Market Insights

Guide to the Markets

Europe | 1Q 2024

As of 31 December 2023

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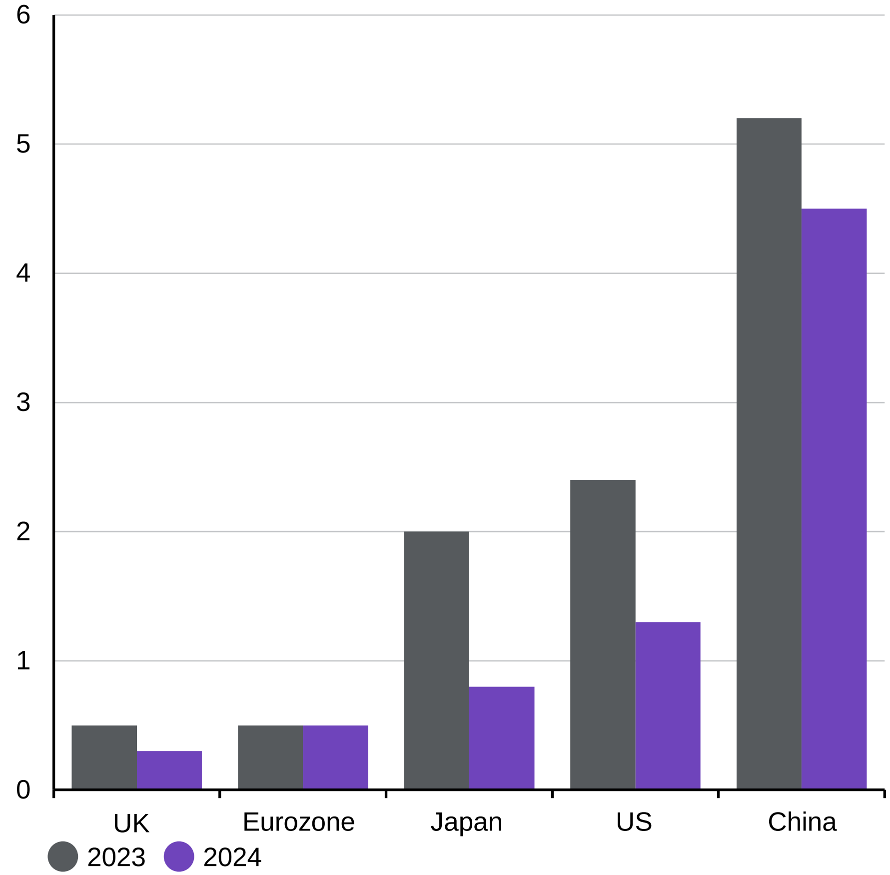
Global growth

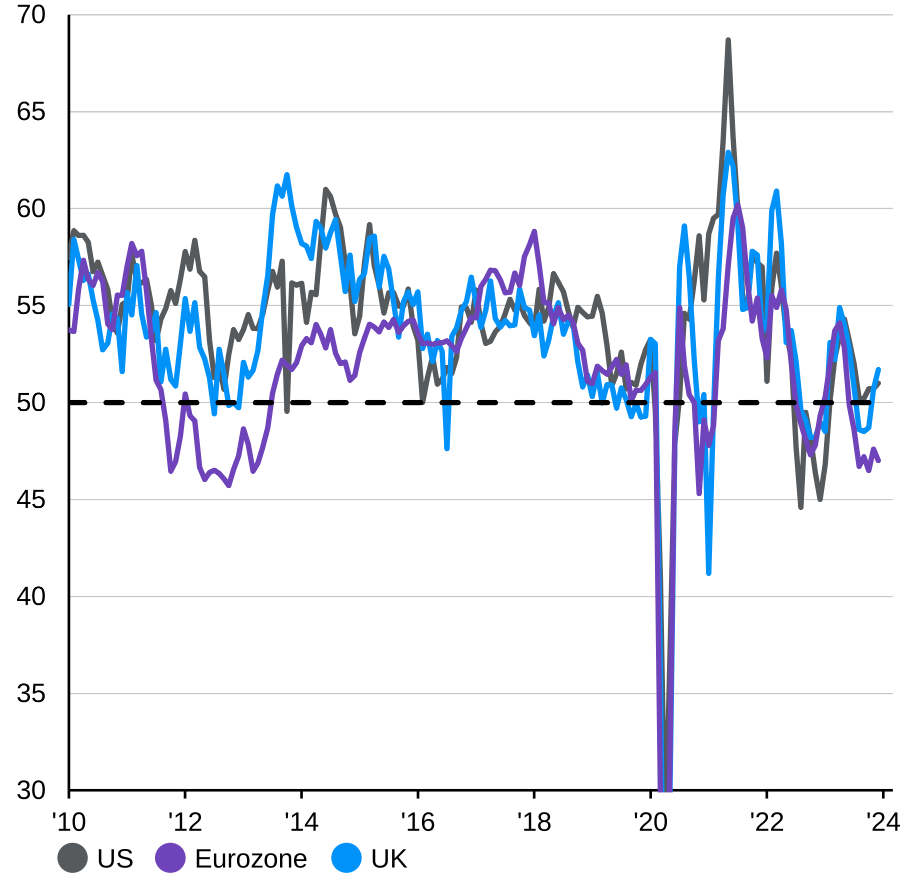
Consensus forecasts for real GDP growth

% change year on year



Composite Purchasing Managers' Index (PMI)

Index level



Source: (Left) Bloomberg, J.P. Morgan Asset Management. Forecasts are from Bloomberg contributor composite. (Right) S&P Global, J.P. Morgan Asset Management. A PMI score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion.
Guide to the Markets - Europe. Data as of 31 December 2023.

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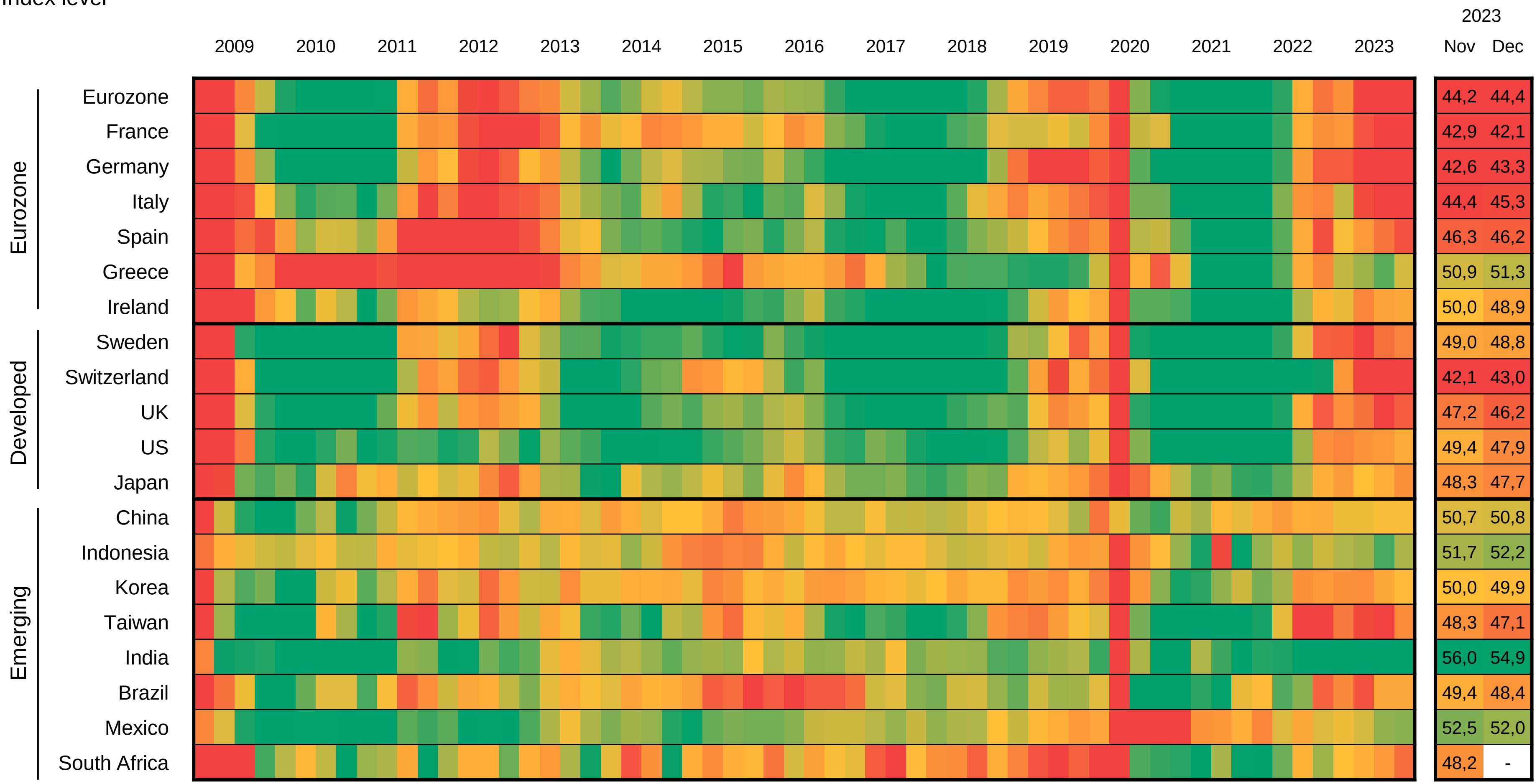
Global economy

Global Purchasing Managers' Index (PMI) for manufacturing

GTM | Europe | 5

Global manufacturing PMI

Index level



Source: S&P Global, J.P. Morgan Asset Management. A score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. The heatmap colours range from red to yellow to green, where red is below 50, yellow is at 50 and green is above 50. Quarterly averages are shown, except the two most recent monthly data points. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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Global inflation

Headline inflation

% change year on year

		2021	2022												2023										
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Eurozone	Eurozone	5,0	5,1	5,9	7,4	7,4	8,1	8,6	8,9	9,1	9,9	10,6	10,1	9,2	8,6	8,5	6,9	7,0	6,1	5,5	5,3	5,2	4,3	2,9	2,4
	France	3,4	3,3	4,2	5,1	5,4	5,8	6,5	6,8	6,6	6,2	7,1	7,1	6,7	7,0	7,3	6,7	6,9	6,0	5,3	5,1	5,7	5,7	4,5	3,9
	Germany	5,7	5,1	5,5	7,6	7,8	8,7	8,2	8,5	8,8	10,9	11,6	11,3	9,6	9,2	9,3	7,8	7,6	6,3	6,8	6,5	6,4	4,3	3,0	2,3
	Italy	4,2	5,1	6,2	6,8	6,3	7,3	8,5	8,4	9,1	9,4	12,6	12,6	12,3	10,7	9,8	8,1	8,6	8,0	6,7	6,3	5,5	5,6	1,8	0,6
	Spain	6,6	6,2	7,6	9,8	8,3	8,5	10,0	10,7	10,5	9,0	7,3	6,7	5,5	5,9	6,0	3,1	3,8	2,9	1,6	2,1	2,4	3,3	3,5	3,3
	Greece	4,4	5,5	6,3	8,0	9,1	10,5	11,6	11,3	11,2	12,1	9,5	8,8	7,6	7,3	6,5	5,4	4,5	4,1	2,8	3,5	3,5	2,4	3,8	2,9
	Ireland	5,7	5,0	5,7	6,9	7,3	8,3	9,6	9,6	9,0	8,6	9,4	9,0	8,2	7,5	8,1	7,0	6,3	5,4	4,8	4,6	4,9	5,0	3,6	2,5
Developed	Sweden	4,5	3,9	4,4	6,3	6,6	7,5	8,9	8,3	9,5	10,3	9,8	10,1	10,8	9,6	9,7	8,1	7,7	6,7	6,3	6,3	4,5	3,7	4,0	3,3
	Switzerland	1,3	1,4	1,9	2,2	2,3	2,7	3,2	3,3	3,3	3,2	2,9	2,9	2,7	3,2	3,2	2,7	2,6	2,2	1,8	2,1	1,9	2,0	2,0	1,6
	UK	5,4	5,5	6,2	7,0	9,0	9,1	9,4	10,1	9,9	10,1	11,1	10,7	10,5	10,1	10,4	10,1	8,7	8,7	7,9	6,8	6,7	6,7	4,6	3,9
	US	7,0	7,5	7,9	8,5	8,3	8,6	9,1	8,5	8,3	8,2	7,7	7,1	6,5	6,4	6,0	5,0	4,9	4,0	3,0	3,2	3,7	3,7	3,2	3,1
	Japan	0,8	0,5	0,9	1,2	2,5	2,5	2,4	2,6	3,0	3,0	3,7	3,8	4,0	4,3	3,3	3,2	3,5	3,2	3,3	3,3	3,2	3,0	3,3	2,8
Emerging	China	1,5	0,9	0,9	1,5	2,1	2,1	2,5	2,7	2,5	2,8	2,1	1,6	1,8	2,1	1,0	0,7	0,1	0,2	0,0	-0,3	0,1	0,0	-0,2	-0,5
	Indonesia	1,9	2,2	2,1	2,6	3,5	3,6	4,3	4,9	4,7	6,0	5,7	5,4	5,5	5,3	5,5	5,0	4,3	4,0	3,5	3,1	3,3	2,3	2,6	2,9
	Korea	3,7	3,6	3,7	4,1	4,8	5,4	6,0	6,3	5,7	5,6	5,7	5,0	5,0	5,2	4,8	4,2	3,7	3,3	2,7	2,3	3,4	3,7	3,8	3,3
	Taiwan	2,6	2,8	2,3	3,3	3,4	3,4	3,6	3,4	2,7	2,8	2,7	2,4	2,7	3,1	2,4	2,4	2,3	2,0	1,8	1,9	2,5	2,9	3,0	2,9
	India	5,7	6,0	6,1	7,0	7,8	7,0	7,0	6,7	7,0	7,4	6,8	5,9	5,7	6,5	6,4	5,7	4,7	4,3	4,9	7,4	6,8	5,0	4,9	5,6
	Brazil	10,1	10,4	10,5	11,3	12,1	11,7	11,9	10,1	8,7	7,2	6,5	5,9	5,8	5,8	5,6	4,7	4,2	3,9	3,2	4,0	4,6	5,2	4,8	4,7
	Mexico	7,4	7,1	7,3	7,5	7,7	7,7	8,0	8,2	8,7	8,7	8,4	7,8	7,8	7,9	7,6	6,8	6,3	5,8	5,1	4,8	4,6	4,5	4,3	4,3
	South Africa	5,9	5,7	5,7	5,9	5,9	6,5	7,4	7,8	7,6	7,5	7,6	7,4	7,2	6,9	7,0	7,1	6,8	6,3	5,4	4,7	4,8	5,4	5,9	5,5

Source: Bank of Mexico, DGBAS, ECB, Federal Reserve, IBGE, India Ministry of Statistics & Programme Implementation, Japan Ministry of Internal Affairs & Communication, Korean National Statistical Office, LSEG Datastream, National Bureau of Statistics of China, ONS, Riksbank, Statistics Indonesia, Statistics South Africa, Swiss National Bank, J.P. Morgan Asset Management. Eurozone countries use HICP inflation, all other countries use CPI inflation. Heatmap colours are based on the respective central bank target inflation rates. Blue is below target, white is at target and red is above target. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

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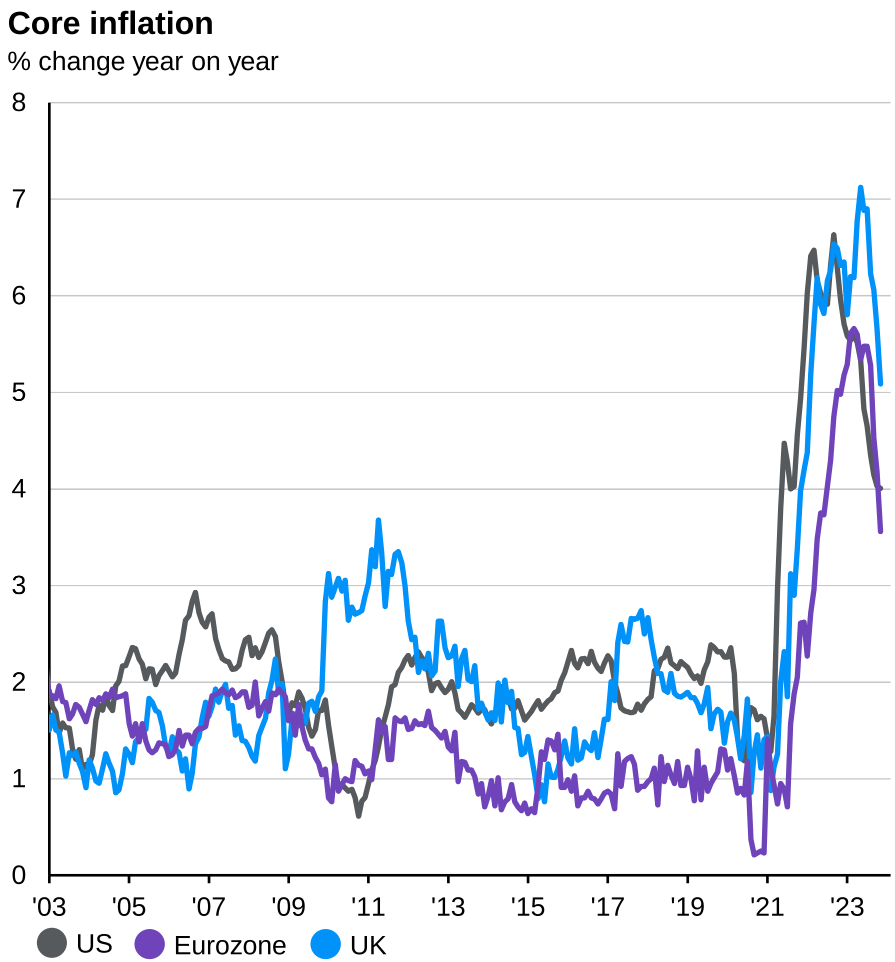
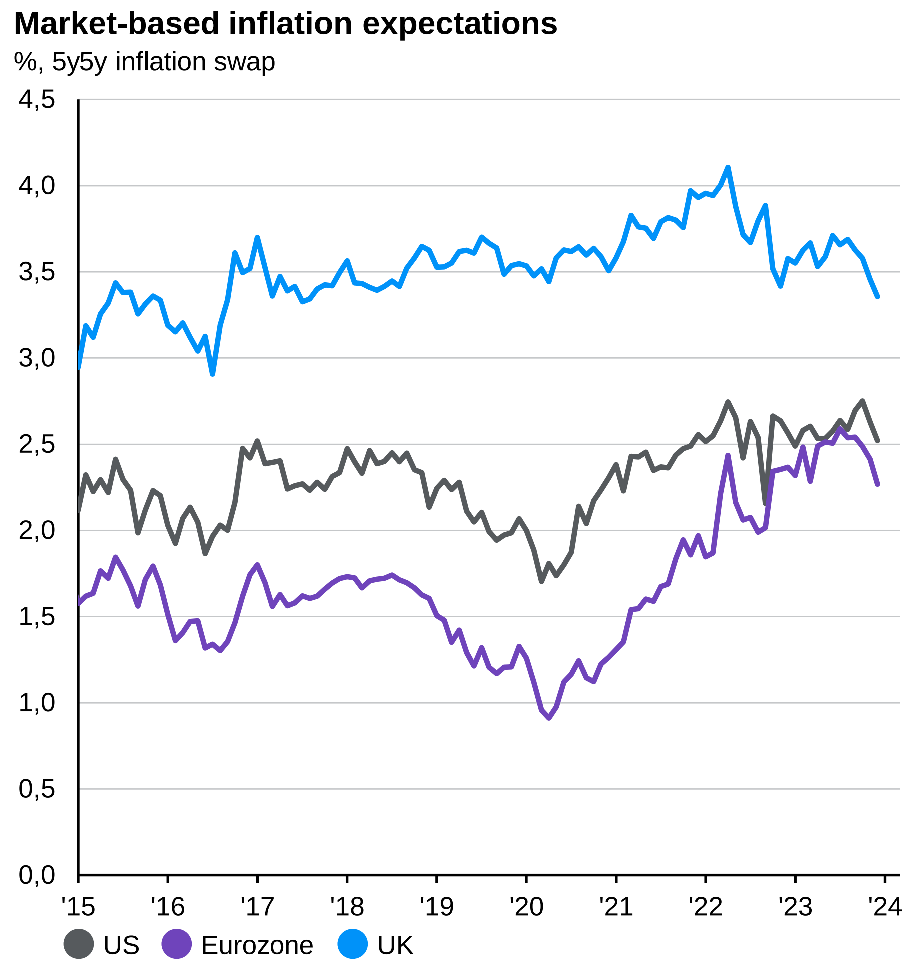
Global inflationary pressures





Source: (Left) BLS, Eurostat, LSEG Datastream, ONS, J.P. Morgan Asset Management. Core inflation excludes food and energy in the US, and food, energy, alcohol and tobacco in the eurozone and the UK. (Right) Bloomberg, J.P. Morgan Asset Management. 5y5y inflation swaps represent the market's expectation of five-year average inflation, starting in five years' time. UK inflation swaps use RPI rather than CPI as the reference point, which partly explains why the UK 5y5y is higher than other regions. Strong demand for index-linked Gilts from defined benefit UK pension funds also drives the UK 5y5y higher. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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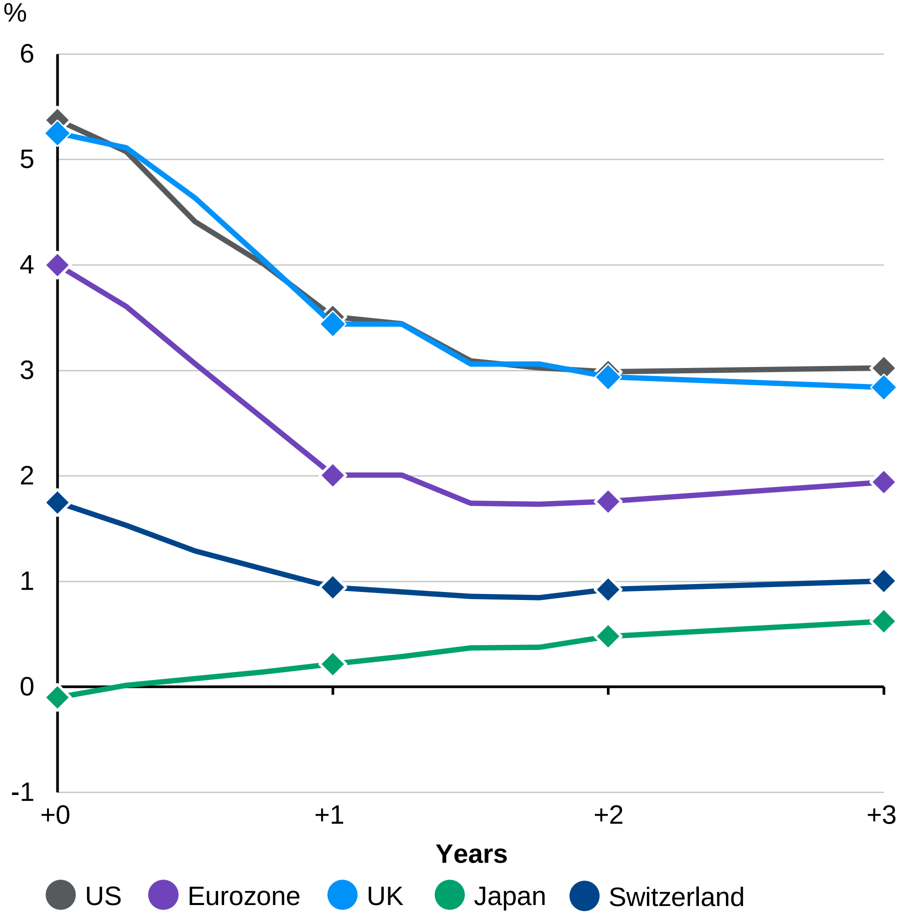
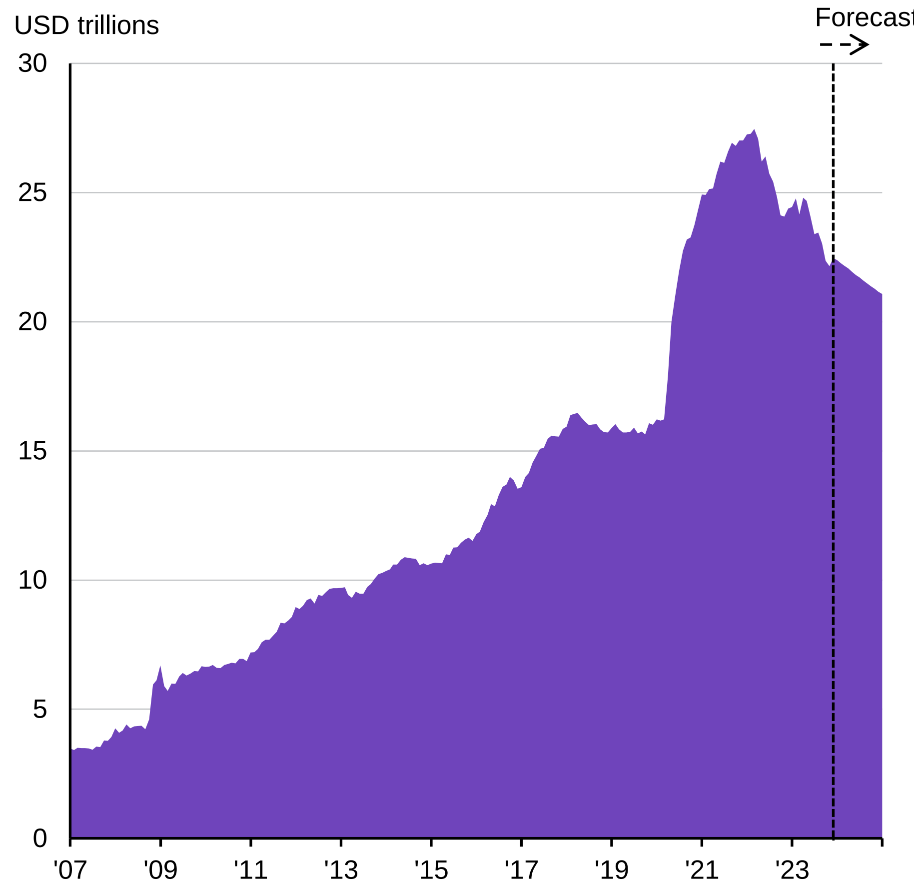
Global monetary policy

Market expectations for central bank policy rates



Global central bank balance sheets



Source: (Left) Bloomberg, J.P. Morgan Asset Management. Expectations are calculated using OIS forwards. (Right) BoE, BoJ, ECB, Fed, LSEG Datastream, SNB, J.P. Morgan Asset Management. Global central bank balance sheet is the sum of the balance sheets of the BoE, BoJ, ECB, Fed and SNB. Forecast from J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.*
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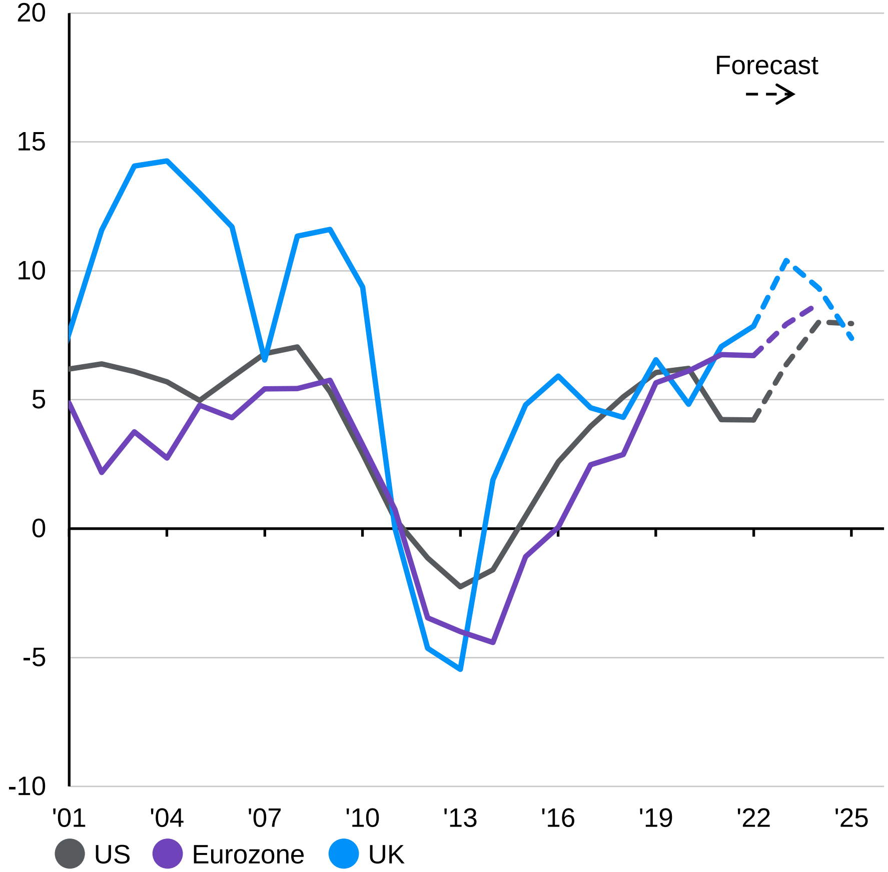
Global fiscal policy

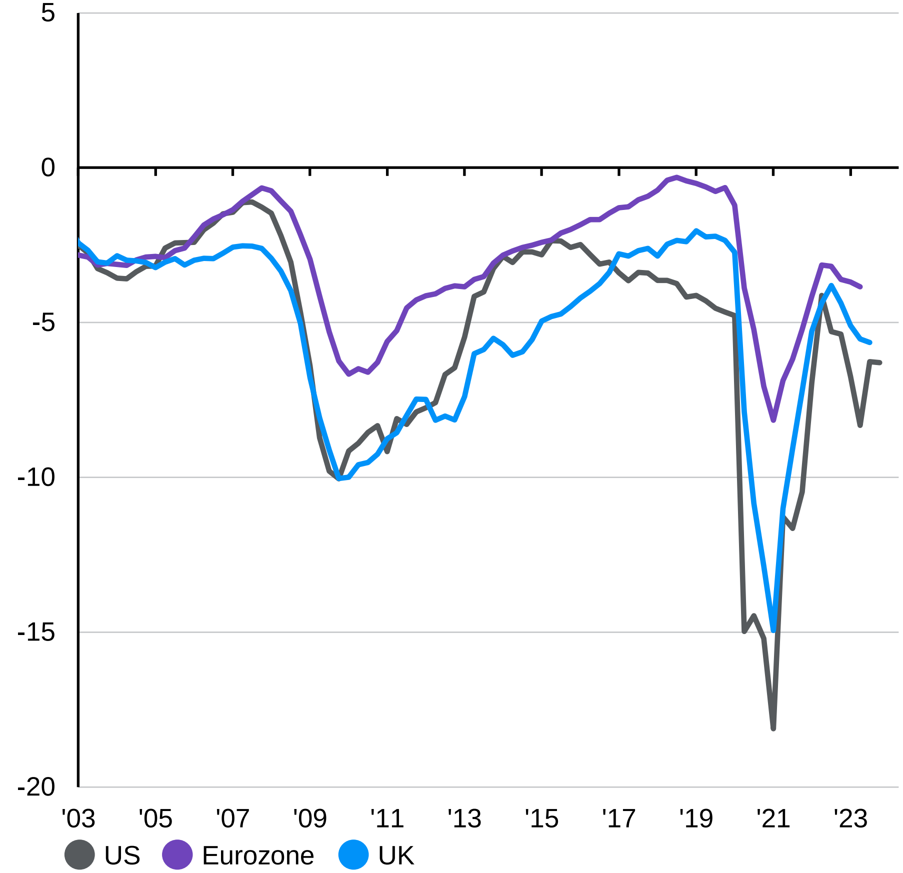
Public sector investment

% change year on year, three-year moving average



Public sector budget balance

% of nominal GDP



Source: (Left) Deutsche Bundesbank, INE, INSEE, ISTAT, LSEG Datastream, OECD, J.P. Morgan Asset Management. Chart shows a smoothed measure of government gross fixed capital formation. Forecast is OECD. Eurozone is GDP-weighted average of France, Germany, Italy and Spain. (Right) Bloomberg, Eurostat, ONS, US Treasury, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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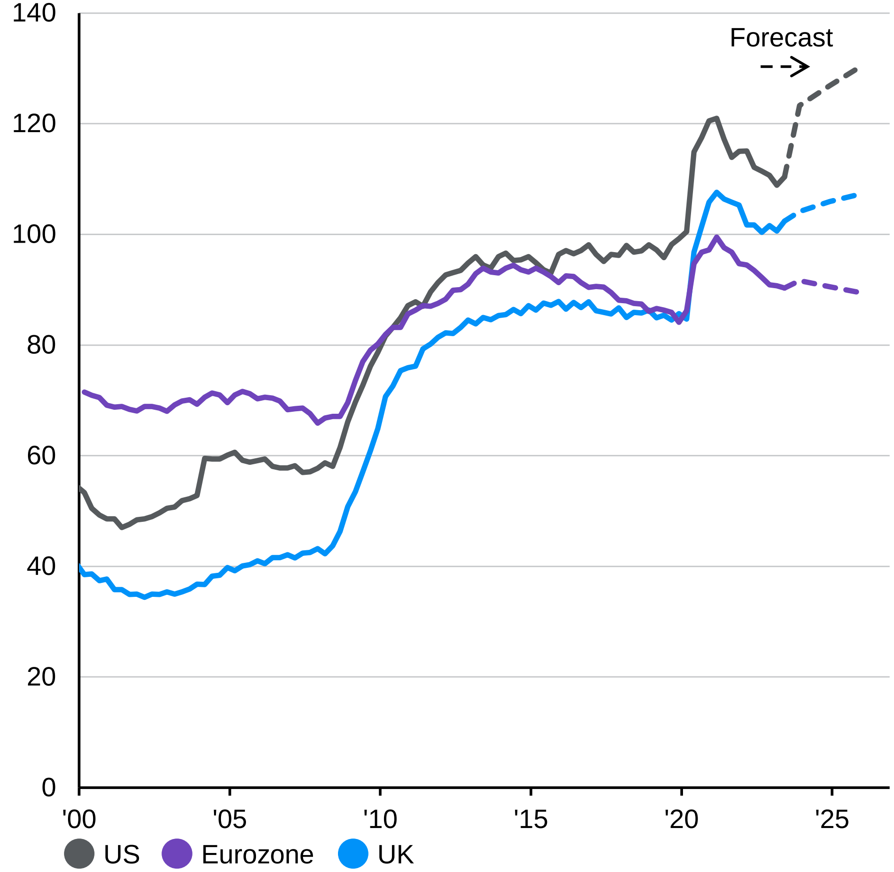
Global economy

Global government debt

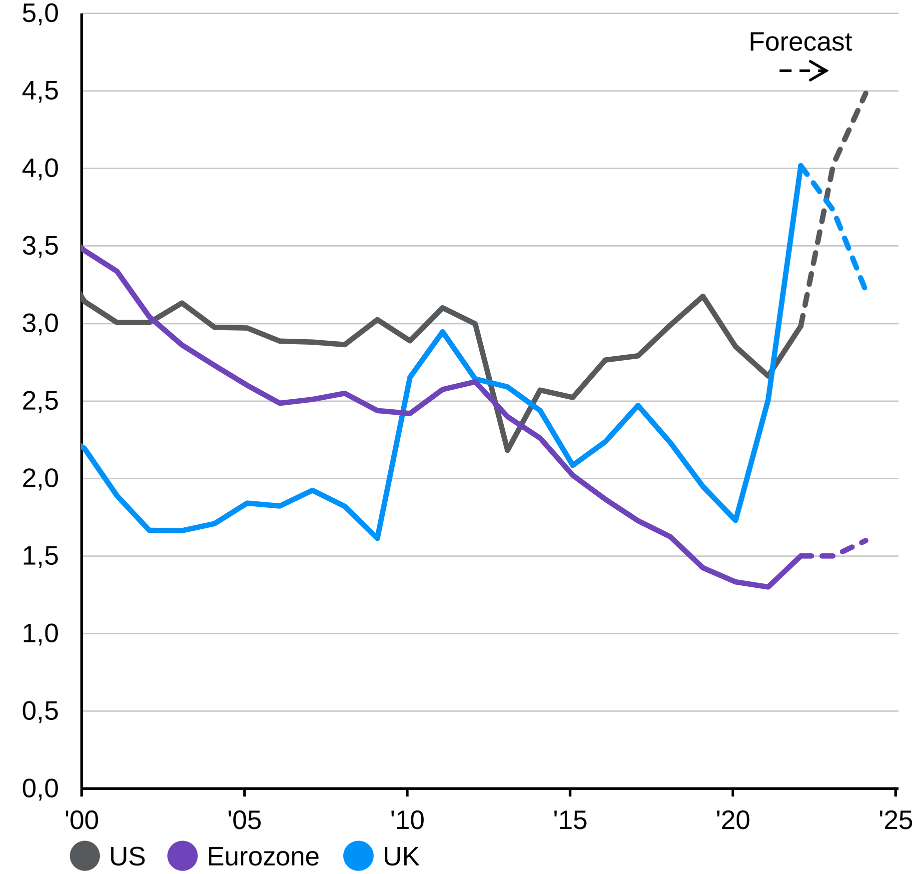
Government debt

% of nominal GDP



Government interest payments

% of nominal GDP



Source: (Left) Bank for International Settlements, Eurostat, IMF, LSEG Datastream, J.P. Morgan Asset Management. Debt refers to gross debt at face value. Dotted lines represent the IMF forecasts for government debt to GDP in 2023 and 2024. (Right) LSEG Datastream, OECD, J.P. Morgan Asset Management. 2023 is OECD forecast. Eurozone refers to 17 OECD countries in the eurozone, which excludes Croatia, Cyprus and Malta. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

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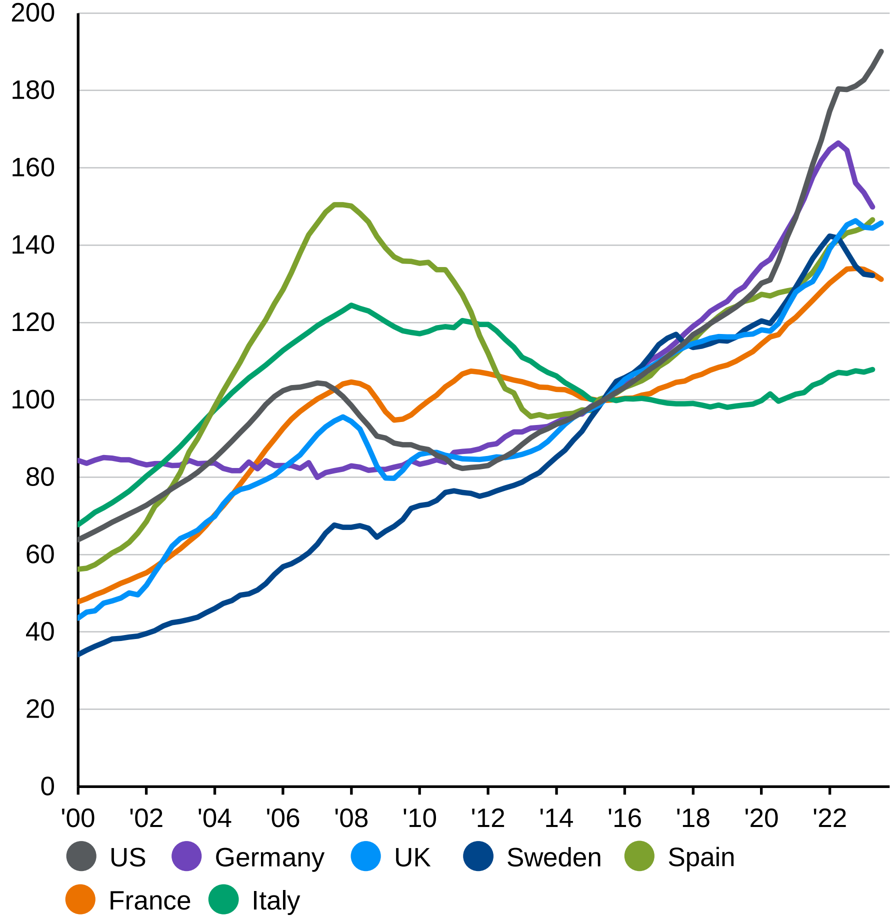
Global consumer balance sheets

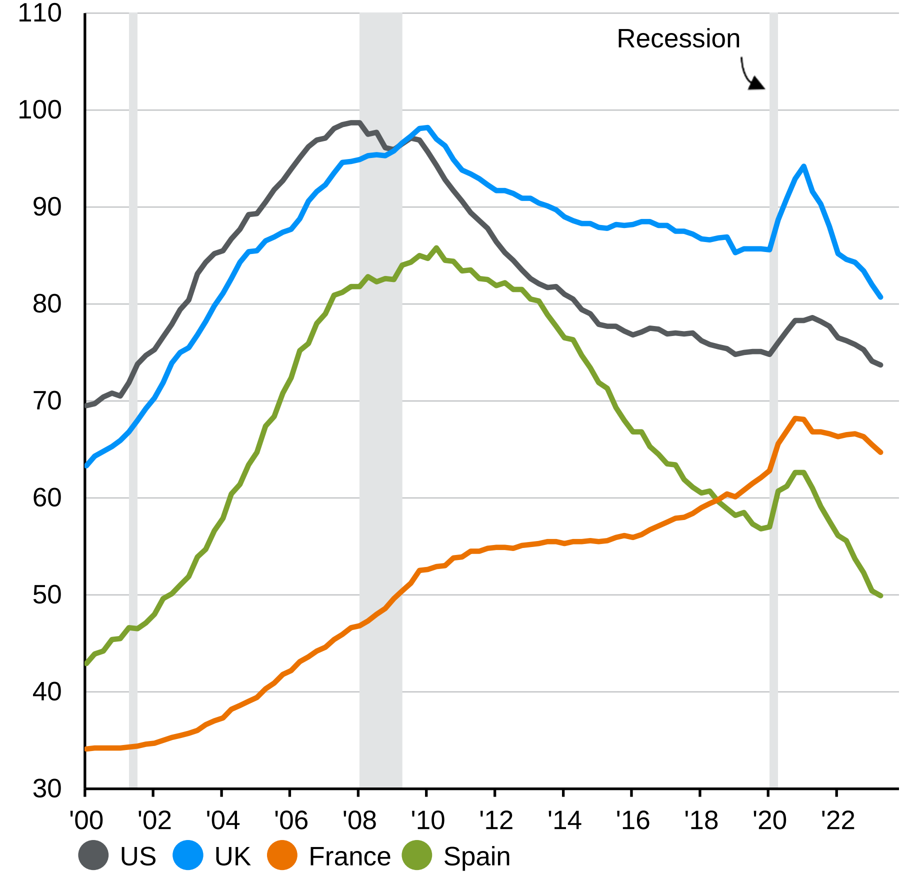
Nominal house prices

Index level, rebased to 100 in 2015



Household debt

% of nominal GDP



Source: (Left) OECD, J.P. Morgan Asset Management. (Right) BEA, Eurostat, LSEG Datastream, ONS, J.P. Morgan Asset Management.
Guide to the Markets - Europe. Data as of 31 December 2023.

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US dollar

US dollar and interest rate differentials

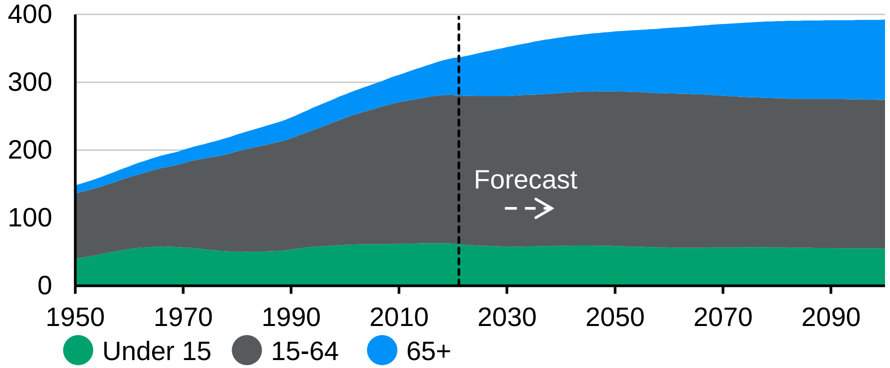
Index level (LHS); % points (RHS)

Source: J.P. Morgan Securities Research, LSEG Datastream, J.P. Morgan Asset Management. DM is developed markets and the yield is calculated as a GDP-weighted average of the 10-year government bond yields of Australia, Canada, France, Germany, Italy, Japan, Switzerland and the UK. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Global demographics

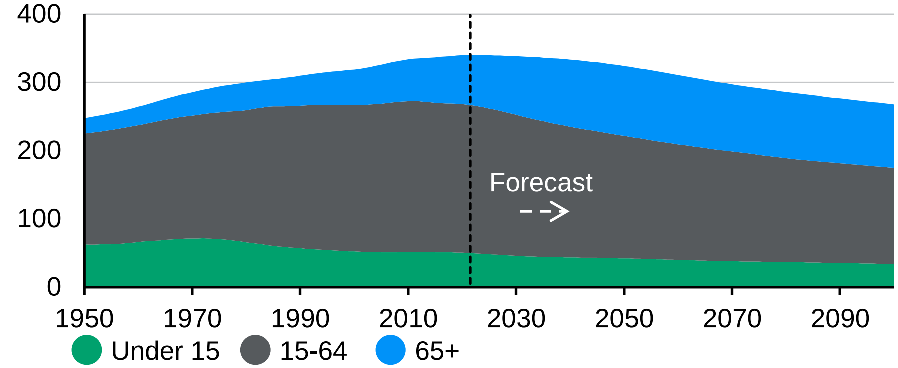
Population split by age: US

Millions of people



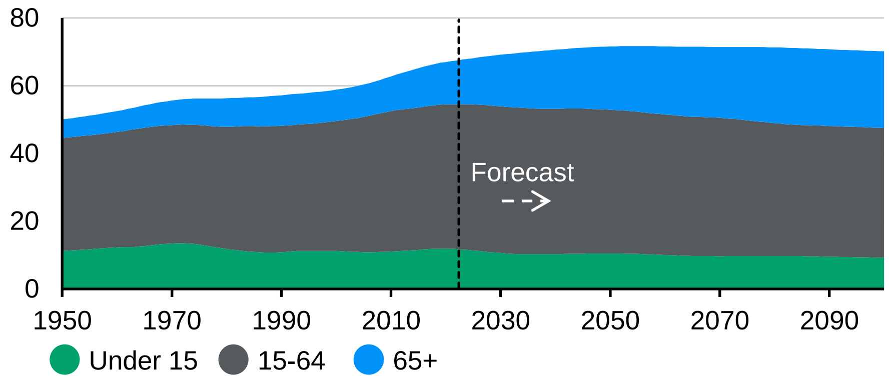
Population split by age: eurozone

Millions of people



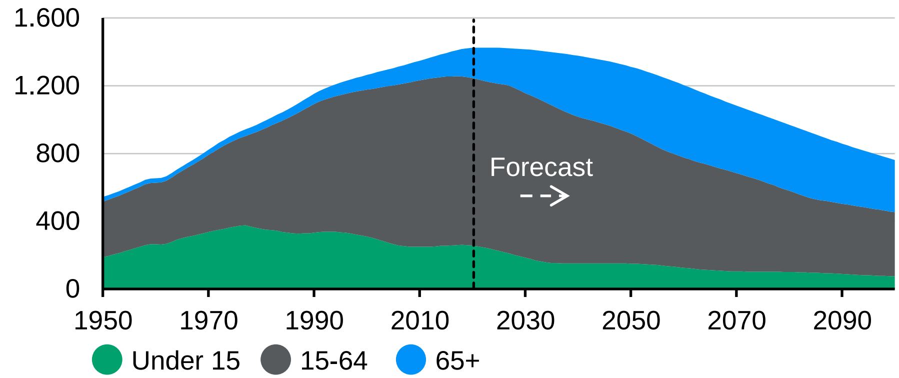
Population split by age: UK

Millions of people



Population split by age: China

Millions of people

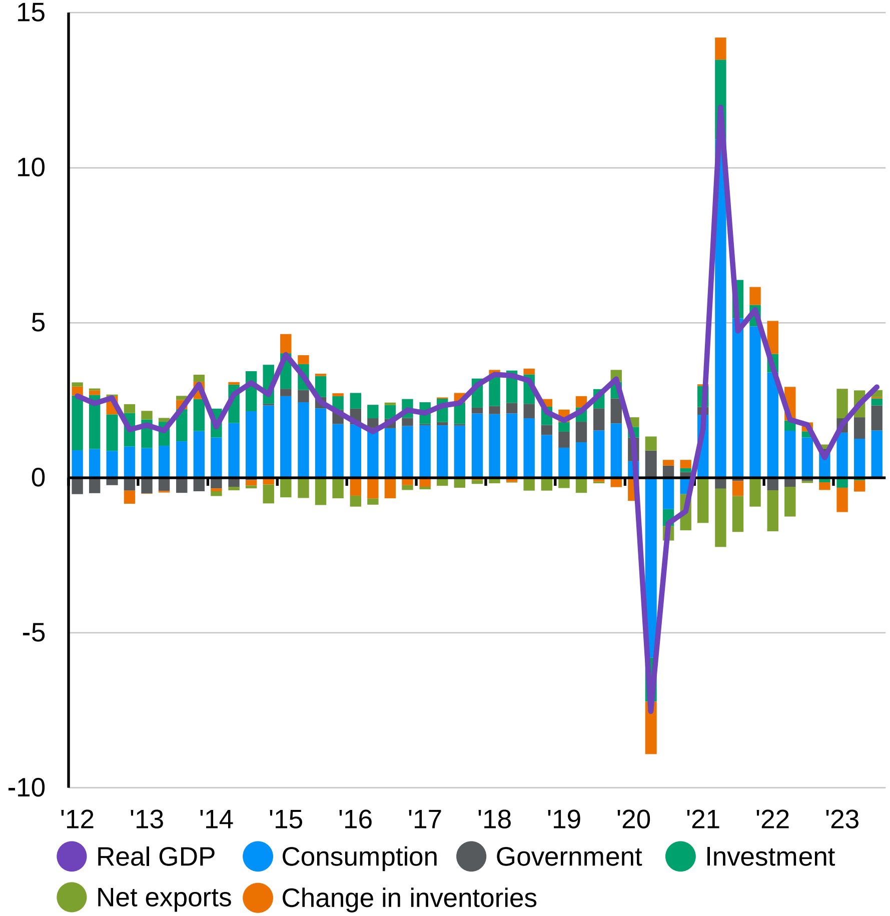


Source: (All charts) LSEG Datastream, United Nations, J.P. Morgan Asset Management. Forecast is United Nations. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

