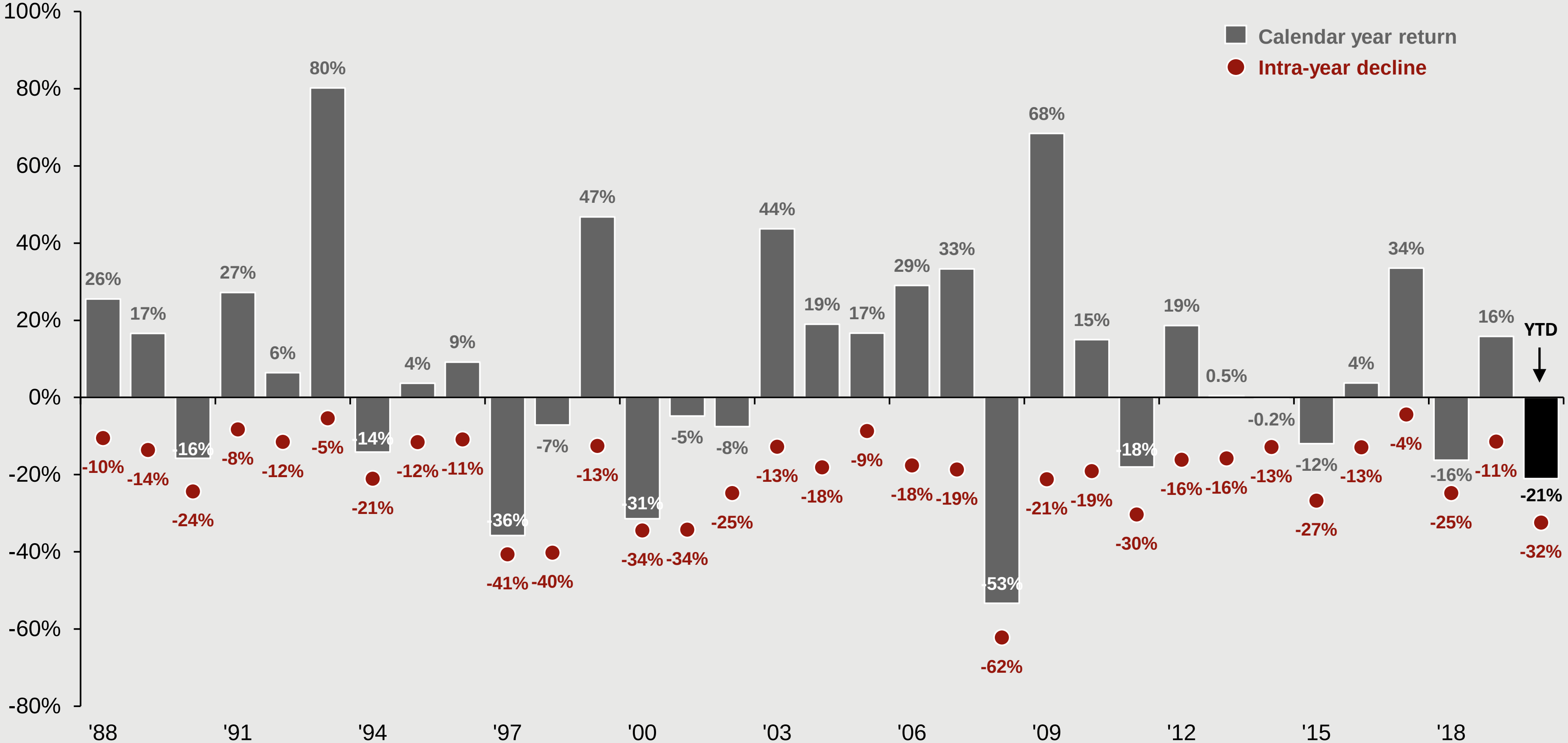


Source: FactSet, various central banks, J.P. Morgan Asset Management; (Top) International Monetary Fund.
*Post crisis time period defined as 2008-2014. Post 1st Fed rate hike defined as 2015-2019. **Real yield is calculated based on the last 12-month average Consumer Price Index for each respective market covering data 31/03/19 – 28/02/20, except for Australia, which uses average 31/01/19 – 31/12/19 CPI due to data availability. Nominal yields are the 10-year government bond yield for each respective market. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