US GDP and business surveys

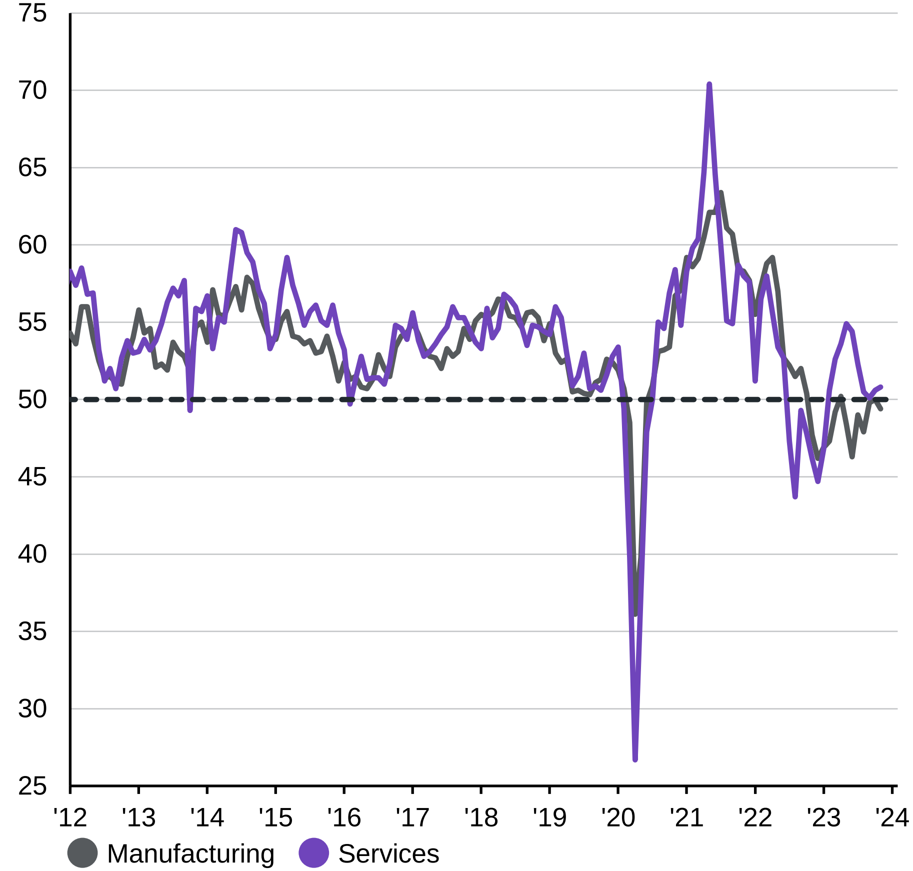
Contribution to US real GDP growth

% change year on year



US Purchasing Managers' Indices (PMI)

Index level



Source: (All charts) BEA, Bloomberg, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. A PMI score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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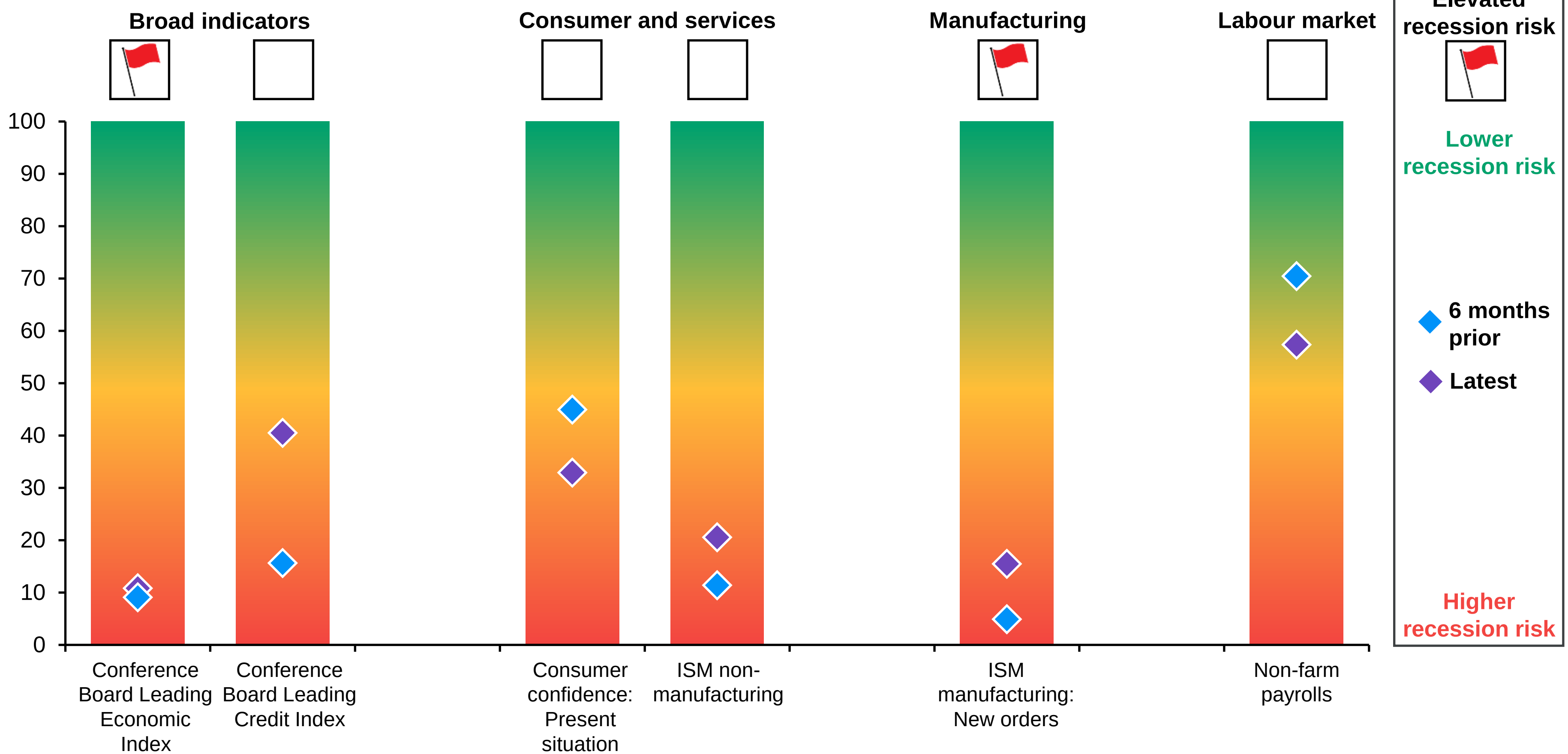
US Economic Monitor

US economic indicators

Percentile rank relative to historic data since 1990



Source: BLS, Conference Board, ISM, LSEG Datastream, J.P. Morgan Asset Management. Elevated recession risk flags are shown when the underlying indicator is at a level consistent with the onset of any of the three recessions prior to the Covid-19 recession. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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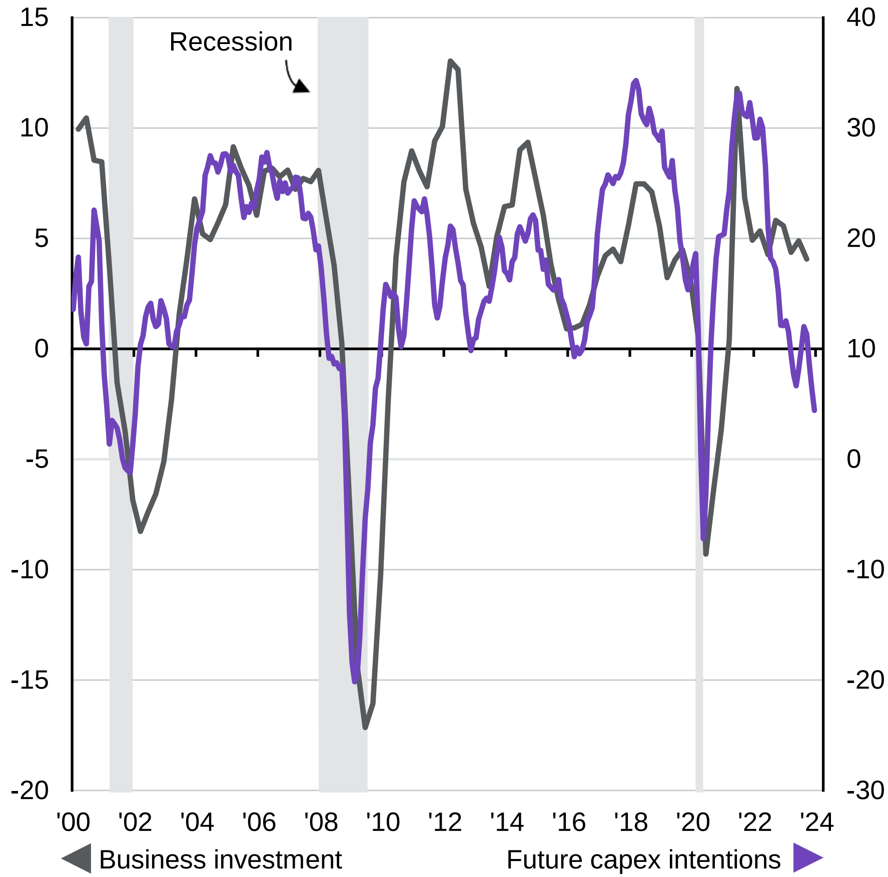
US business and residential investment

Global economy

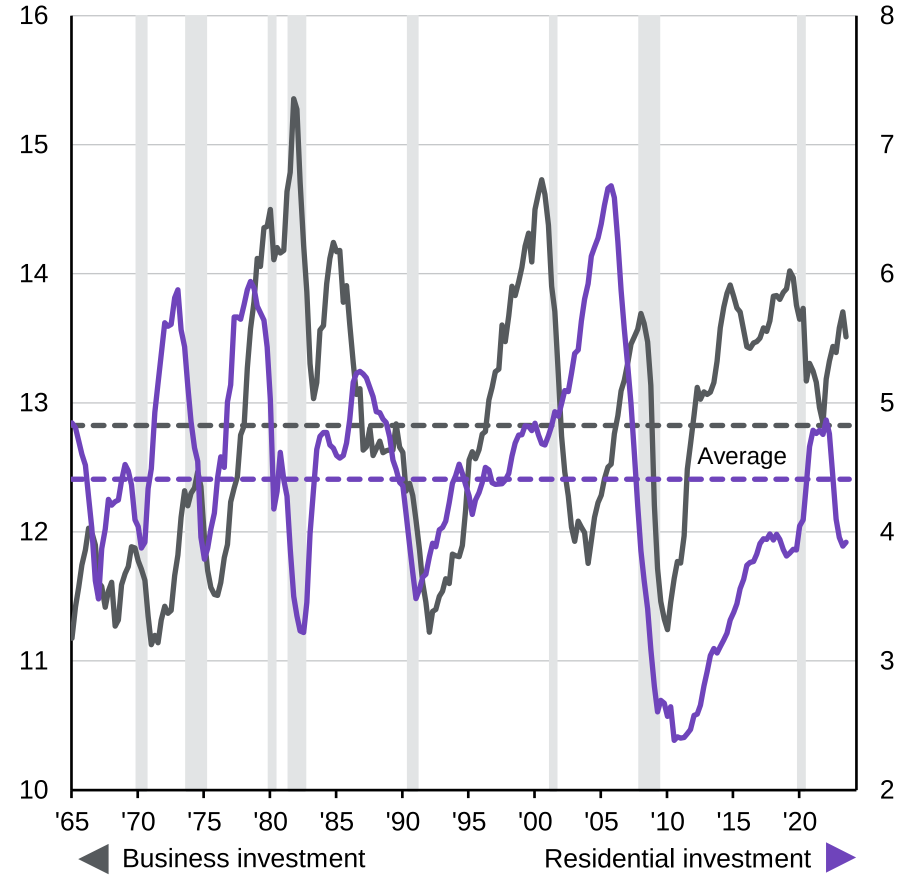
US real business investment and future capex intentions

% change year on year (LHS); index level (RHS)



US residential and business investment

% of nominal GDP



Source: (Left) BEA, Dallas Fed, Kansas City Fed, LSEG Datastream, New York Fed, Philadelphia Fed, Richmond Fed, J.P. Morgan Asset Management. Future capex intentions is an equally weighted average of the five aforementioned Fed districts' capex intentions measures, shown as a three-month moving average. (Right) BEA, LSEG Datastream, J.P. Morgan Asset Management. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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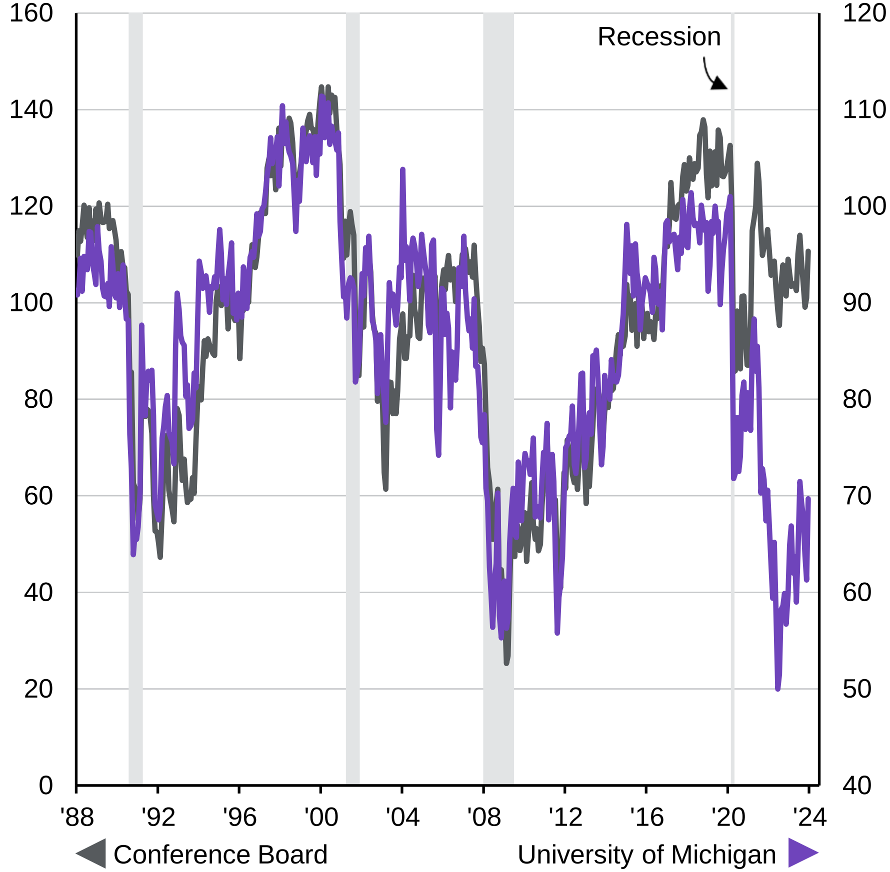
US consumer

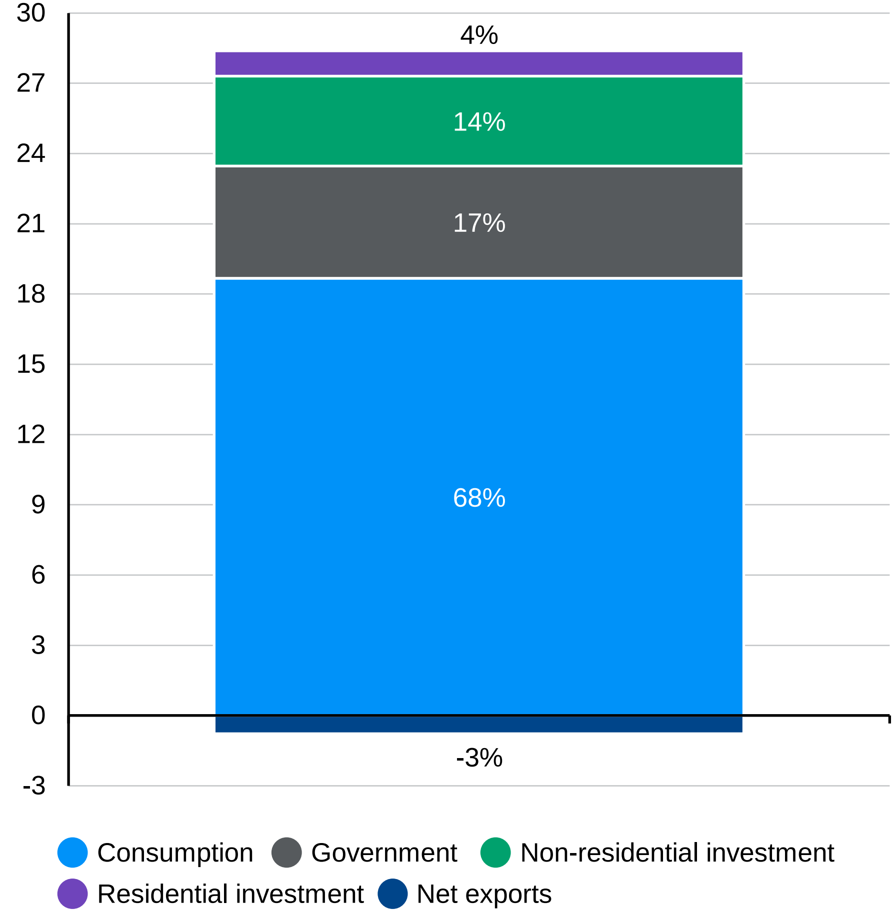
US consumer confidence

Index level



US nominal GDP composition

USD trillions, latest quarter



Source: (Left) Conference Board, LSEG Datastream, University of Michigan, J.P. Morgan Asset Management. The consumer confidence indices can diverge due to different emphasis in the surveys. The University of Michigan survey places a stronger weight on personal finances and buying conditions while the Conference Board index emphasises employment. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates.(Right) BEA, LSEG Datastream, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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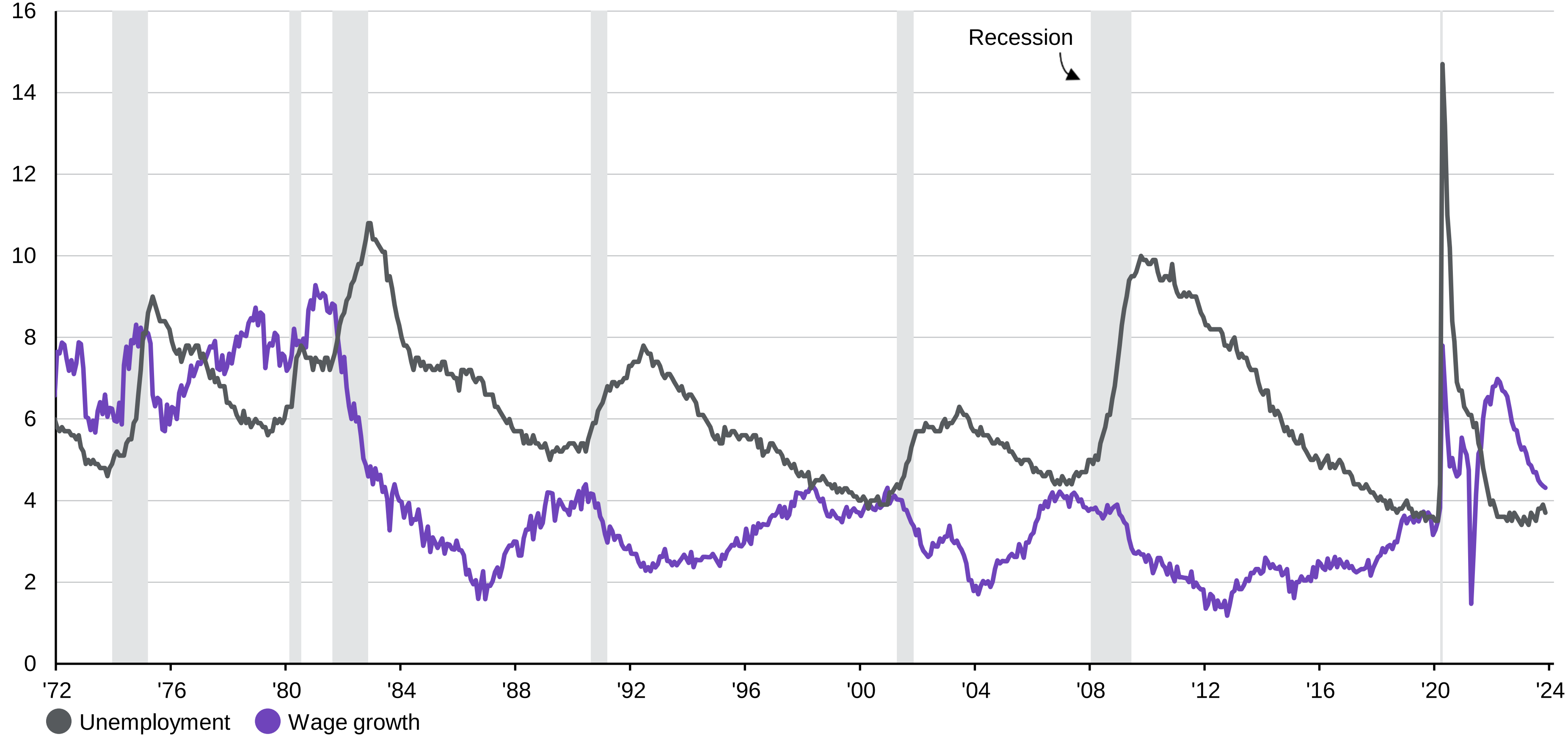
US labour market

US unemployment and wage growth

%, wage growth is year on year

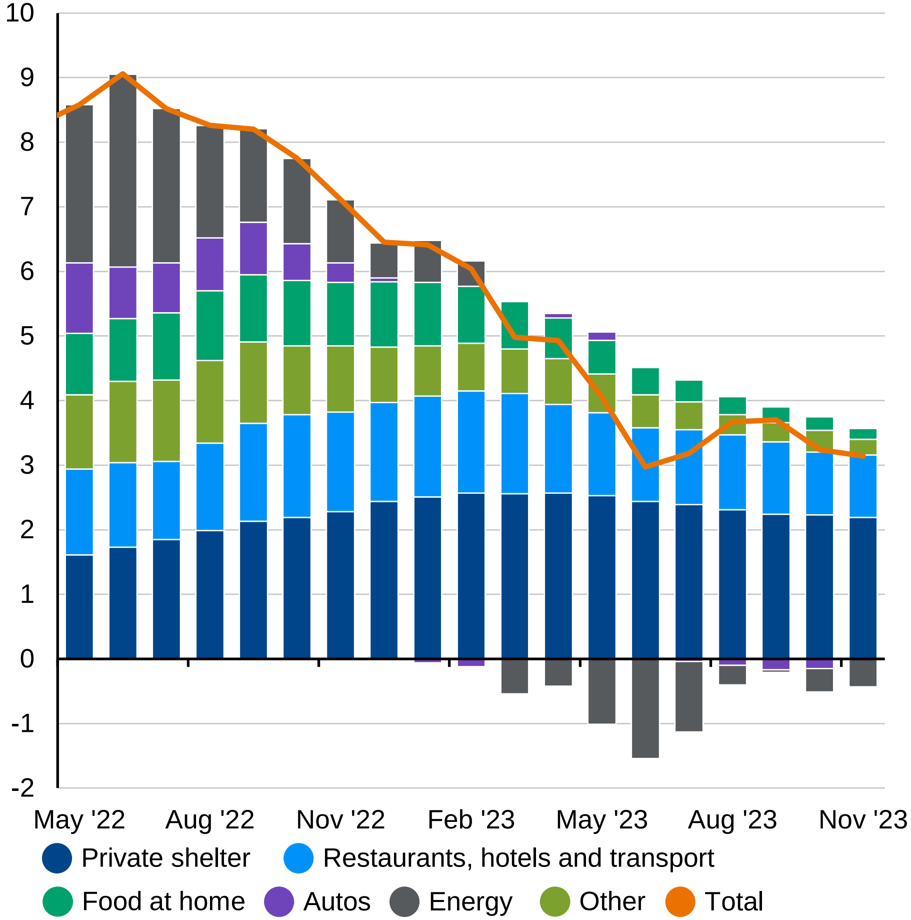


Source: BLS, LSEG Datastream, J.P. Morgan Asset Management. Wage growth is average hourly earnings for production and nonsupervisory employees. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates. *Guide to the Markets - Europe.* Data as of 31 December 2023.

US inflation

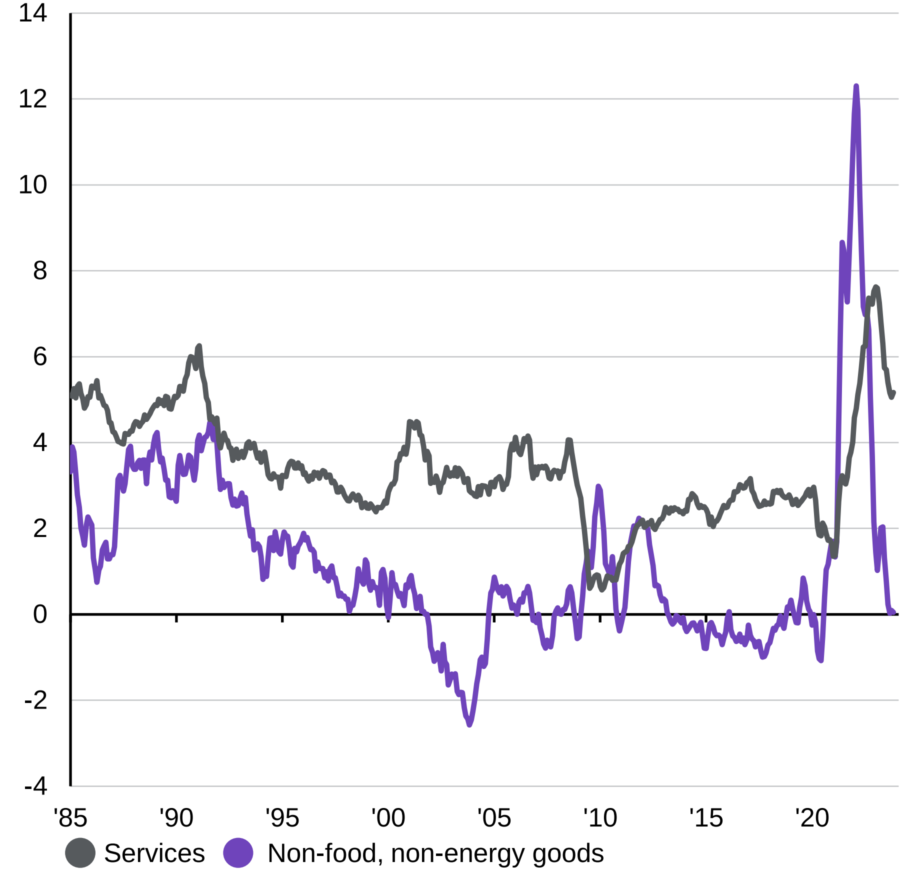
US headline inflation breakdown

% change year on year



US goods and services inflation

% change year on year



Source: (All charts) BLS, LSEG Datastream, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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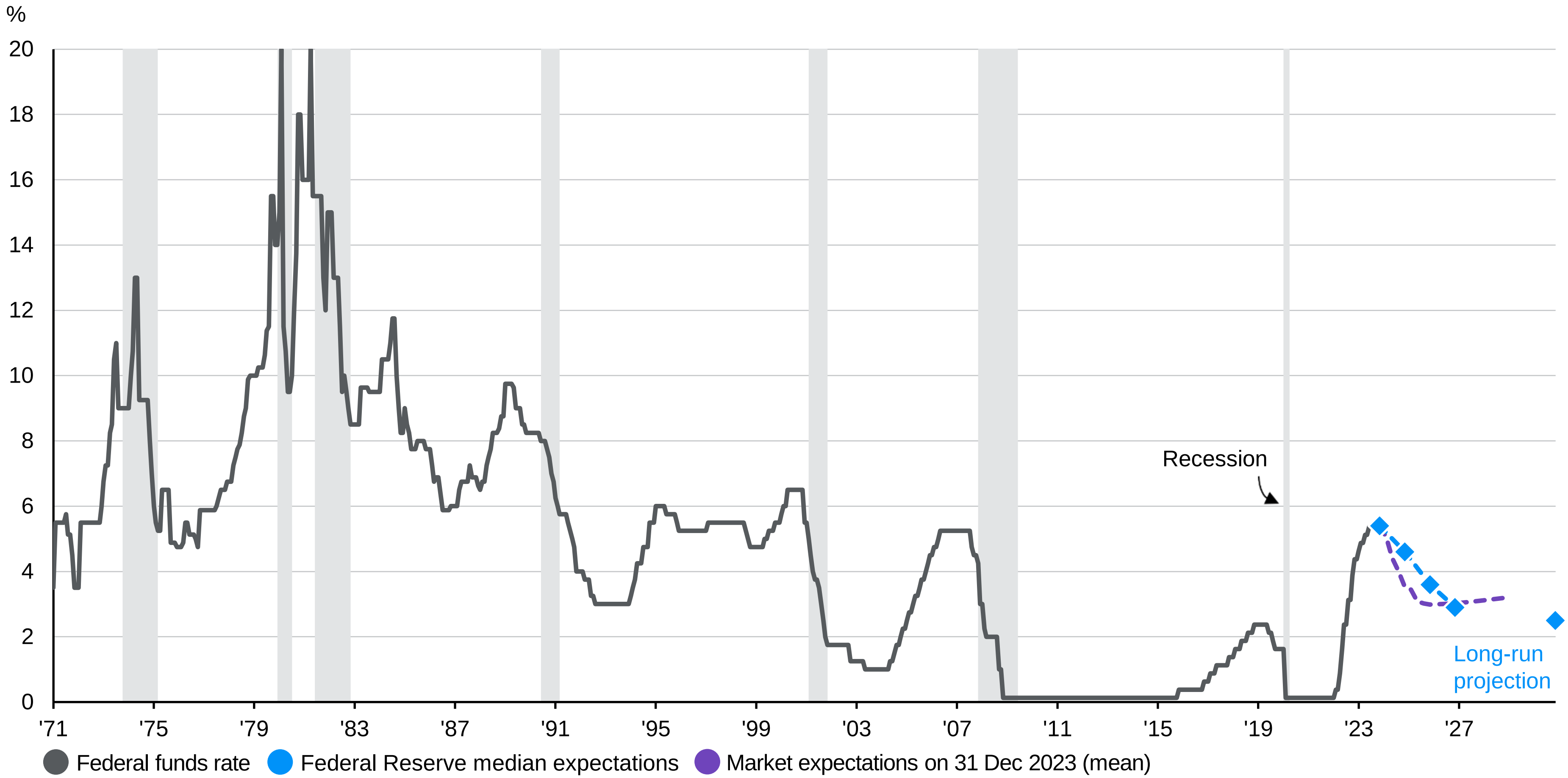
US Federal Reserve policy

Federal Reserve policy rate expectations

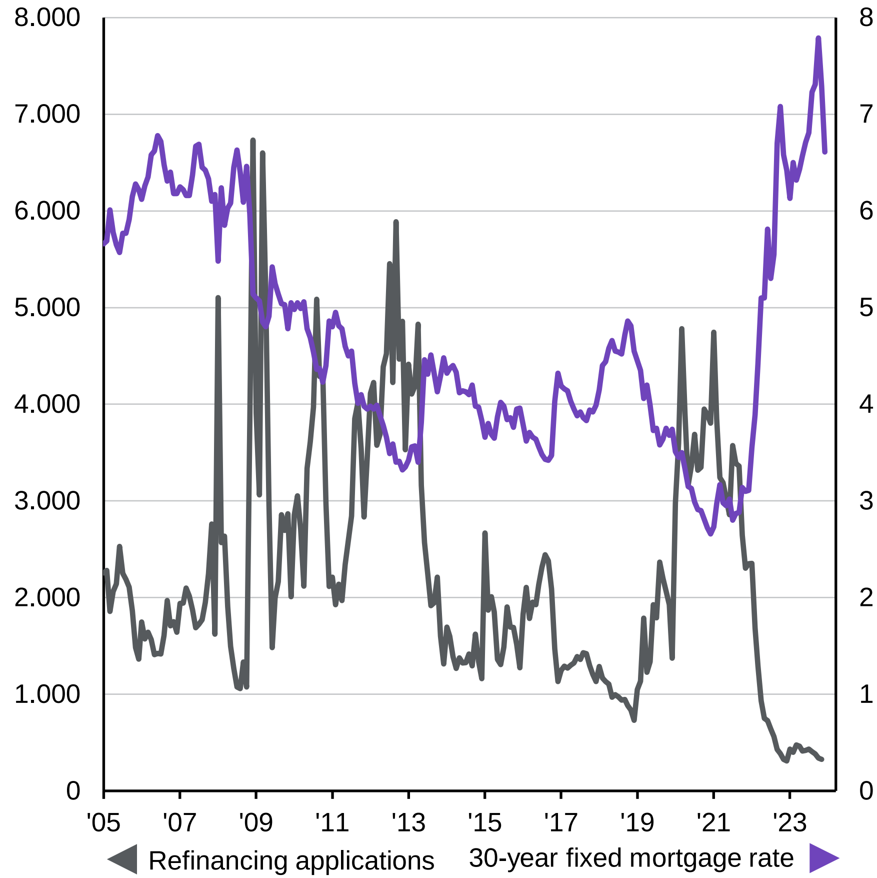


Source: Bloomberg, BLS, Federal Reserve, J.P. Morgan Asset Management. Market expectations are calculated using OIS forwards. The long-run projection represents the committee's median assessment of where the federal funds rate would be expected to converge to under the appropriate monetary policy and in the absence of further shocks to the economy. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

US interest rate sensitivity

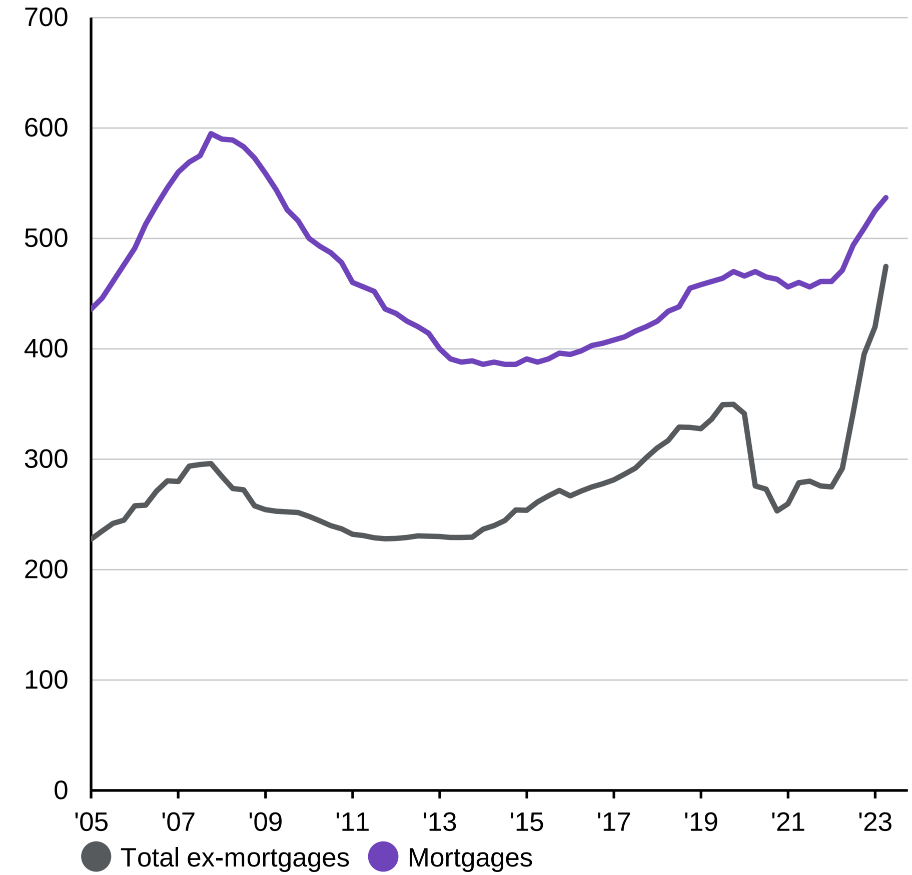
US mortgage refinancing and 30-year mortgage rate

Index level (LHS); % (RHS)



US personal interest payments

USD billions



Source: (Left) Federal Home Loan Mortgage Corporation, LSEG Datastream, Mortgage Bankers Association of America, J.P. Morgan Asset Management. (Right) LSEG Datastream, Mortgage Bankers Association of America, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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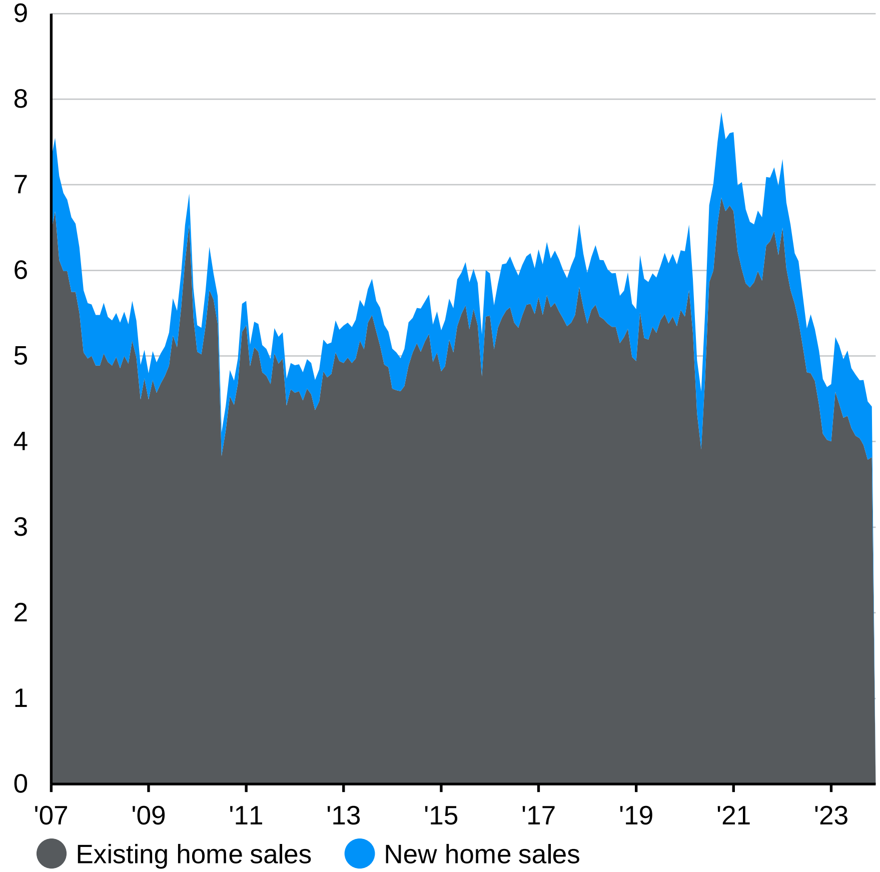
US housing activity and inventories

US home sales
Millions, seasonally adjusted



US housing inventories
Thousands, seasonally adjusted

Source: (All charts) LSEG Datastream, National Association of Realtors, US Census Bureau, J.P. Morgan Asset Management. Housing inventories include new and existing single-family homes for sale. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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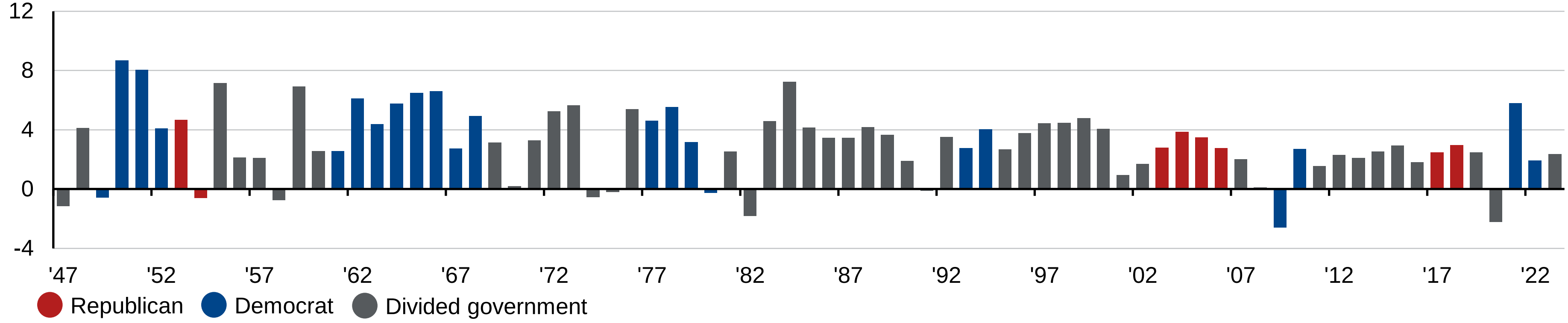
US politics

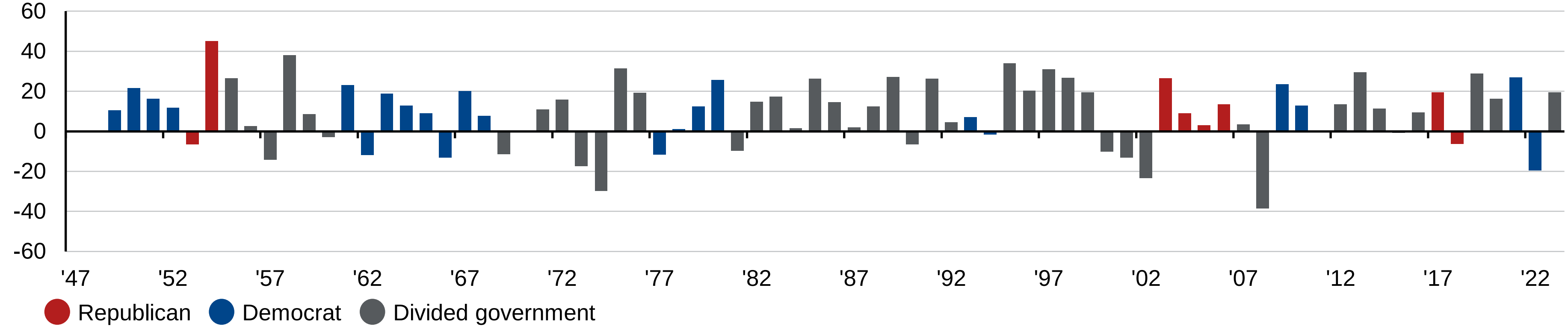
Real GDP

% change year on year



S&P 500 returns

% change year on year



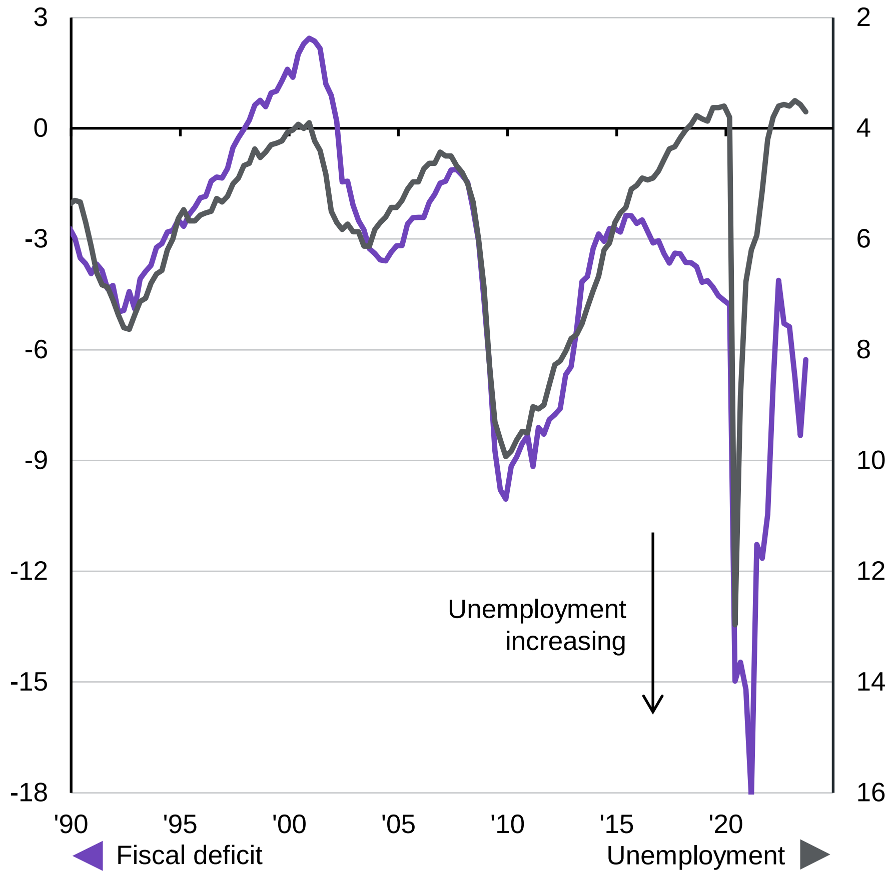
Source: (All charts) BEA, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Global economy

US focus: Fiscal challenges

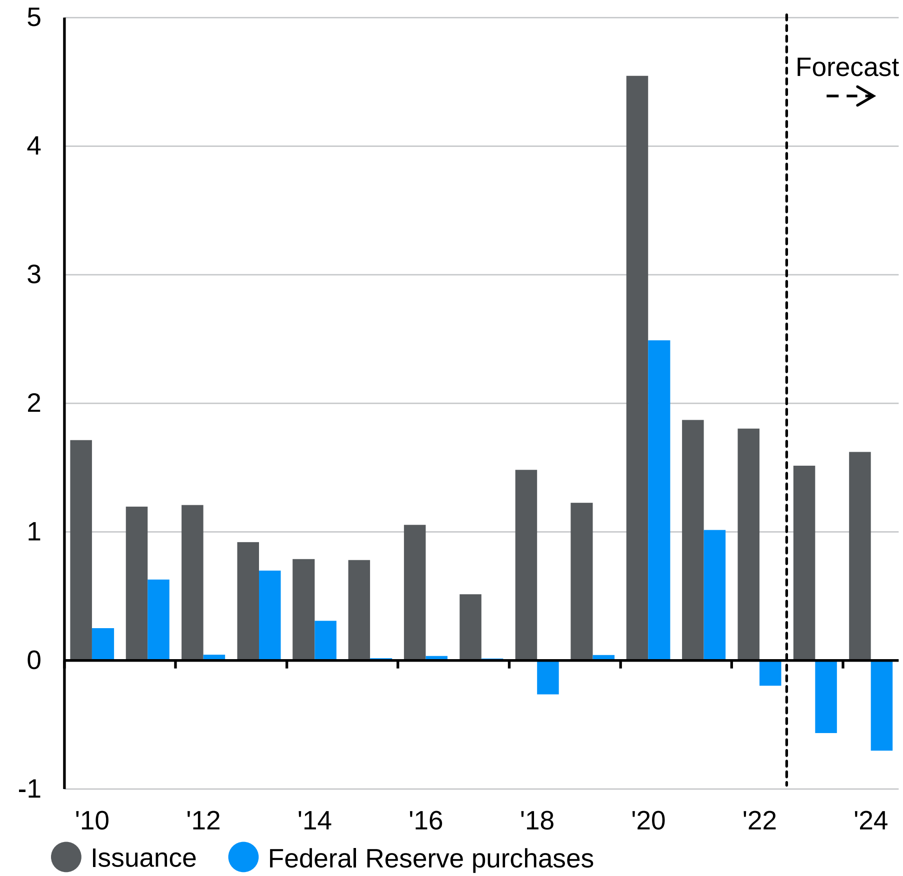
US fiscal deficit and unemployment rate

% of nominal GDP (LHS); % (RHS)



US government debt issuance and Fed purchases

USD trillions



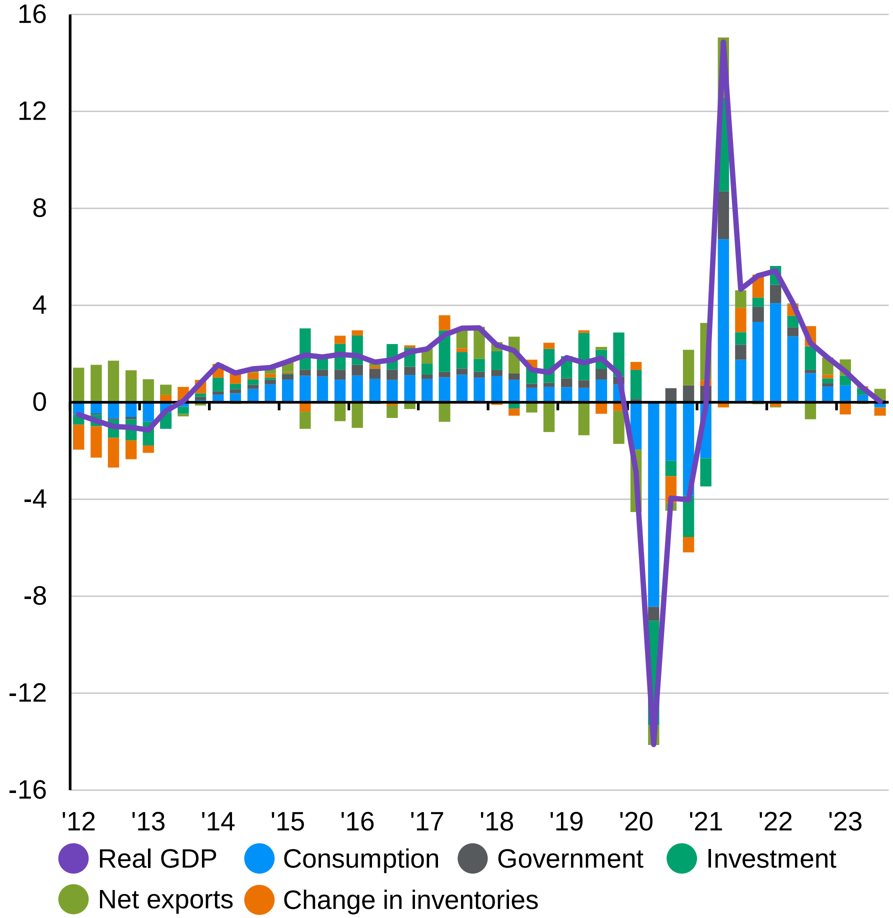
Source: (Left) Bloomberg, J.P. Morgan Asset Management. (Right) CBO, US Treasury, J.P. Morgan Asset Management. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Eurozone GDP and business surveys

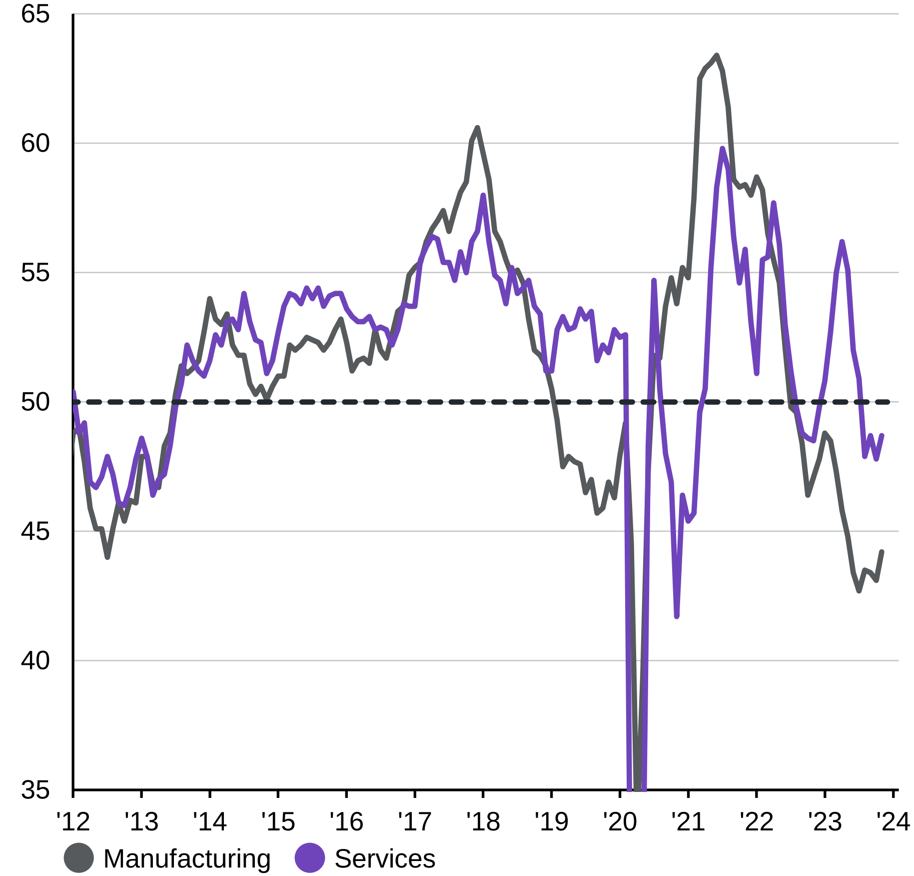
Contribution to eurozone real GDP growth