MSCI AC Asia Pacific ex-Japan intra-year declines vs. calendar year returns

Despite average intra-year drops of -20% (median: -17%), annual returns are positive in 20 of 32 years (63%)



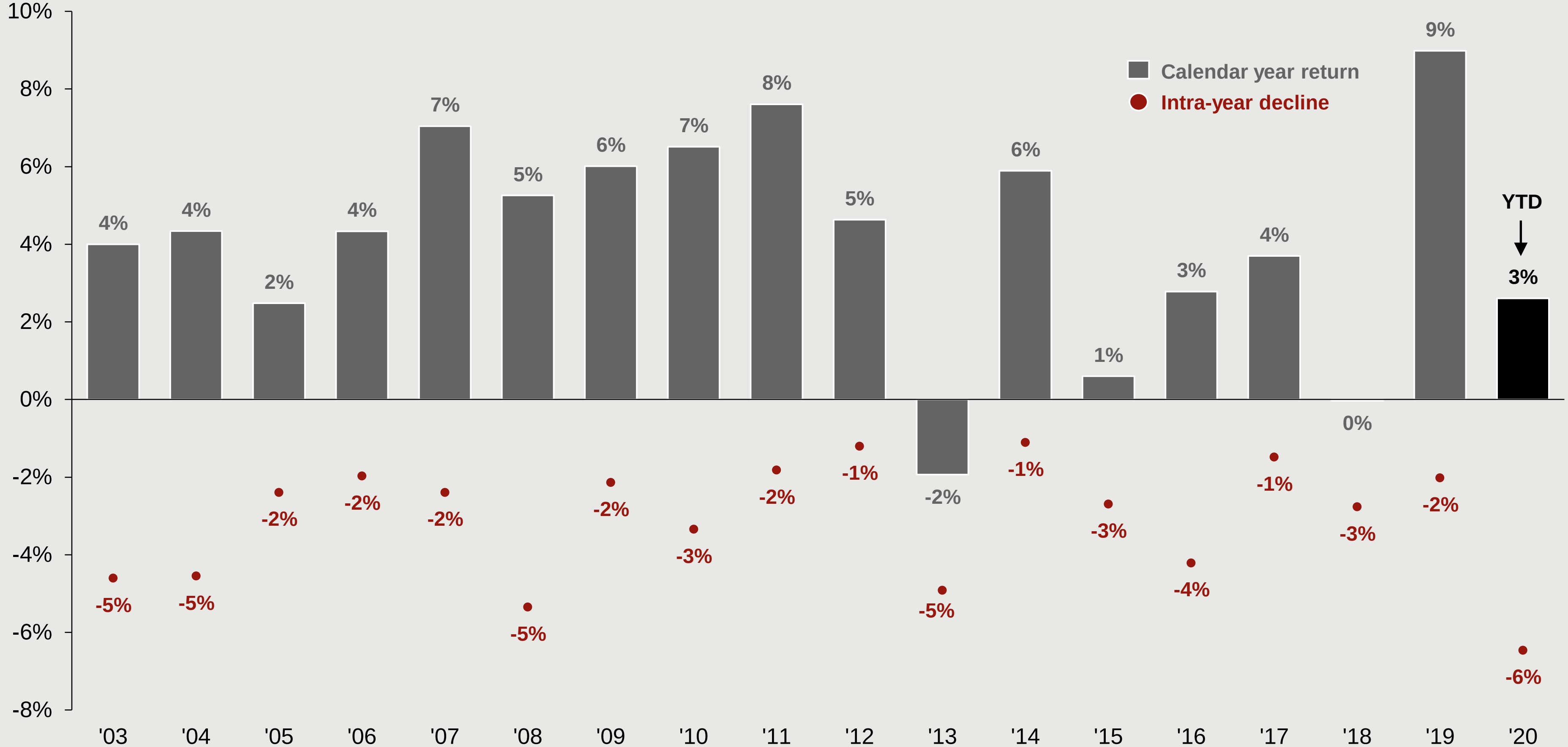
Source: FactSet, MSCI, J.P. Morgan Asset Management.
Returns are price returns based on MSCI AC Asia Pacific ex-Japan Index in U.S. dollar terms. Intra-year decline is the largest peak to trough decline during the respective year. Returns shown are calendar year returns from 1988 to 2019. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Investing principles

J.P.Morgan Asset Management

Bloomberg Barclays Global Aggregate USD intra-year declines vs. calendar year returns