% change year on year



Eurozone Purchasing Managers' Indices (PMI)

Index level



Source: (All charts) Eurostat, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. A PMI score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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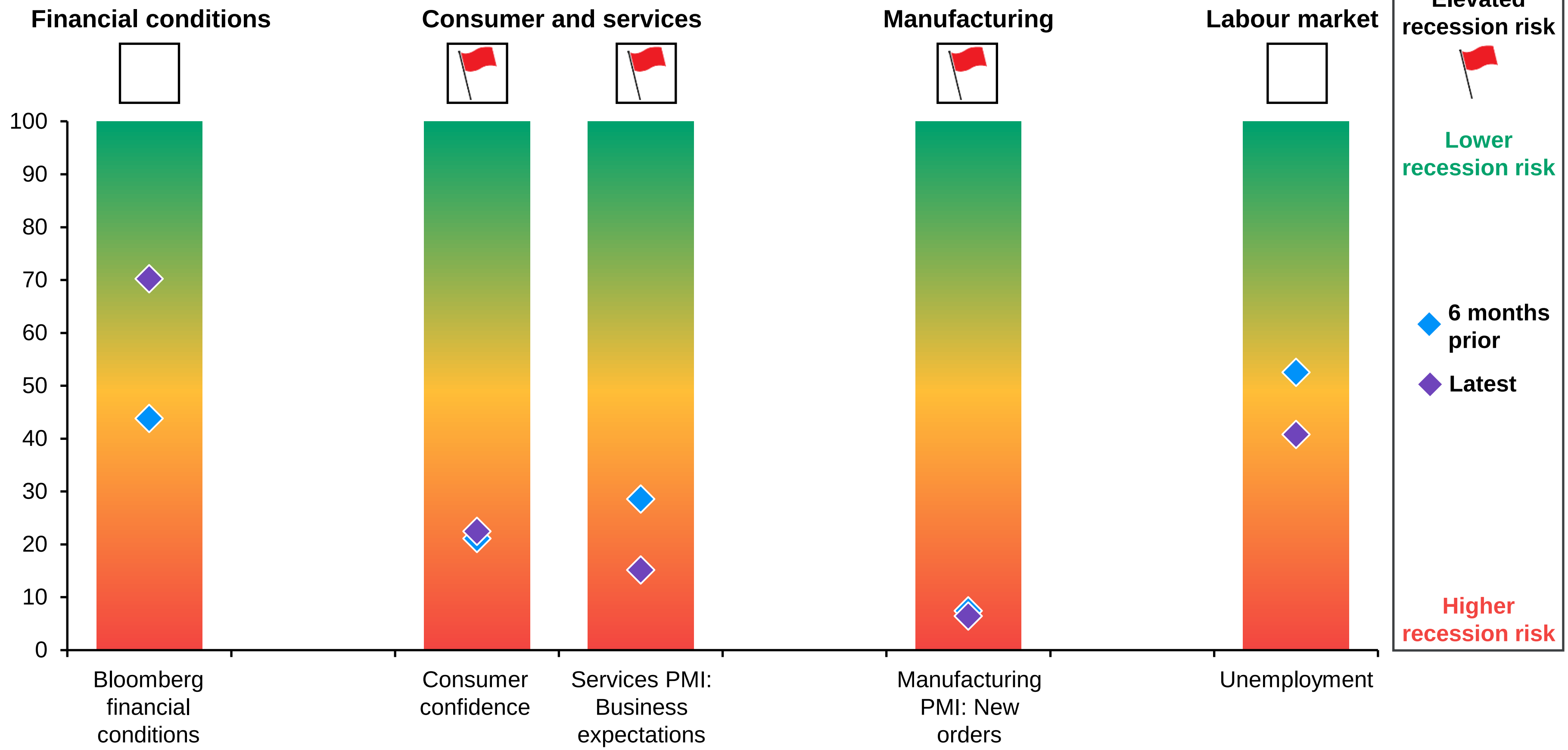
Eurozone Economic Monitor

Eurozone economic indicators

Percentile rank relative to historic data since 1999



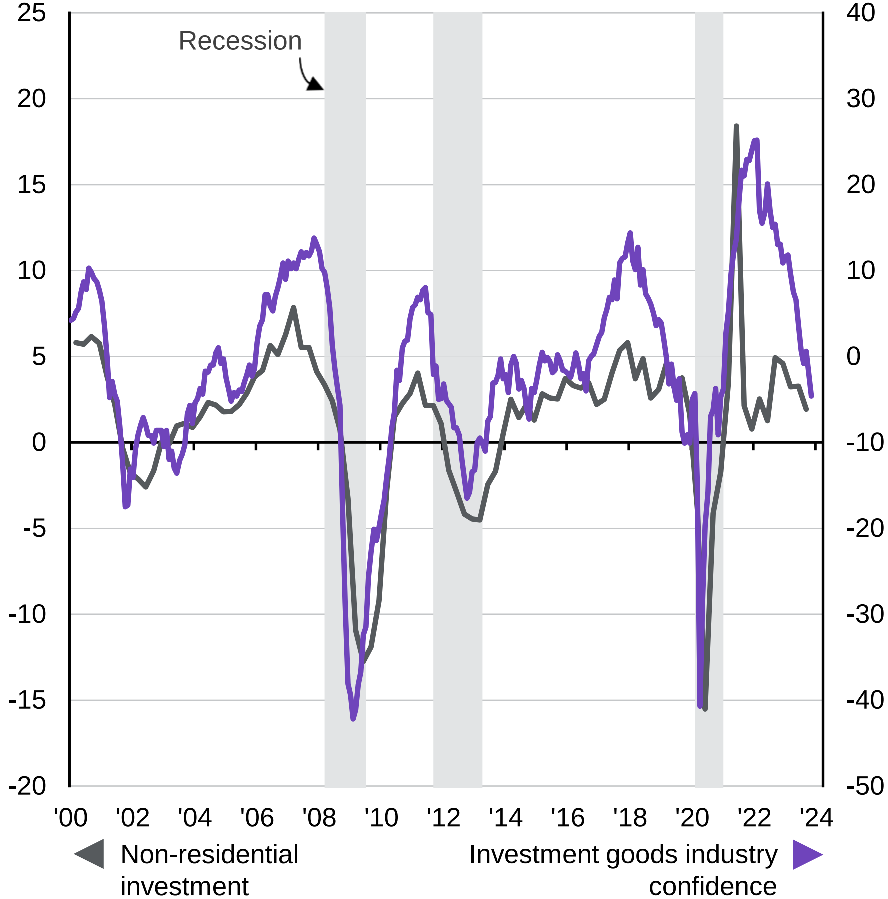
Source: Bloomberg, European Commission, Eurostat, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Elevated recession risk flags are shown when the underlying indicator is at a level consistent with eurozone recessions prior to the Covid-19 recession. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Eurozone business investment and credit conditions

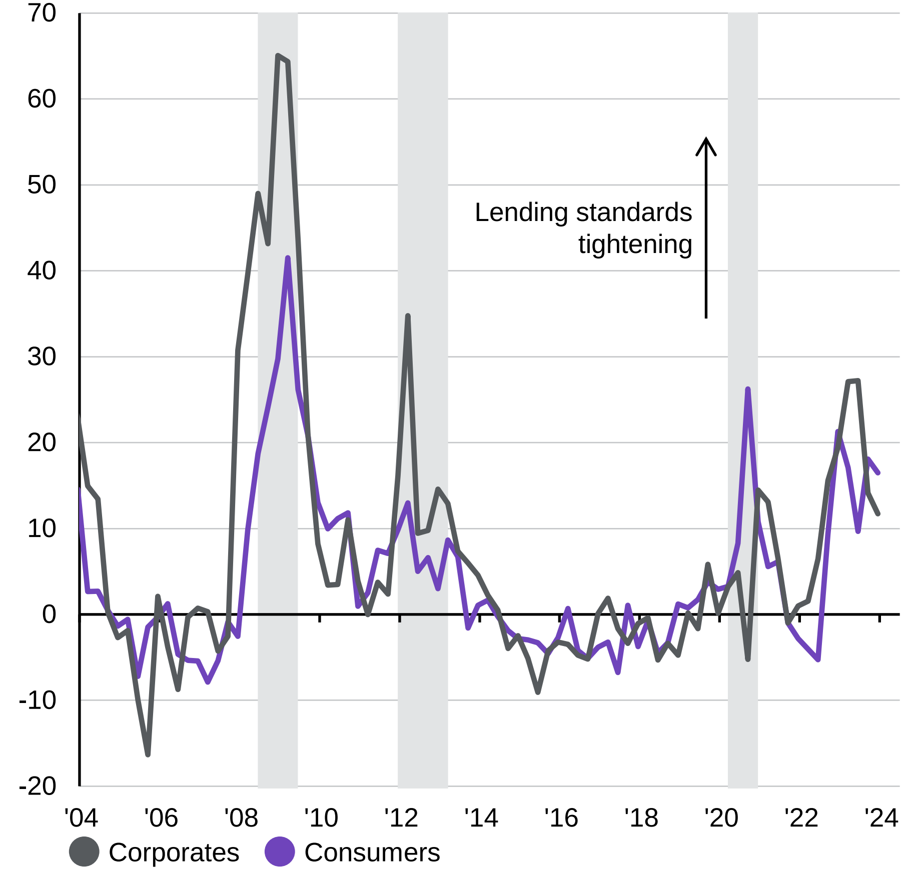
Eurozone real investment and investment confidence

% change year on year (LHS); index level (RHS)



Eurozone credit conditions

% of banks tightening credit standards



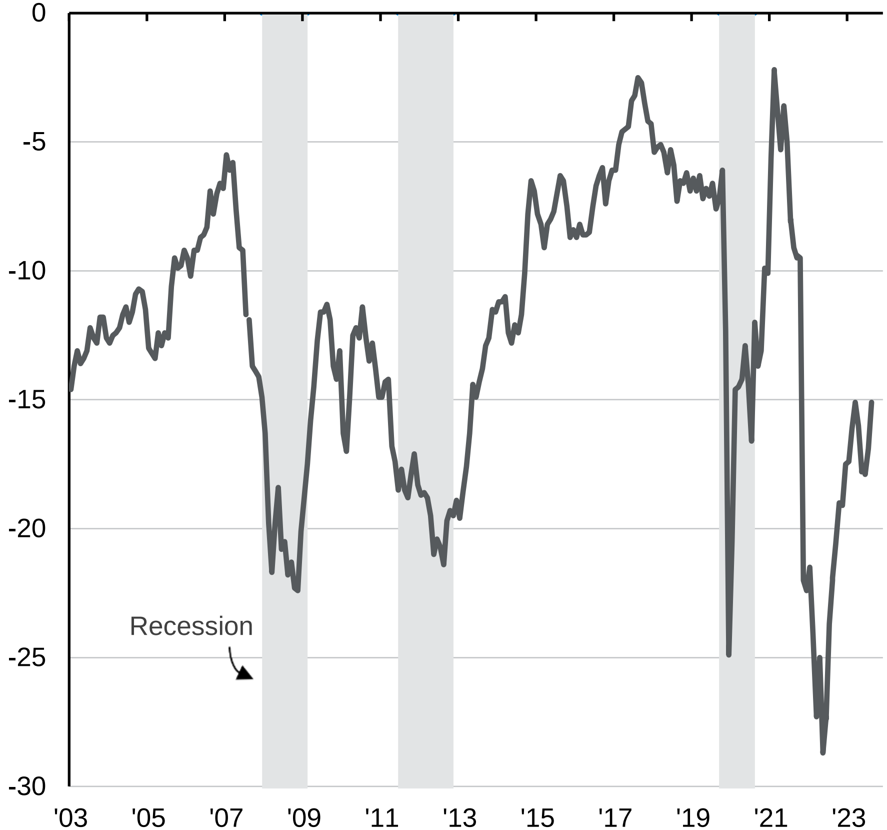
Source: (Left) Eurostat, LSEG Datastream, J.P. Morgan Asset Management. Non-residential investment is in real terms and includes both public and private investment. (Right) European Central Bank, LSEG Datastream, J.P. Morgan Asset Management. Data is from the Euro Area Bank Lending Survey.
Guide to the Markets - Europe. Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Eurozone consumer

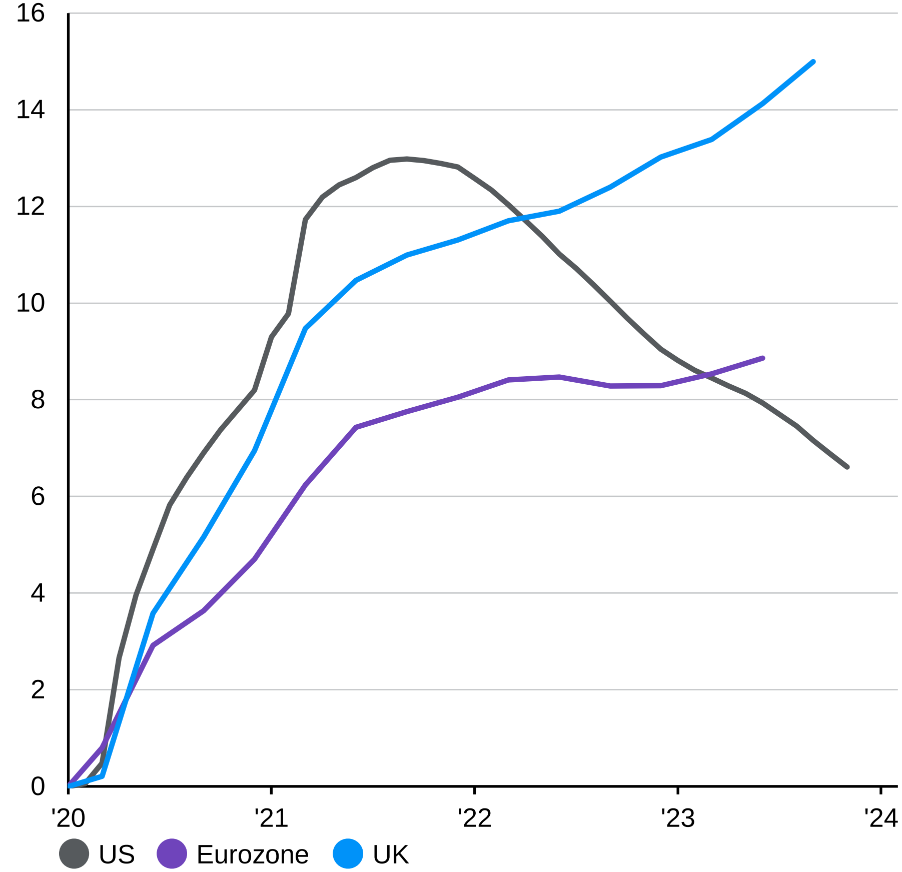
Eurozone consumer confidence

Index level



Accumulated excess savings

% of 2019 GDP, relative to pre-pandemic savings rates



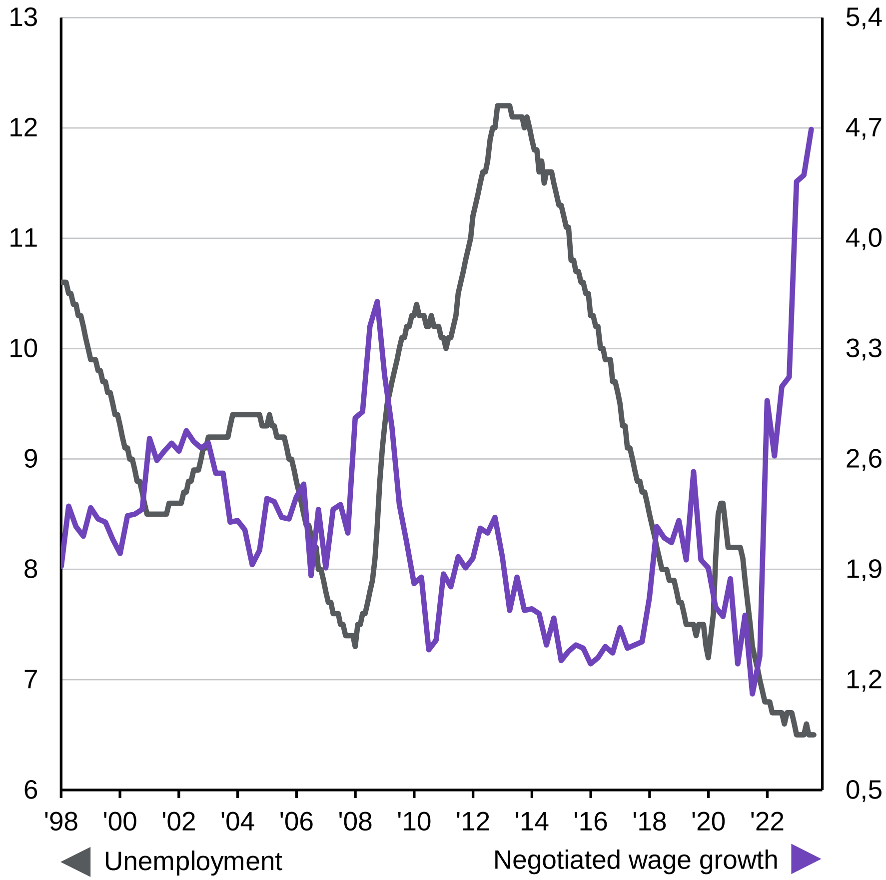
Source: (Left) Bloomberg, European Commission, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. (Right) BEA, Eurostat, LSEG Datastream, ONS, J.P. Morgan Asset Management. Excess savings calculated relative to savings rates in the fourth quarter of 2019. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Global economy

Eurozone labour market

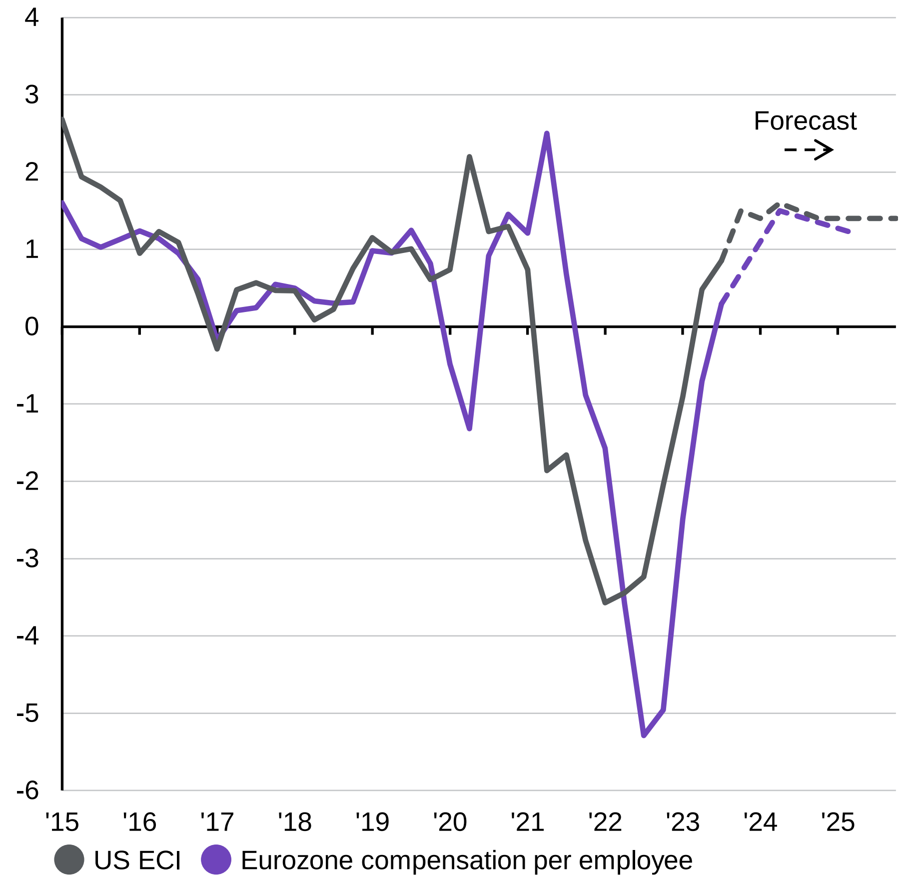
Eurozone unemployment and wage growth

%, wage growth is year on year



Real wage growth

% change year on year

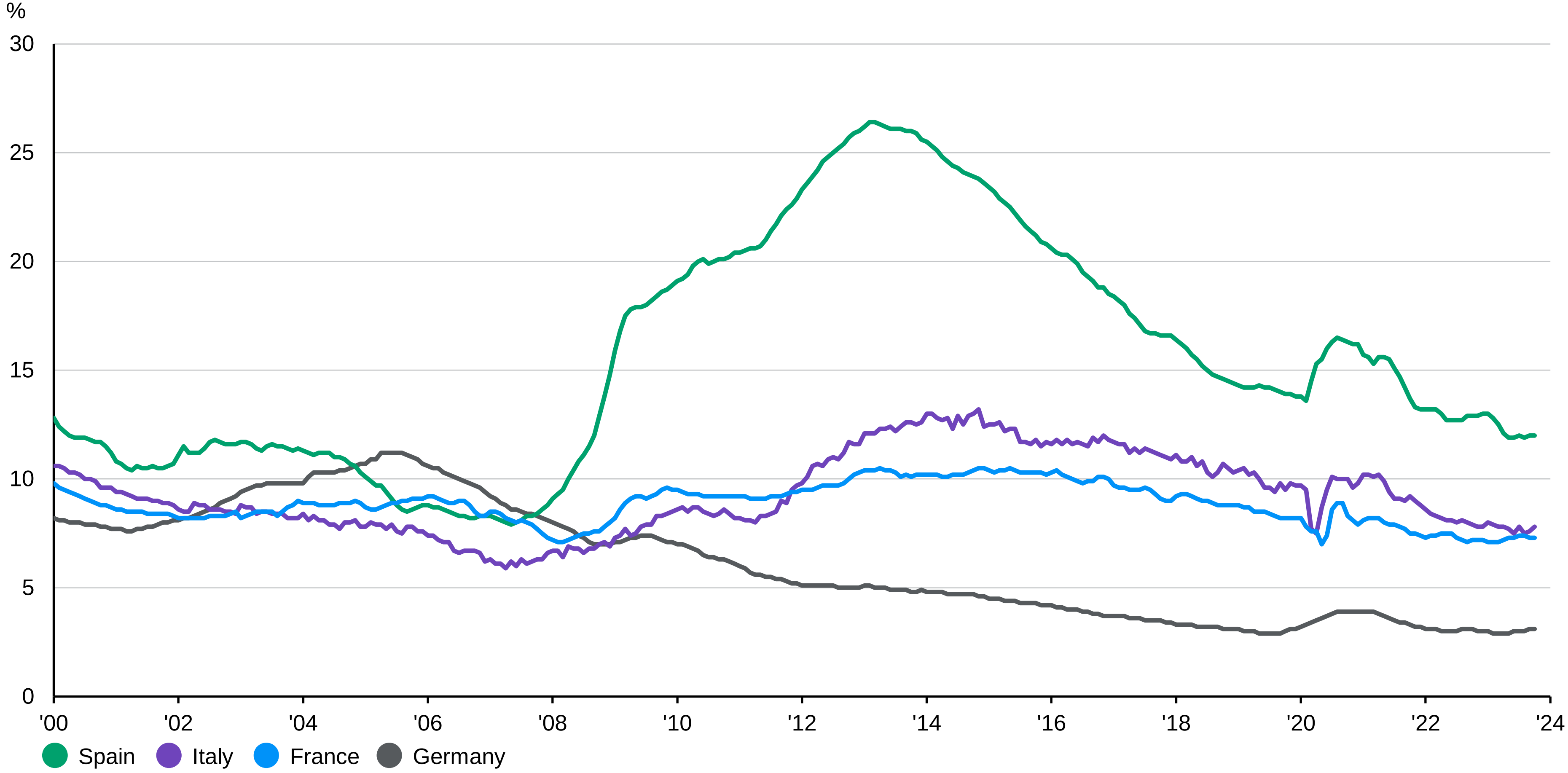


Source: (Left) European Central Bank, Eurostat, LSEG Datastream, J.P. Morgan Asset Management. Wage growth is based on negotiated wages. (Right) BLS, CBO, European Central Bank, European Commission, LSEG Datastream, J.P. Morgan Asset Management. US data is the Employment Cost Index, with forecasts from the CBO. Eurozone data is compensation per employee, with forecasts from the European Commission. The eurozone data is smoothed over 2020 and 2021 to remove distortions related to the pandemic. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Eurozone unemployment

France, Germany, Italy and Spain unemployment rates

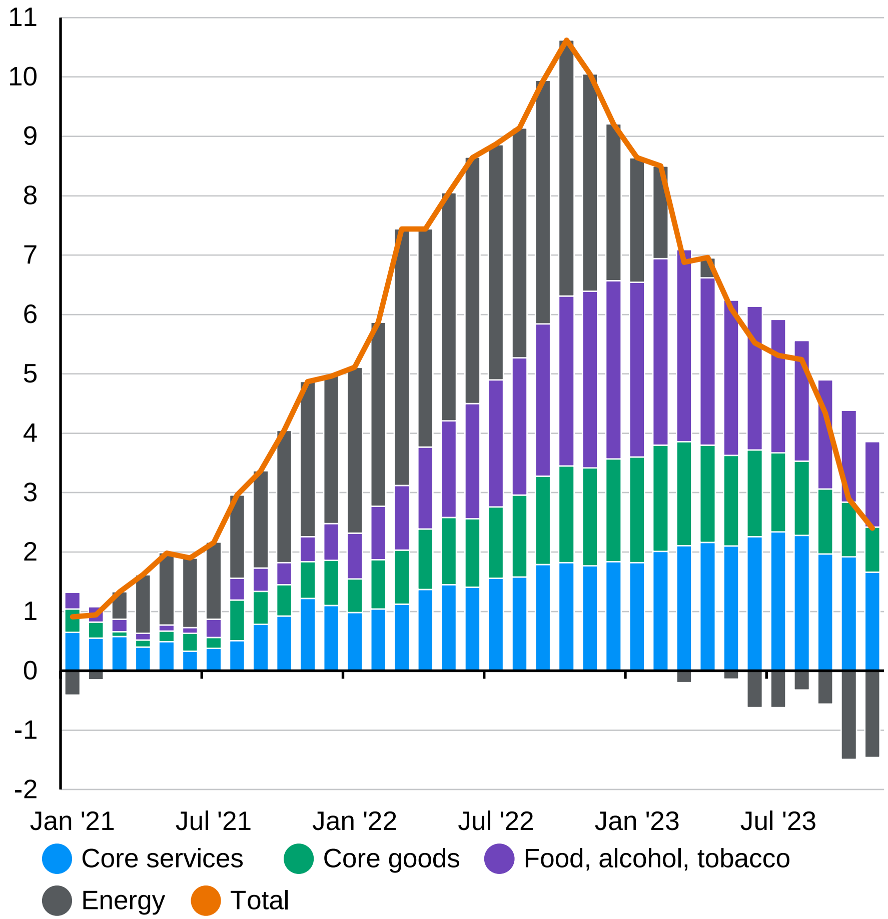


Source: Eurostat, LSEG Datastream, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Eurozone inflation

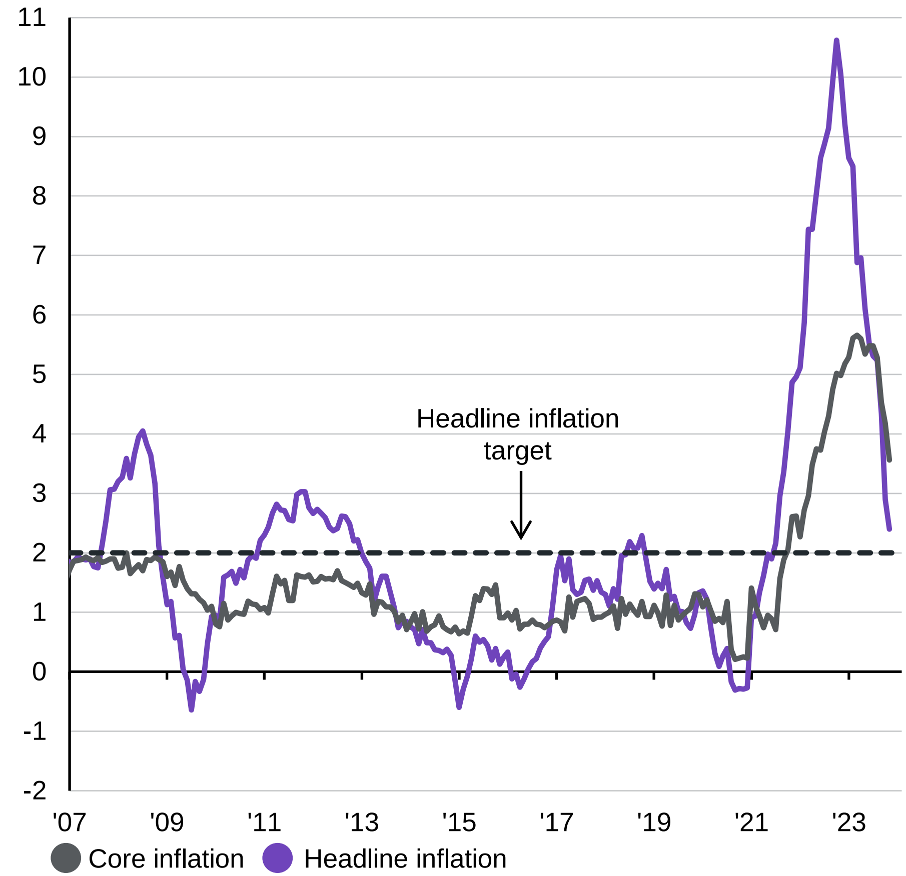
Eurozone headline inflation breakdown

% change year on year



Eurozone headline and core inflation

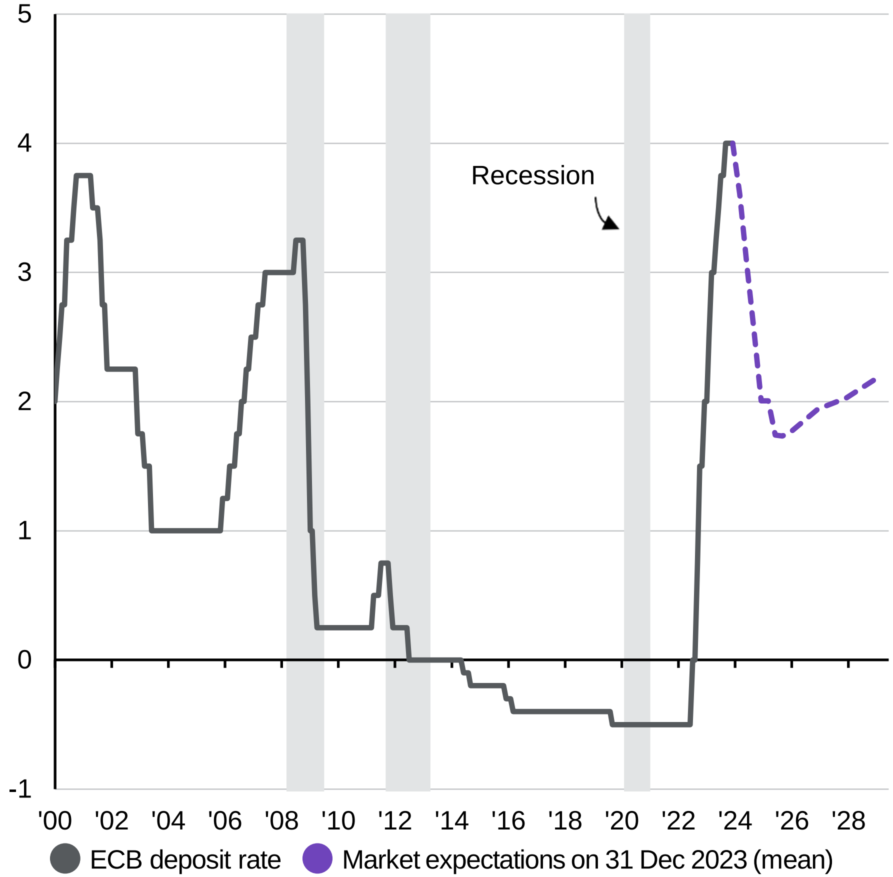
% change year on year



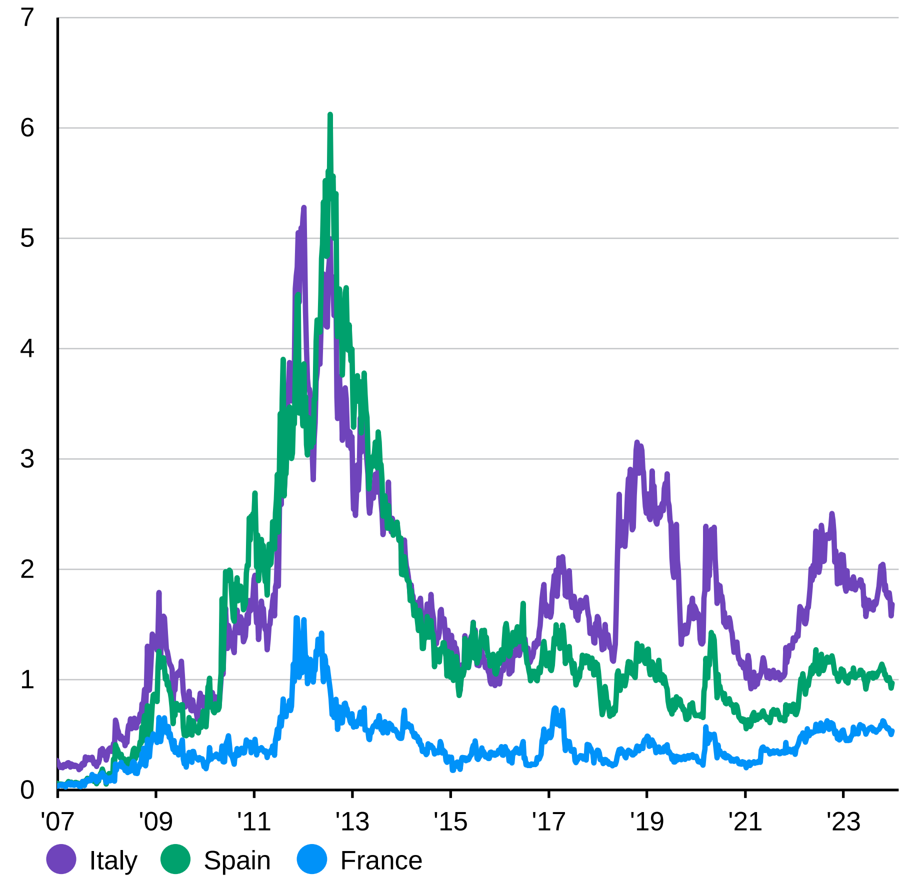
Source: (All charts) Eurostat, LSEG Datastream, J.P. Morgan Asset Management. Core inflation is defined as headline inflation less energy, food, alcohol and tobacco. *Guide to the Markets - Europe.* Data as of 31 December 2023.

European Central Bank policy

European Central Bank policy rate expectations



European 10-year government bond spreads over Germany



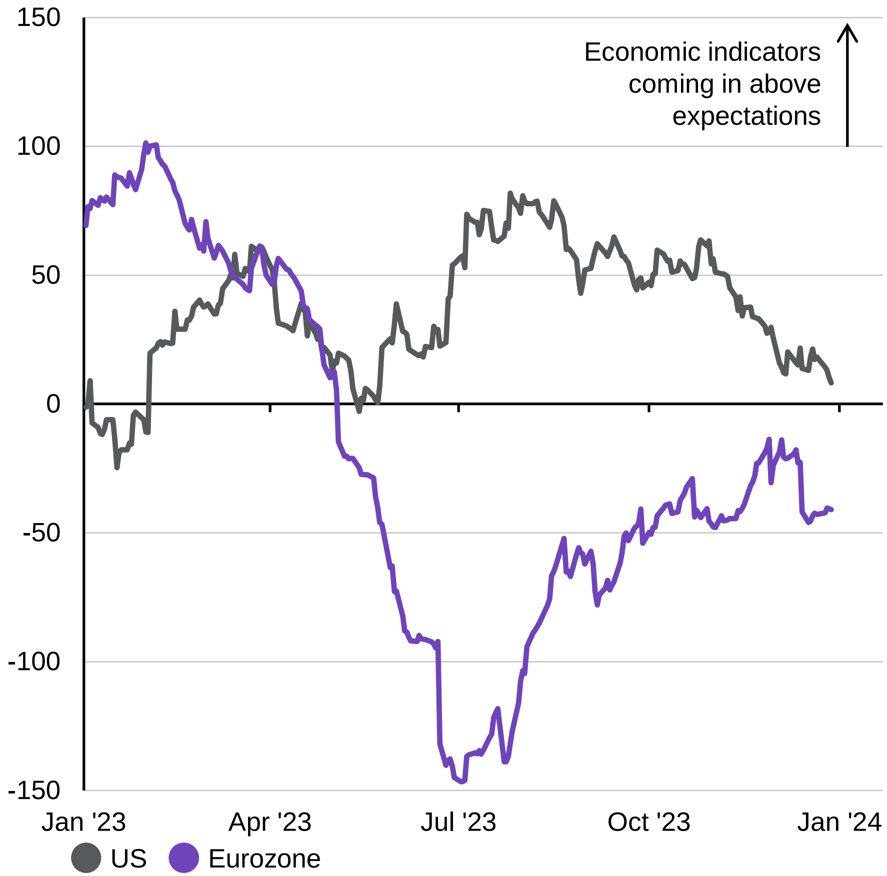
Source: (Left) Bloomberg, European Central Bank, J.P. Morgan Asset Management. Market expectations are calculated using OIS forwards. (Right) LSEG Datastream, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Eurozone focus: Economic surprises and Recovery Fund

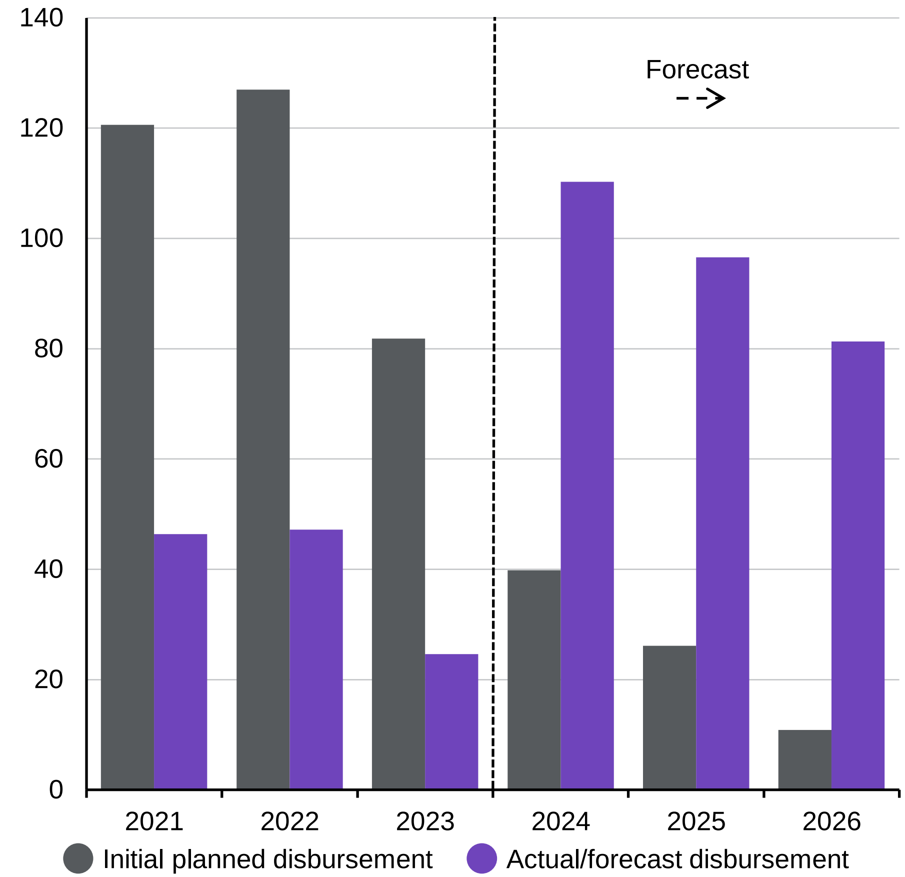
Citigroup economic surprise indices

Index level



EU Recovery Fund grants

EUR billions

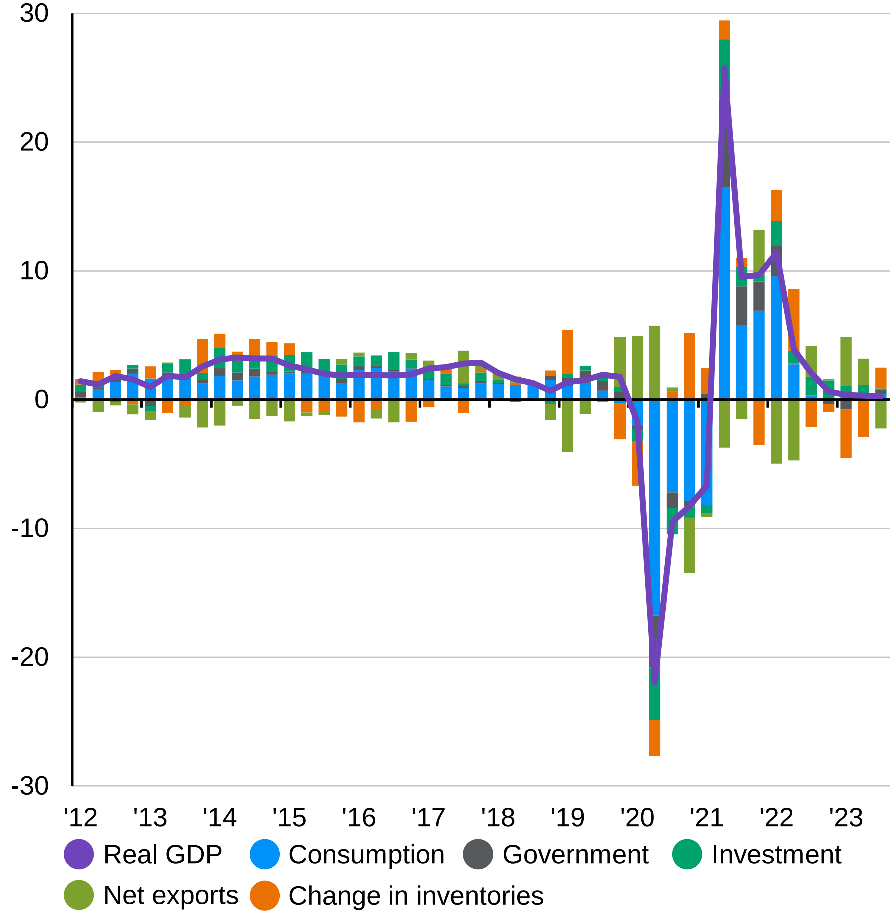


Source: (Left) Bloomberg, Citi, J.P. Morgan Asset Management. (Right) European Commission, J.P. Morgan Asset Management. The grants disbursed in 2024-26 are based on J.P. Morgan Asset Management estimates. *Guide to the Markets - Europe.* Data as of 31 December 2023.

UK GDP and business surveys

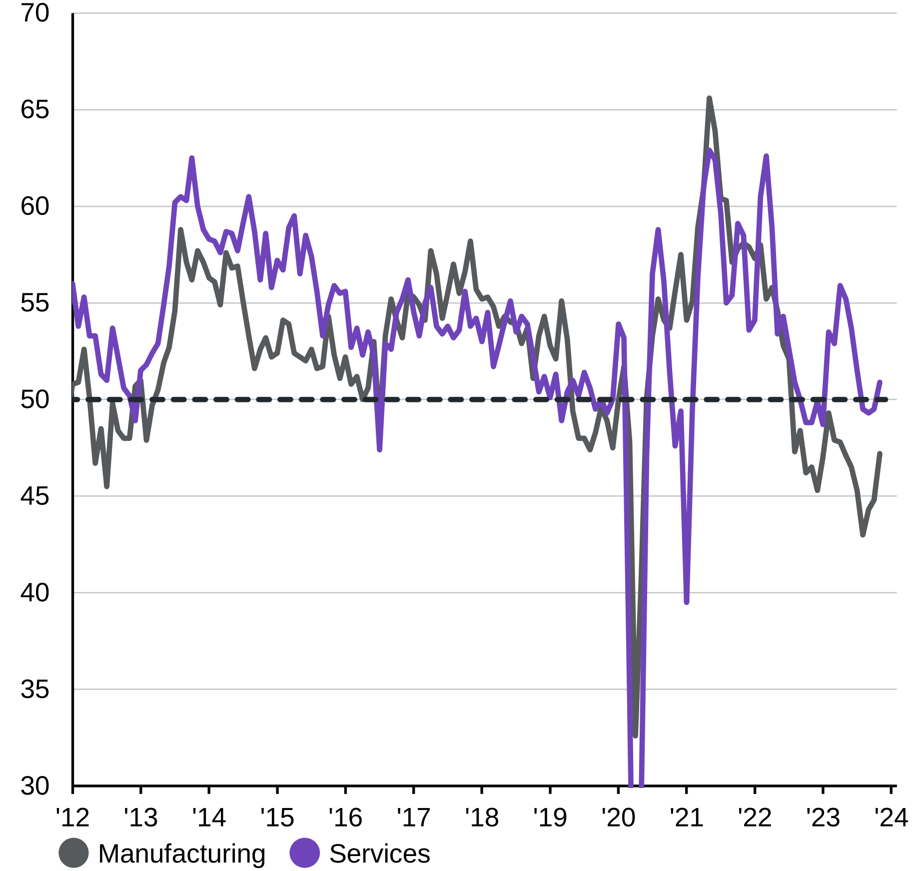
Contribution to UK real GDP growth

% change year on year



UK Purchasing Managers' Indices (PMI)

Index level



Source: (All charts) LSEG Datastream, ONS, S&P Global, J.P. Morgan Asset Management. A PMI score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. *Guide to the Markets - Europe.* Data as of 31 December 2023.

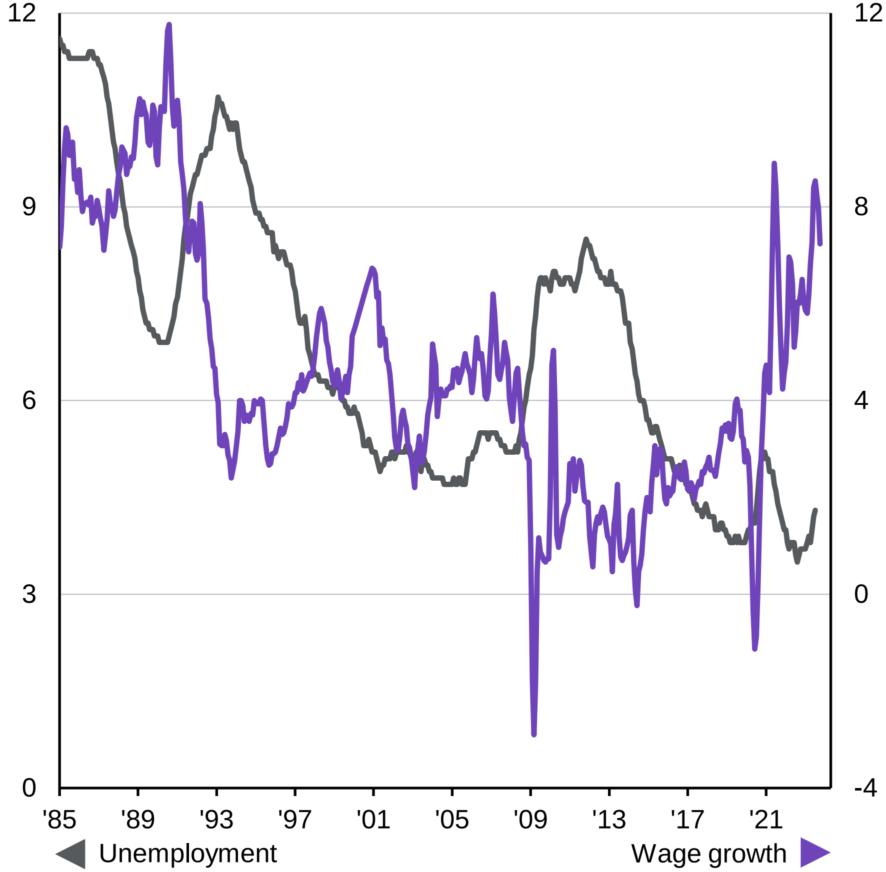
J.P.Morgan ASSET MANAGEMENT

Global economy

UK labour market

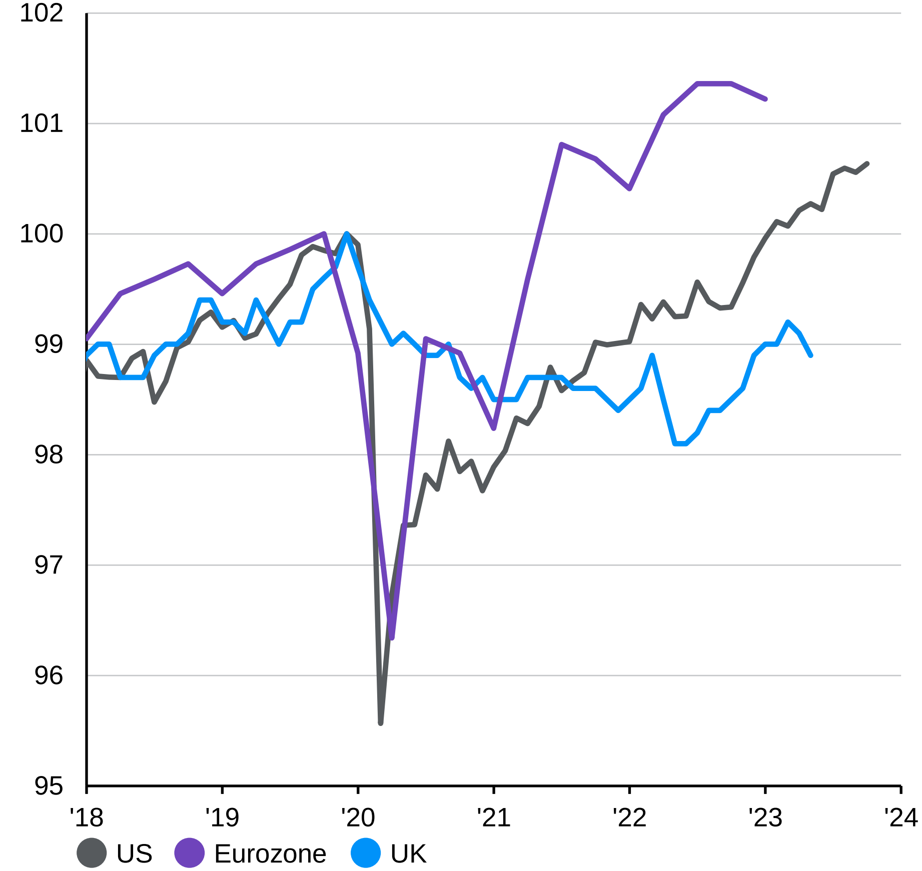
UK unemployment rate and wage growth

%, wage growth is year on year



Labour force participation rates

Index level, rebased to 100 at pre-pandemic peak



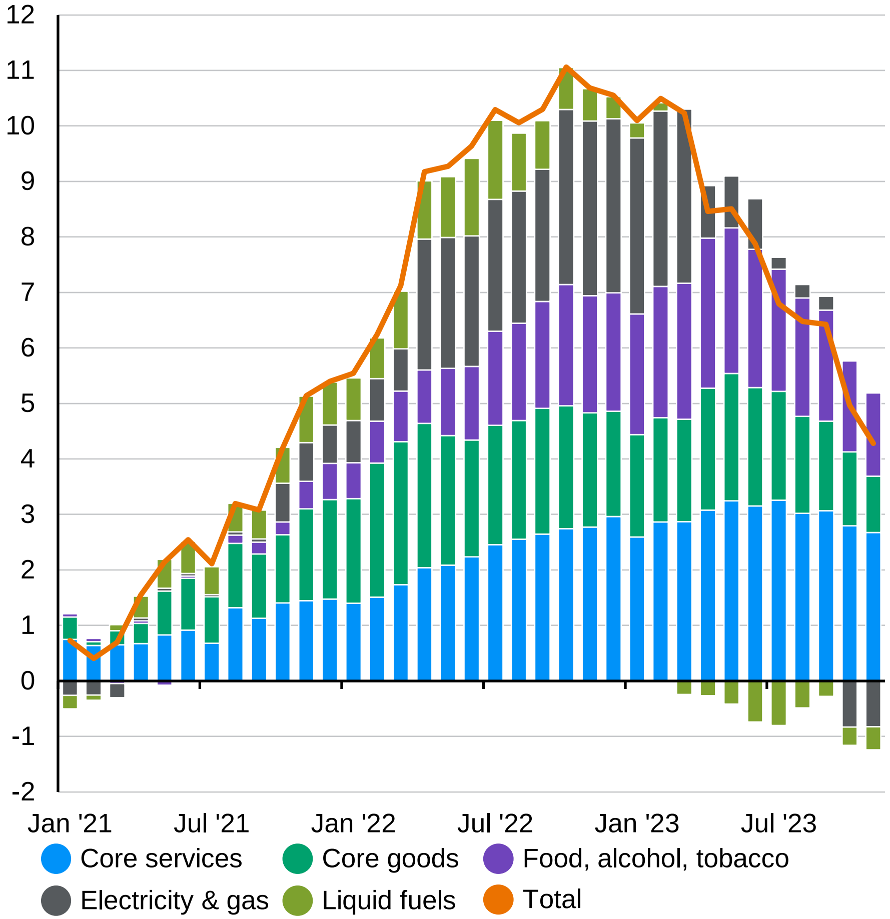
Source: (Left) LSEG Datastream, ONS, J.P. Morgan Asset Management. Wage growth is a three-month moving average of average weekly earnings for the whole economy, including bonuses and arrears. (Right) Eurostat, LSEG Datastream, OECD, ONS, J.P. Morgan Asset Management. Participation rates are for people between the ages of 16-64 for the US and UK, and 15-64 for the eurozone. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

UK inflation

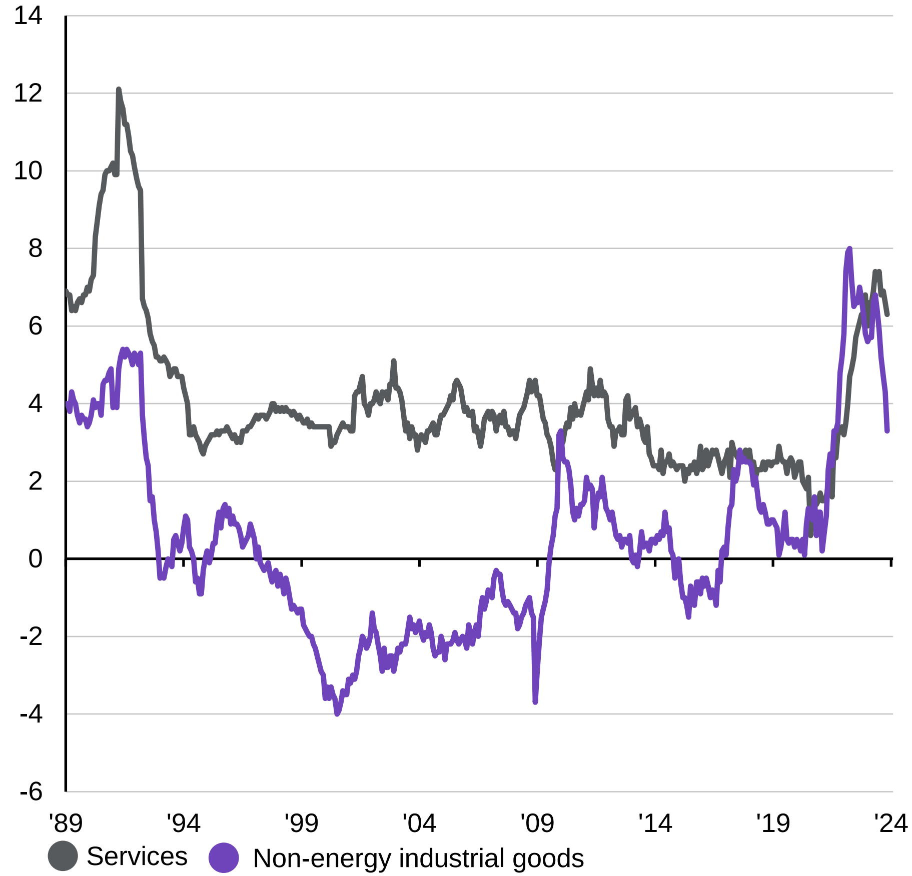
UK headline inflation breakdown

% change year on year



UK goods and services inflation

% change year on year

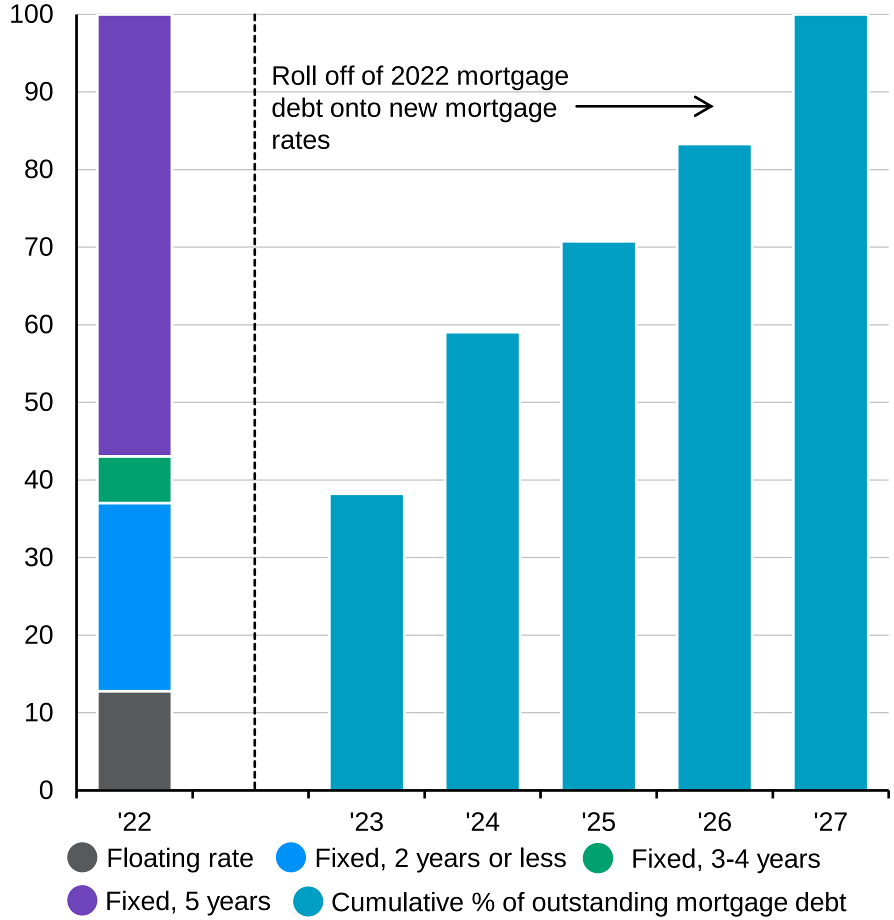


Source: (All charts) LSEG Datastream, ONS, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

UK focus: Mortgage dynamics

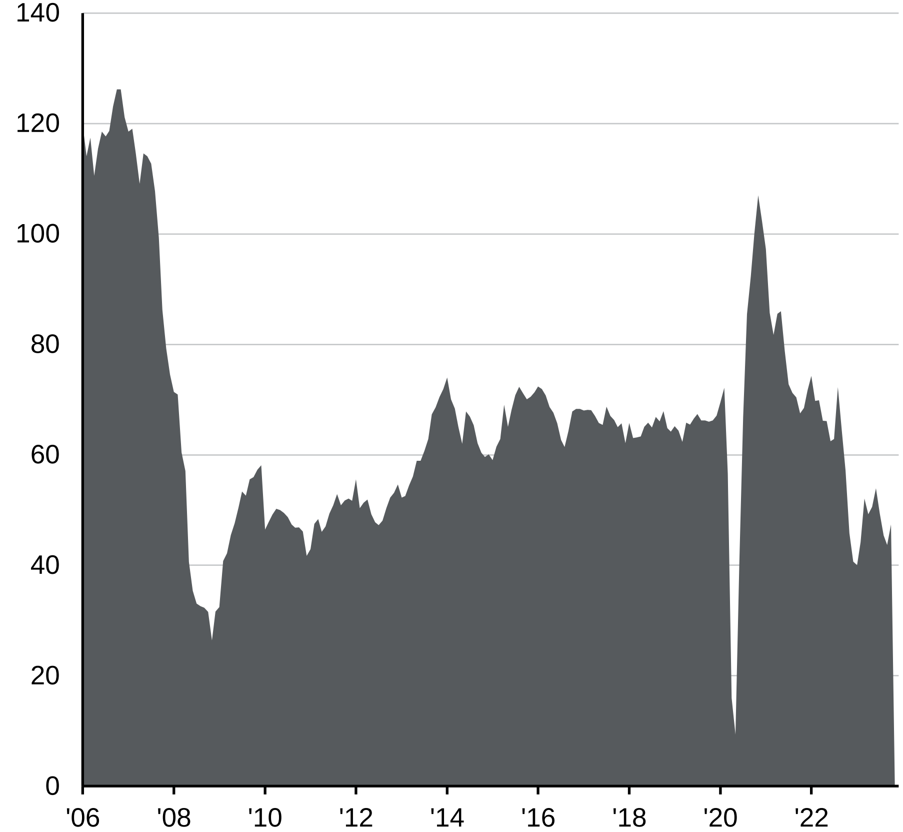
UK mortgages exposed to higher rates

% of mortgage stock, cumulative % of outstanding mortgage debt



UK mortgage approvals

Thousands, seasonally adjusted



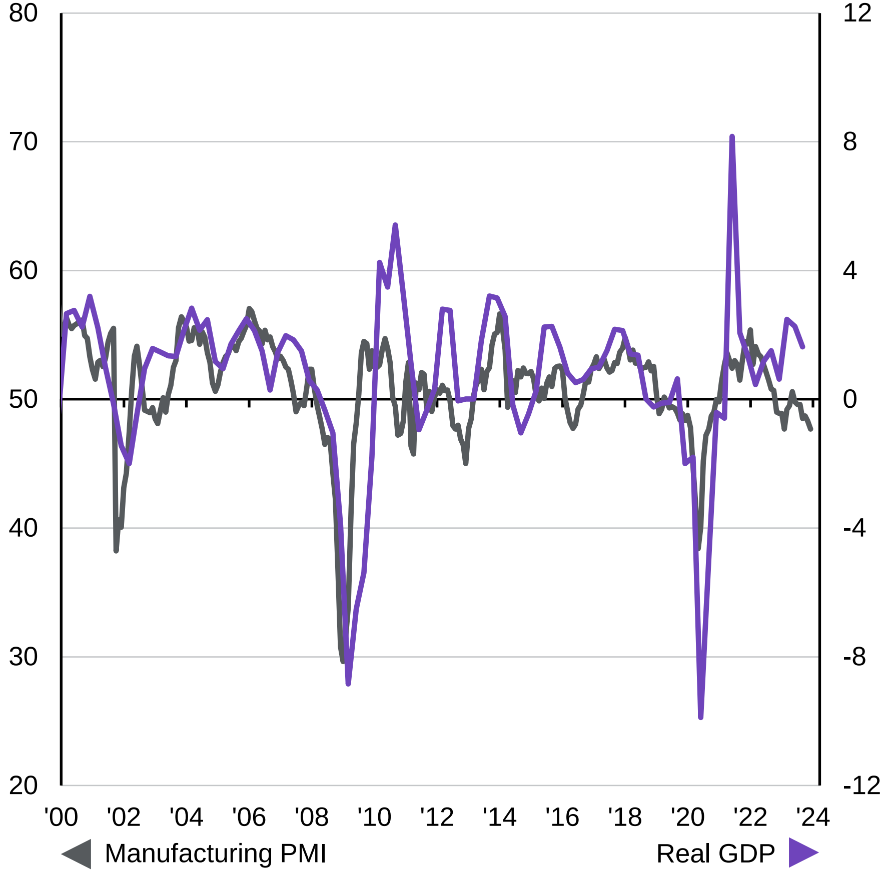
Source: (Left) Bank of England, J.P. Morgan Asset Management. Mortgages exposed to higher rates are based on internal J.P. Morgan Asset Management calculations and estimates. The first bar shows the proportion of UK mortgage debt as of 4Q 2022 that is either floating rate or with historical fixed rate agreements. The subsequent bars show the cumulative proportion of this debt that will be exposed to higher interest rates over time. (Right) Bank of England, LSEG Datastream, J.P, Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Japan GDP and inflation

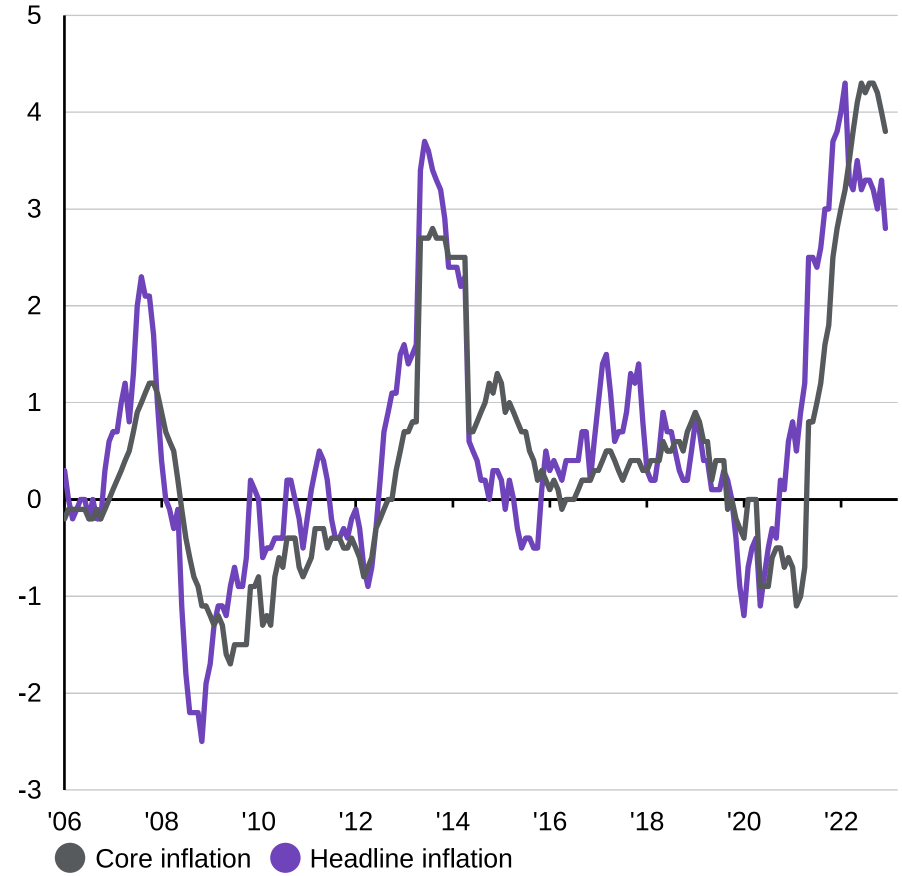
Japan real GDP and manufacturing PMI

Index level (LHS); % change year on year (RHS)



Japan inflation

% change year on year



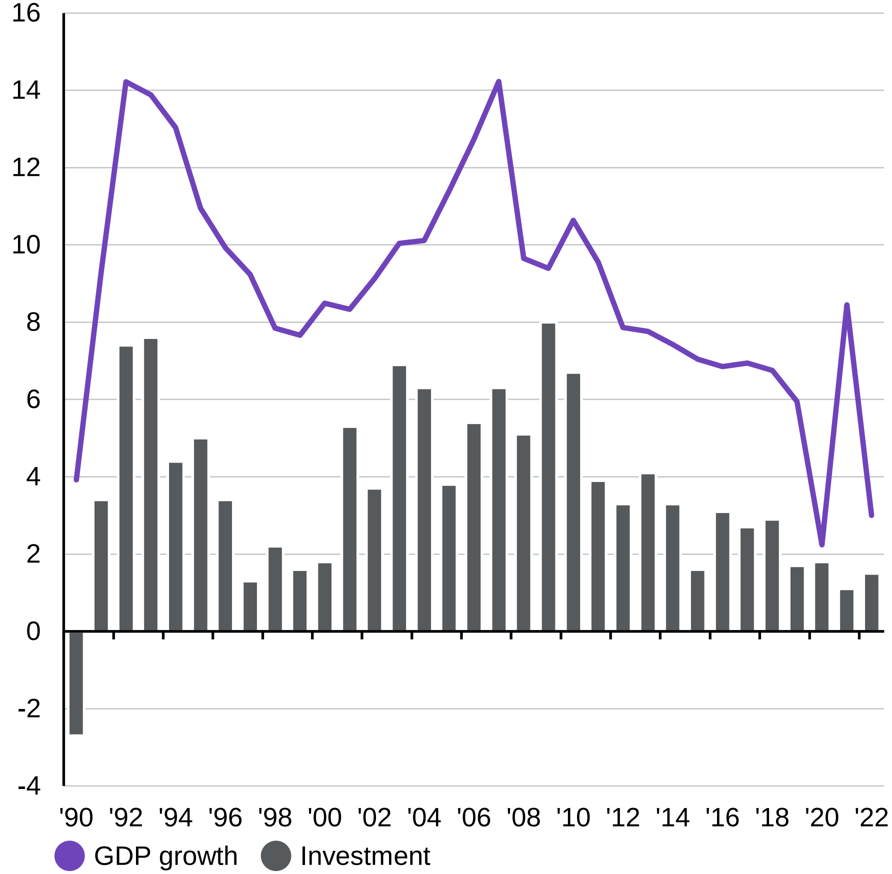
Source: (Left) Japan Cabinet Office, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. A score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. (Right) Japan Statistics Bureau, LSEG Datastream, J.P. Morgan Asset Management. Core inflation is defined as excluding fresh food and energy, as preferred by the Bank of Japan. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

China GDP and business surveys

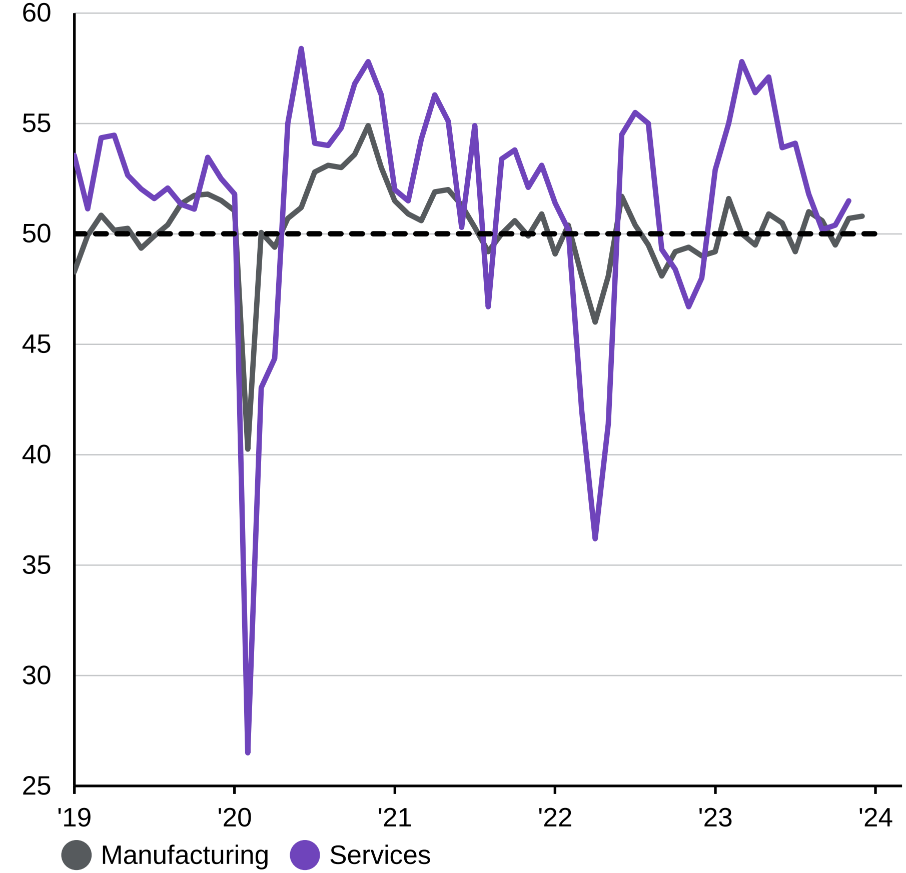
Contribution to China real GDP growth

% change year on year



China Caixin manufacturing and services PMIs

Index level



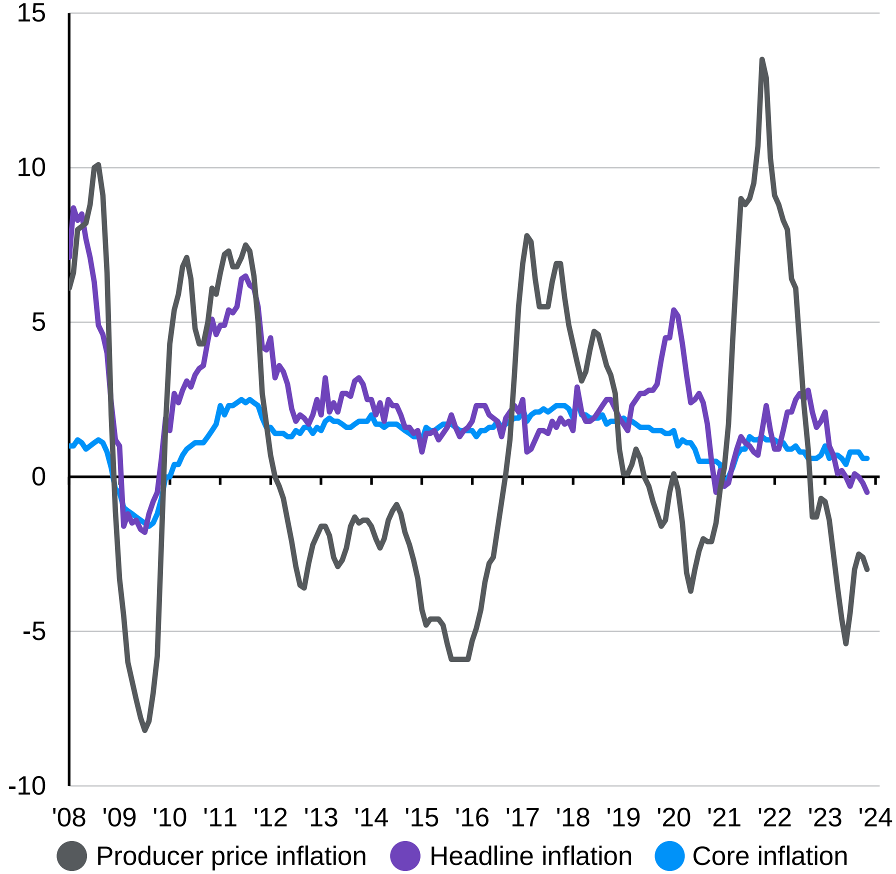
Source: (Left) LSEG Datastream, National Bureau of Statistics of China, J.P. Morgan Asset Management. (Right) S&P Global, J.P. Morgan Asset Management. For the PMI indices, a score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion.
Guide to the Markets - Europe. Data as of 31 December 2023.

J.P.Morgan
ASSET MANAGEMENT

China inflation and credit dynamics

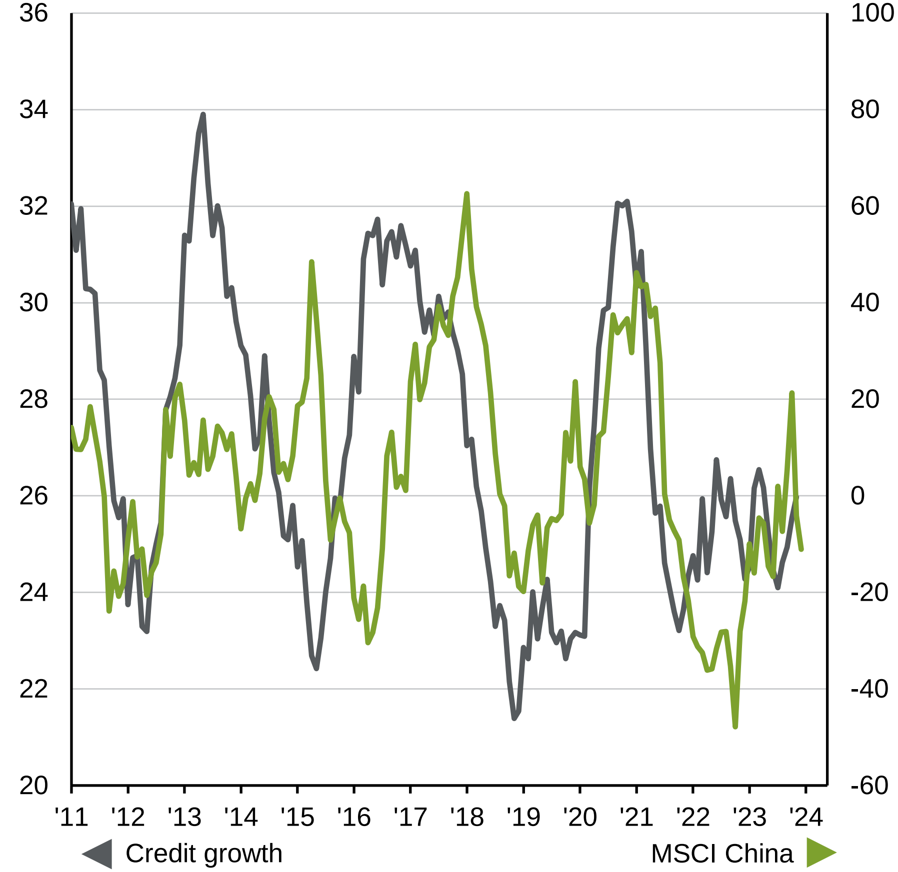
China inflation

% change year on year



China credit growth and equity performance

% of nominal GDP (LHS); % change year on year, total return (RHS)



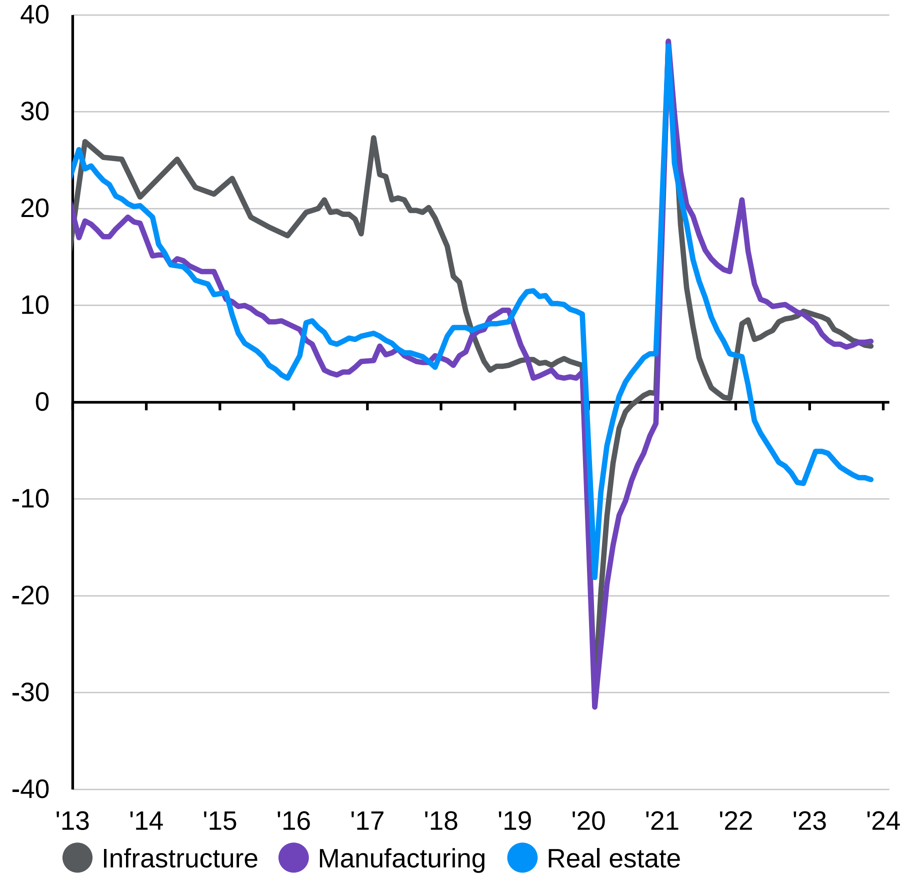
Source: (Left) Bloomberg, LSEG Datastream, J.P. Morgan Asset Management. Core inflation excludes food and energy. (Right) Bloomberg, MSCI, People's Bank of China, J.P. Morgan Asset Management. Credit growth is the 12-month change in the credit stock to the real economy as a percent of nominal GDP. MSCI China returns shown in USD. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

China fixed asset investment and household wealth

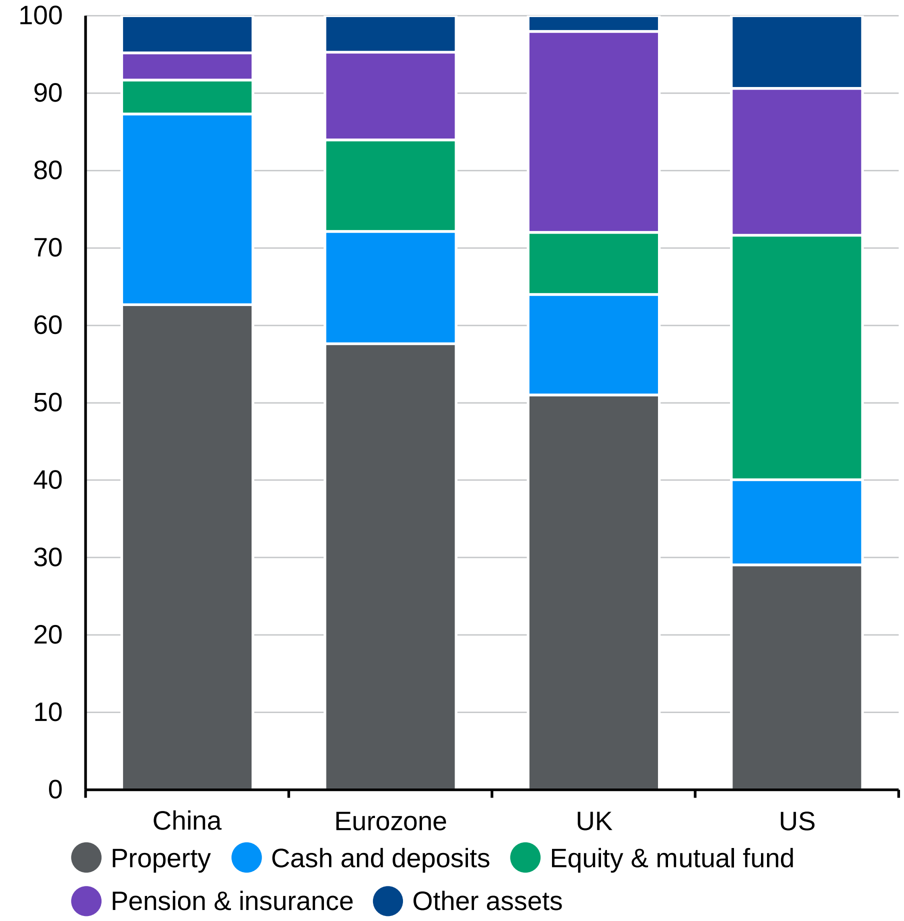
China fixed asset investment by sector

% change year on year



Composition of household assets

% of total assets



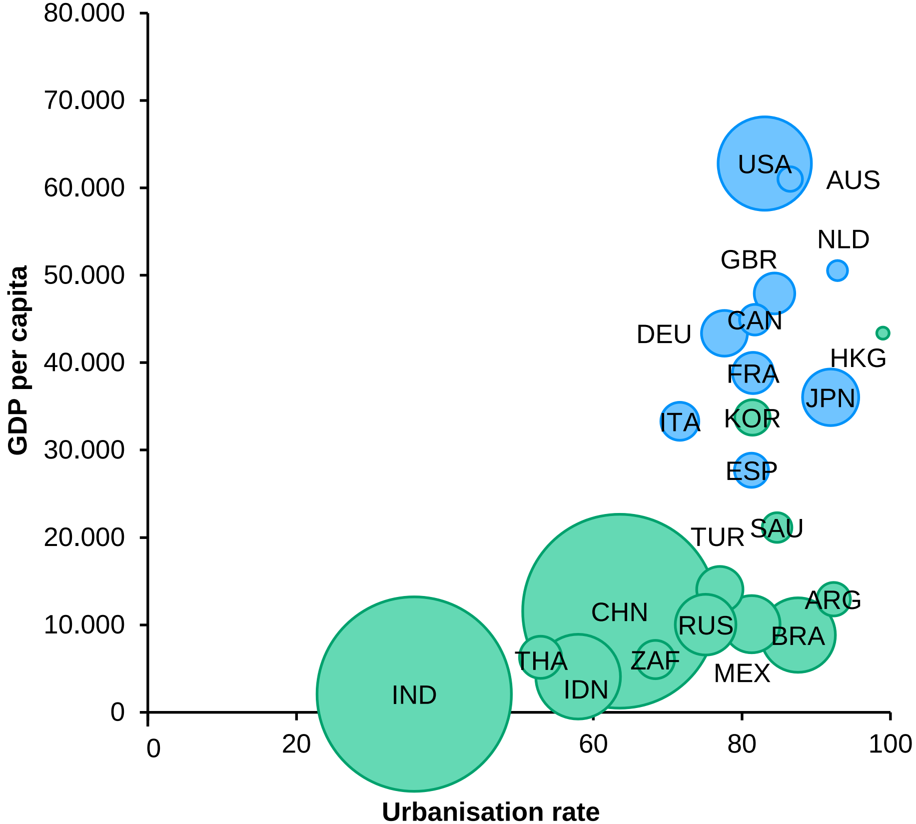
Source: (Left) LSEG Datastream, National Bureau of Statistics of China, J.P. Morgan Asset Management. (Right) CEIC, European Central Bank, Federal Reserve, Goldman Sachs Investment Research, LSEG Datastream, NFID, Wind, J.P. Morgan Asset Management. Data is for 2022 except the UK, which is 2021 due to data availability. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Emerging market structural dynamics

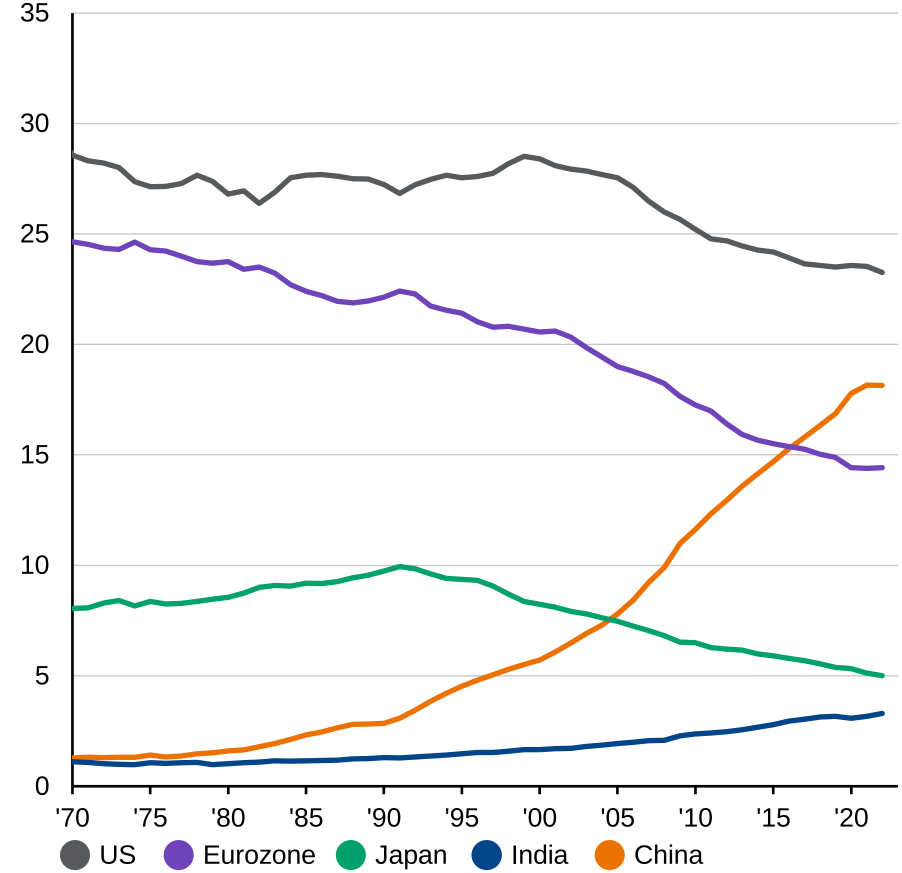
Urbanisation, real GDP per capita and population size

% of population and USD, bubble size is population



Share of global real GDP

%



Source: (Left) World Bank, J.P. Morgan Asset Management. Urbanisation rate refers to the proportion of the total population living within an urban area defined by national statistical offices. Countries are labelled using three-letter International Organisation of Standardisation country codes. (Right) LSEG Datastream, World Bank, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

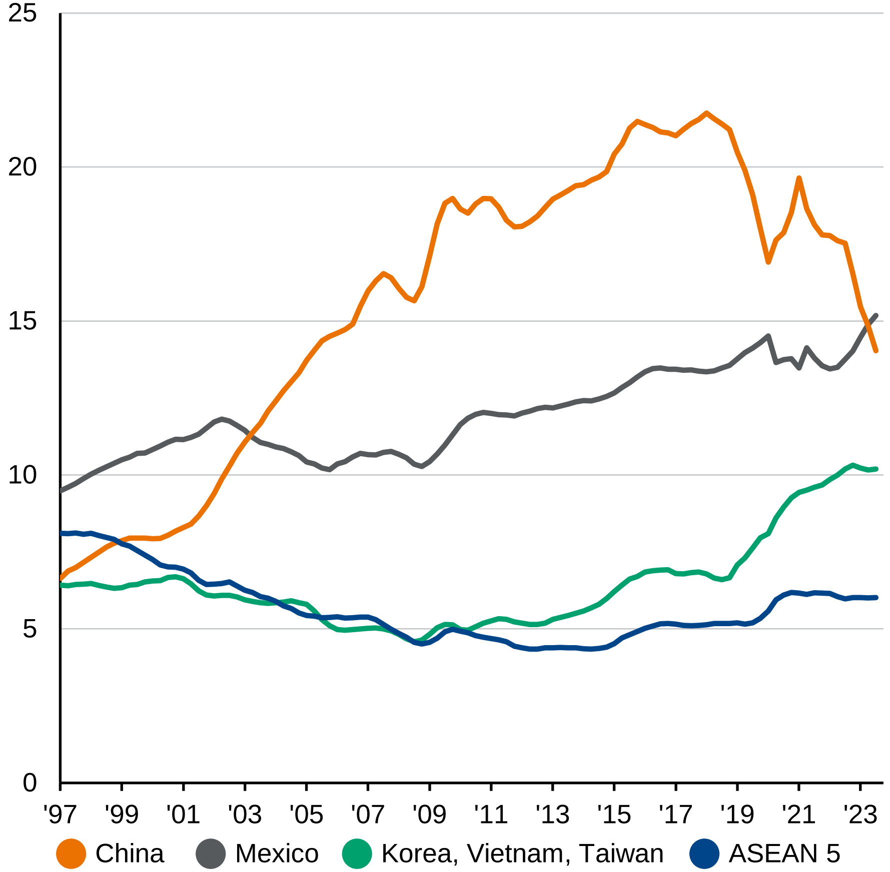
J.P.Morgan ASSET MANAGEMENT

Global economy

EM focus: Trade dynamics and real rates

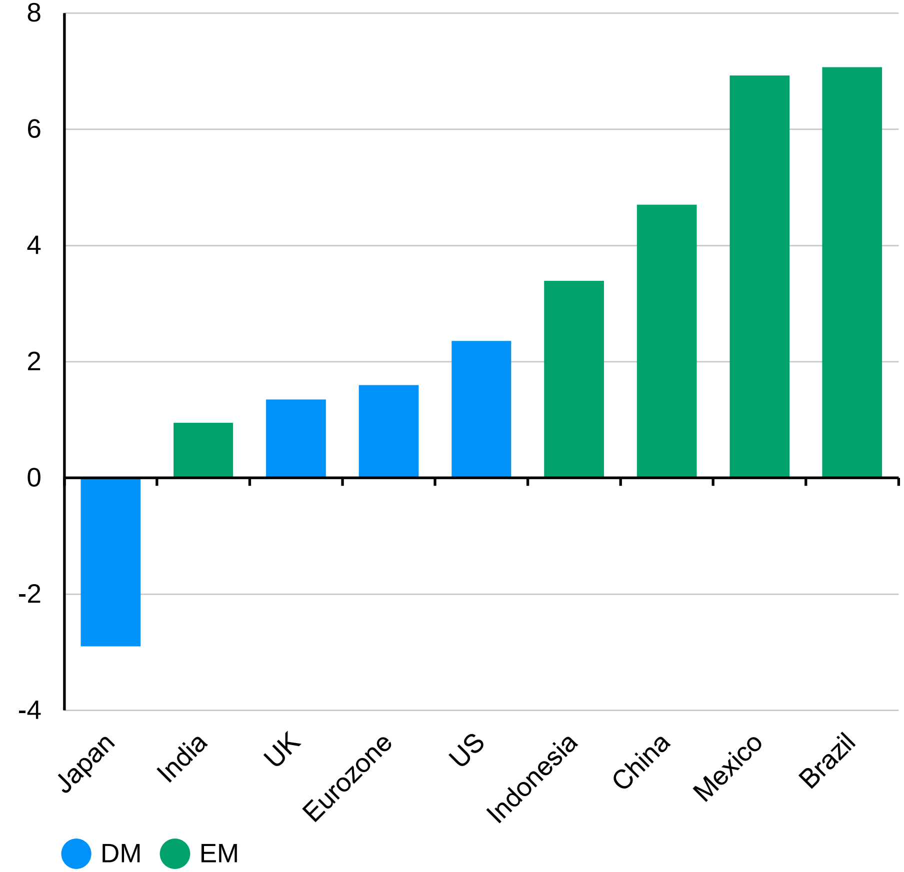
Share of US imports

% of total goods and services imports



Real interest rates

%



Source: (Left) LSEG Datastream, US Census Bureau, J.P. Morgan Asset Management. (Right) Banco Central Brasil, Banco de Mexico, Bank Indonesia, BLS, BoE, BoJ, ECB, Eurostat, Federal Reserve, IBGE, India Ministry of Statistics & Programme Implementation, INEGI, Japan Ministry of Internal Affairs & Communication, LSEG Datastream, National Bureau of Statistics of China, ONS, People's Bank of China, Reserve Bank of India, Statistics Indonesia, J.P. Morgan Asset Management. Real rates are calculated by deducting the headline inflation rate from the policy rate. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Equities

World equity valuations

MSCI World forward P/E ratio

x, multiple

Equity and credit yields

% yield

Source: (Left) IBES, LSEG Datastream, MSCI, J.P. Morgan Asset Management. Forward P/E ratio is price to 12-month forward earnings, calculated using IBES earnings estimates. (Right) BofA, IBES, LSEG Datastream, MSCI, J.P. Morgan Asset Management. Developed market equities: MSCI World, Global BBB credit: BofA Global BBB Corporate Index. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

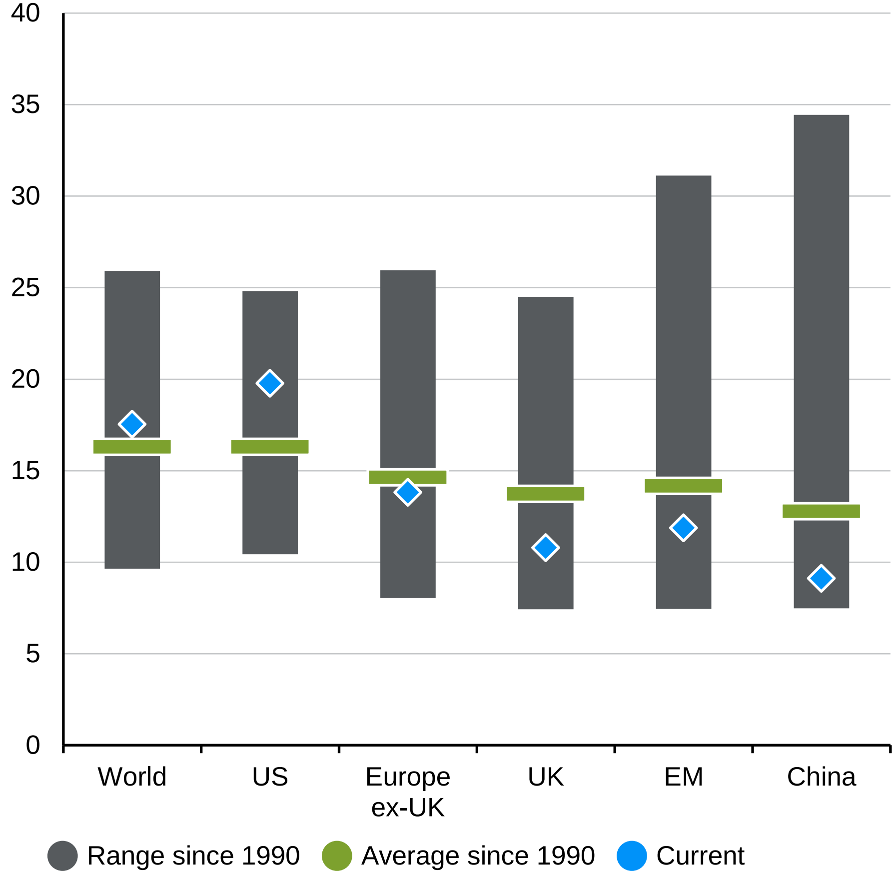
J.P.Morgan ASSET MANAGEMENT

Equities

Regional equity valuations

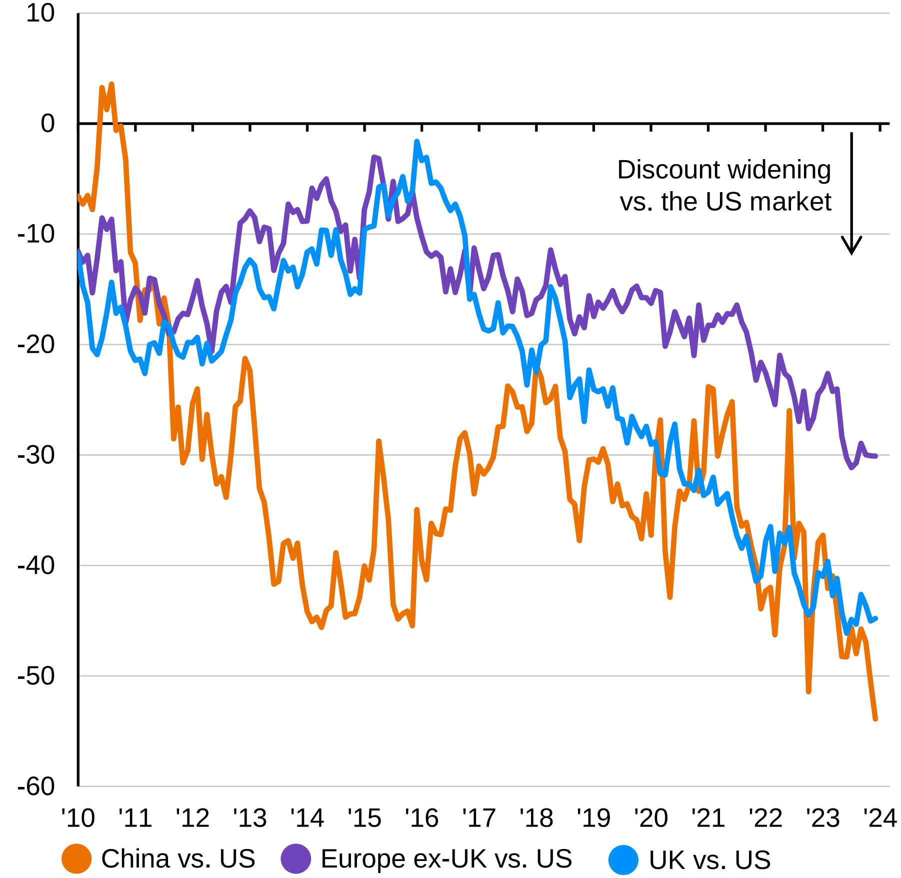
Global forward P/E ratios

x, multiple



Relative equity valuations

%, relative discount/premium based on 12-month forward P/E ratios



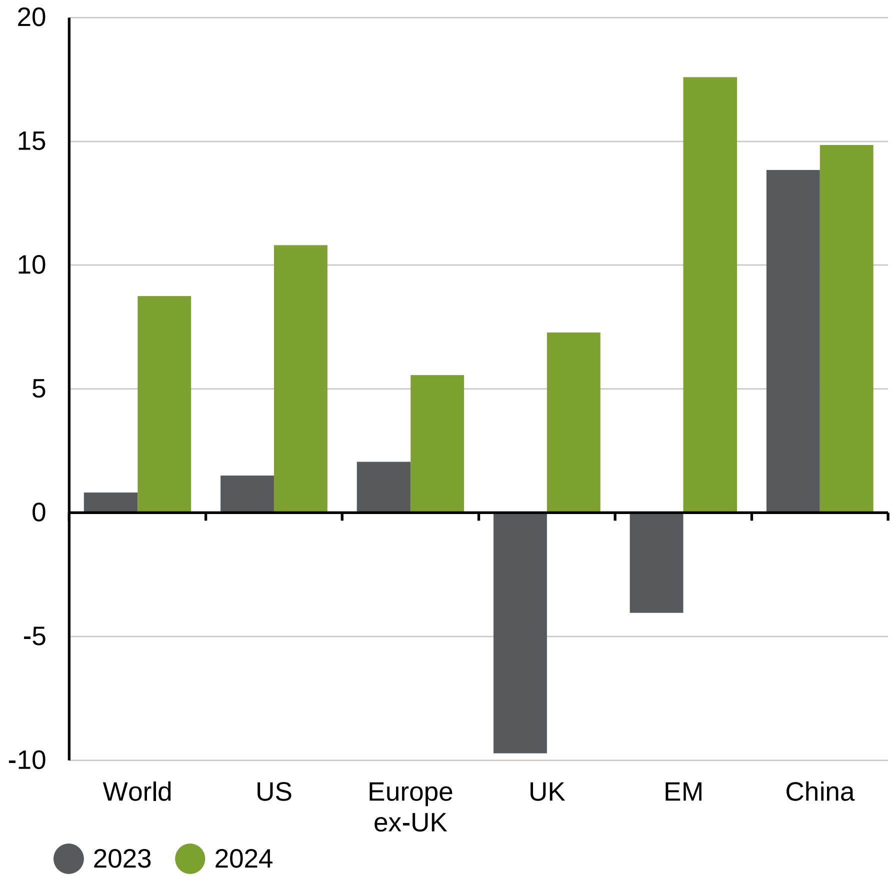
Source: (Left) FTSE, IBES, LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. MSCI indices are used for World, Europe ex-UK, EM and China. UK is FTSE All-Share and US is S&P 500. Earnings data is based on 12-month forward estimates. (Right) FTSE, IBES, LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. US: S&P 500; Europe ex-UK: MSCI Europe ex-UK; UK: FTSE All-Share; China: MSCI China. Valuation is price to 12-month forward earnings. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Regional earnings expectations and profit margins