Despite average intra-year drops of -3% (median: -2%), annual returns are positive in 15 of 17 years (88%)



Source: Bloomberg Barclays, FactSet, J.P. Morgan Asset Management.
Returns are total returns based on Bloomberg Barclays Global Aggregate USD Index. Intra-year decline is the largest peak to trough decline during the respective year.
Returns shown are calendar year returns from 2003 to 2019. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

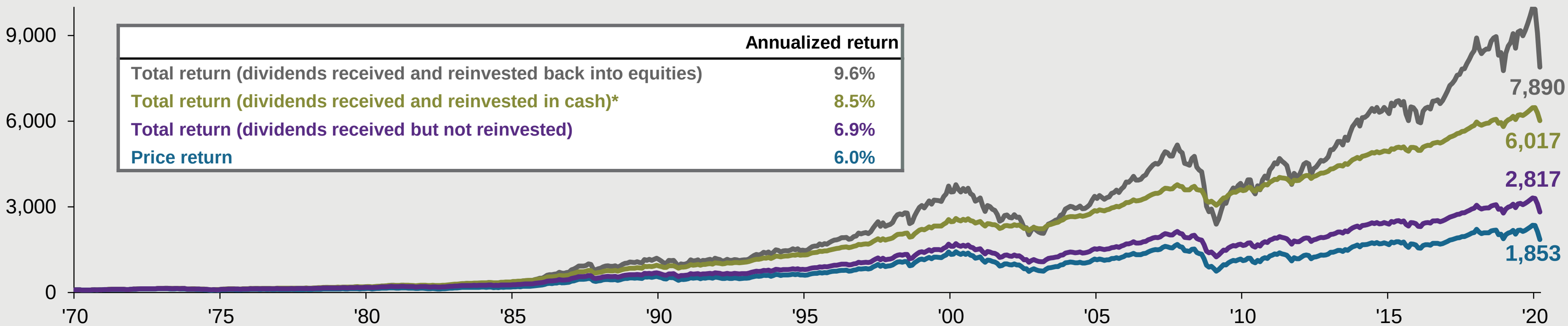
Investing principles

J.P.Morgan Asset Management

MSCI World Index: Performance under different scenarios

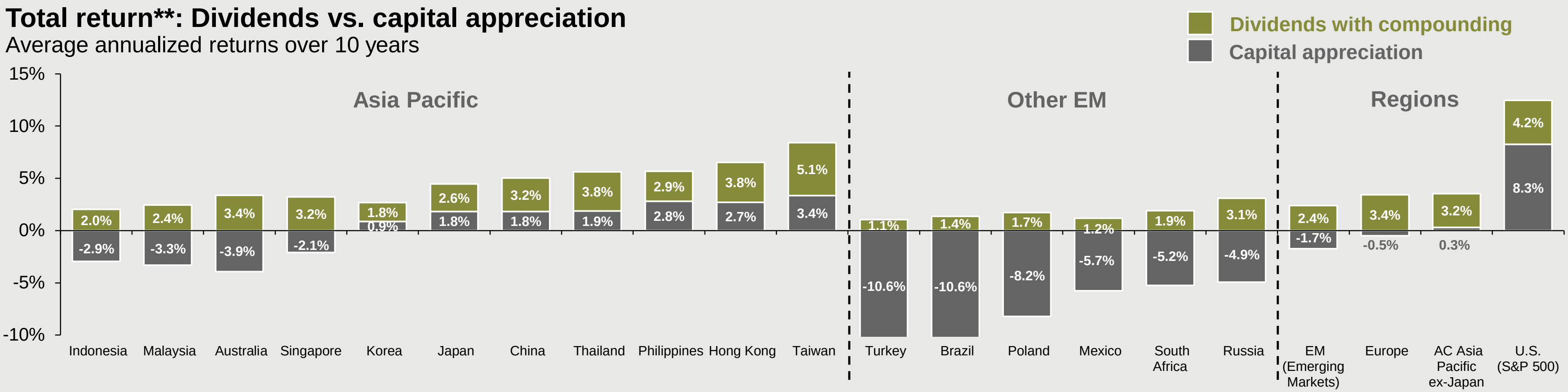
Index, 1970 = 100

	Annualized return
Total return (dividends received and reinvested back into equities)	9.6%
Total return (dividends received and reinvested in cash)*	8.5%
Total return (dividends received but not reinvested)	6.9%
Price return	6.0%