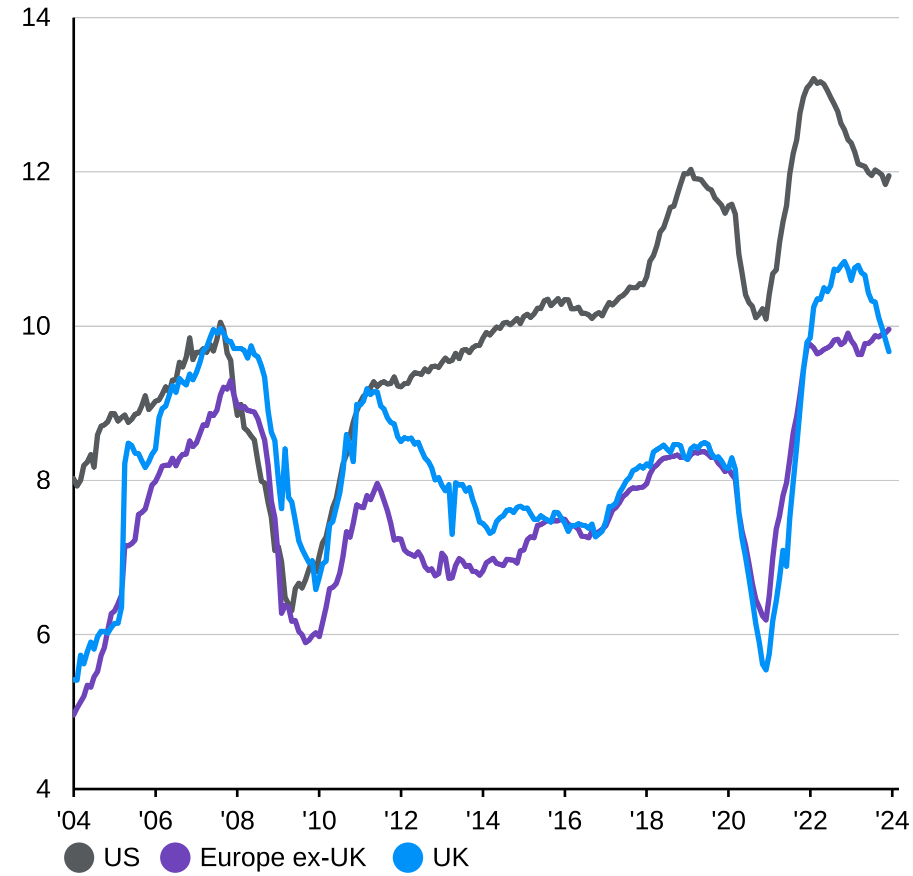
Consensus estimates for global earnings per share growth

% change year on year



Profit margins

%, margins of 12-month trailing earnings relative to sales



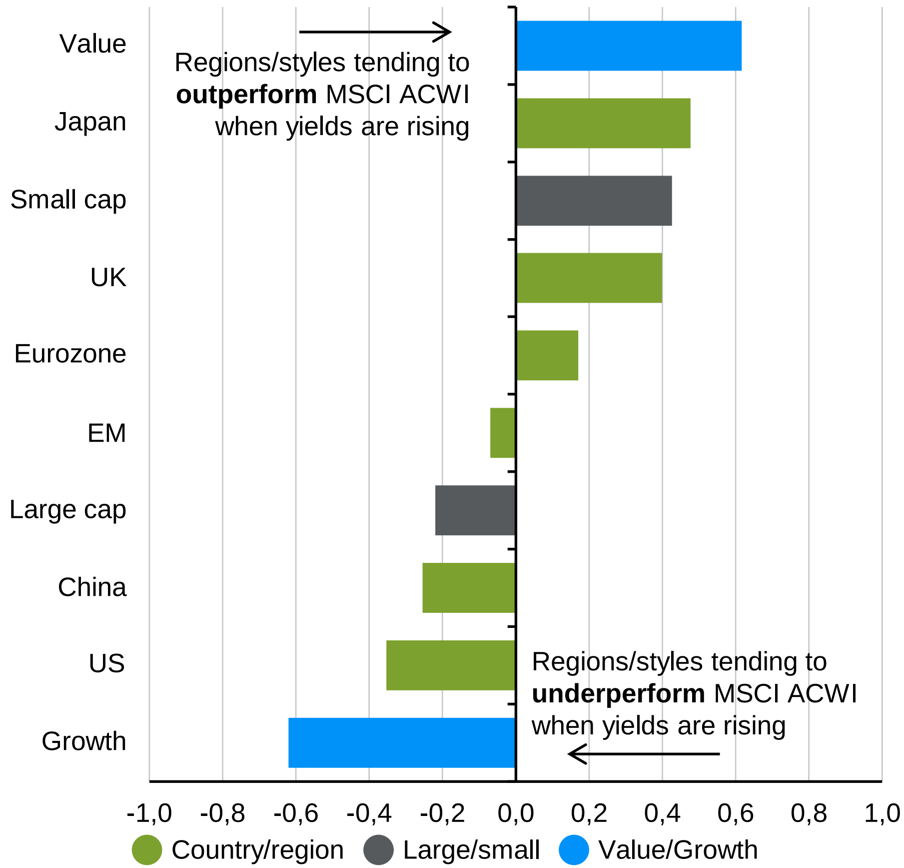
Source: (Left) FTSE, IBES, LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. MSCI indices are used for World, Europe ex-UK, EM and China. UK is FTSE All-Share and US is S&P 500. Earnings data is based on 12-month forward estimates. (Right) FTSE, LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. US: S&P 500, Europe ex-UK: MSCI Europe ex-UK, UK: FTSE All-Share. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Global equity market correlations with Treasury yields

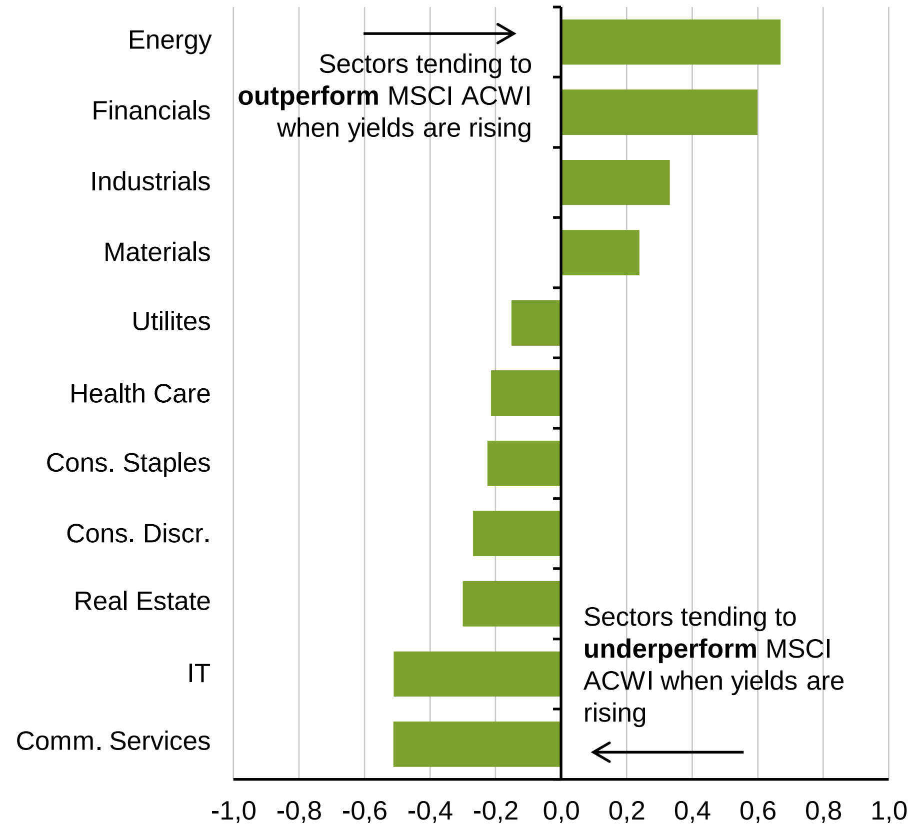
Correlation of regions and styles to US 10y Treasury yield

10y correlation of rel. performance with US 10y Treasury yield



Correlation of MSCI ACWI sectors to US 10y Treasury yield

10y correlation of sector rel. performance with US 10y Treasury yield



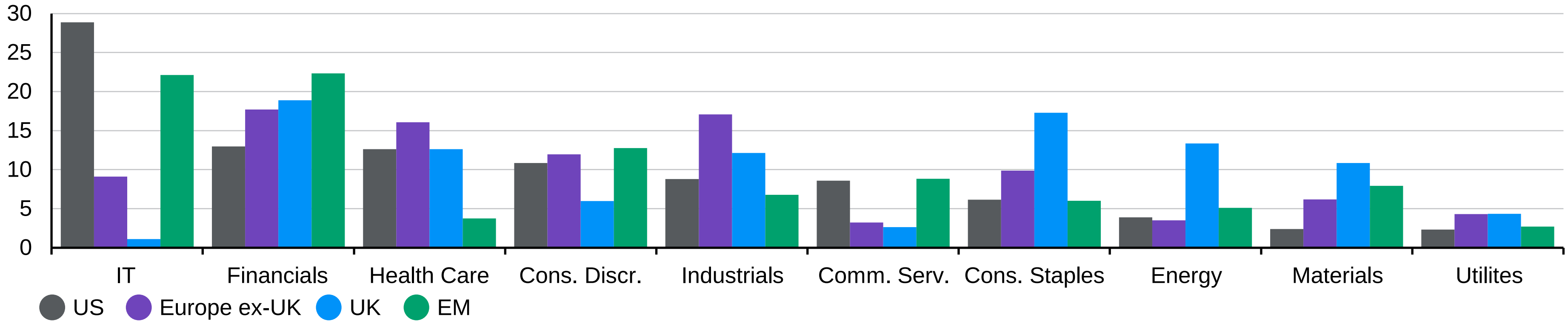
Source: (All charts) LSEG Datastream, MSCI, J.P. Morgan Asset Management. Correlation of regions and styles is calculated between the six-month change in US 10-year Treasury yields and the six-month relative performance of each region and style to MSCI All-Country World Index. Correlation of sectors is calculated between the six-month change in US 10-year Treasury yields and the six-month relative performance of each sector to MSCI All-Country World Index. All indices used are MSCI. Value and Growth as well as size indices used are for the MSCI All-Country World universe. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Equities

Global equity sector weights

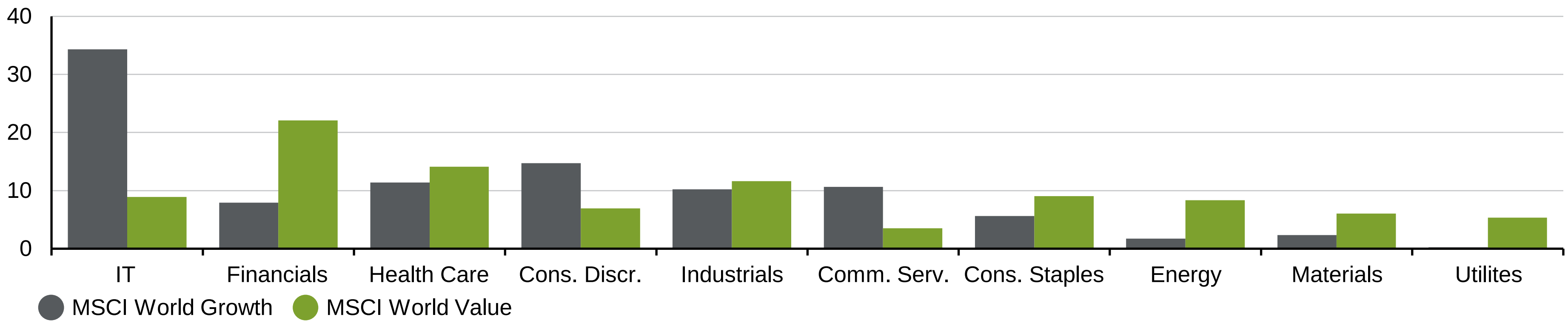
Global equity sector weights

% of total market cap



MSCI World Growth and Value sector weights

% of total market cap



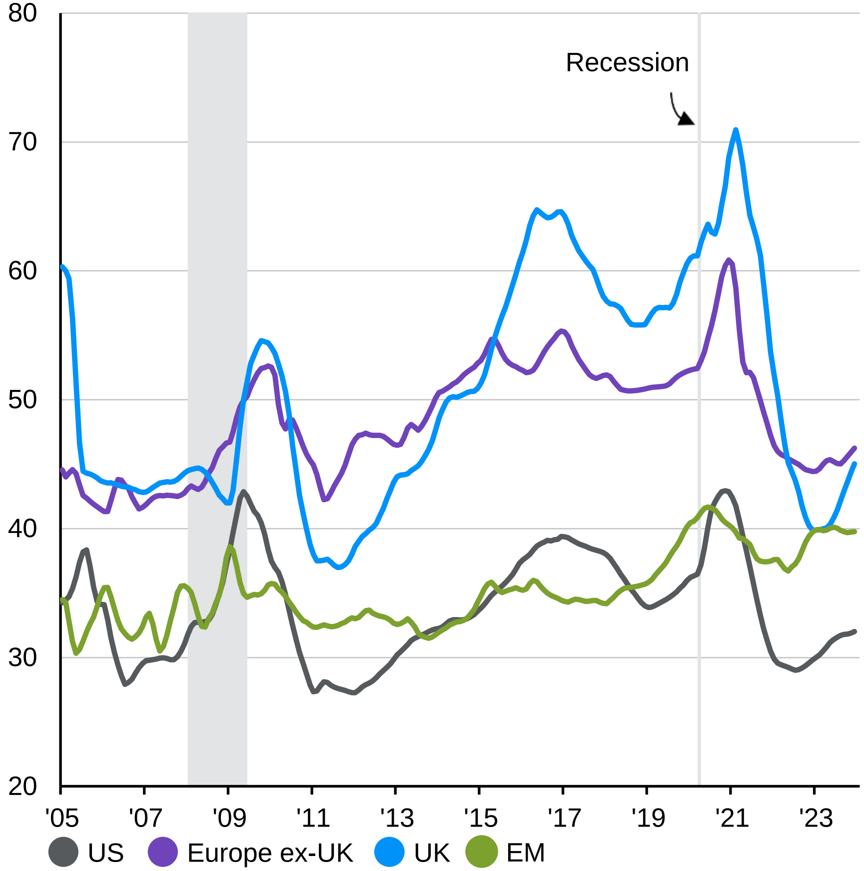
Source: (Top) LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. Indices are all MSCI, except for US, which is S&P 500. (Bottom) LSEG Datastream, MSCI, J.P. Morgan Asset Management. Real estate is not included in these sector breakdowns due to the small size of the weight in each index. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Global equity income

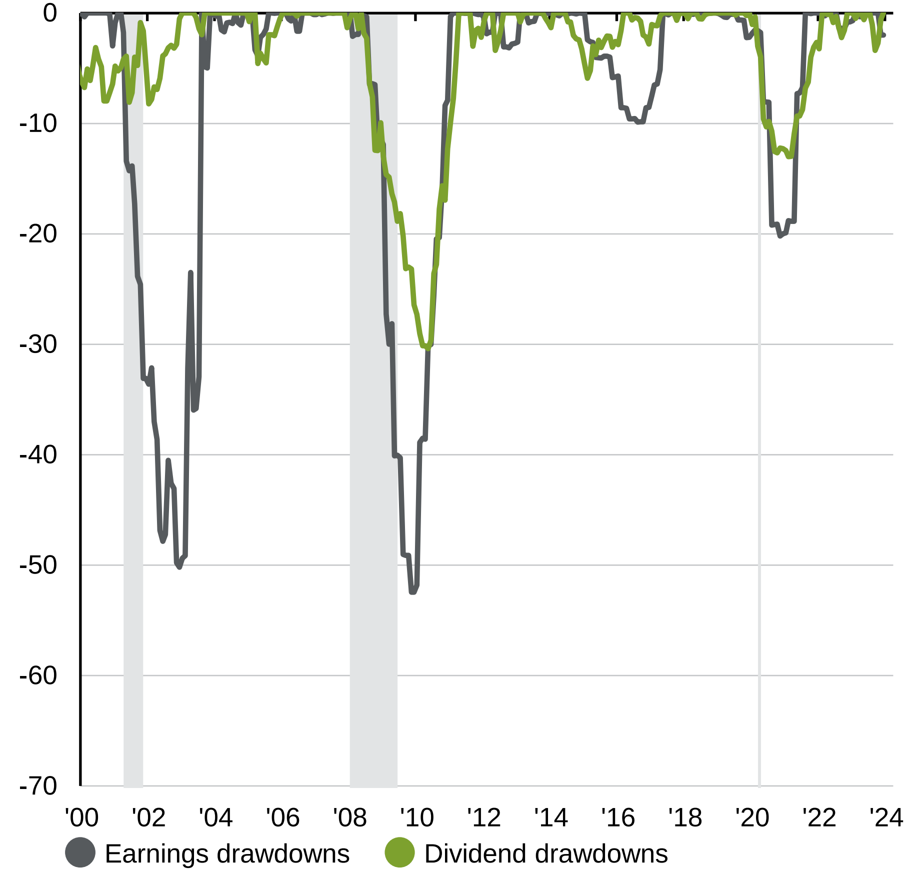
Dividend payout ratios

%, three-month moving average



MSCI World earnings and dividend drawdowns

% drawdown from rolling 2-year high



Source: (Left) FTSE, LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. US is S&P 500, UK is FTSE All-Share, MSCI indices used for Europe ex-UK and EM. Dividend payout ratio shows 12-month trailing dividend per share divided by 12-month trailing earnings per share. (Right) Bloomberg, MSCI, J.P. Morgan Asset Management. Earnings and dividends are both calculated on a per share basis. Earnings data is last 12 months' earnings per share. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

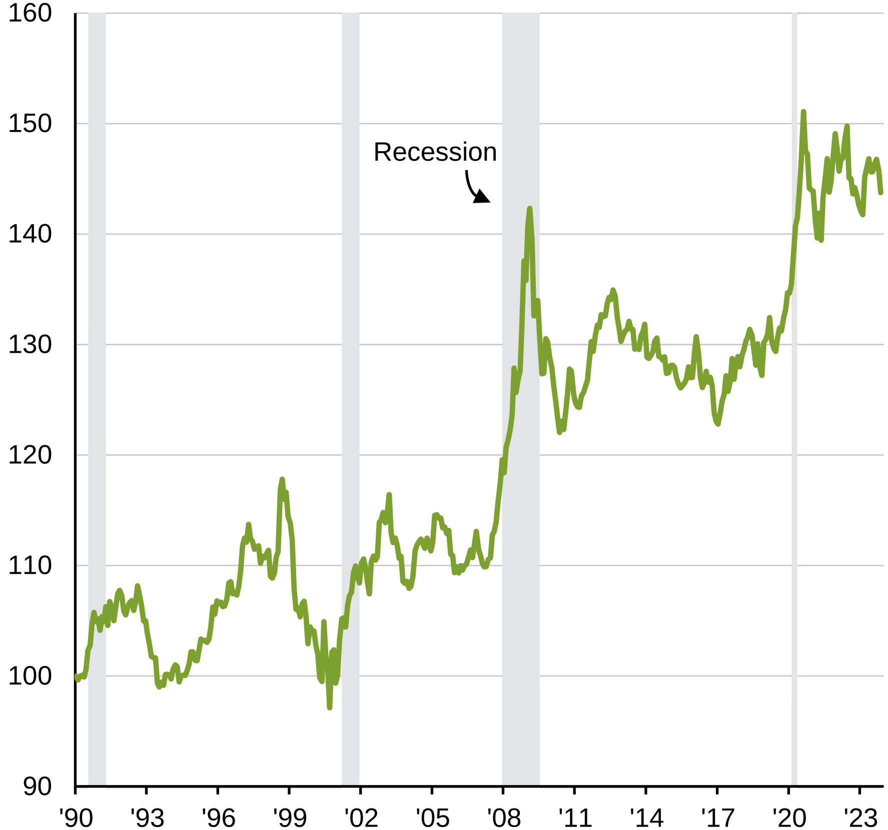
J.P.Morgan ASSET MANAGEMENT

Equities

Equity market factors

S&P 500 Quality/S&P 500 relative performance

Relative total return index level, rebased to 100 in January 1990



MSCI World Growth and Value forward P/E ratios

x, multiple

Source: (Left) J.P. Morgan Asset Management Quantitative Beta Solutions, S&P Global, J.P. Morgan Asset Management. S&P 500 Quality index is the top quartile quality stocks in the S&P 500 determined by J.P. Morgan Asset Management Quantitative Beta Strategies based on measures of profitability, financial risk and earnings quality. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates. (Right) LSEG Datastream, MSCI, J.P. Morgan Asset Management. Forward P/E ratio is price to 12-month forward earnings, as published by MSCI. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

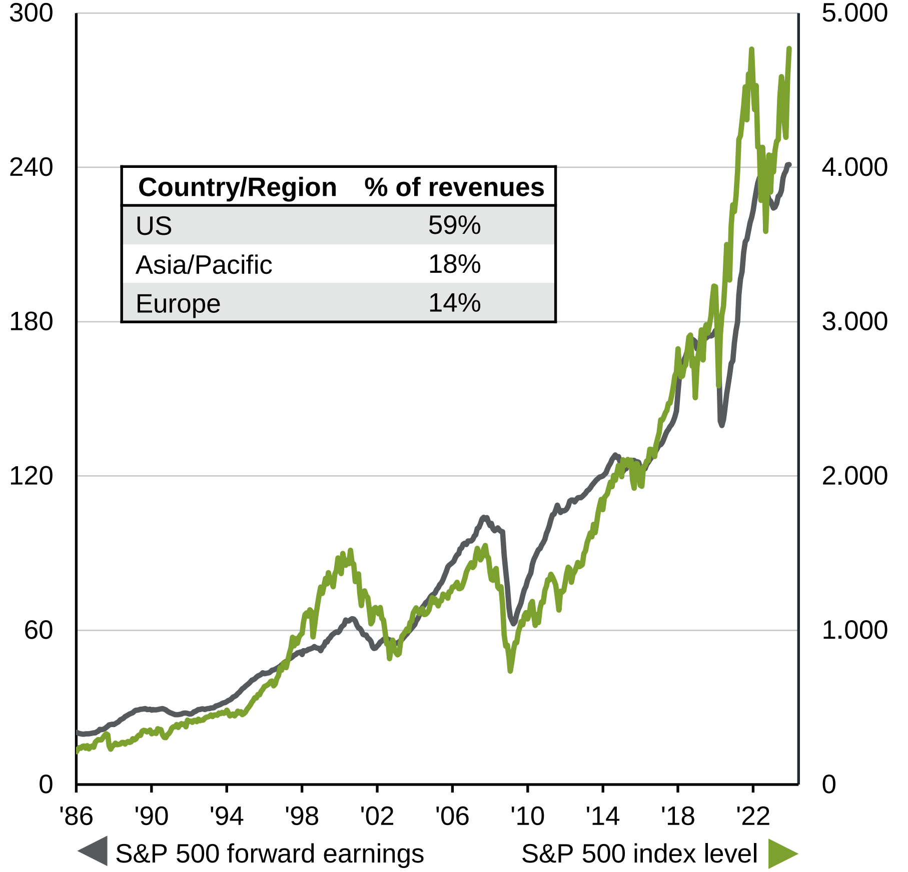
J.P.Morgan ASSET MANAGEMENT

Equities

US earnings

S&P 500 earnings and performance

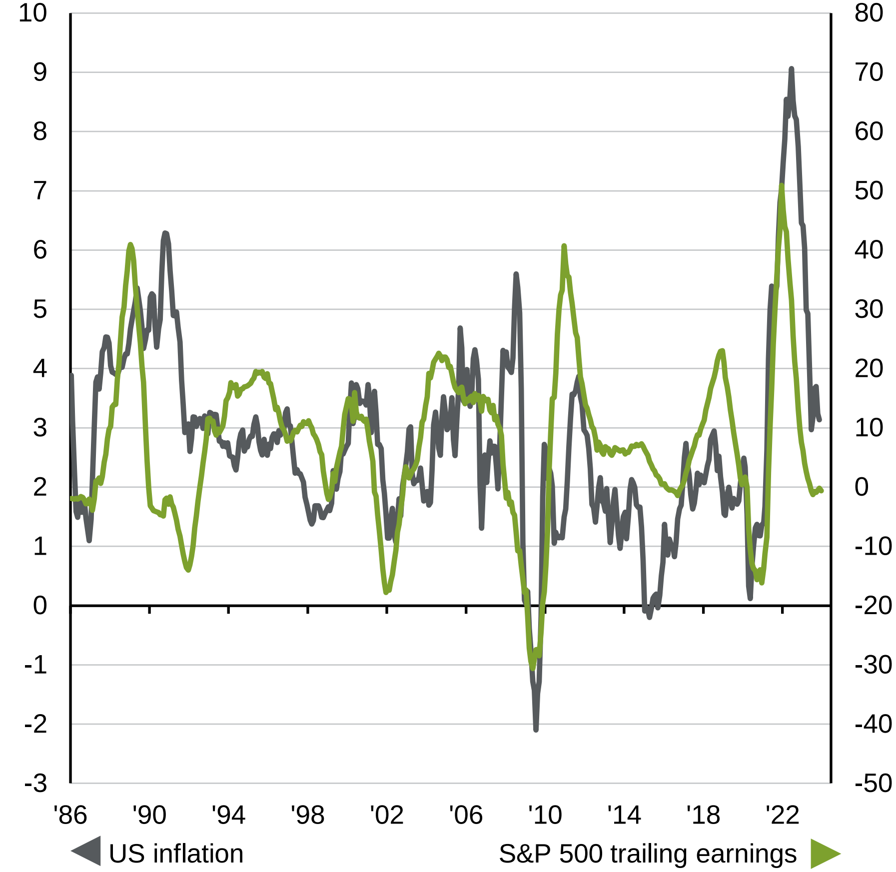
Next 12 months' earnings per share estimates USD (LHS); index level (RHS)



Country/Region	% of revenues
US	59%
Asia/Pacific	18%
Europe	14%

US inflation and earnings growth

% change year on year



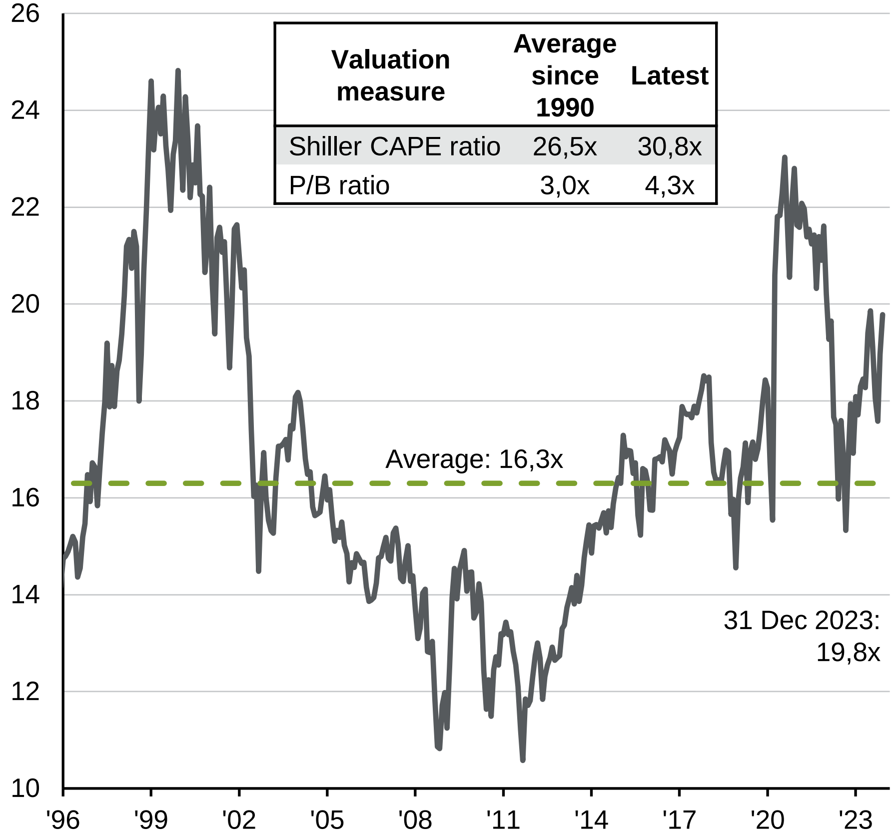
Source: (Left) FactSet, IBES, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Earnings data is based on 12-month forward estimates. (Right) BLS, IBES, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Earnings data is last 12 months' earnings per share. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

US equity valuations

S&P 500 forward P/E ratio

x, multiple



Valuation measure	Average since 1990	Latest
Shiller CAPE ratio	26,5x	30,8x
P/B ratio	3,0x	4,3x

Forward P/E ratio of the S&P 500 top 10 vs. the rest

x, multiple

Source: (Left) IBES, LSEG Datastream, Robert Shiller, S&P Global, J.P. Morgan Asset Management. Forward P/E ratio is price to 12-month forward earnings, calculated using IBES earnings estimates. P/E data may differ from Guide to the Markets - US, which uses FactSet earnings estimates. Shiller cyclically adjusted P/E (CAPE) is price-to-earnings ratio adjusted using trailing 10-year average inflation-adjusted earnings. P/B ratio is trailing price-to-book ratio. (Right) FactSet, S&P Global, J.P. Morgan Asset Management. The top 10 stocks are based on the 10 largest index constituents at the start of each month. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

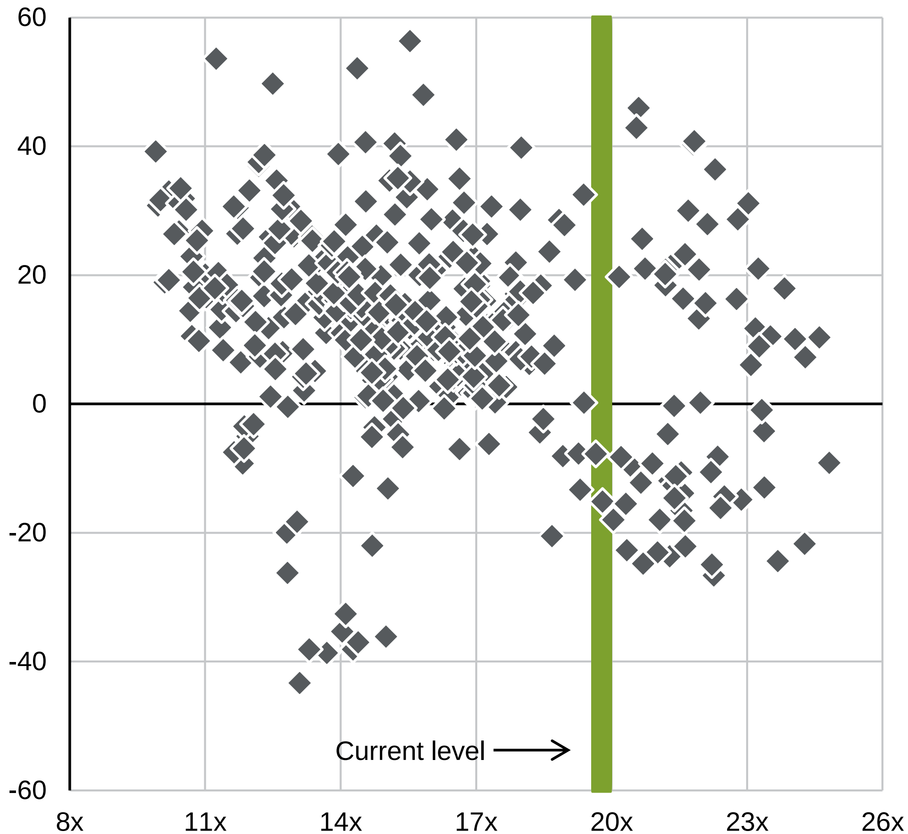
J.P.Morgan ASSET MANAGEMENT

Equities

US valuations and subsequent returns

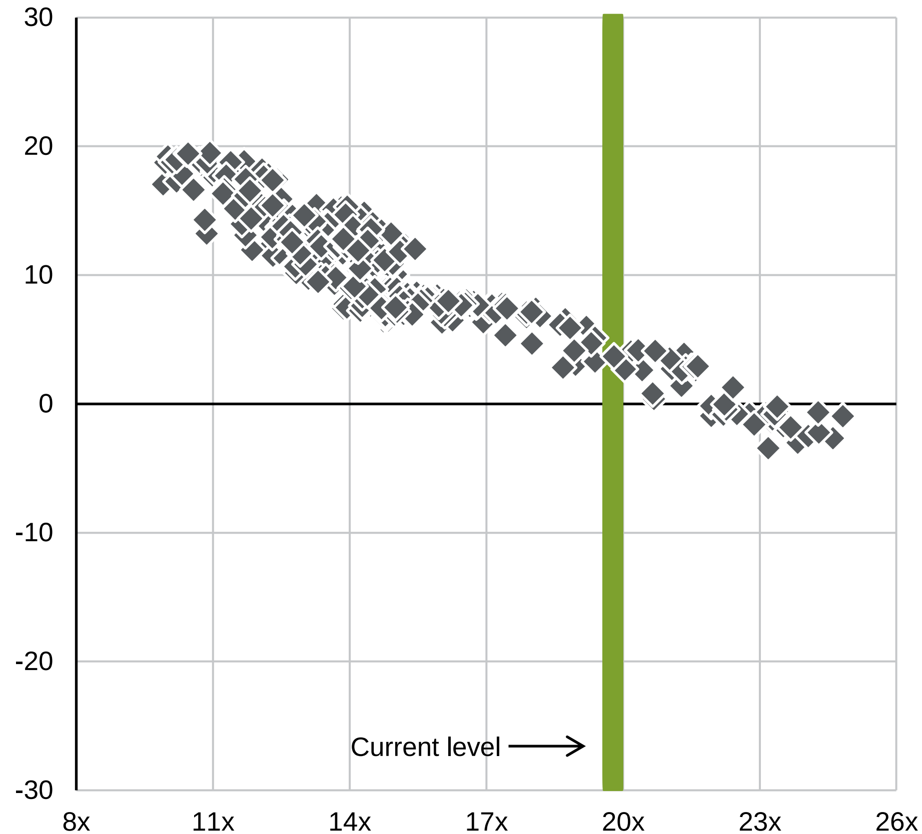
S&P 500 forward P/E ratios and subsequent 1-year returns

%, annualised total return*



S&P 500 forward P/E ratios and subsequent 10-year returns

%, annualised total return*

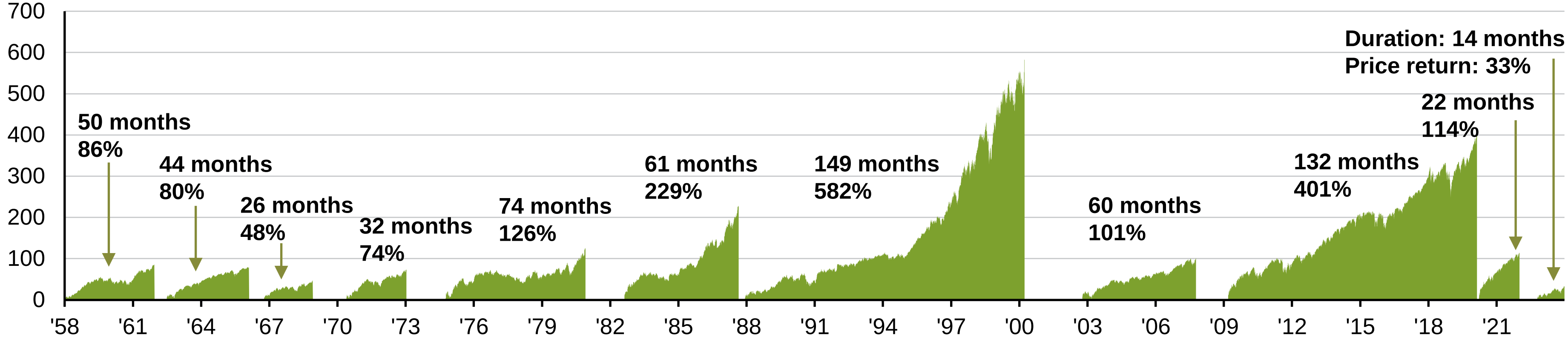


Source: (All charts) IBES, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. *Dots represent monthly data points since 1988, which is earliest available. Forward P/E ratio is price to 12-month forward earnings, calculated using IBES earnings estimates. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

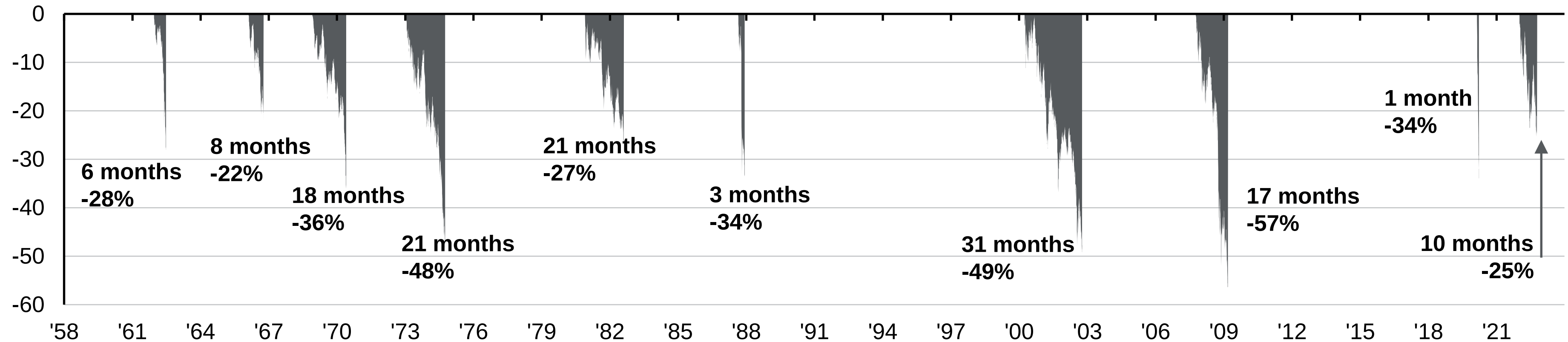
Equities

US bull and bear markets

S&P 500 bull markets, %



S&P 500 bear markets, %



Source: (All charts) Bloomberg, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Charts and labels refer to price return. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

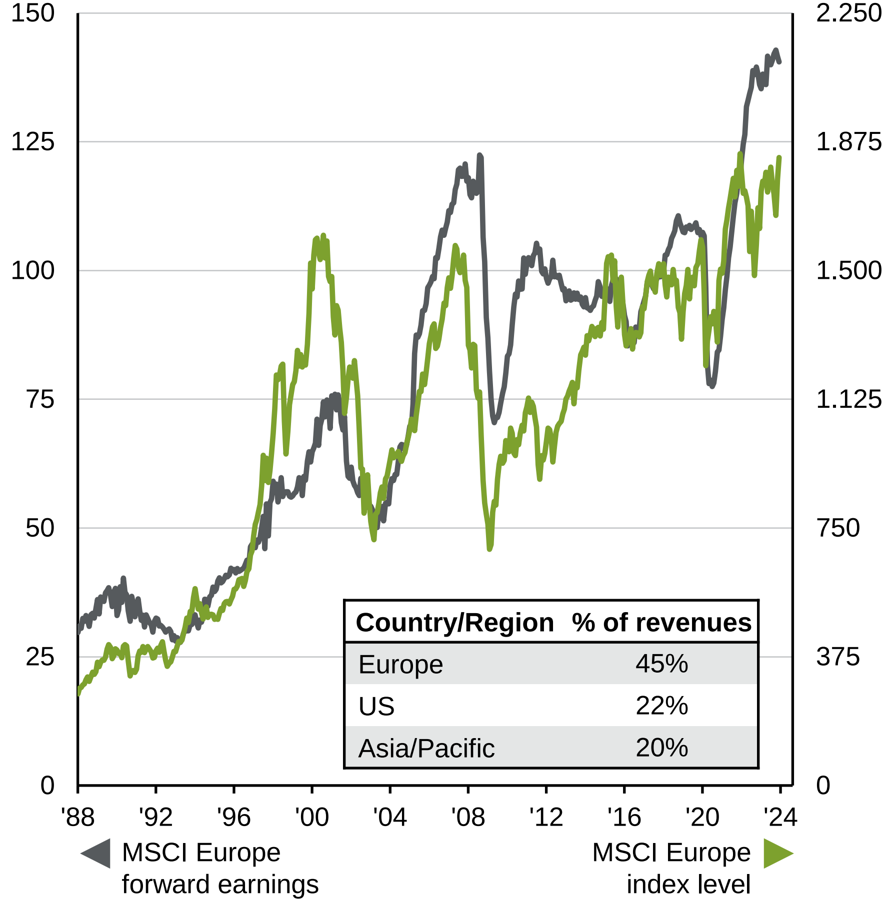
J.P.Morgan ASSET MANAGEMENT

Equities

Europe earnings and buyback yields

MSCI Europe earnings and performance

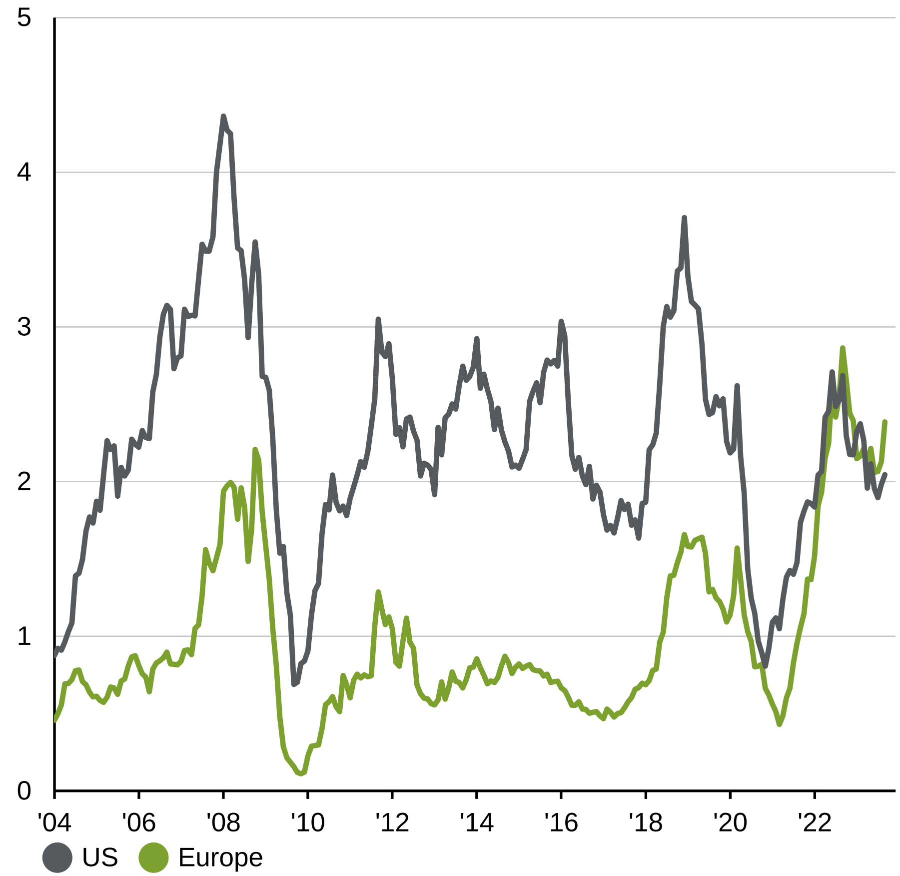
Next 12 months’ earnings per share estimates, EUR (LHS); index level (RHS)



Country/Region	% of revenues
Europe	45%
US	22%
Asia/Pacific	20%

European and US buyback yields

%



Source: (Left) FactSet, IBES, LSEG Datastream, MSCI, J.P. Morgan Asset Management. Earnings data is based on 12-month forward estimates. (Right) Bernstein, Bloomberg, LSEG Datastream, J.P. Morgan Asset Management. Buyback yields are the value of total stock buyback announcements over the previous 12 months as a percentage of Datastream regional index market cap. Past performance is not a reliable indicator of current and future results.