Total return**: Dividends vs. capital appreciation

Average annualized returns over 10 years



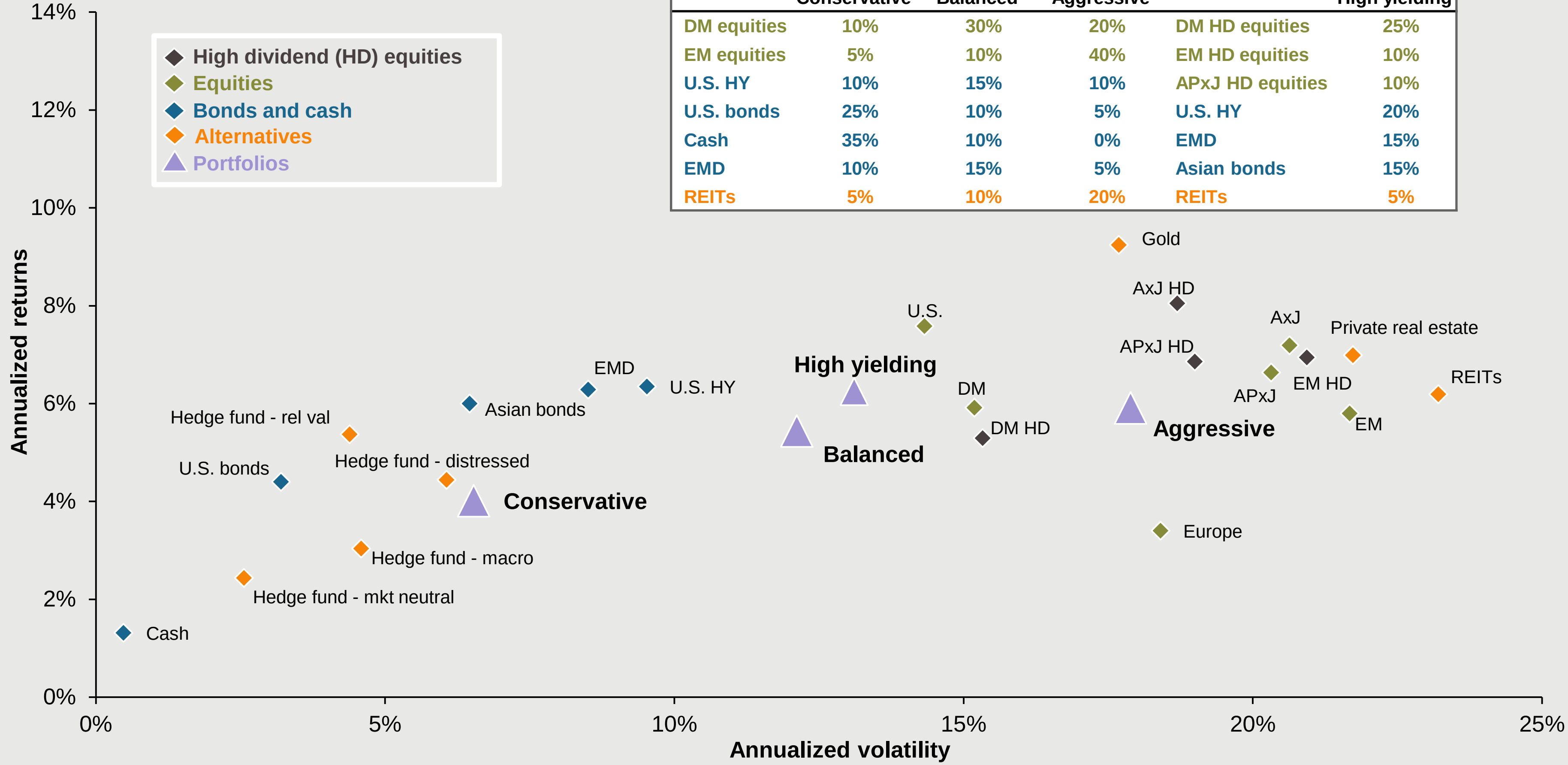
Source: FactSet, MSCI, J.P. Morgan Asset Management.
*Reinvestment in cash based on the same month U.S. three-month Treasury bill (secondary market) yield.
**Returns are total (gross) returns based on MSCI indices in U.S. dollar terms. Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