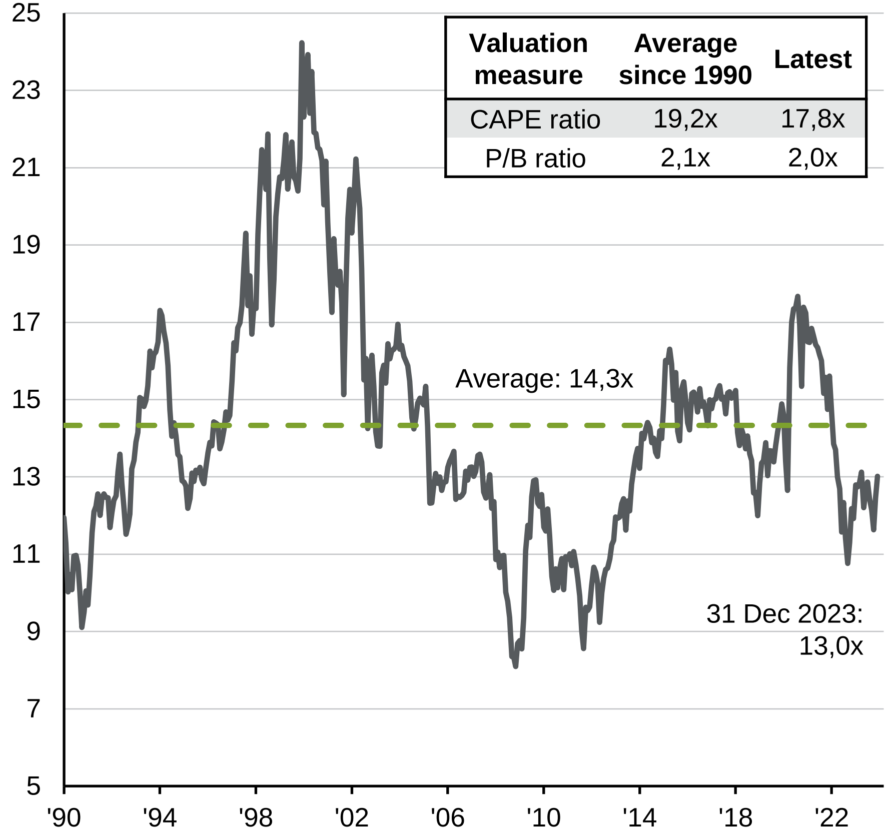
Guide to the Markets - Europe. Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Europe equity valuations

MSCI Europe forward P/E ratio

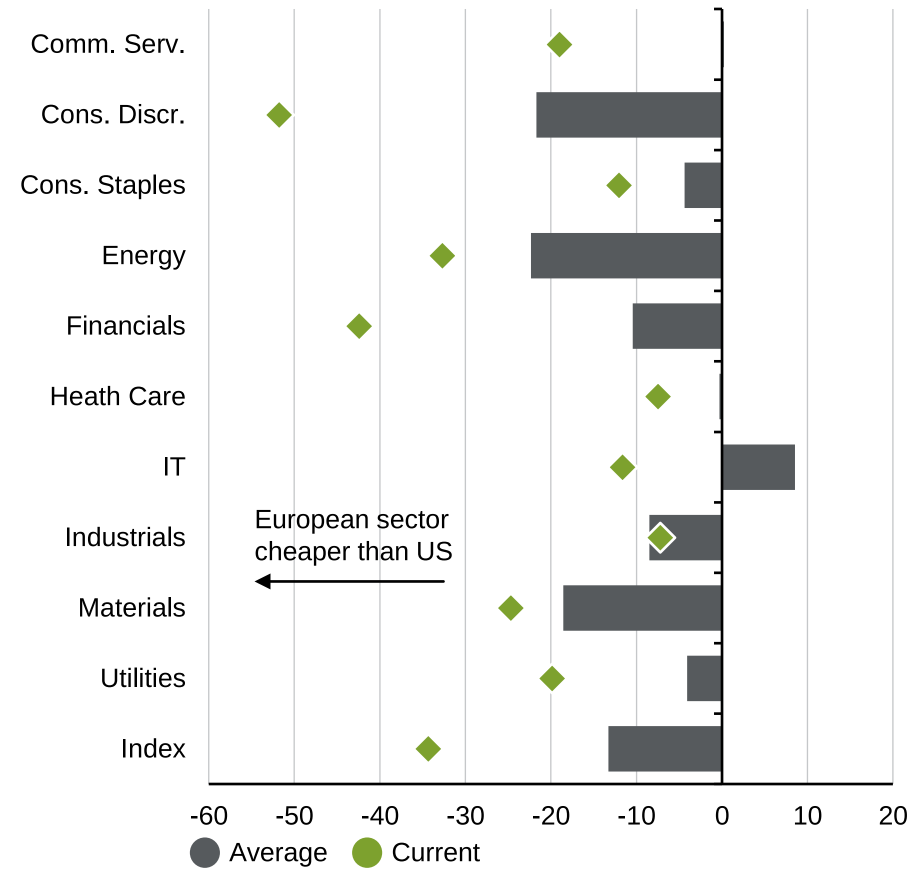
x, multiple



Valuation measure	Average since 1990	Latest
CAPE ratio	19,2x	17,8x
P/B ratio	2,1x	2,0x

MSCI Europe relative valuation vs. the US

%, relative discount/premium based on 12-month forward P/E ratios



Source: (Left) IBES, LSEG Datastream, MSCI, J.P. Morgan Asset Management. Forward P/E ratio is price to 12-month forward earnings, calculated using IBES earnings estimates. Cyclically adjusted P/E (CAPE) is price-to-earnings ratio adjusted using trailing 10-year average inflation-adjusted earnings. P/B ratio is trailing price-to-book ratio. (Right) LSEG Datastream, MSCI, S&P Global, J.P. Morgan Asset Management. The chart shows the current percentage discount of the index or sector 12-month forward P/E ratio vs. the equivalent for the S&P 500, and the average since 1995. Communication Services average is calculated using data from 1995 to 2000 inclusive and from 2005 to date, due to sector composition changes. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Equities

Europe large, mid and small capitalisation equities

MSCI Europe large, mid & small cap performance

Index level, rebased to 100 in Jan 1995

MSCI Europe large, mid & small cap valuations

x, multiple

Source: (All charts) LSEG Datastream, MSCI, J.P. Morgan Asset Management. Valuation is price to 12-month forward earnings ratio. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

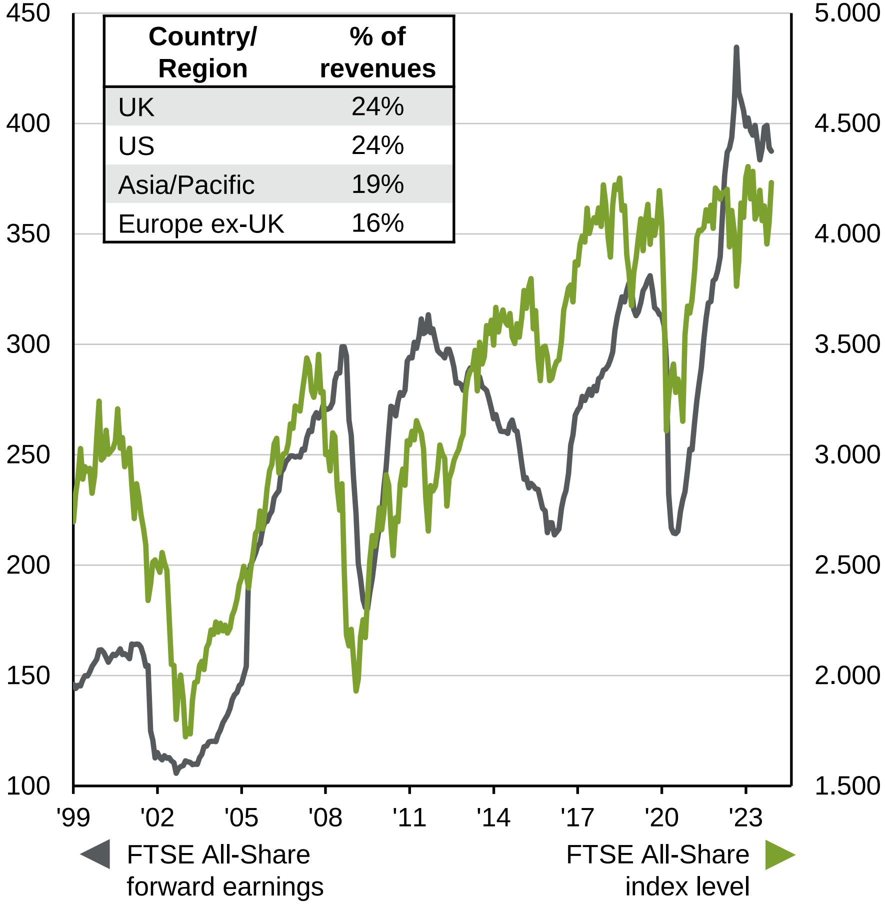
J.P.Morgan
ASSET MANAGEMENT

UK earnings

FTSE All-Share earnings and performance

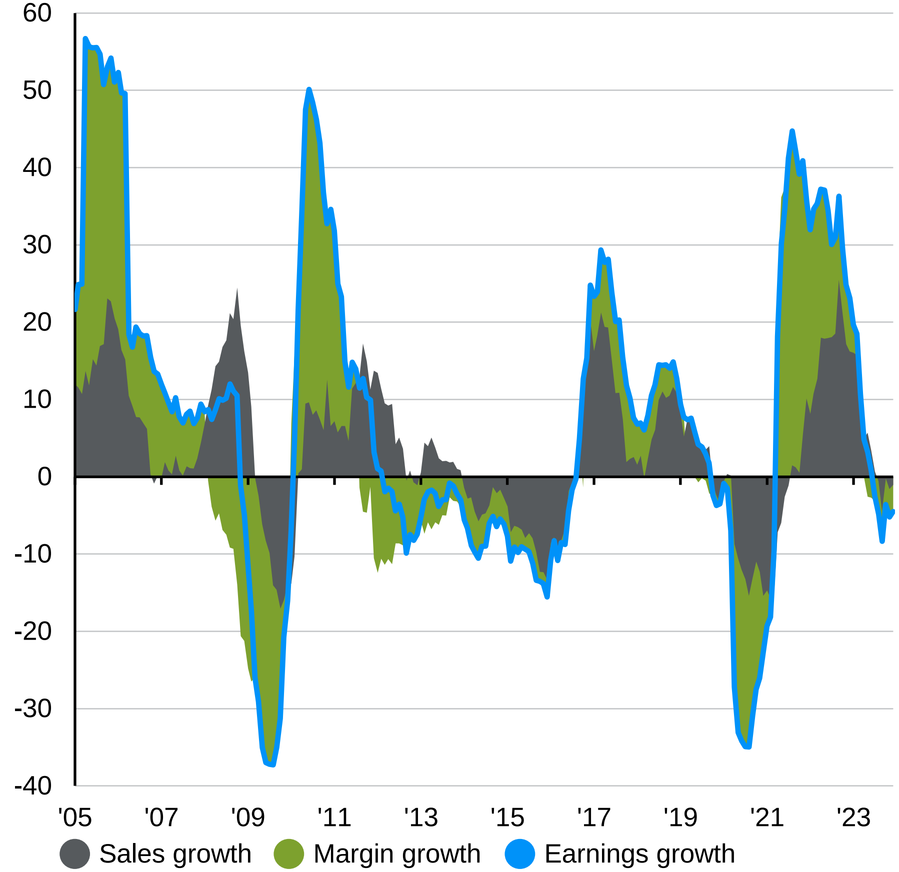
Next 12 months' earnings per share estimates, GBP (LHS); index level (RHS)

Country/ Region	% of revenues
UK	24%
US	24%
Asia/Pacific	19%
Europe ex-UK	16%



FTSE All-Share earnings per share growth

% change year on year

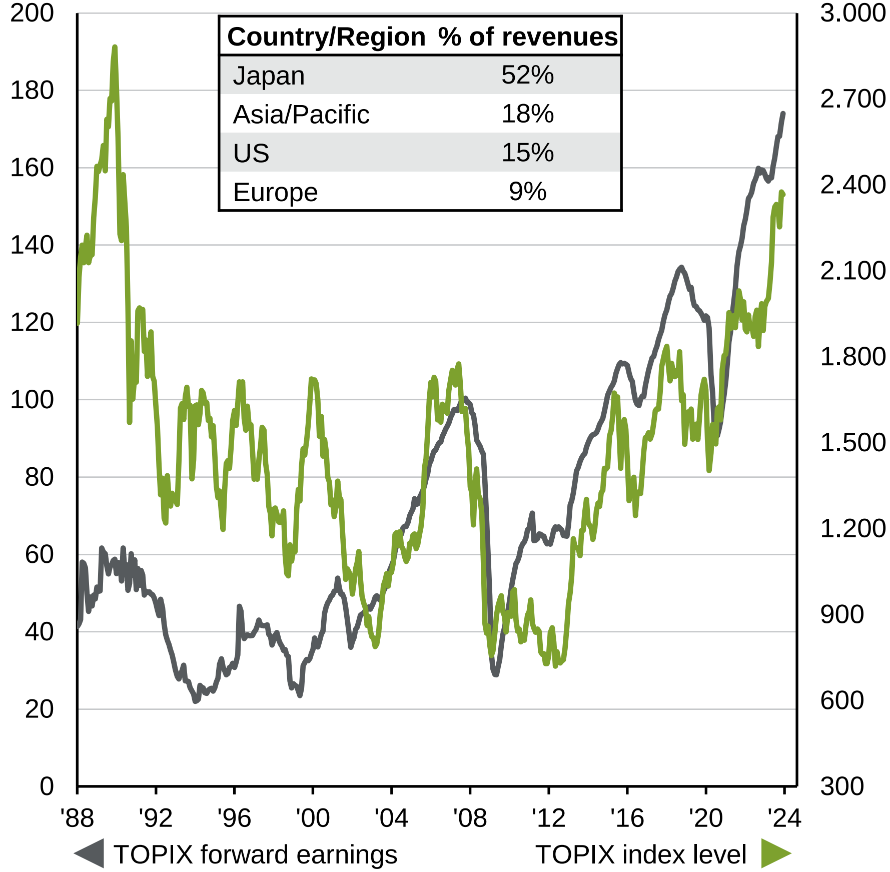


Source: (All charts) FactSet, FTSE, IBES, LSEG Datastream, J.P. Morgan Asset Management. Earnings data are based on 12-month forward estimates. Margin growth is the growth rate of earnings per share divided by sales per share. Past performance is not a reliable indicator of current and future results.
Guide to the Markets - Europe. Data as of 31 December 2023.

Japan equity market and currency

TOPIX earnings and performance

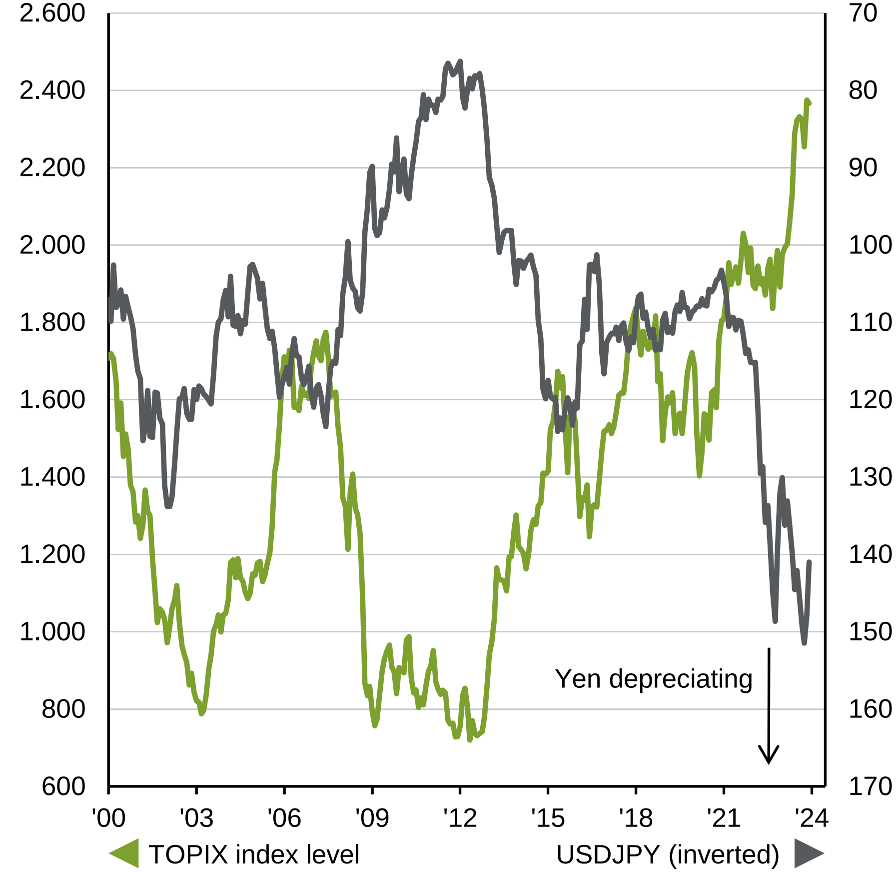
Next 12 months' earnings per share estimates, JPY (LHS); index level (RHS)



Country/Region	% of revenues
Japan	52%
Asia/Pacific	18%
US	15%
Europe	9%

TOPIX and the yen vs. US dollar

Index level (LHS); JPY per USD (RHS)



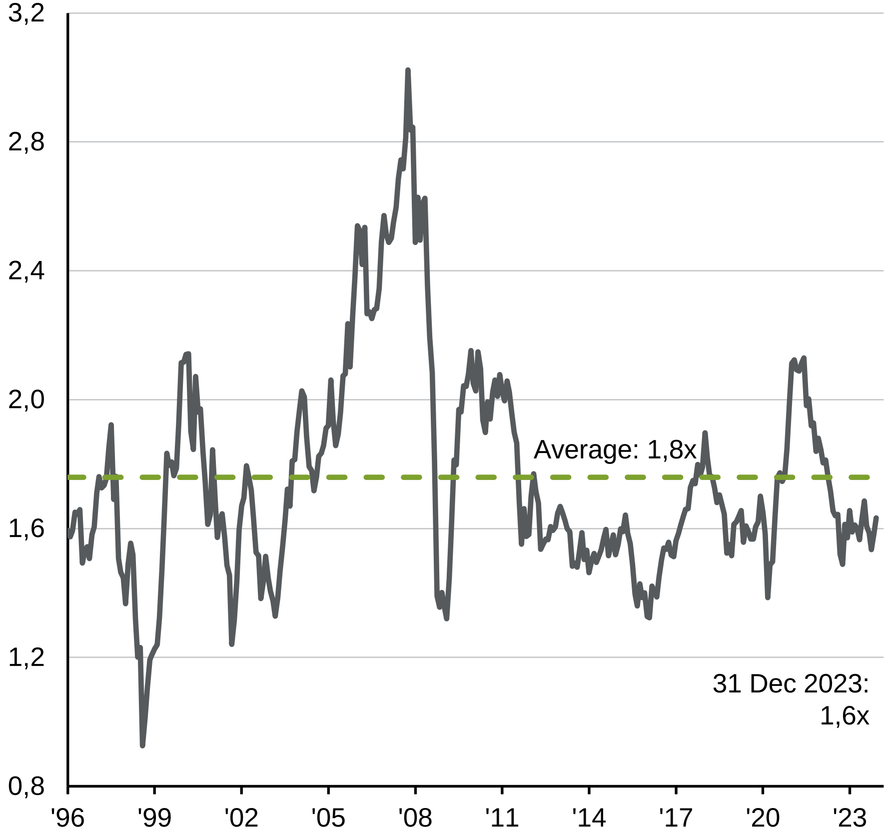
Source: (Left) FactSet, IBES, LSEG Datastream, TOPIX, J.P. Morgan Asset Management. Earnings data are based on 12-month forward estimates. (Right) LSEG Datastream, TOPIX, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan
ASSET MANAGEMENT

Emerging market equity valuations

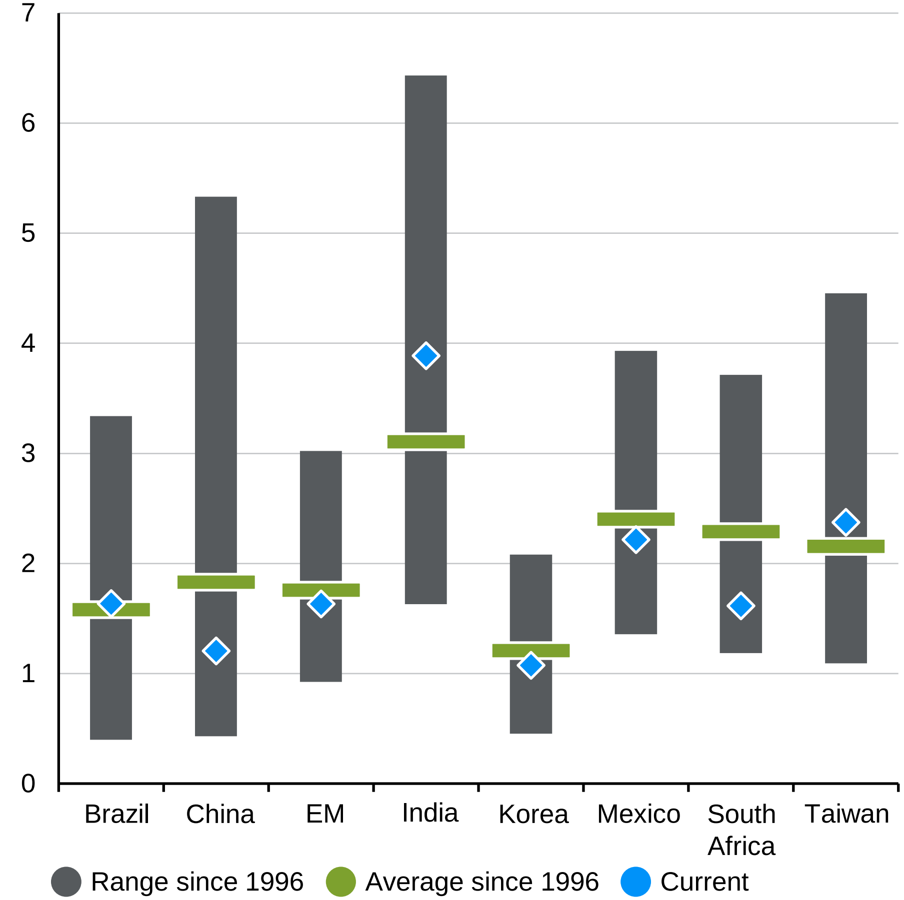
MSCI EM price-to-book ratio

x, multiple



EM price-to-book ratios by country

x, multiple



Source: (All charts) IBES, LSEG Datastream, MSCI, J.P. Morgan Asset Management. All indices are MSCI. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

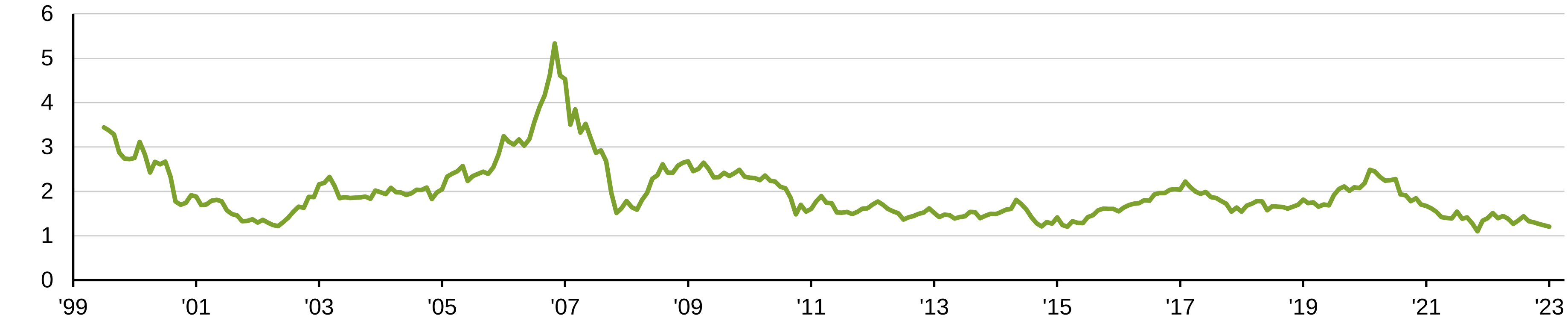
J.P.Morgan ASSET MANAGEMENT

Equities

China equity price-to-book ratio and drawdowns

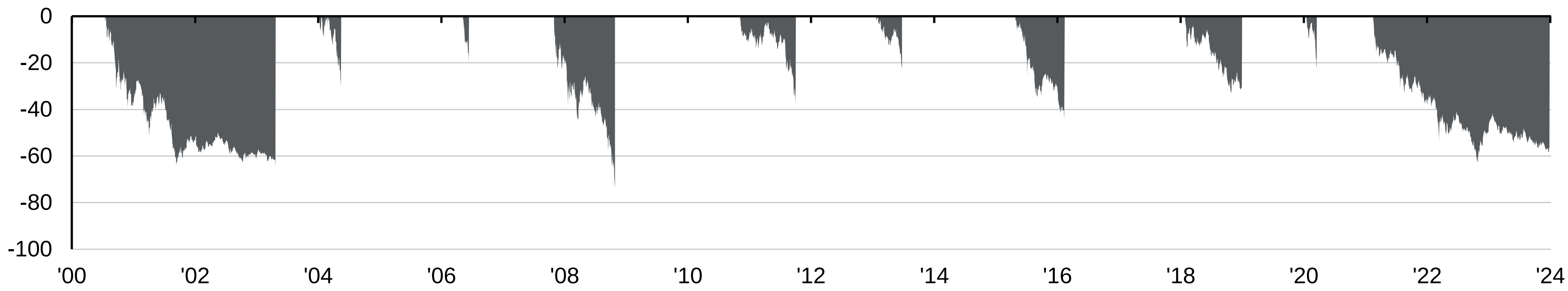
MSCI China price-to-book ratio

x, multiple



MSCI China historical drawdowns

% drawdown from local peak, price return in local currency



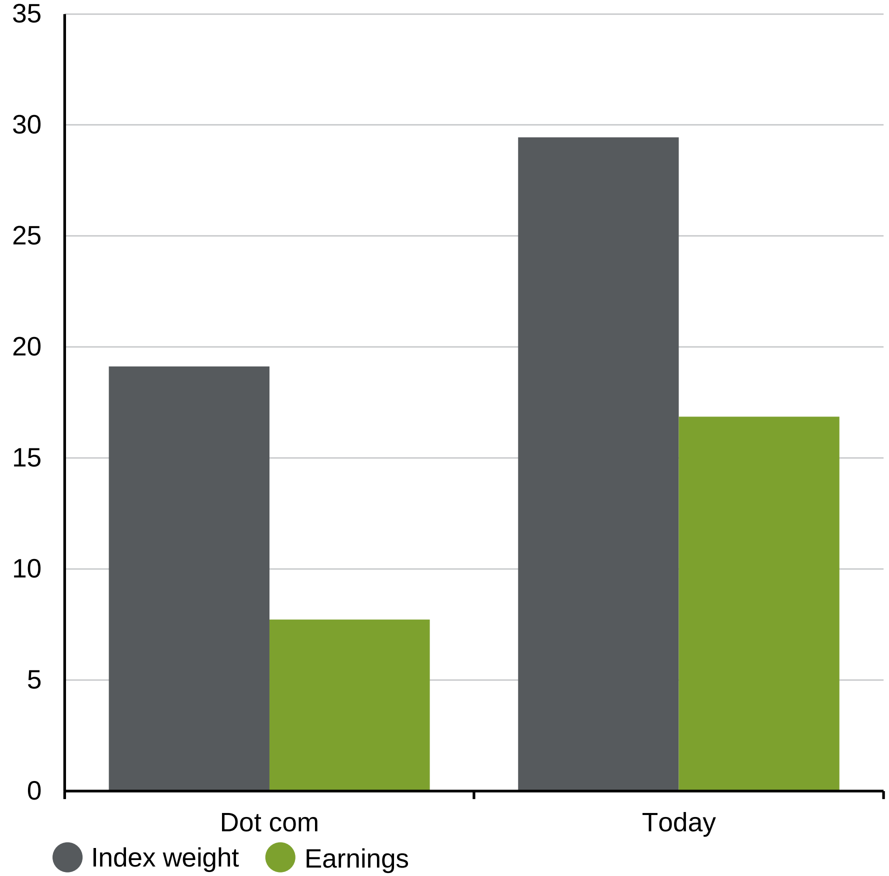
Source: (All charts) LSEG Datastream, MSCI, J.P. Morgan Asset Management. Bottom chart plots all drawdowns of 20% or more from the local peak. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan
ASSET MANAGEMENT

Equity focus: Navigating Tech concentration

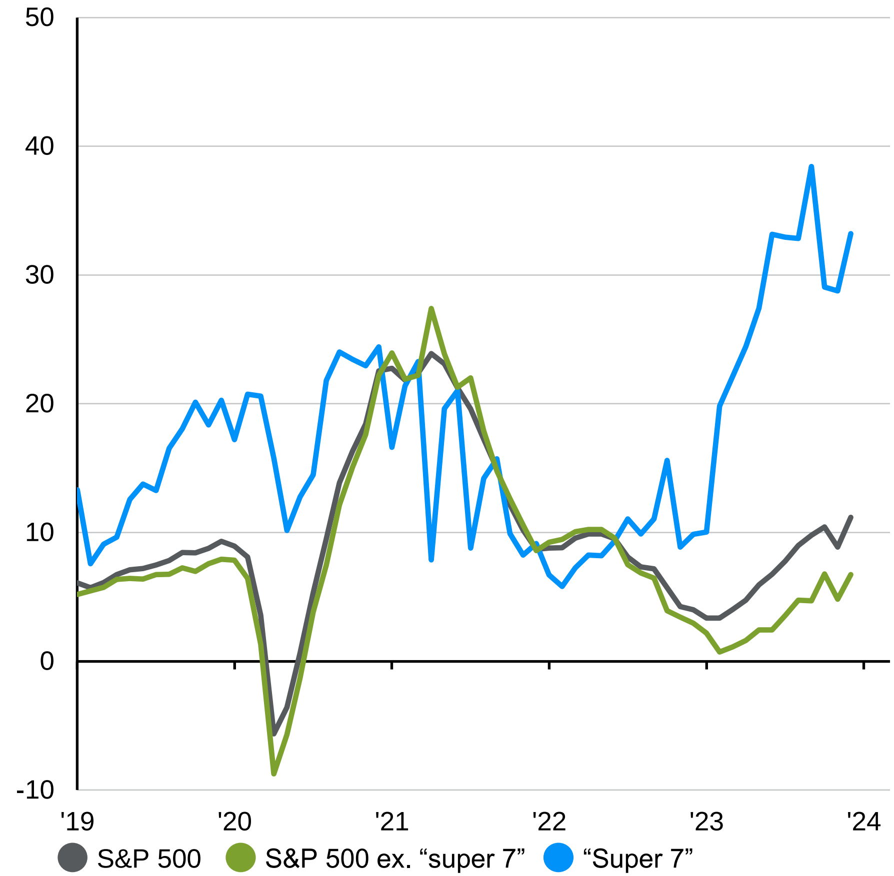
Contribution of largest seven "Tech" stocks to S&P 500

% contribution to S&P 500 market cap and trailing earnings



12-month forward earnings expectations

% change year on year



Source: (Left) IBES, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Dot com bubble peak represents the largest seven Tech or Tech-related firms in the S&P 500 by market cap, as of March 2000. We then show the same metrics for the "Today" bars for the current largest seven Tech or Tech-related firms by market cap. (Right) IBES, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

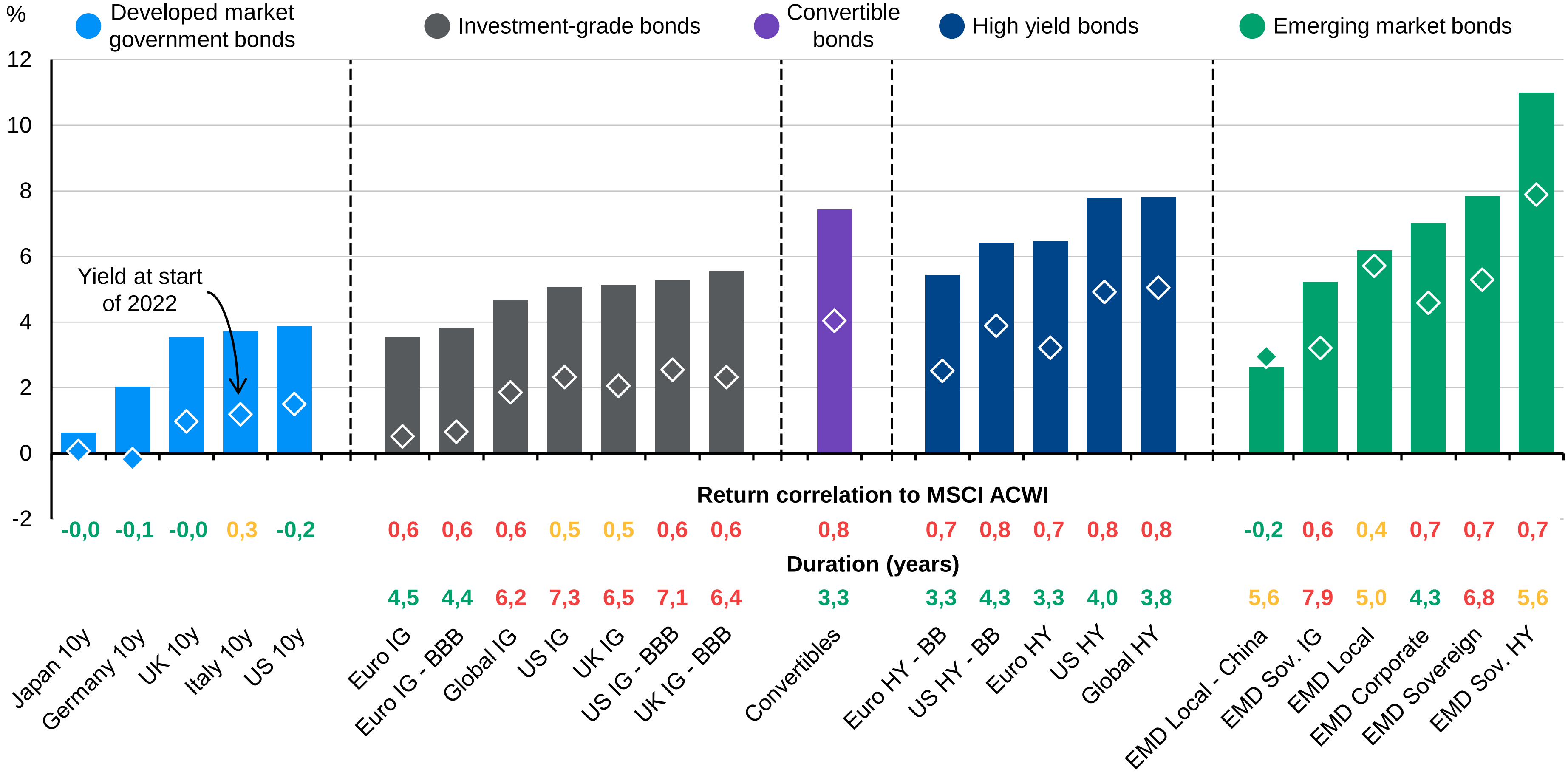
World stock market returns

	2015	2016	2017	2018	2019	2020	2021	2022	2023	1Q ’23	10-year ann. return
EUR Local	24,4% TOPIX 12,1%	15,3% S&P 500 12,0%	24,8% Asia ex-JP 35,9%	0,4% S&P 500 -4,4%	33,9% S&P 500 31,5%	15,0% Asia ex-JP 22,7%	38,5% S&P 500 28,7%	-8,9% Europe -8,0%	22,0% S&P 500 26,3%	7,0% S&P 500 11,7%	14,5% S&P 500 12,0%
	12,9% S&P 500 1,4%	14,9% MSCI EM 10,1%	21,0% MSCI EM 31,0%	-6,8% Portfolio -9,1%	26,9% Portfolio 24,5%	8,9% MSCI EM 19,5%	25,9% Europe 23,3%	-9,3% TOPIX -2,4%	16,6% Europe 15,0%	6,5% Europe 5,7%	9,2% Portfolio 8,4%
	8,8% Portfolio 2,2%	9,5% Portfolio 8,5%	12,7% Portfolio 21,8%	-9,4% TOPIX -16,0%	26,9% Europe 24,6%	8,6% S&P 500 18,4%	22,5% Portfolio 17,8%	-11,5% Portfolio -12,2%	16,0% TOPIX 28,3%	5,5% Portfolio 7,0%	7,8% TOPIX 8,6%
	8,8% Europe 5,4%	8,9% Asia ex-JP 6,4%	11,2% TOPIX 22,2%	-9,8% Asia ex-JP -12,0%	21,4% TOPIX 18,1%	4,8% Portfolio 10,9%	8,8% TOPIX 12,7%	-12,8% S&P 500 -18,1%	15,3% Portfolio 18,2%	3,5% TOPIX 2,0%	7,1% Europe 7,0%
	1,5% Asia ex-JP -5,3%	6,6% TOPIX 0,3%	10,9% Europe 13,7%	-9,9% MSCI EM -9,7%	21,1% MSCI EM 18,5%	3,7% TOPIX 7,4%	5,2% MSCI EM 0,1%	-14,1% Asia ex-JP -15,1%	6,5% MSCI EM 10,3%	3,4% MSCI EM 5,6%	6,5% Asia ex-JP 5,2%
	-4,9% MSCI EM -5,4%	3,2% Europe 7,9%	7,0% S&P 500 21,8%	-10,0% Europe -10,0%	20,7% Asia ex-JP 18,2%	-2,8% Europe -1,7%	2,8% Asia ex-JP -2,8%	-14,5% MSCI EM -15,2%	2,7% Asia ex-JP 6,8%	2,0% Asia ex-JP 4,3%	5,3% MSCI EM 5,6%

Source: LSEG Datastream, MSCI, S&P Global, TOPIX, J.P. Morgan Asset Management. Annualised return covers the period 2014 to 2023 inclusive. Hypothetical portfolio (for illustrative purposes only and should not be taken as a recommendation): 35% Europe; 30% S&P 500; 15% EM; 10% Asia ex-Japan; 10% TOPIX. All indices are total return. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Fixed income yields

Fixed income yields



	Return correlation to MSCI ACWI	Duration (years)
Japan 10y	-0,0	
Germany 10y	-0,1	
UK 10y	-0,0	
Italy 10y	0,3	
US 10y	-0,2	
Euro IG	0,6	4,5
Euro IG - BBB	0,6	4,4
Global IG	0,6	6,2
US IG	0,5	7,3
UK IG	0,5	6,5
US IG - BBB	0,6	7,1
UK IG - BBB	0,6	6,4
Convertibles	0,8	3,3
Euro HY - BB	0,7	3,3
US HY - BB	0,8	4,3
Euro HY	0,7	3,3
US HY	0,8	4,0
Global HY	0,8	3,8
EMD Local - China	-0,2	5,6
EMD Sov. IG	0,6	7,9
EMD Local	0,4	5,0
EMD Corporate	0,7	4,3
EMD Sovereign	0,7	6,8
EMD Sov. HY	0,7	5,6

Source: Bloomberg, Bloomberg Barclays, ICE BofA, J.P. Morgan Economic Research, LSEG Datastream, J.P. Morgan Asset Management. Return correlation to MSCI All-Country World Index is calculated using monthly total returns since 2008. Indices used are as follows: Euro IG: Bloomberg Barclays Euro-Aggregate Corporate; Global IG: Bloomberg Barclays Global Aggregate Corporate; UK IG: Bloomberg Barclays Sterling Aggregate Corporate; US IG: Bloomberg Barclays US Aggregate Corporate; Convertible bonds: Bloomberg Barclays Global Convertible Rate Sensitive hedged to USD; Euro HY: ICE BofA Euro Developed Markets Non-Financial High Yield Constrained Index; Global HY: ICE BofA Global High Yield Index; US HY: ICE BofA US High Yield Constrained Index; EMD corporate: CEMBI Broad Diversified; EMD local: GBI-EM Global Diversified; EMD local – China: J.P. Morgan GBI-EM Broad Diversified China; EMD sovereign: EMBI Global Diversified; EMD sov. IG: EMBI Global Diversified IG; EMD sov. HY: EMBI Global Diversified HY. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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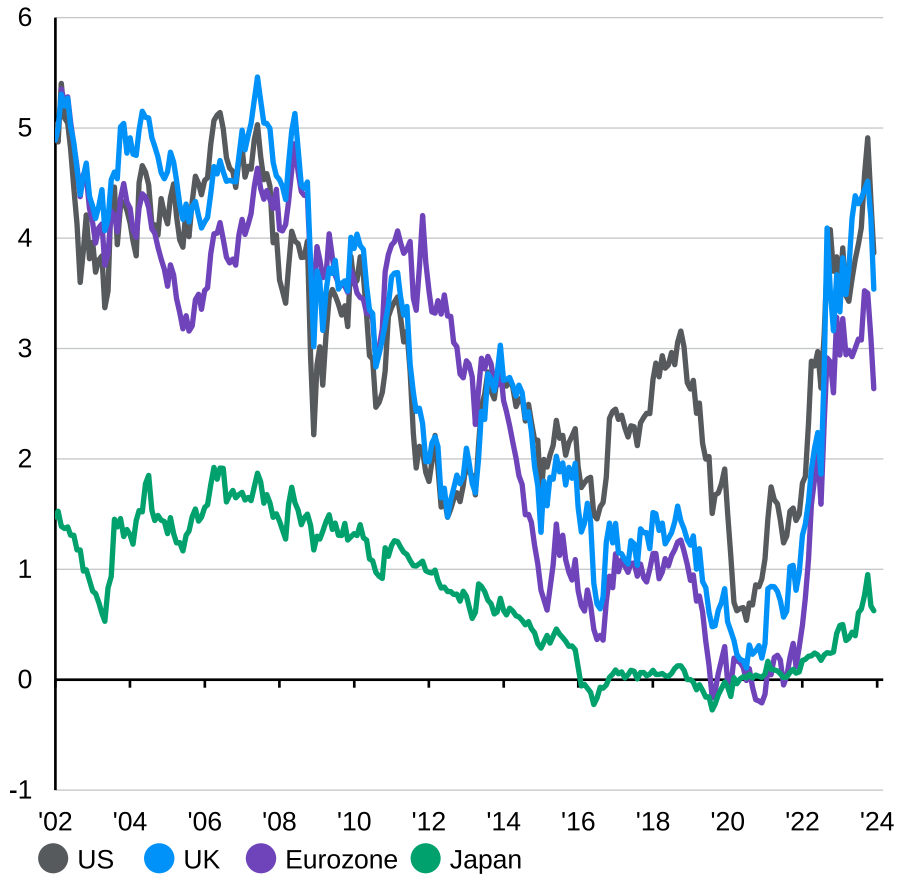
Fixed income

Global government bond yields

Nominal 10-year government bond yields

% yield



Real global government bond yield

% yield

Source: (Left) LSEG Datastream, J.P. Morgan Asset Management. Eurozone is a GDP-weighted average of the French, German, Italian and Spanish 10-year government bond yields. (Right) ICE BofA, LSEG Datastream, J.P. Morgan Asset Management. Index shown is the ICE BofA Global Inflation-Linked Government Bond index. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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US yield curve

US yield curve

Basis points, 10-year Treasury yield minus 2-year Treasury yield

Yield curve inversion and recessions

Number of months from

Yield curve inversion date	Curve inversion to S&P 500 peak before recession	S&P 500 peak to start of recession	Curve inversion to recession
Aug '78	18	0	18
Sep '80	3	8	11
Dec '88	19	1	20
May '98	22	12	34
Dec '05	22	3	25
Median	**19**	**3**	**20**
Average	**17**	**5**	**22**

Source: (Left) LSEG Datastream, J.P. Morgan Asset Management. (Right) LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Periods of recession are defined using US National Bureau of Economic Research (NBER) business cycle dates. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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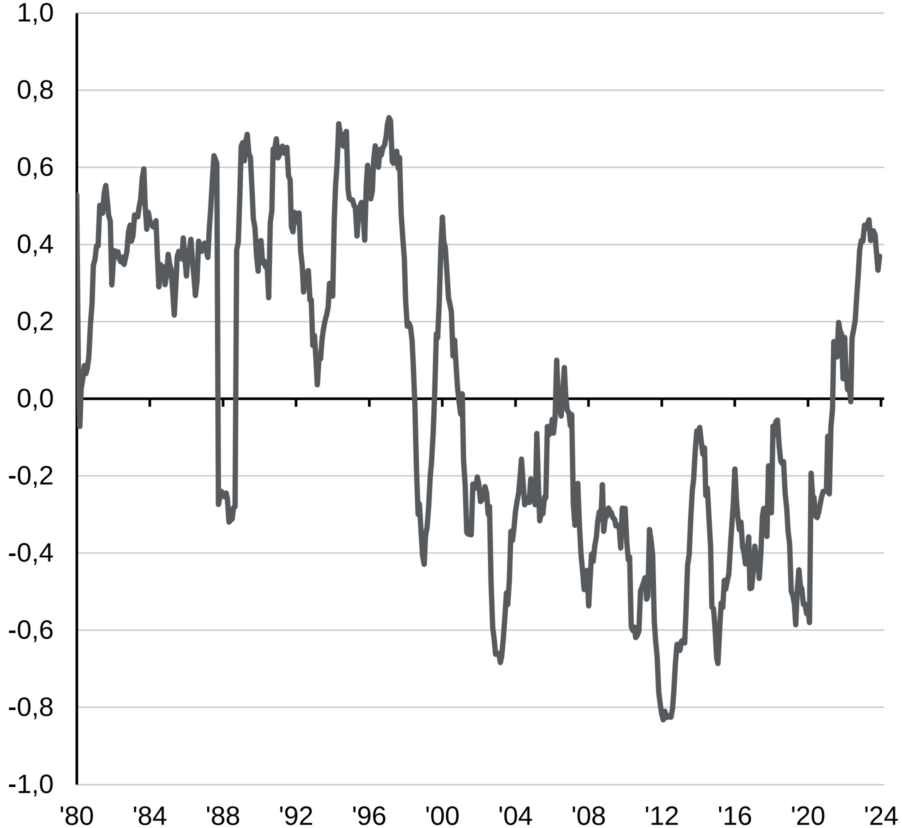
Fixed income

US Treasury diversification potential

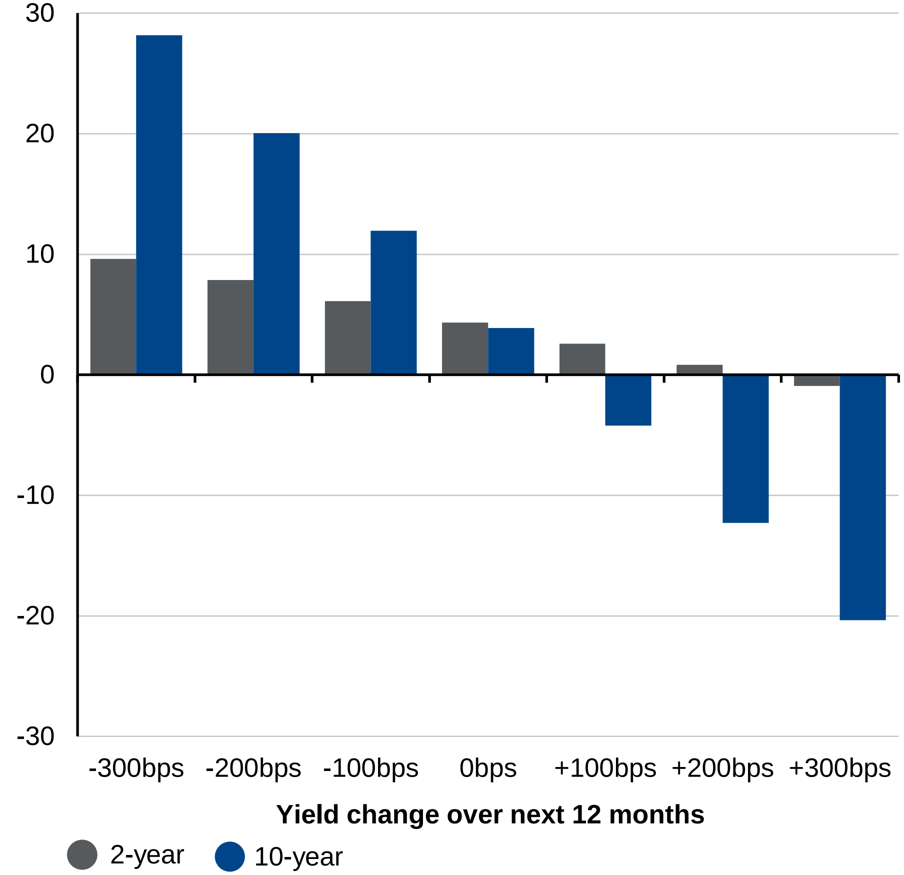
S&P 500 / US 10-year Treasury correlations

Rolling one-year correlation based on weekly returns



Total return scenarios for US Treasuries

%



Source: (Left) LSEG Datastream, S&P Global, J.P. Morgan Asset Management. (Right) Bloomberg, J.P. Morgan Asset Management. Chart indicates the calculated total return achieved by purchasing US Treasuries at the current yield and selling in 12 months' time given various changes in yield. For illustrative purposes only. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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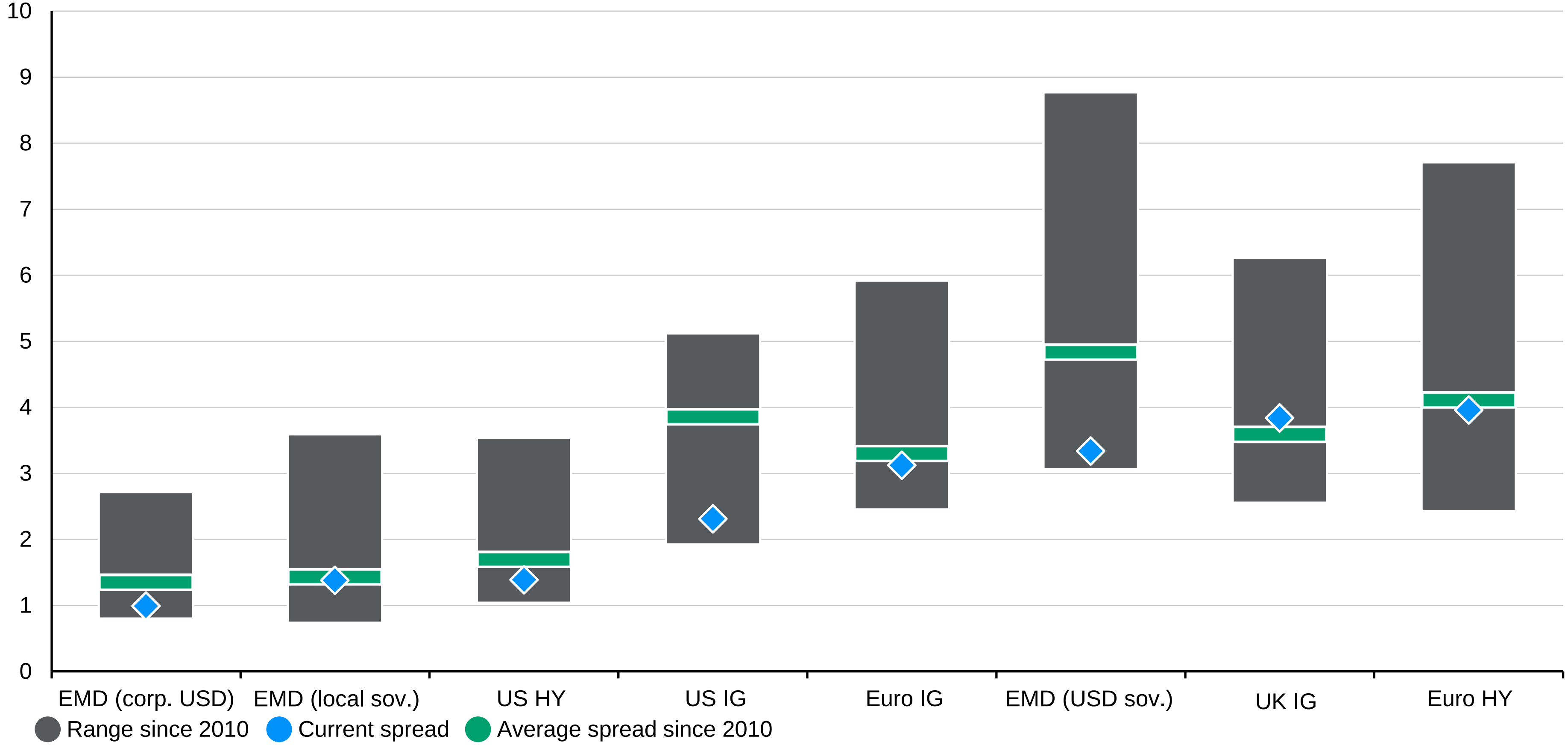
Global fixed income spreads

Fixed income spreads

%, option-adjusted spread



Source: Bloomberg, Bloomberg Barclays, ICE BofA, J.P. Morgan Economic Research, LSEG Datastream, J.P. Morgan Asset Management. Euro IG: Bloomberg Barclays Euro Agg. Corporate; US HY: ICE BofA US High Yield Constrained; EM Debt: J.P. Morgan EMBI Global Diversified; Euro HY: ICE BofA Euro Developed Markets Non-Financial High Yield Constrained; US IG: Bloomberg Barclays US Agg. Corporate – Investment Grade; UK IG: Bloomberg Barclays Sterling Agg. Corporate; EMD local: J.P. Morgan GBI-EM Global Diversified; EMD corporate: J.P. Morgan CEMBI Broad Diversified. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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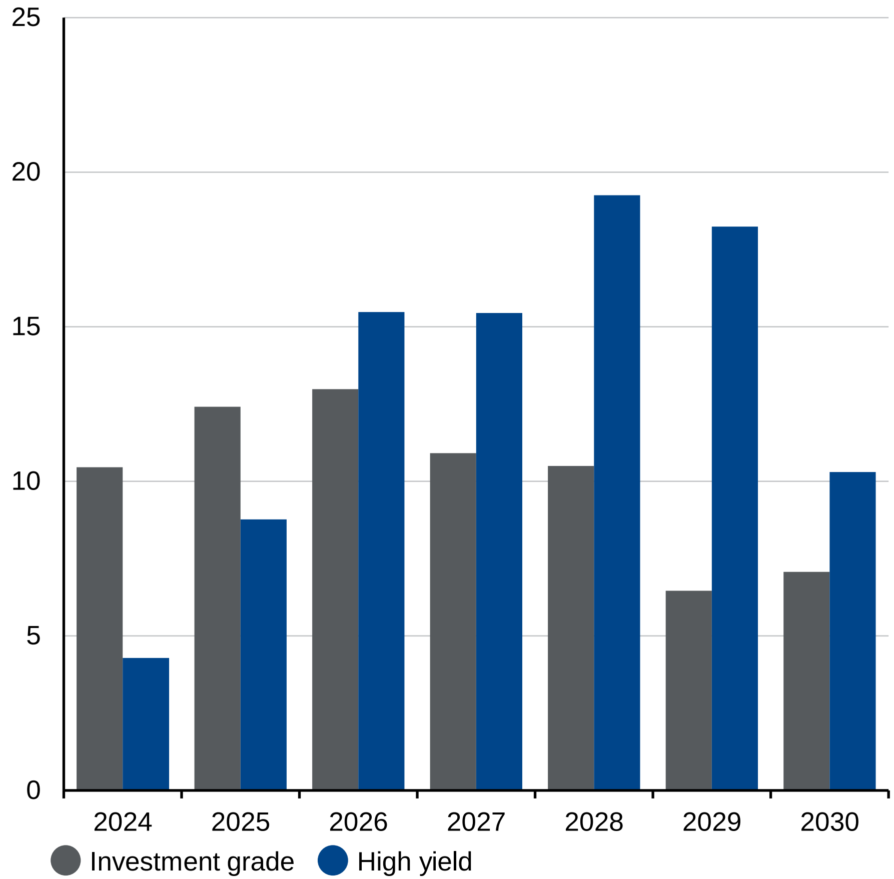
Fixed income

Corporate refinancing

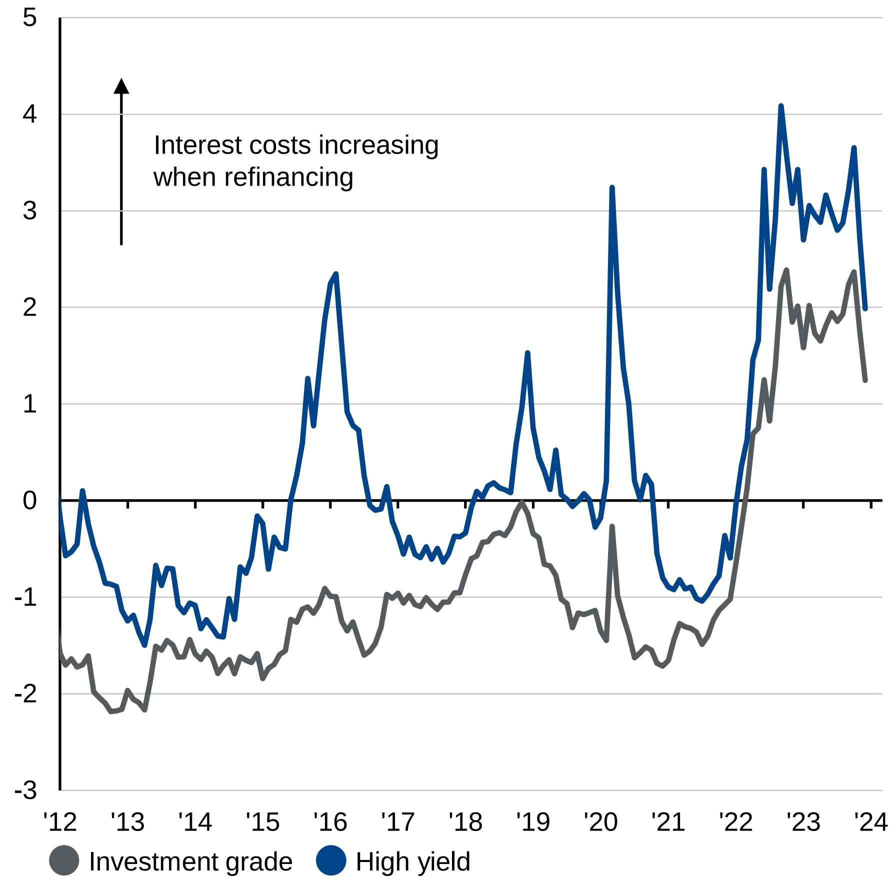
Global credit maturity schedule

% of index



Global corporate refinancing costs

% point difference between current yields and average coupon



Source: (Left) Bloomberg, BofA, J.P. Morgan Asset Management. Global Investment Grade: BofA Global Corporate Index; Global High Yield: BofA Global Developed Market Non-Financial High Yield Constrained Index. 2024 maturities include bonds that have now dropped out of the index given less than one year until maturity. (Right) BofA, LSEG Datastream, J.P. Morgan Asset Management. Global Investment Grade: BofA Global Corporate Index; Global High Yield: BofA Global Developed Market Non-Financial High Yield Constrained Index. Past performance is not a reliable indicator of current and future results.
Guide to the Markets - Europe. Data as of 31 December 2023.