Annualized returns and volatility

Total returns in USD*

Hypothetical portfolio construction	Conservative	Balanced	Aggressive	High yielding	
DM equities	10%	30%	20%	DM HD equities	25%
EM equities	5%	10%	40%	EM HD equities	10%
U.S. HY	10%	15%	10%	APxJ HD equities	10%
U.S. bonds	25%	10%	5%	U.S. HY	20%
Cash	35%	10%	0%	EMD	15%
EMD	10%	15%	5%	Asian bonds	15%
REITs	5%	10%	20%	REITs	5%

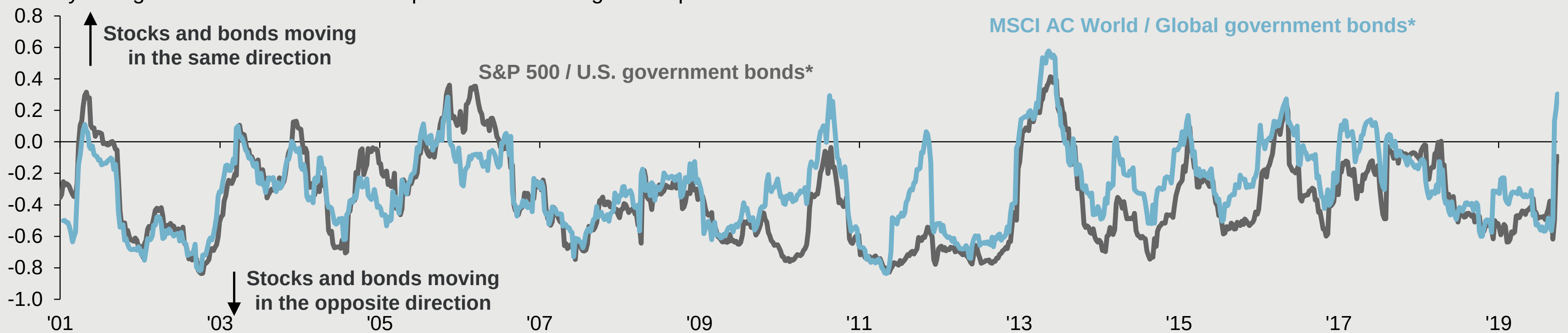


Source: Bloomberg Finance L.P., Dow Jones, FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management.
Hypothetical portfolios were created to illustrate different risk/return profiles and are not meant to represent actual asset allocation.
U.S. dollar total return calculations are based on MSCI Total Return, Bloomberg Barclays and J.P. Morgan indices. AxJ stands for MSCI AC Asia ex-Japan and APxJ stands for MSCI AC Asia Pacific ex-Japan. *Monthly total returns between 31/03/05 and 31/03/20 are used for all asset classes.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

J.P.Morgan Asset Management

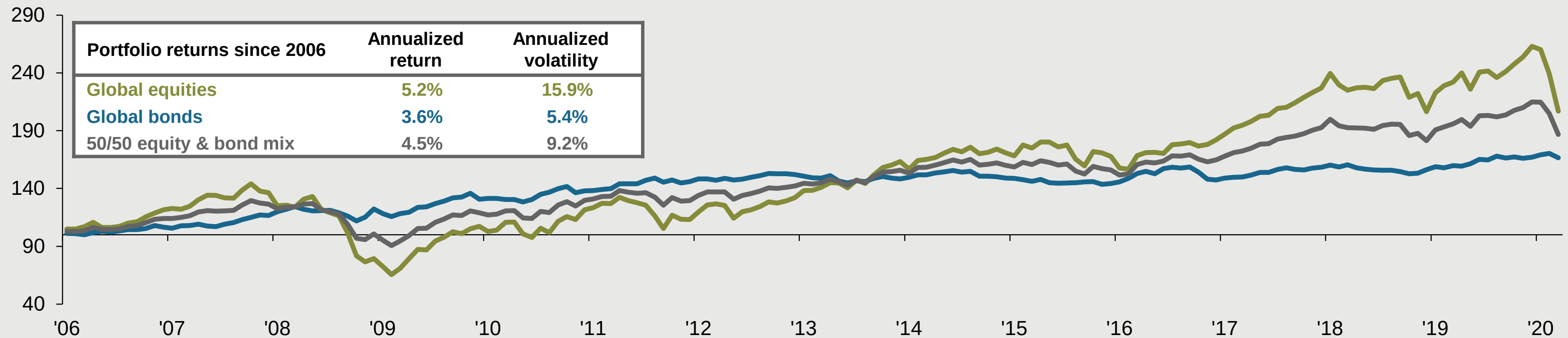
Correlations between stocks and sovereign bonds