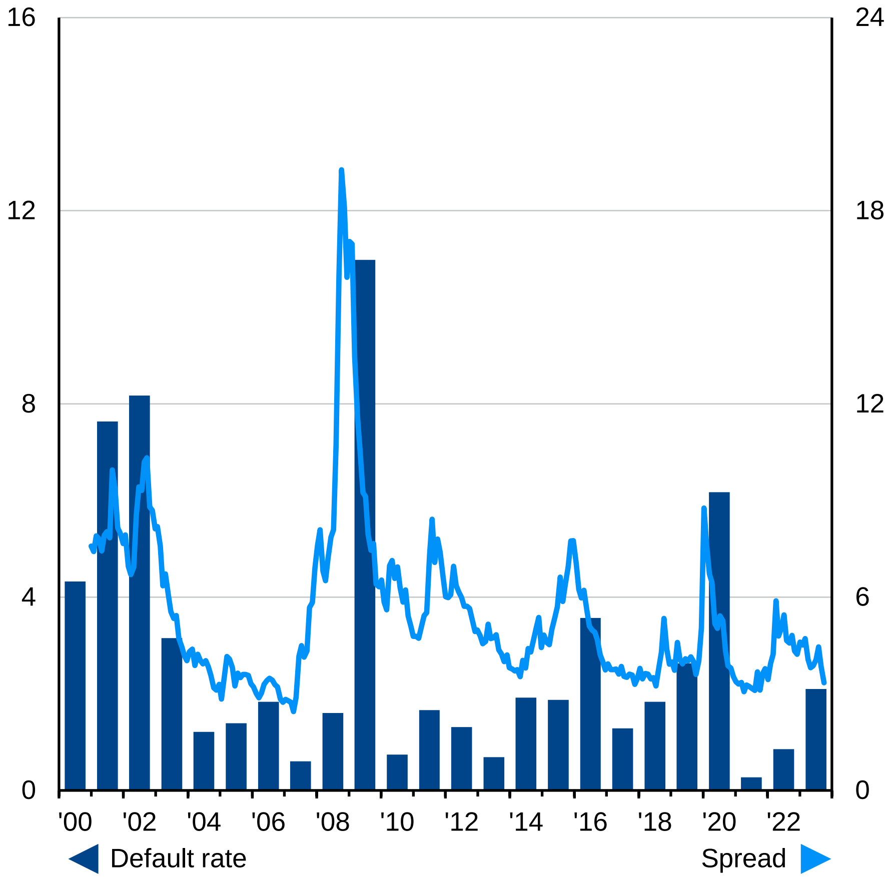
J.P.Morgan ASSET MANAGEMENT

Fixed income

High yield bonds

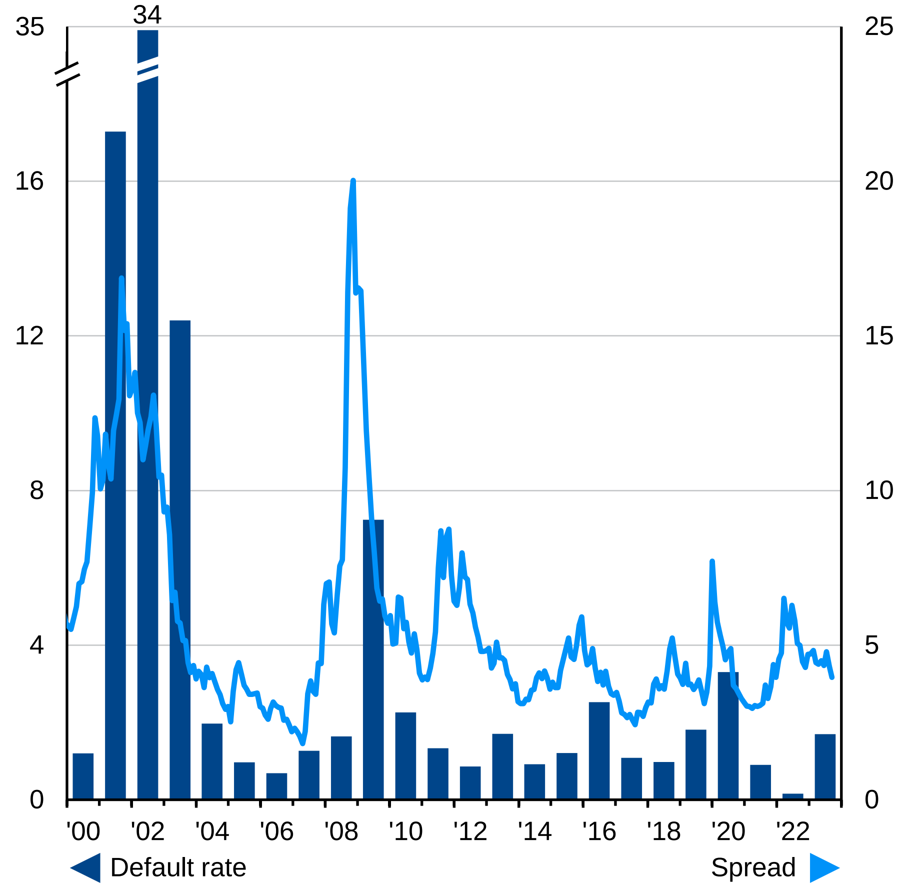
US high yield spread and defaults

%, default rate (LHS); %, option-adjusted spread (RHS)



Euro high yield spread and defaults

%, default rate (LHS); %, option-adjusted spread (RHS)



Source: (Left) ICE BofA, J.P. Morgan Securities Research, LSEG Datastream, J.P. Morgan Asset Management. US HY: ICE BofA US High Yield Constrained. US HY default rate is defined as the par value percentage of the total market trading at or below 50% of par value and includes any Chapter 11 filing, prepackaged filing or missed interest payments. (Right) Bloomberg, ICE BofA, J.P. Morgan Securities Research, J.P. Morgan Asset Management. Euro HY: ICE BofA Euro Developed Markets Non-Financial High Yield Constrained Index. Euro HY defaults occur when bonds are downgraded to C rating. The calculation universe is based on par value percentage of the EUR and GBP HY Non-Financials Corporate bond universe. Defaults include missed coupon payments, restructuring and distressed exchanges. 2023 default rate is for the last 12 months of available data. Past performance is not a reliable indicator of current and future results.
Guide to the Markets - Europe. Data as of 31 December 2023.

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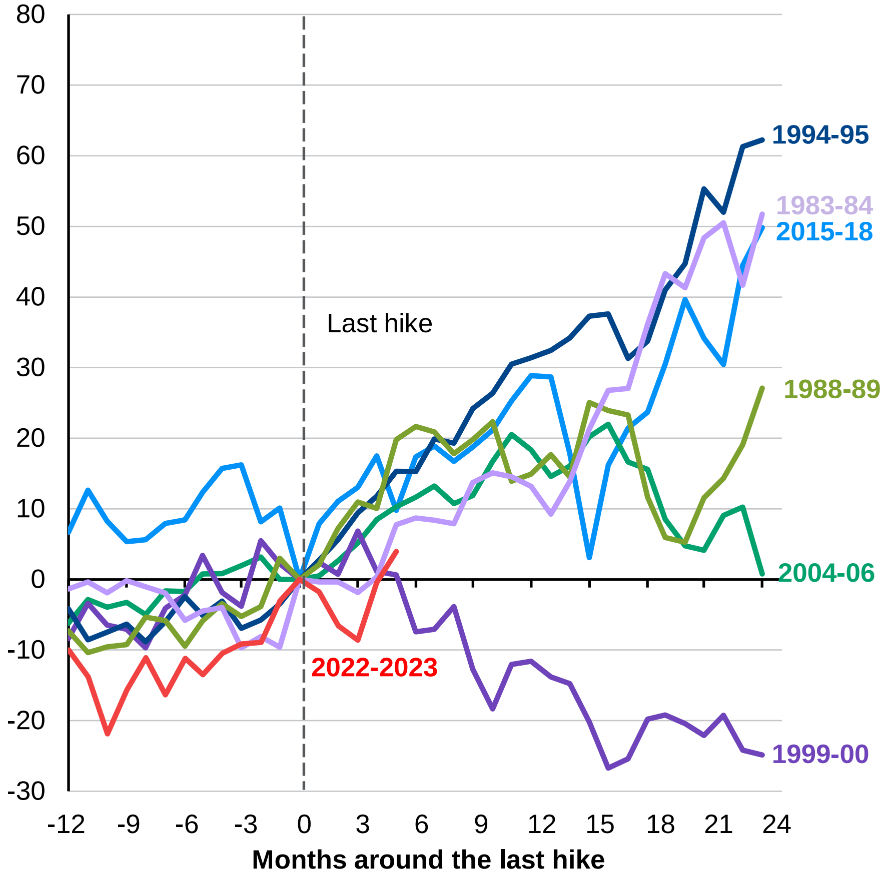
Equity and bond returns after Fed hiking cycles

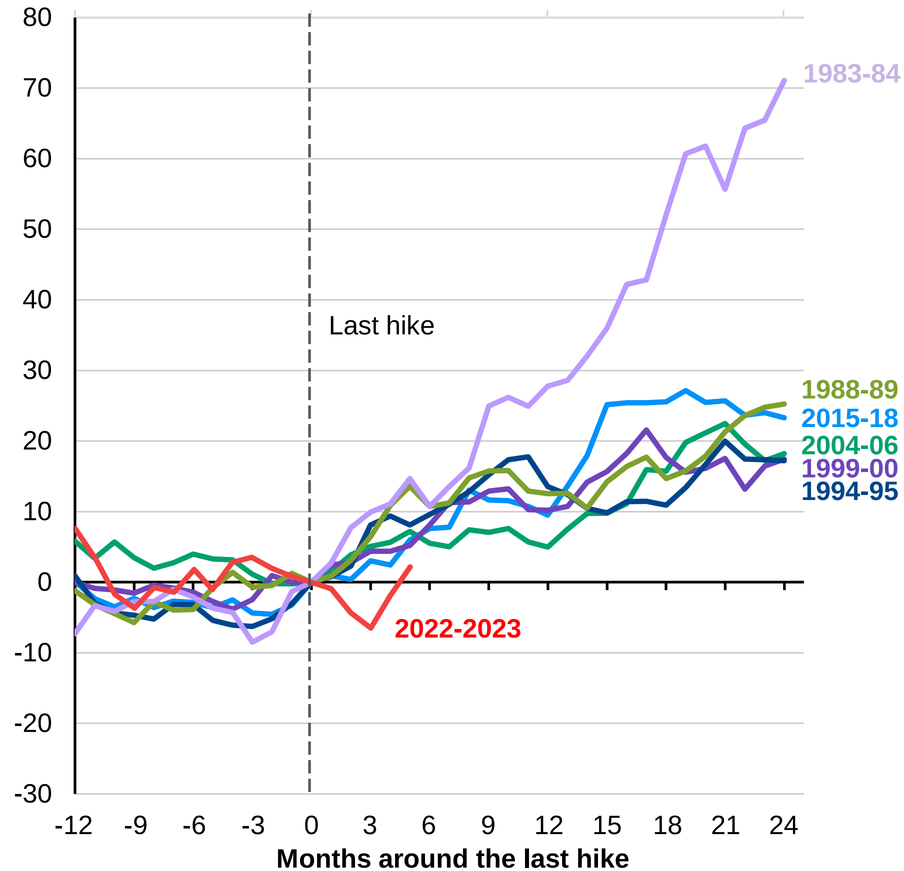
S&P 500 returns at the end of a Fed hiking cycle

%, price return, indexed to zero at the last hike



UST 10-year returns at the end of a Fed hiking cycle

%, total return, indexed to zero at the last hike



Source: Federal Reserve, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. The 2022-2023 cycle assumes that the last hike of the cycle was in July 2023. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

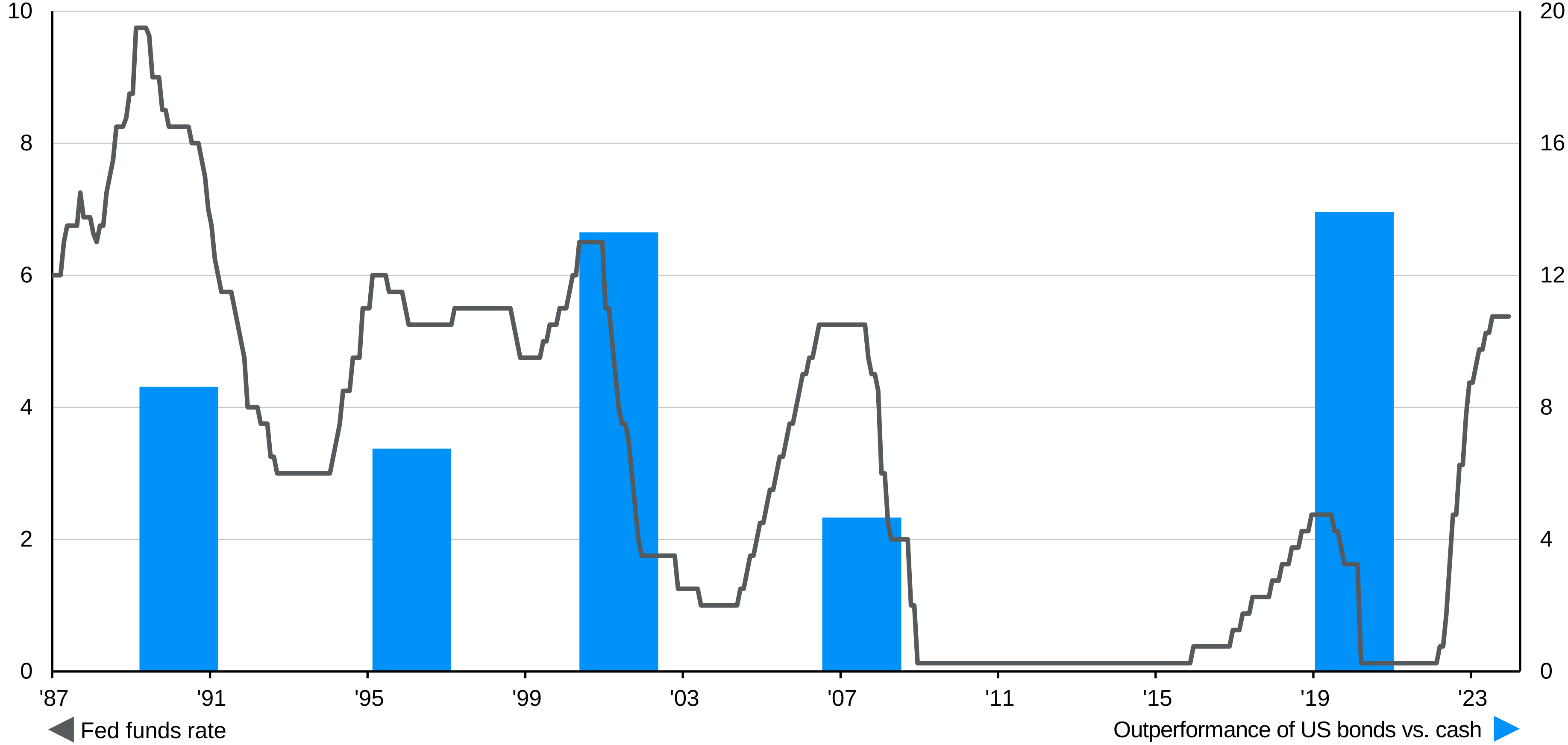
J.P.Morgan ASSET MANAGEMENT

Fixed income

Fixed income focus: Bond performance beyond peak rates

Relative performance of US bonds vs. cash after interest rate peaks

% (LHS); % points, two-year relative performance of US Aggregate bonds vs. cash (RHS)



Source: Bloomberg, Bloomberg Barclays, Federal Reserve, ICE BofA, J.P. Morgan Asset Management. Cash: ICE BofA 3-Month Treasury Bill Index; US bonds: Bloomberg Barclays US Aggregate Index. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Global fixed income returns

	2015	2016	2017	2018	2019	2020	2021	2022	2023	1Q '23	10-year ann. return
EUR Local	12,7% EM Debt 1,2%	21,0% US HY 17,5%	6,3% Euro HY 6,3%	5,9% US Treas. 0,9%	17,2% EM Debt 15,0%	5,0% Euro Gov 5,0%	13,3% US HY 5,3%	-5,4% US HY -11,2%	11,8% Euro HY 11,8%	7,2% Euro Gov 7,2%	6,8% US HY 4,5%
	12,3% US Treas. 0,8%	13,4% EM Debt 10,2%	2,4% Euro IG 2,4%	2,7% US HY -2,3%	16,6% US IG 14,5%	3,1% Infl Linked 3,1%	6,5% US IG -1,0%	-6,7% US Treas. -12,5%	9,6% US HY 13,5%	5,5% Euro IG 5,5%	5,5% EM Debt 3,2%
	10,6% US IG -0,7%	10,2% Euro HY 10,2%	1,4% Infl Linked 1,4%	2,4% US IG -2,5%	16,5% US HY 14,4%	2,8% Euro IG 2,8%	6,4% Infl Linked 6,4%	-9,7% Infl Linked -9,7%	8,2% Euro IG 8,2%	5,5% Euro HY 5,5%	5,3% US IG 3,0%
	6,4% Portfolio 0,2%	9,3% US IG 6,1%	0,2% Euro Gov 0,2%	1,3% Portfolio -1,4%	11,2% Portfolio 10,1%	2,2% Euro HY 2,2%	5,7% EM Debt -1,8%	-10,2% US IG -15,8%	7,3% EM Debt 11,1%	5,3% Infl Linked 5,3%	3,7% Portfolio 2,4%
	6,3% US HY -4,6%	8,1% Portfolio 6,3%	-2,8% Portfolio 4,3%	1,0% Euro Gov 1,0%	10,9% Euro HY 10,9%	0,9% Portfolio 5,8%	5,1% US Treas. -2,3%	-11,3% Euro HY -11,3%	7,1% Euro Gov 7,1%	4,6% EM Debt 9,2%	3,5% US Treas. 1,3%
	1,6% Euro Gov 1,6%	4,7% Euro IG 4,7%	-3,2% EM Debt 10,3%	0,6% EM Debt -4,3%	8,8% US Treas. 6,9%	0,8% US IG 9,9%	3,9% Portfolio -0,2%	-11,5% Portfolio -14,6%	6,3% Portfolio 8,3%	4,5% Portfolio 7,0%	3,4% Euro HY 3,4%
	1,4% Euro HY 1,4%	4,1% US Treas. 1,0%	-5,6% US HY 7,5%	-1,3% Euro IG -1,3%	6,8% Euro Gov 6,8%	-0,9% US Treas. 8,0%	3,4% Euro HY 3,4%	-12,4% EM Debt -17,8%	5,9% Infl Linked 5,9%	4,0% US IG 8,5%	2,1% Infl Linked 2,1%
	0,8% Infl Linked 0,8%	3,8% Infl Linked 3,8%	-6,5% US IG 6,4%	-1,5% Infl Linked -1,5%	6,6% Infl Linked 6,6%	-2,7% US HY 6,1%	-1,0% Euro IG -1,0%	-13,6% Euro IG -13,6%	4,8% US IG 8,5%	2,6% US HY 7,1%	1,4% Euro IG 1,4%
	-0,6% Euro IG -0,6%	3,2% Euro Gov 3,2%	-10,1% US Treas. 2,3%	-4,0% Euro HY -4,0%	6,2% Euro IG 6,2%	-3,4% EM Debt 5,3%	-3,5% Euro Gov -3,5%	-18,5% Euro Gov -18,5%	0,5% US Treas. 4,1%	1,3% US Treas. 5,7%	1,3% Euro Gov 1,3%

Source: Bloomberg, Bloomberg Barclays, ICE BofA, J.P. Morgan Economic Research, LSEG Datastream, J.P. Morgan Asset Management. UK IG: Bloomberg Barclays Sterling Agg. Corporate; US HY: ICE BofA US High Yield Constrained; EM Debt: J.P. Morgan EMBI Global Diversified; Euro HY: ICE BofA Euro Developed Markets Non-Financial High Yield Constrained; US IG: Bloomberg Barclays US Agg. Corporate – Investment Grade; US Treasuries: Bloomberg Barclays US Agg. Gov. Treasury; Euro IG: Bloomberg Barclays Euro Agg. Corporate; Euro Gov.: Bloomberg Barclays Euro Agg. Government; Infl Linked: Bloomberg Barclays Euro Gov. Inflation-Linked. Hypothetical portfolio (for illustrative purposes only and should not be taken as a recommendation): 20% Euro Gov.; 15% US Treasuries; 10% Linkers; 15% US IG; 10% Euro IG; 10% US HY; 5% Euro HY; 15% EM Debt. Annualised return covers period 2014 to 2023 inclusive. Returns are unhedged in euros and local currencies. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

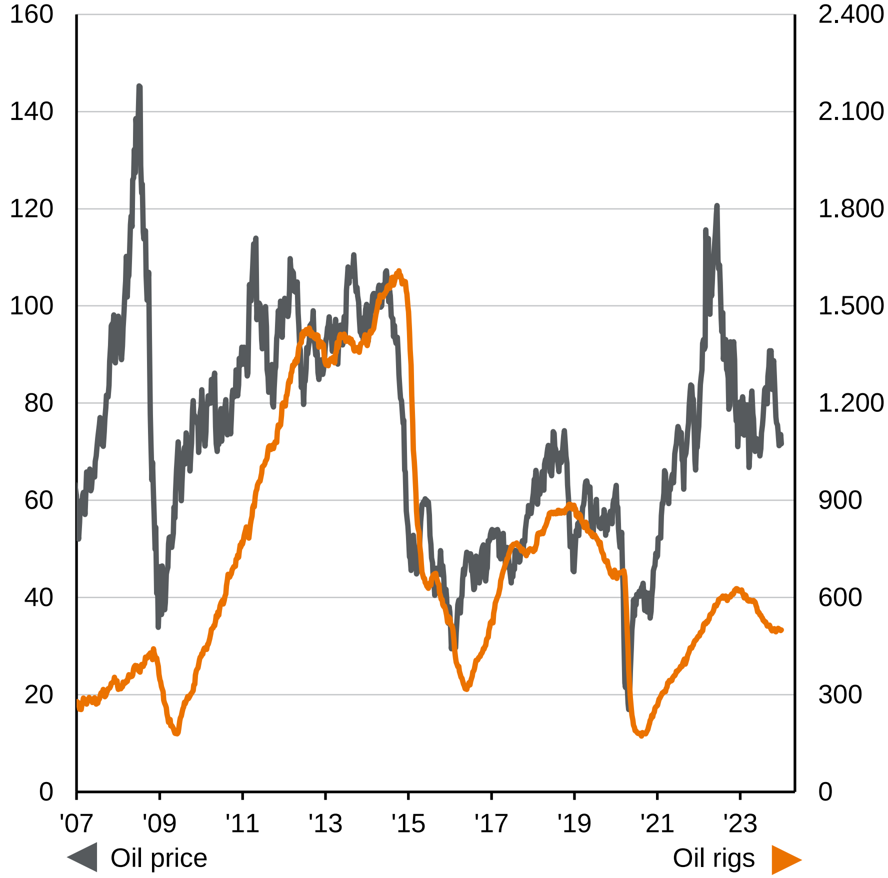
J.P.Morgan ASSET MANAGEMENT

Fixed income

Oil

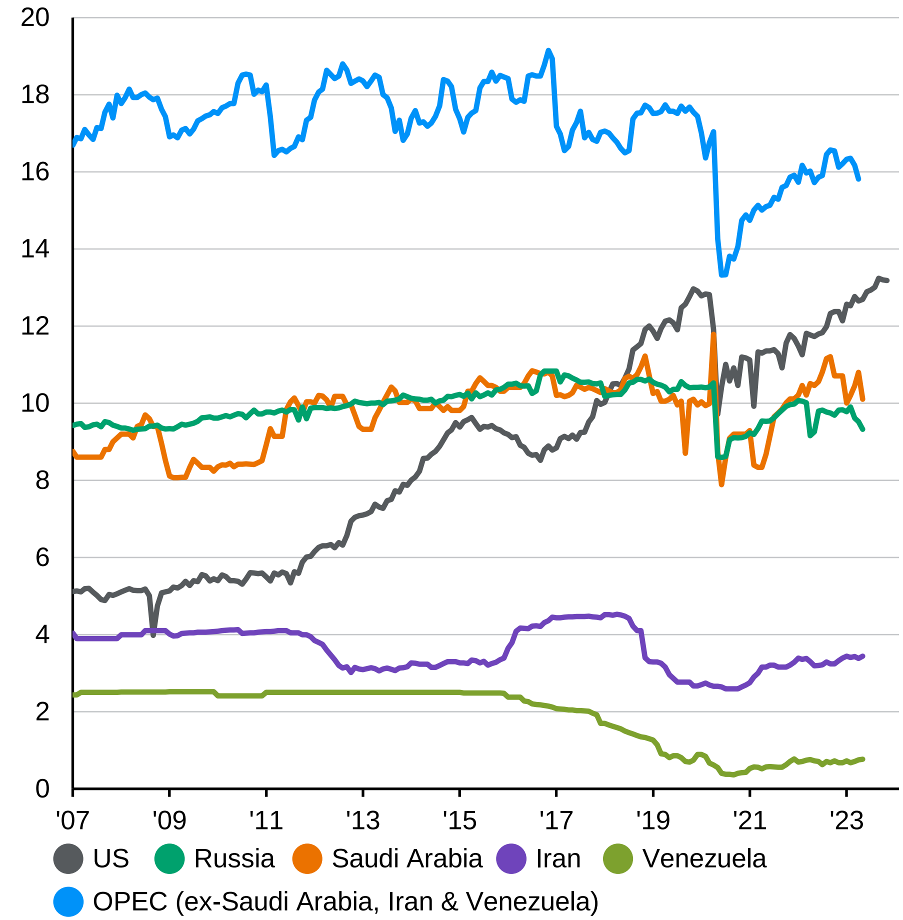
WTI crude oil price and US rig count

USD per barrel (LHS); number of rigs (RHS)



Crude oil production by country

Million barrels per day



Source: (Left) Baker Hughes, Bloomberg, J.P. Morgan Asset Management. (Right) EIA, LSEG Datastream, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

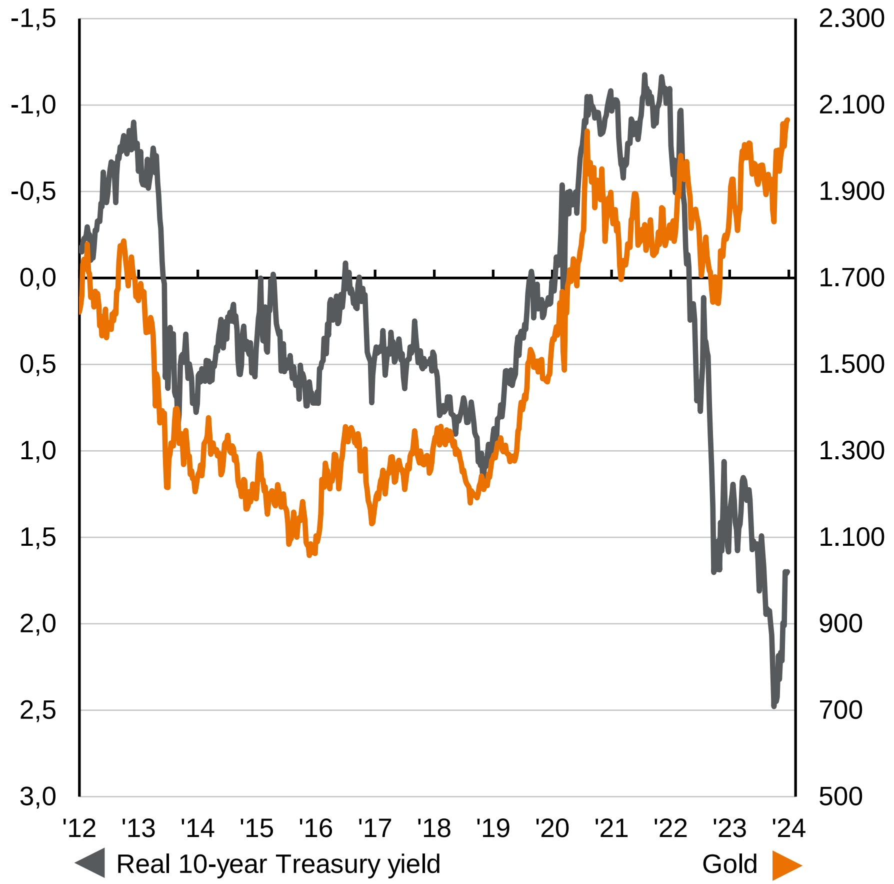
J.P.Morgan ASSET MANAGEMENT

Commodities

Other assets

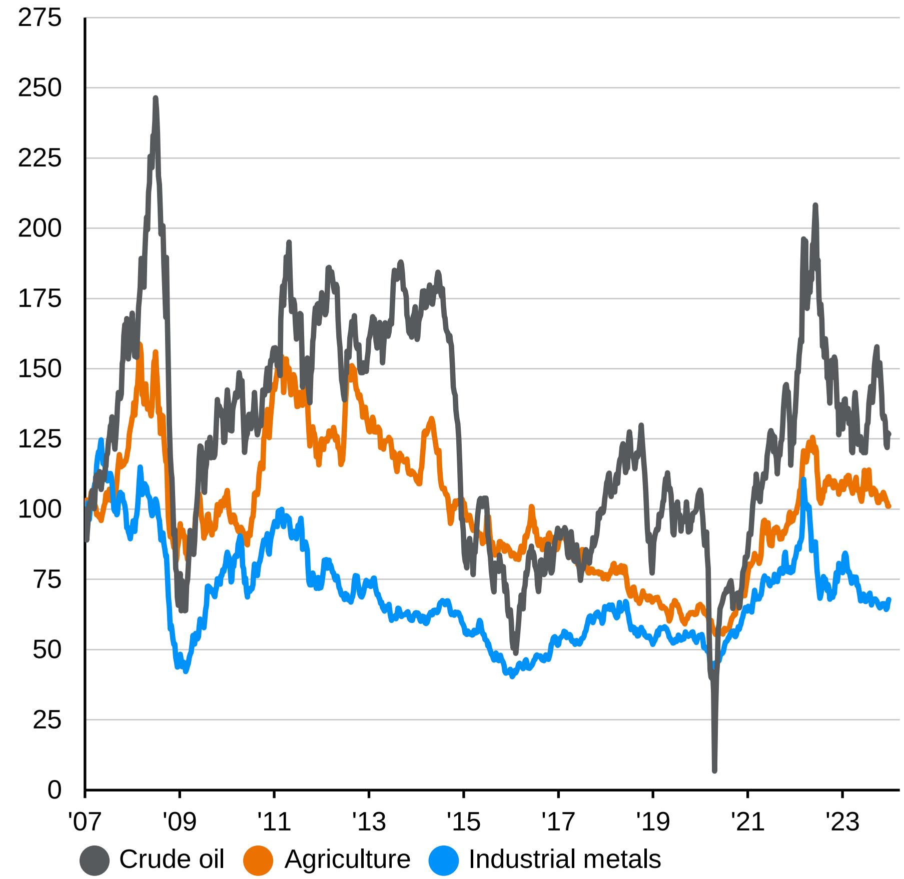
Real US 10-year Treasury yield vs. gold

%, inverted (LHS); USD per Troy ounce (RHS)



Commodity prices

Index level, rebased to 100 in Jan 2007



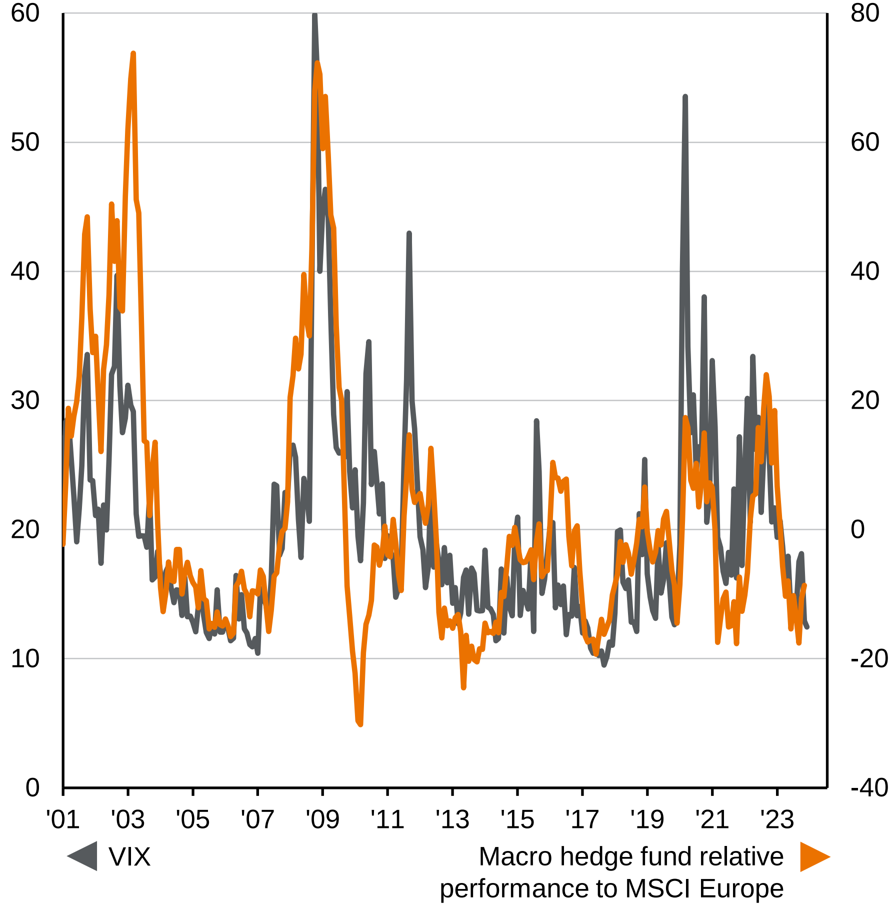
Source: (Left) LSEG Datastream, J.P. Morgan Asset Management. Real yield is the US 10-year Treasury inflation-protected security yield. (Right) Bloomberg, J.P. Morgan Asset Management. Industrial metals include aluminium, copper, nickel and zinc. Agriculture includes coffee, corn, soybeans, soybean oil, sugar and wheat. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Volatility and alternative investments

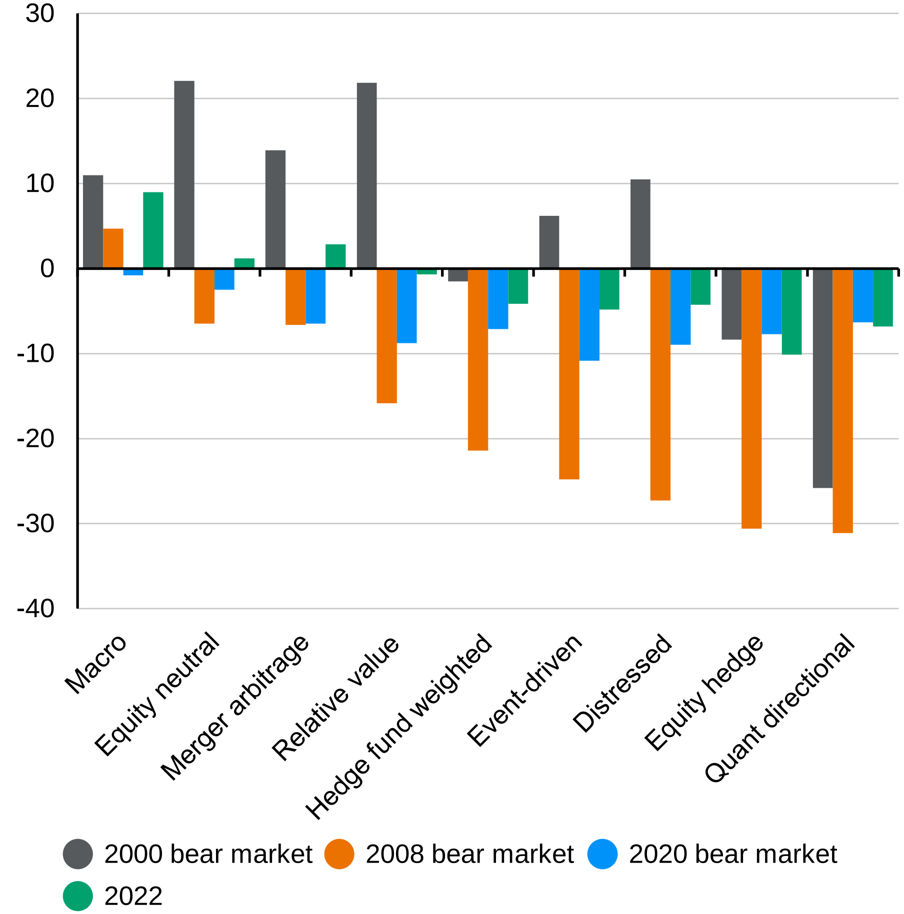
Macro hedge fund relative performance & volatility

Index level (LHS); % change year on year (RHS)



Hedge fund style returns during bear markets

% total return



Source: (Left) CBOE, Hedge Fund Research Indices (HFRI), LSEG Datastream, MSCI, J.P. Morgan Asset Management. Macro hedge fund (total return in USD) relative performance is calculated relative to MSCI Europe (total return in local currency). VIX is the implied volatility of S&P 500 Index based on options pricing. (Right) Hedge Fund Research Indices (HFRI), LSEG Datastream, J.P. Morgan Asset Management. 2000 bear market is from 31 March 2000 to 31 October 2002, 2008 bear market is from 31 October 2007 to 28 February 2009, 2020 bear market is from 31 January 2020 to 30 April 2020. Hedge fund strategies are defined in the HFRI hedge fund strategy classification system. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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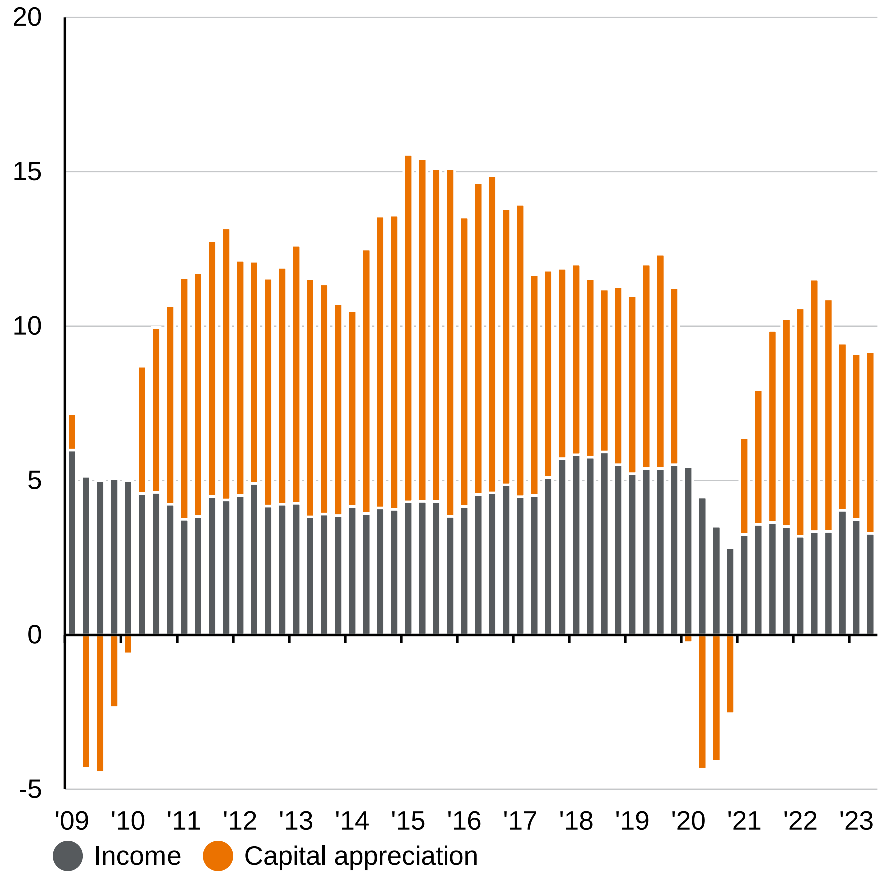
Inflation protection and alternative investments

Global core infrastructure returns

%, rolling 4-quarter returns from income and capital appreciation



Public and private market correlations

Correlation, quarterly returns

	2008 - 2023	Global Bonds	Global Equities
Financial assets	Global Bonds	1,0	
	Global Equities	0,4	1,0
Global real estate	U.S. Core RE	-0,2	0,0
	Europe Core RE	-0,2	0,1
Real assets	Commodities	-0,2	0,0
	Global Core Infra	-0,1	0,0
	Transport	-0,2	0,0
	Timber	-0,2	-0,1
Private markets	Direct Lending	0,0	0,7
	Private Equity	0,3	0,8
Hedge funds	Equity Long/Short	0,3	0,9
	Macro	0,0	0,3

Source: (Left) MSCI, J.P. Morgan Asset Management. Infrastructure returns represented by the MSCI Global Quarterly Infrastructure Asset Index “low risk” category. Rolling one-year returns from income and capital appreciation. (Right) Bloomberg, Burgiss, Cliffwater, FactSet, HRFI, LSEG Datastream, MSCI, NCREIF, J.P. Morgan Asset Management. Global equities: MSCI AC World Index; Global bonds: Bloomberg Global Aggregate Index; US core real estate: NCREIF Property Index – Open End Diversified Core Equity; Europe core real estate: MSCI Global Property Fund Index – Continental Europe; Direct lending: Cliffwater Direct Lending Index; Global infrastructure: MSCI Global Quarterly Infrastructure Asset Index (equal-weighted blend); Timber: NCREIF Timberland Total Return Index; Commodities: Bloomberg Commodity Index. Private equity is time-weighted returns from Burgiss. Hedge fund indices are from HFRI. Transport: returns are derived from a J.P. Morgan Asset Management index. All correlation coefficients are calculated based on quarterly total return data for the period 30 June 2008 to 31 March 2023. Returns are denominated in USD. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Other assets

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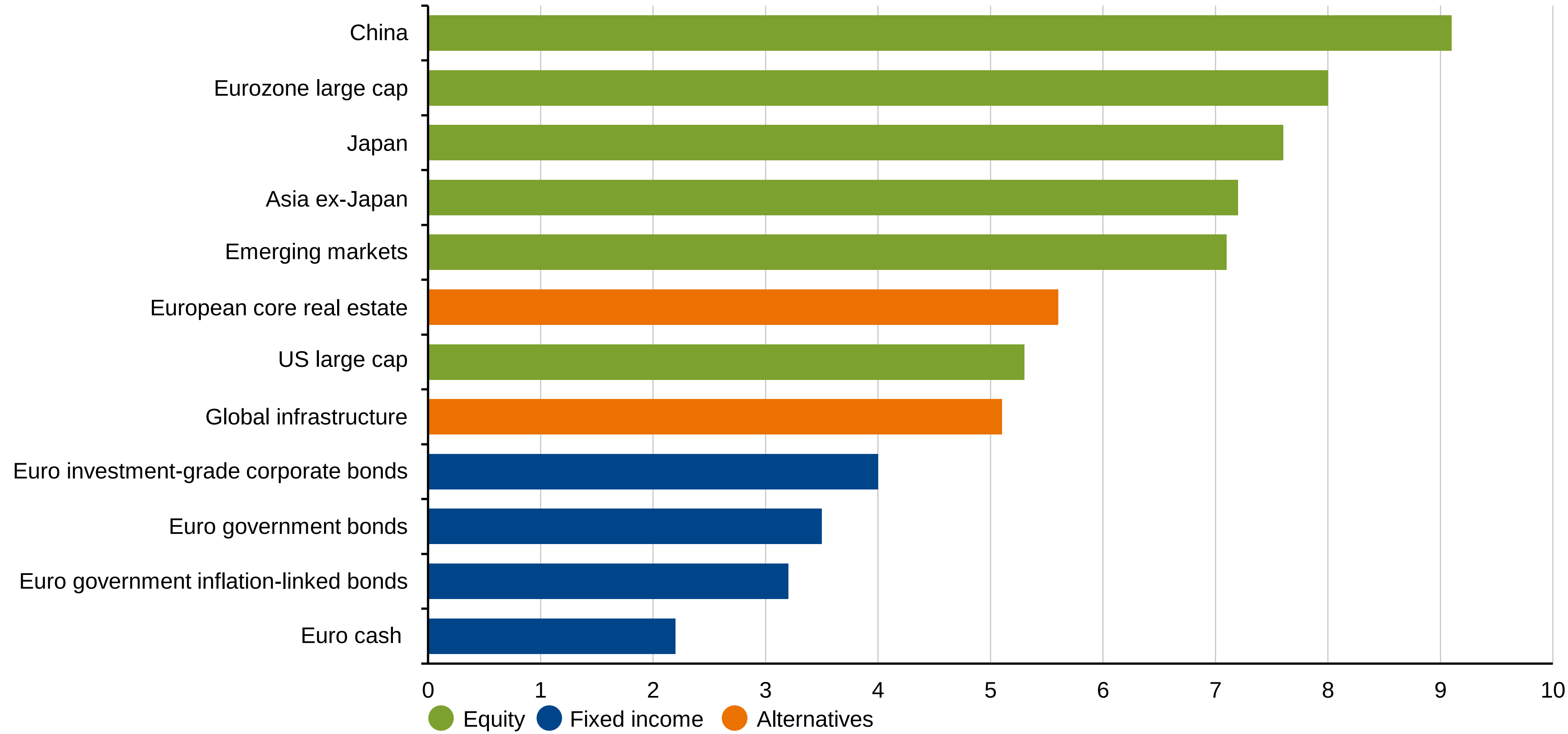
Asset return expectations

2024 Long-Term Capital Market Assumptions expected returns in coming 10-15 years
%, annualised return in EUR



Source: 2024 Long-Term Capital Market Assumptions, J.P. Morgan Asset Management. Returns are nominal and in EUR. The projections in the chart above are based on J.P. Morgan Asset Management's proprietary Long-Term Capital Market Assumptions (10-15 years) for returns of major asset classes. The resulting projections include only the benchmark return associated with the portfolio and do not include alpha from the underlying product strategies within each asset class. The assumptions are presented for illustrative purposes only. Past performance and forecasts are not reliable indicators of current and future results.
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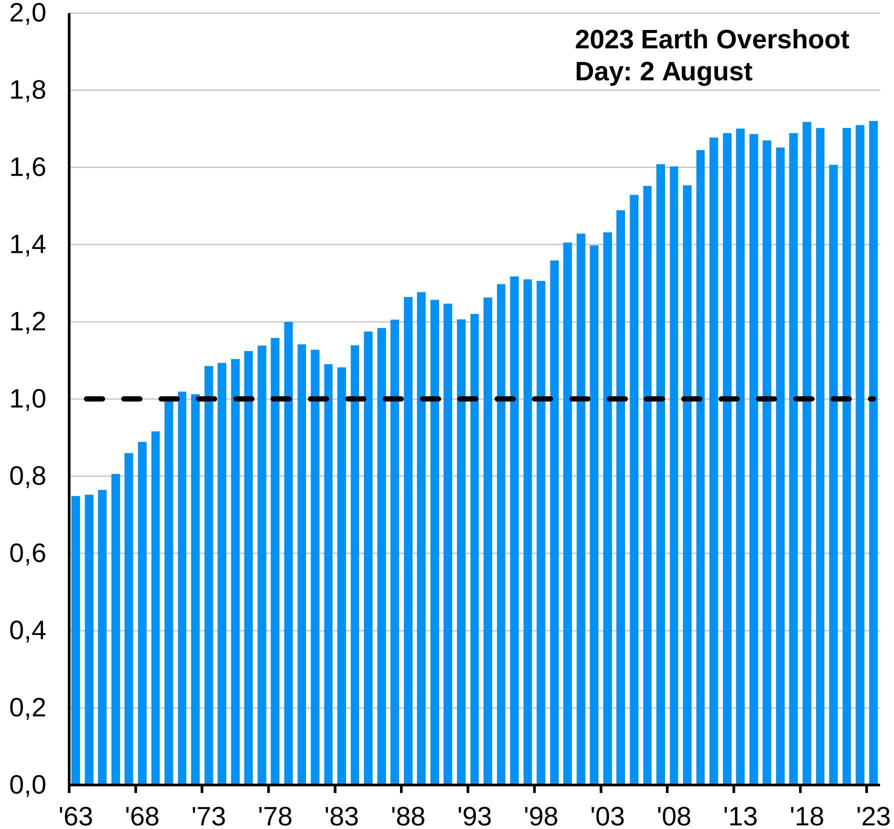
Ecological capacity and consumer concerns

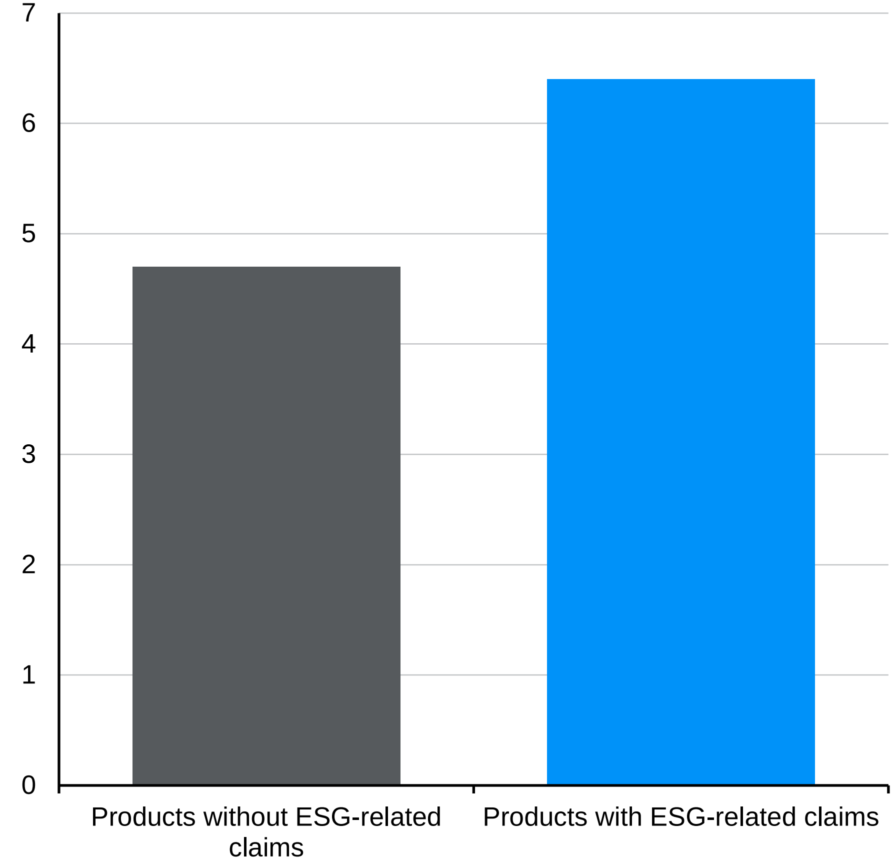
Earths needed to sustainably meet ecological footprint

Number of Earths required annually to sustainably meet ecological demand



US sales growth

%, annualised growth rate from 2018 - 2022



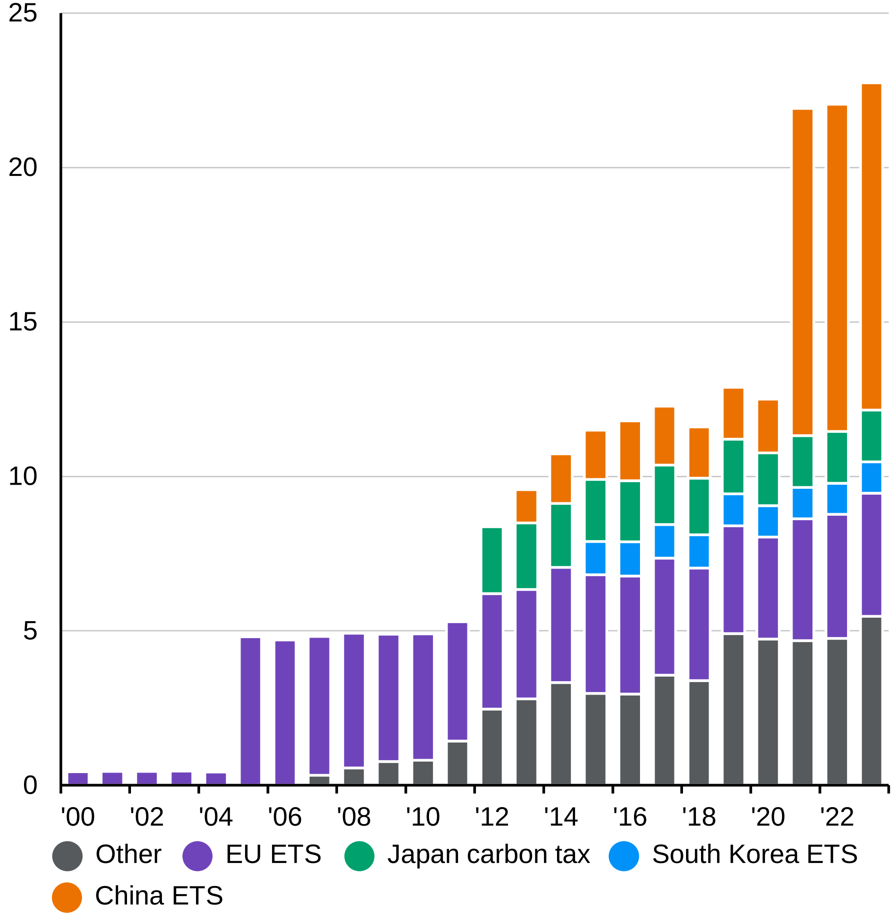
Source: (Left) Global Footprint Network National Footprint and Biocapacity Accounts 2022 Edition, J.P. Morgan Asset Management. The ecological footprint measures how fast the world's population consumes resources and generates waste, which is then compared to how fast nature can absorb waste and generate new resources. A score of more than one implies that the world has used more from nature than the planet can regenerate in the entire year. (Right) McKinsey & Company, NielsenIQ, J.P. Morgan Asset Management. The study covered 600,000 products representing USD 400 billion in annual retail revenues.
Guide to the Markets - Europe. Data as of 31 December 2023.