Weekly rolling six-month correlation of equities and sovereign bond prices*



Portfolio returns: Global equities, global bonds vs. equity and fixed income blend

Total returns, 2006 = 100



Portfolio returns since 2006	Annualized return	Annualized volatility
Global equities	5.2%	15.9%
Global bonds	3.6%	5.4%
50/50 equity & bond mix	4.5%	9.2%

Source: Bloomberg Finance L.P., FactSet, MSCI, J.P. Morgan Asset Management; (Top) Standard & Poor's.
*Rolling six-month pairwise correlations between weekly returns in equity (S&P 500 and MSCI All Country World Index price indices) and bond (Bloomberg Barclays U.S. Aggregate Government Treasury and Bloomberg Barclays Global Aggregate Government Treasuries price indices) markets.
Global equities represented by MSCI AC World Index, global bonds represented by Bloomberg Barclays Aggregate Global Bond Index.
Past performance is not a reliable indicator of current and future results.
Guide to the Markets – Asia. Data reflect most recently available as of 31/03/20.

Investing principles

J.P.Morgan Asset Management

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 a 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 Index℠ 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 Indices℠ 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 Index℠ 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 Index℠ 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 Index℠ 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 Index℠ 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 Index℠ 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 Dec ember 31, 1969.

The MSCI China Index℠ 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 Index℠ 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 Index℠ 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 Index℠ 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 Index℠ 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 Index℠ 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 Index℠ 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

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.

J.P. Morgan Asset Management: Risks and Disclosures

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.

For the purposes of MiFID II, the JPM Market Insights and Portfolio Insights programs are marketing communications and are not in scope for any MiFID II / MiFIR requirements specifically related to investment research. Furthermore, the J.P. Morgan Asset Management Market Insights and Portfolio Insights programs, as non-independent research, have not been prepared in accordance with legal requirements designed to promote the independence of investment research, nor are they subject to any prohibition on dealing ahead of the dissemination of investment research.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be taken as advice or a recommendation for any specific investment product, strategy, plan feature or other purpose in any jurisdiction, nor is it a commitment from J.P. Morgan Asset Management or any of its subsidiaries to participate in any of the transactions mentioned herein. Any examples used are generic, hypothetical and for illustration purposes only. This material does not contain sufficient information to support an investment decision and it should not be relied upon by you in evaluating the merits of investing in any securities or products. In addition, users should make an independent assessment of the legal, regulatory, tax, credit, and accounting implications and determine, together with their own professional advisers, if any investment mentioned herein is believed to be suitable to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. Any forecasts, figures, opinions or investment techniques and strategies set out are for information purposes only, based on certain assumptions and current market conditions and are subject to change without prior notice. All information presented herein is considered to be accurate at the time of production, but no warranty of accuracy is given and no liability in respect of any error or omission is accepted. It should be noted that investment involves risks, the value of investments and the income from them may fluctuate in accordance with market conditions and taxation agreements and investors may not get back the full amount invested. Both past performance and yields are not reliable indicators of current and future results.

J.P. Morgan Asset Management is the brand for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide.

To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at https://am.jpmorgan.com/global/privacy.

This communication is issued by the following entities:

In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients' use only, by local J.P. Morgan entities, as the case may be.; in Canada, for institutional clients' use only, by JPMorgan Asset Management (Canada) Inc., which is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon and is also registered as an Investment Fund Manager in British Columbia, Ontario, Quebec and Newfoundland and Labrador. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific ("APAC"), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), which this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number "Kanto Local Finance Bureau (Financial Instruments Firm) No. 330"); in Australia, to wholesale clients only as defined in section 761A and 761G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919). For all other markets in APAC, to intended recipients only.

Prepared by: David Kelly, Tai Hui, Yoshinori Shigemi, Kerry Craig, Jasslyn Yeo, Marcella Chow, Ian Hui, Agnes Lin, Shogo Maekawa and Chaoping Zhu.

Unless otherwise stated, all data are as of March 31, 2020 or most recently available.

MI-GTMASIA-E MARCH 2020

Material ID: 0903c02a823a5888

J.P.Morgan
Asset Management