J.P.Morgan ASSET MANAGEMENT

Carbon pricing

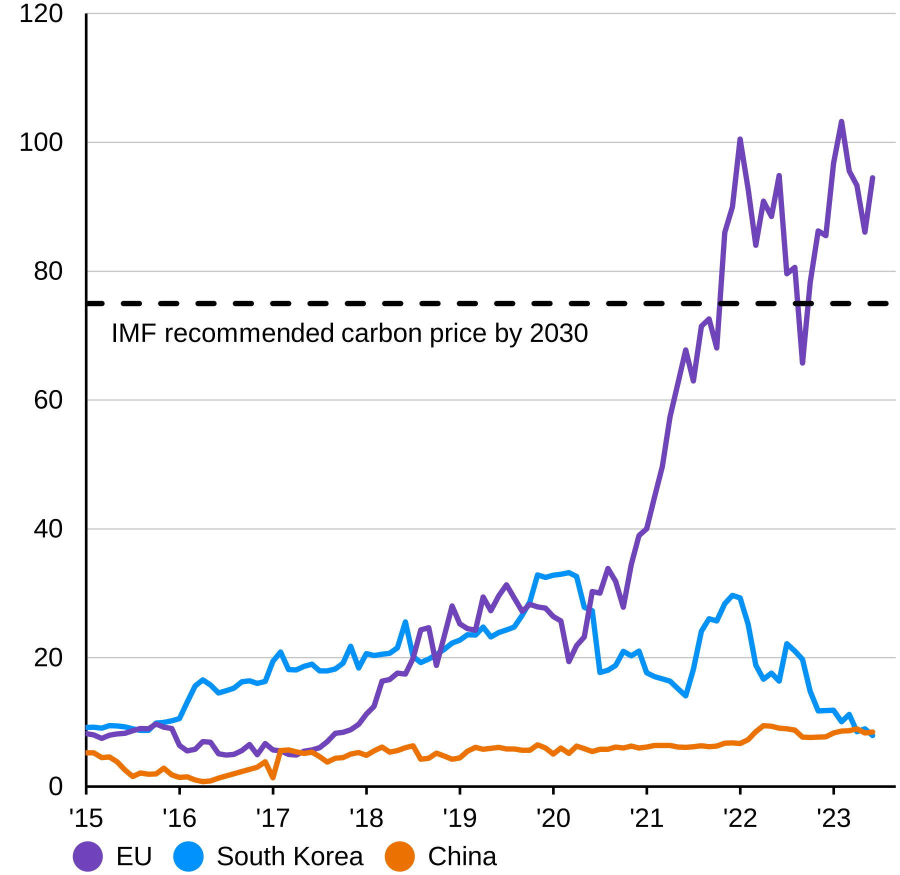
Global emissions covered by carbon pricing initiatives

% of global greenhouse gas emissions



Emissions trading system prices

USD per tonne of CO_2 equivalent



Source: (Left) World Bank, J.P. Morgan Asset Management. ETS is emissions trading system. (Right) IMF, International Carbon Action Partnership, J.P. Morgan Asset Management. China ETS price is the Shanghai ETS price up to July 2021, and the mainland price thereafter. USD 75 represents the IMF's recommendation for global average carbon prices by 2030 to limit global warming. CO2 equivalent tonnes standardise emissions to allow for comparison between gases. One equivalent tonne has the same warming effect as one tonne of CO2 over 100 years. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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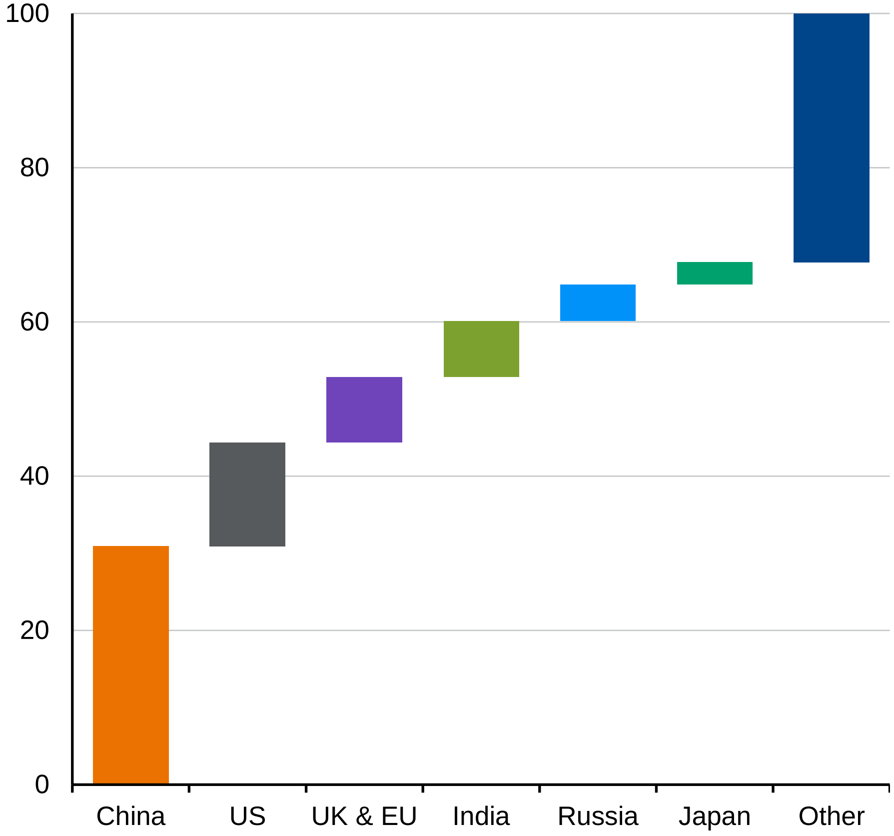
ESG

Global CO_2 emissions by country

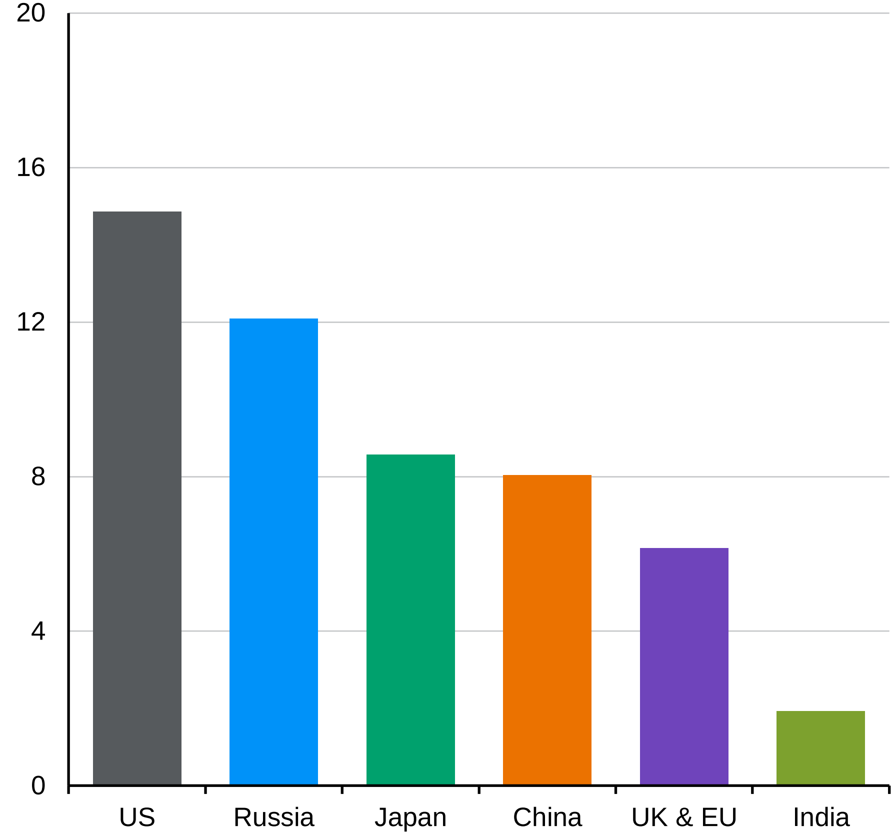
Share of global CO_2 emissions by country

%, 2021



Global CO_2 emissions per capita

Tonnes, 2021



Source: (All charts) Gapminder, Global Carbon Project, Our World in Data, United Nations, J.P. Morgan Asset Management. CO2 emissions are from the burning of fossil fuels for energy and cement production. Emission impact from land use change (such as deforestation) is not included. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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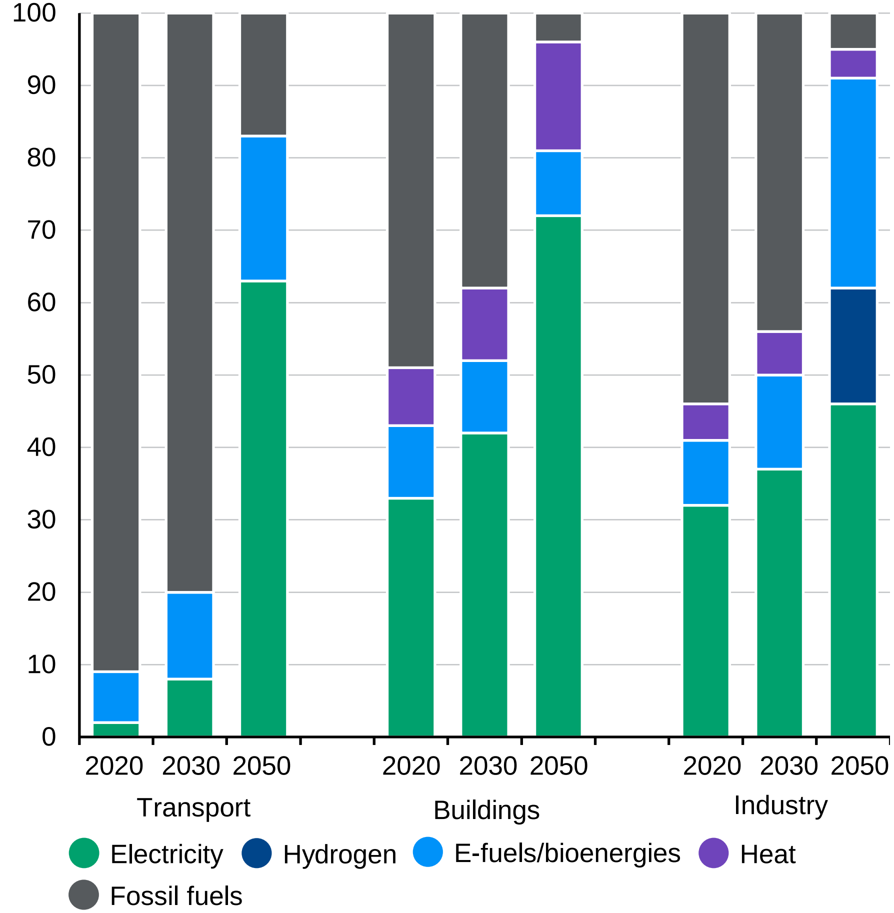
Energy mix and greenhouse gas emissions by sector

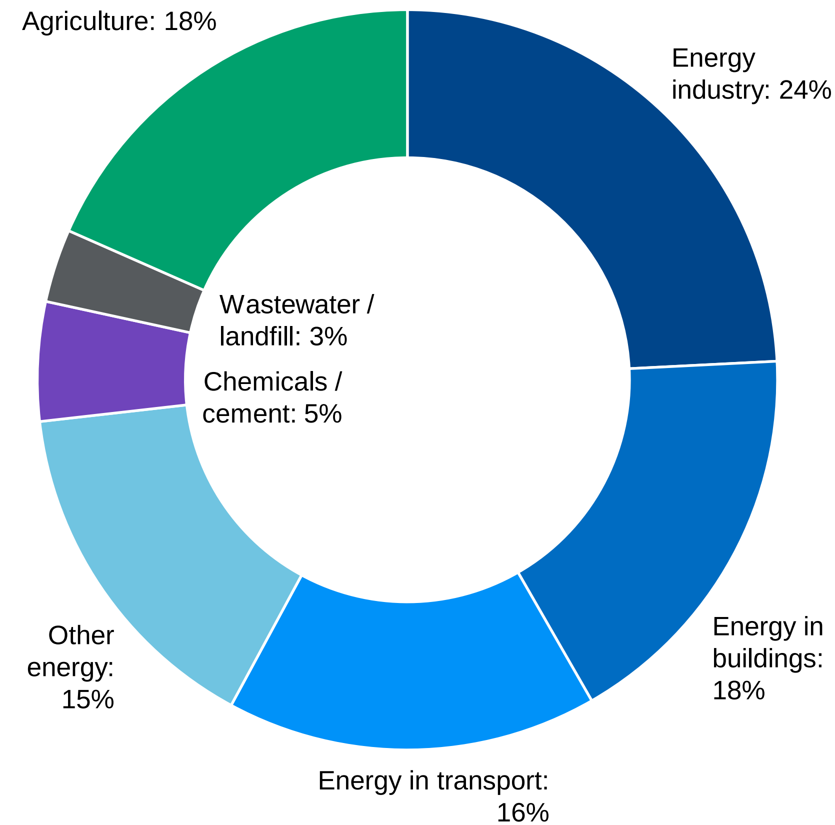
ESG

Share of energy carriers in end use sectors



Share of global greenhouse gas emissions by sector

% of global greenhouse gas emissions (2016), CO_2 equivalent tonnes



Source: (Left) Enel Group, European Commission Impact Assessment accompanying the communication on the 2030 Climate Target Plan (Sept 2020) and ENTSOE & ENTSOG TYNDP 2020 Scenario Report (June 2020), J.P. Morgan Asset Management. (Right) Climate Watch, Our World in Data, World Resource Institute, J.P. Morgan Asset Management. Greenhouse gas emissions include CO2, methane, nitrous oxide and fluorinated greenhouse gases. CO2 equivalent tonnes standardise emissions to allow for comparison between gases. One equivalent tonne has the same warming effect as one tonne of CO2 over 100 years.
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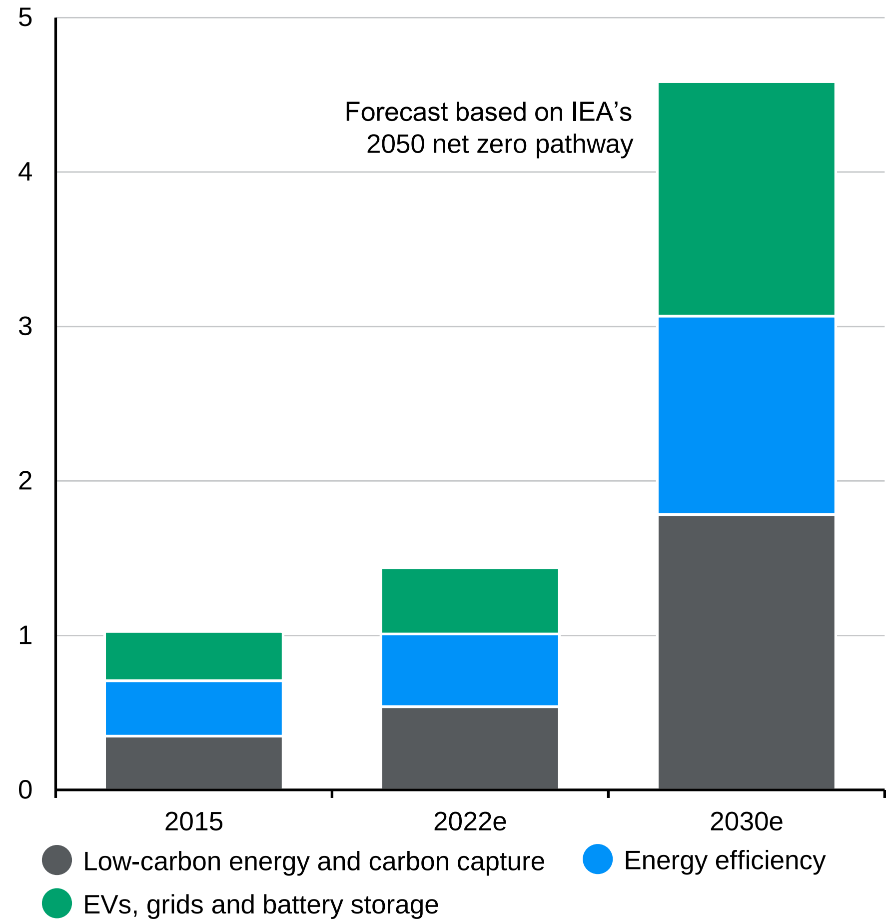
ESG

Investment in climate change mitigation and adaptation

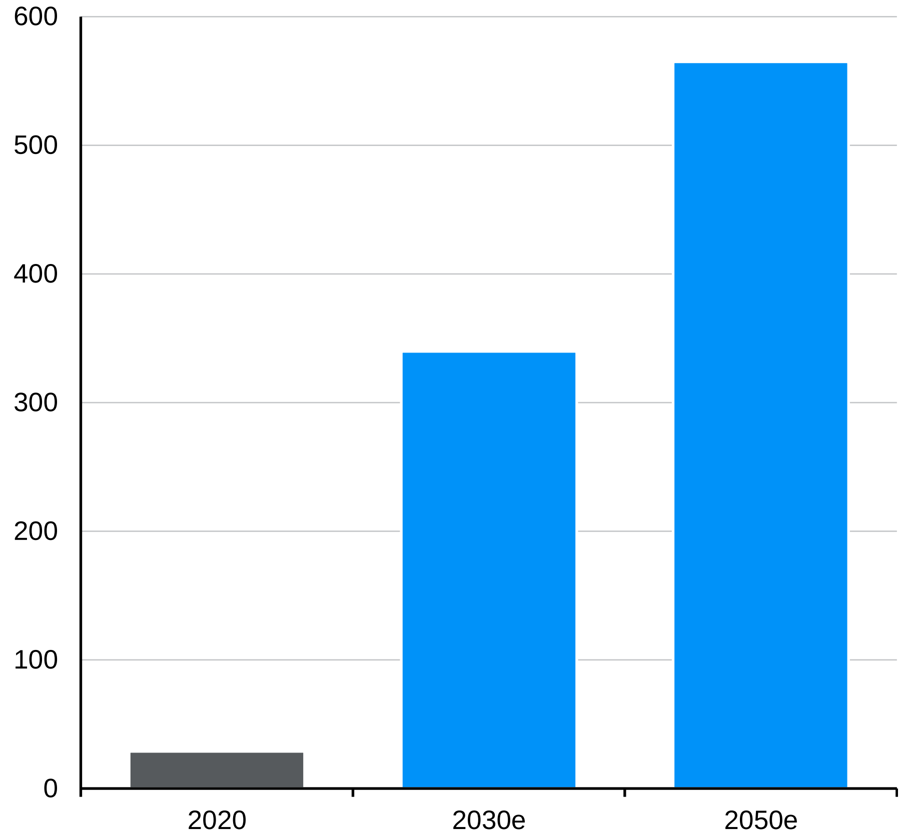
Global investment in clean energy and energy efficiency

USD trillions



Adaptation financing gap for developing countries

USD billions, current flows and projected future need for adaptation finance



Source: (Left) IEA, J.P. Morgan Asset Management. Data is from the IEA's World Energy Investment 2022 report. 2030e is based on the IEA's net zero by 2050 scenario. (Right) United Nations Environment Programme Adaptation Gap Report 2022, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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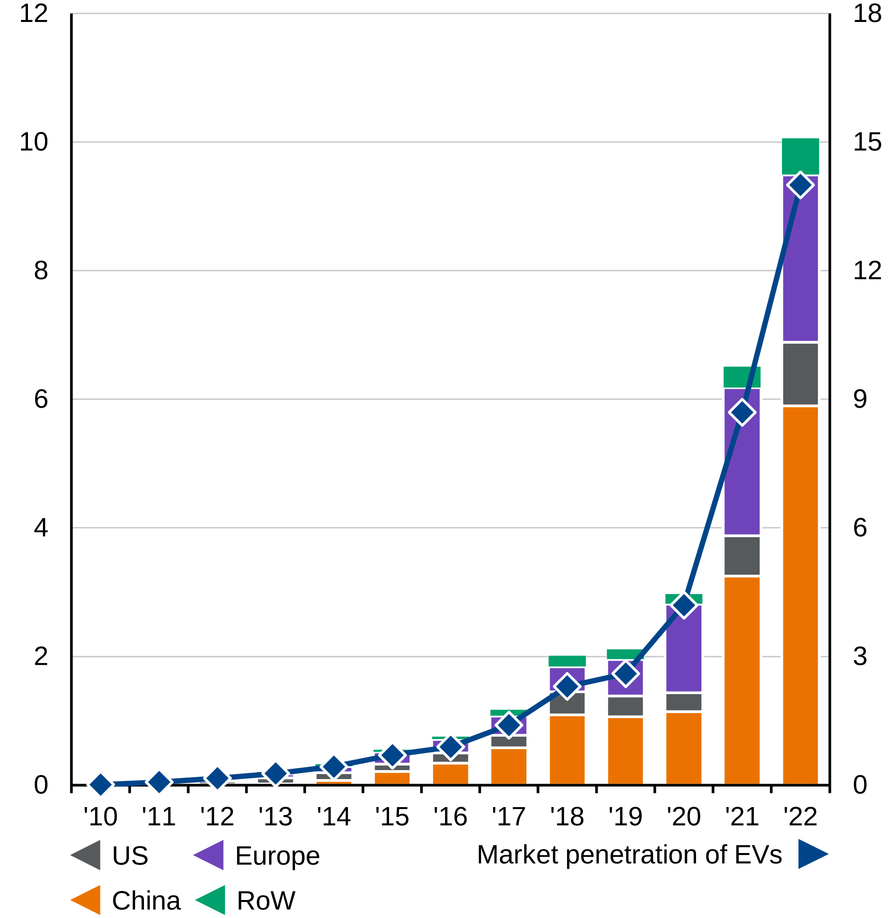
Electric vehicle sales and mineral content

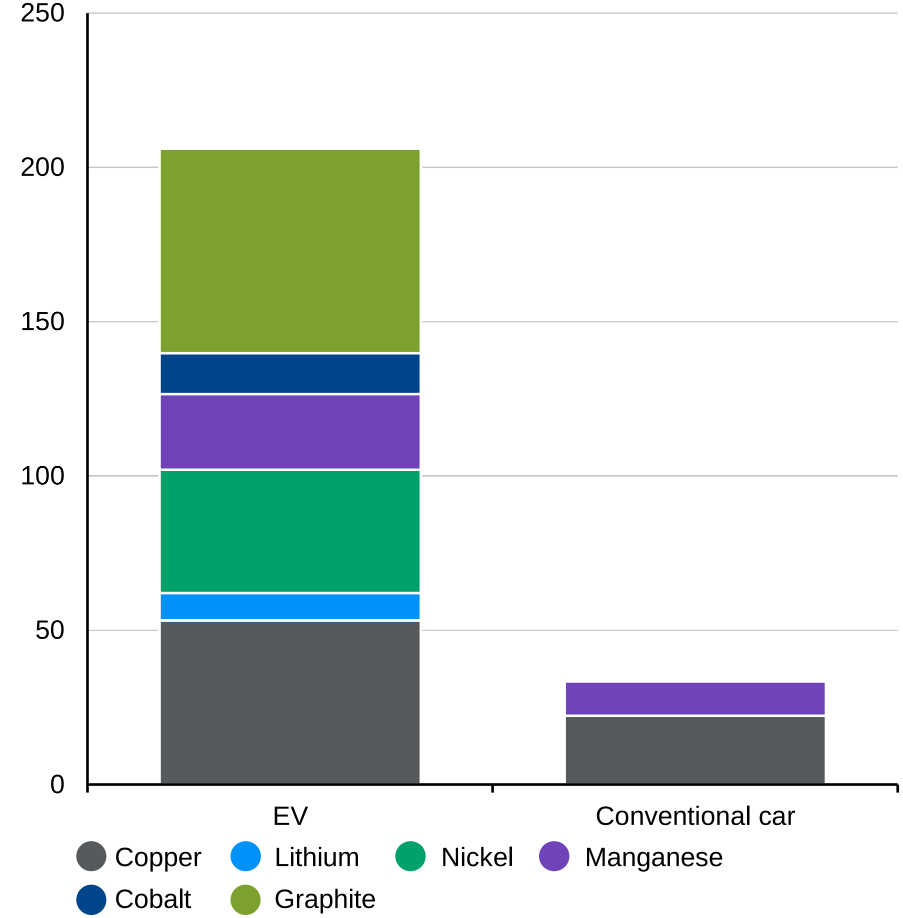
Global electric vehicle sales and market penetration

Millions (LHS); % (RHS)



Mineral content of electric vehicles and conventional cars

Kilograms per vehicle



Source: (All charts) IEA, J.P. Morgan Asset Management. Data is from the IEA's "The Role of Critical Minerals in Clean Energy Transitions" report.
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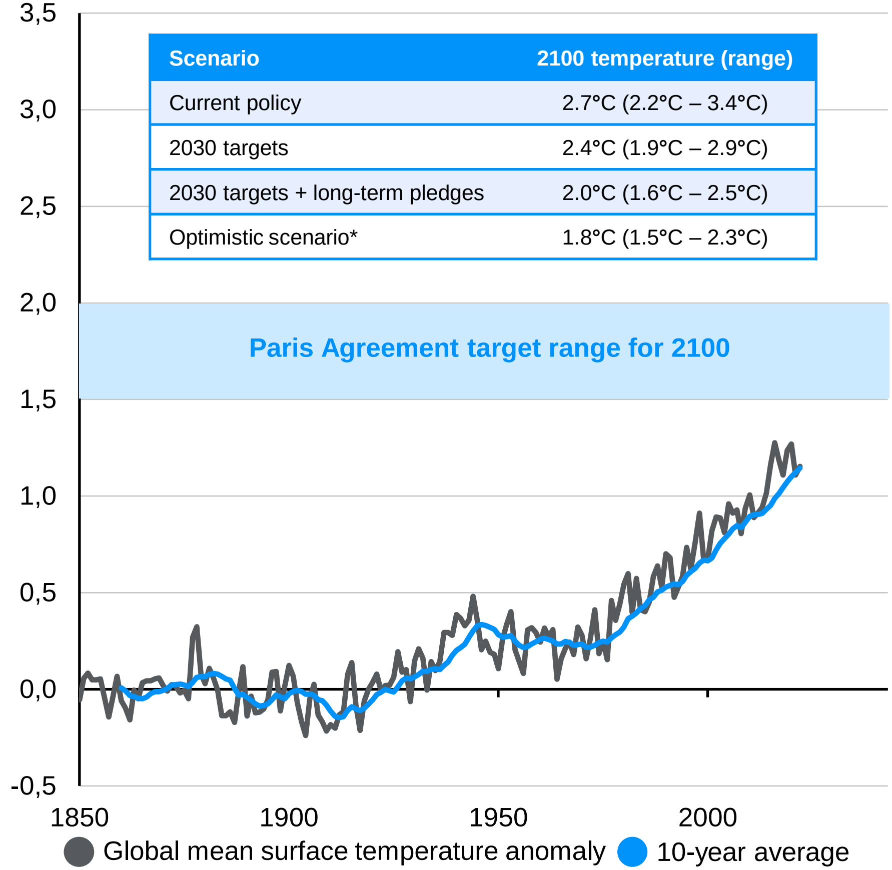
Global warming and energy consumption

Global temperature anomalies vs. pre-industrial levels

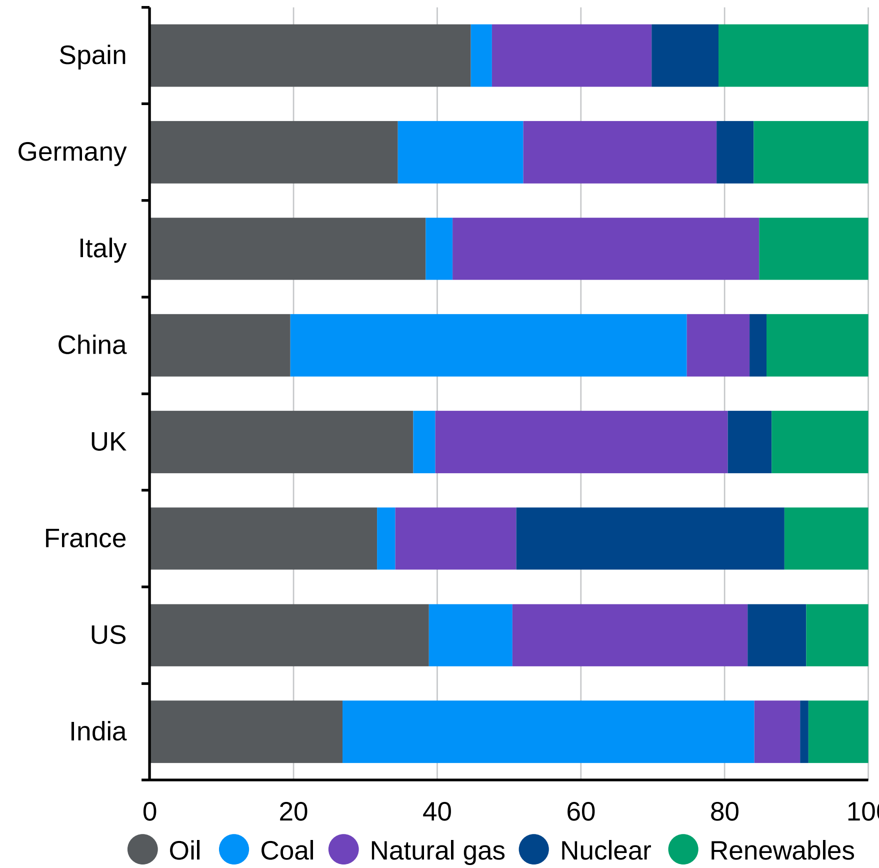
Degrees Celsius

Scenario	2100 temperature (range)
Current policy	2.7°C (2.2°C – 3.4°C)
2030 targets	2.4°C (1.9°C – 2.9°C)
2030 targets + long-term pledges	2.0°C (1.6°C – 2.5°C)
Optimistic scenario*	1.8°C (1.5°C – 2.3°C)



Global energy mix

% of primary energy consumption (2021)



Source: (Left) Climate Action Tracker, Climate Change Tracker, Indicators of Global Climate Change 2022, J.P. Morgan Asset Management. Scenarios are based on the November 2022 update of the Climate Action Tracker Thermometer. 2030 targets are based on nationally determined contributions (NDCs). *Optimistic scenario represents Climate Action Tracker's best case scenario, and assumes full implementation of all announced targets including net zero targets, long-term climate strategies (LTS) and NDCs. (Right) Our World in Data, J.P. Morgan Asset Management. Renewables include hydro, wind, solar and biomass fuels.
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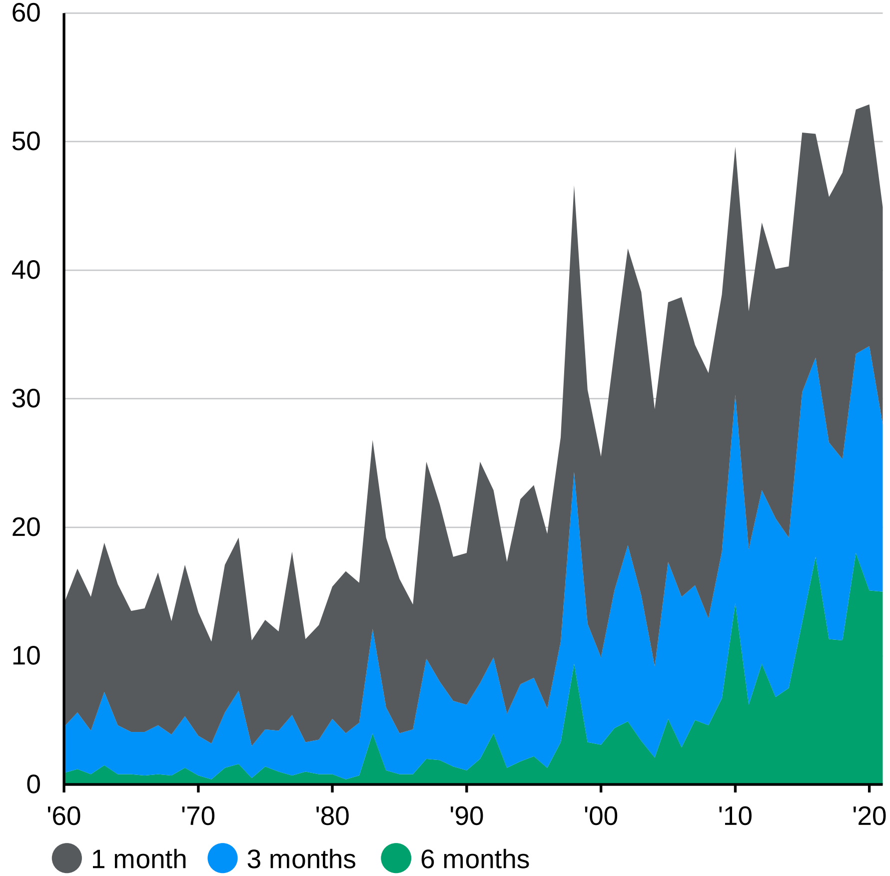
ESG

Droughts and food prices

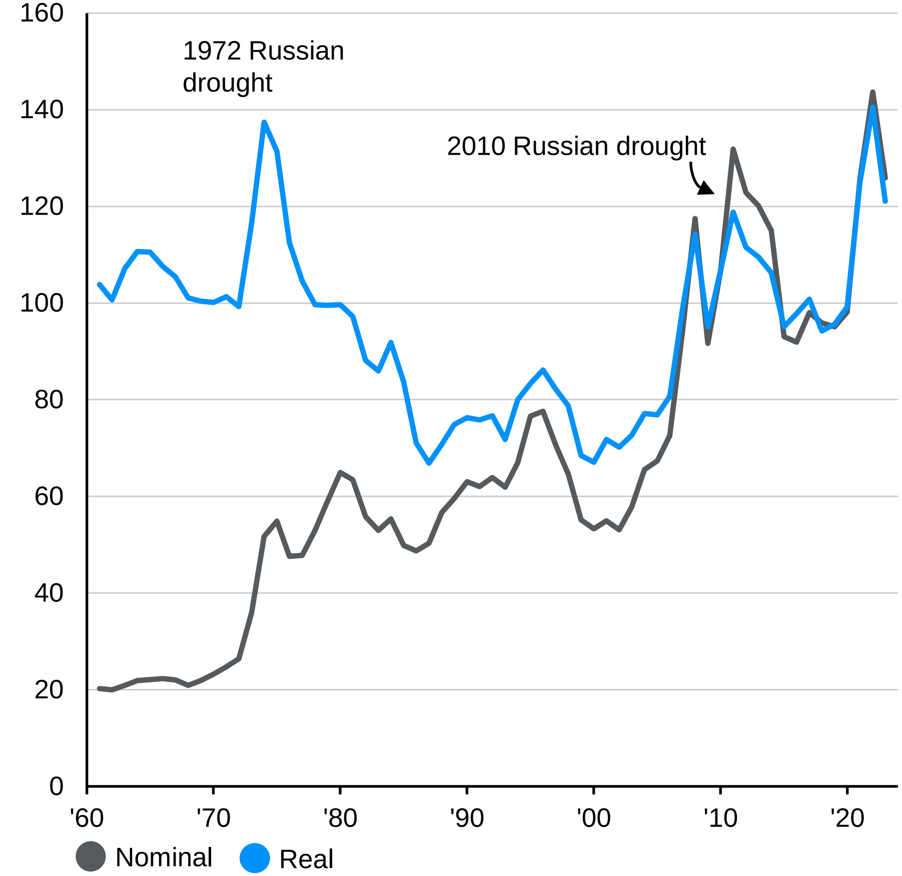
Land affected by droughts

% of global land affected by droughts per year



Food prices

Index level



Source: (Left) Global Standardised Precipitation-Evapotranspiration Index Database, 2021. Beguería, S et al., The Lancet Countdown on Health and Climate Change: 2022 Report, J.P. Morgan Asset Management. (Right) Food and Agriculture Organization of the United Nations, J.P. Morgan Asset Management.
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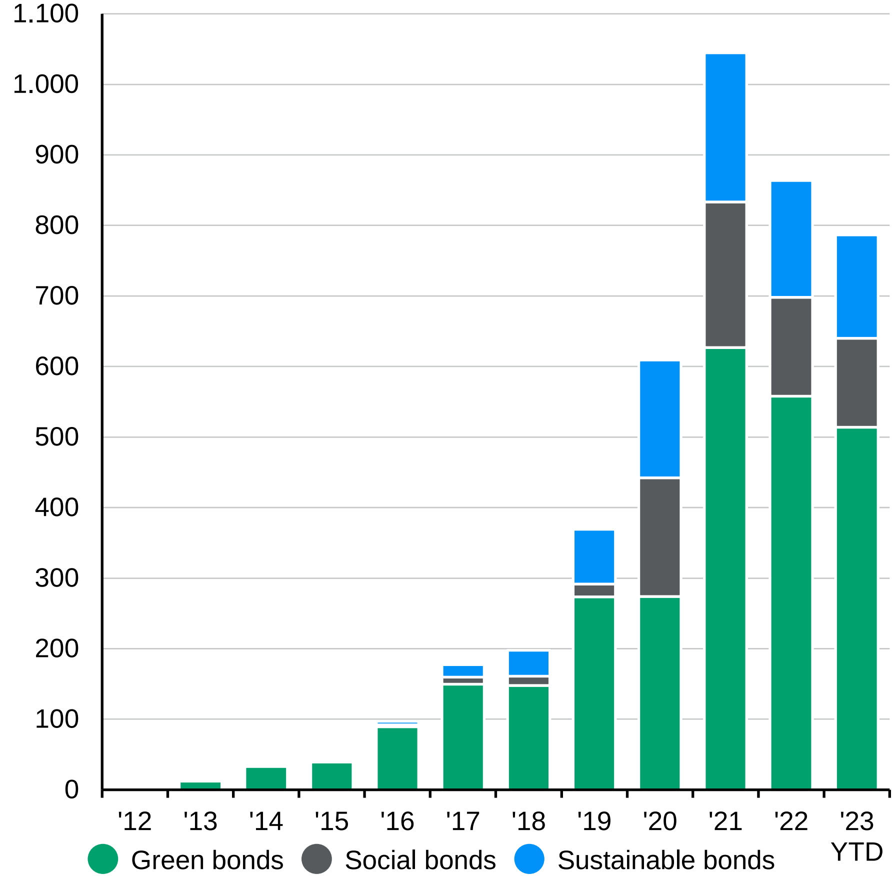
ESG and capital markets

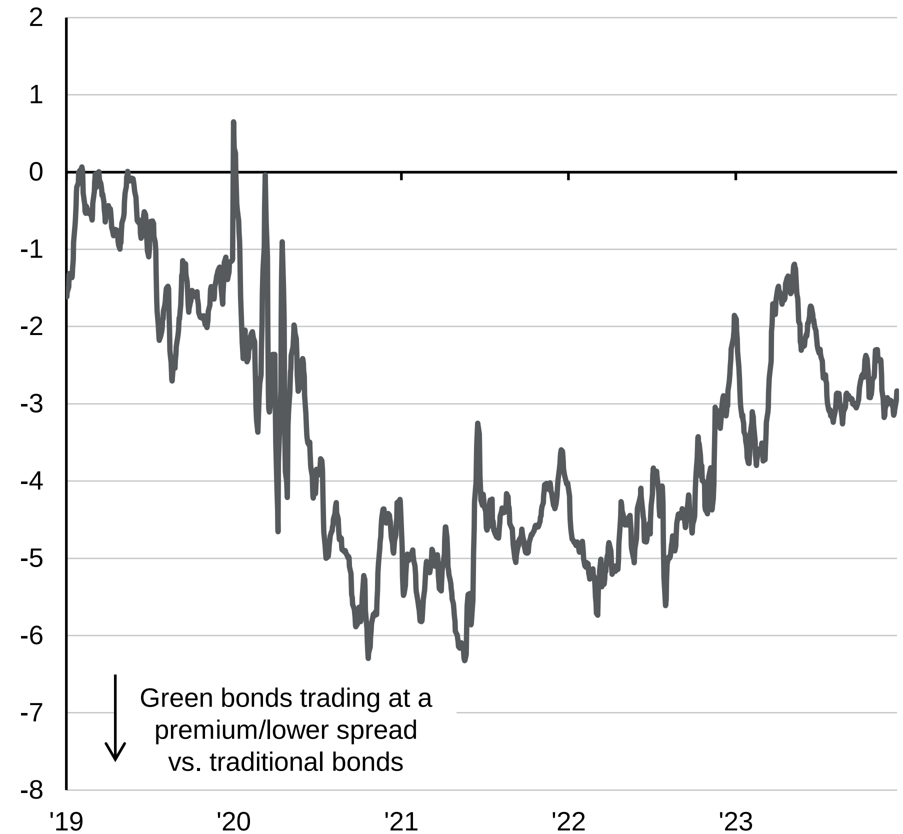
Global green, social and sustainable bond issuance

USD billions



Spread between green and traditional corporate bonds

Basis points

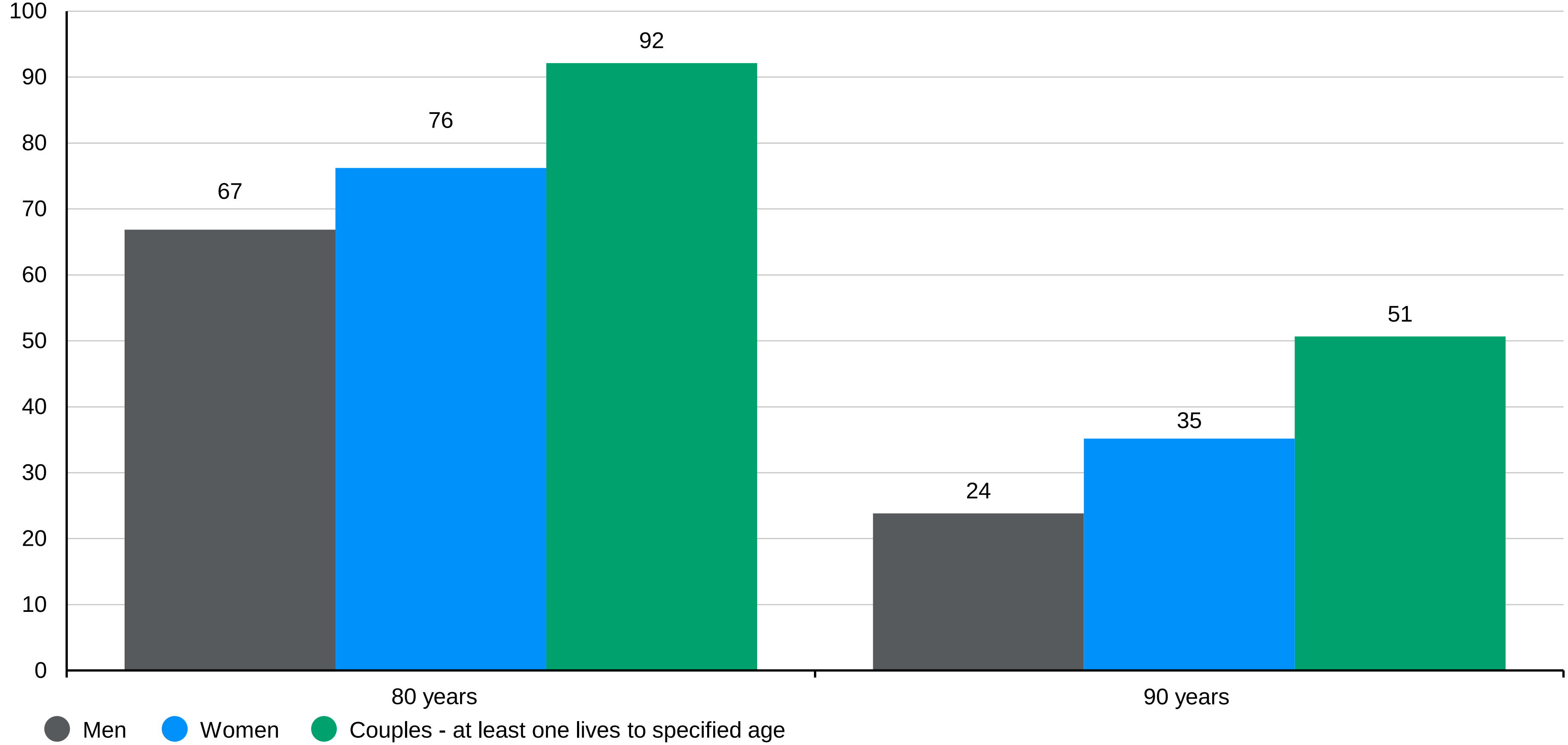


Source: (Left) LSEG Eikon, J.P. Morgan Asset Management. Green bonds have 100% of the net bond proceeds allocated to green projects. Social bond proceeds have a focus on delivering positive social outcomes. Sustainable bond proceeds are directed to a mix of both green and social projects or if the bond coupon/characteristics can vary based on achieving predefined sustainability targets. (Right) Barclays Research, J.P. Morgan Asset Management. Data shown is latest available for a Barclays Research custom universe of green and non-green, USD and EUR denominated investment-grade credits, matched by issuer, currency, seniority and maturity. Spread difference is measured using the option-adjusted spread. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Life expectancy

Probability of reaching ages 80 and 90

% probability, persons aged 65, by gender and combined couple



Source: ONS 2018-2020 Life Tables, J.P. Morgan Asset Management. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Investing principles

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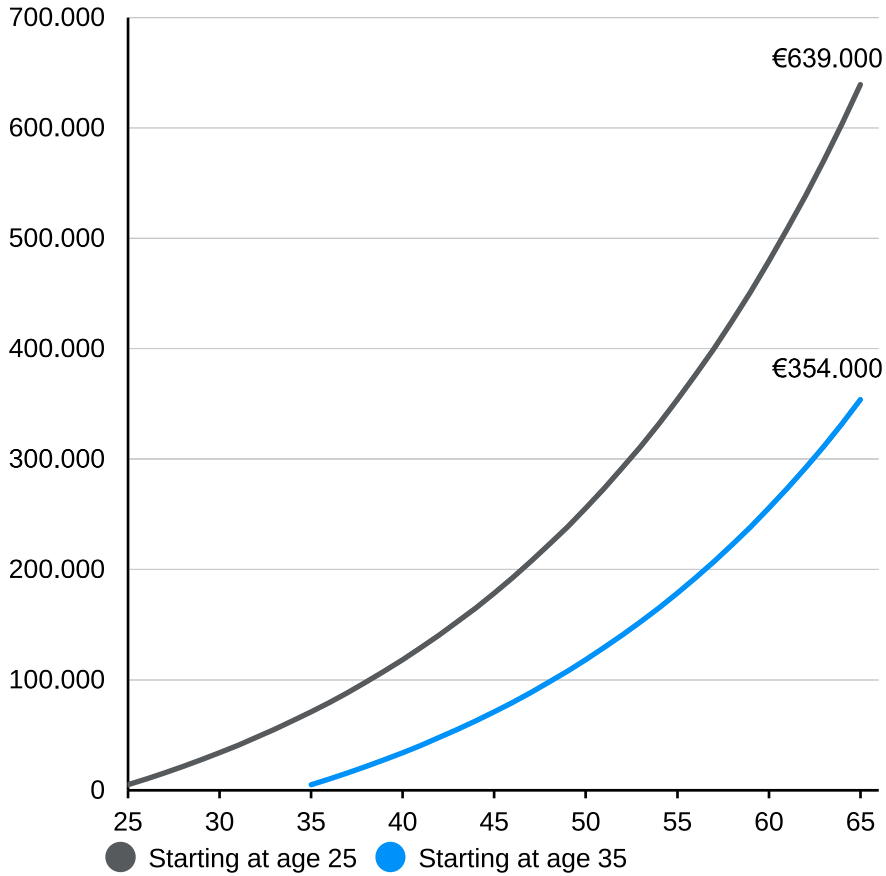
The effect of compounding

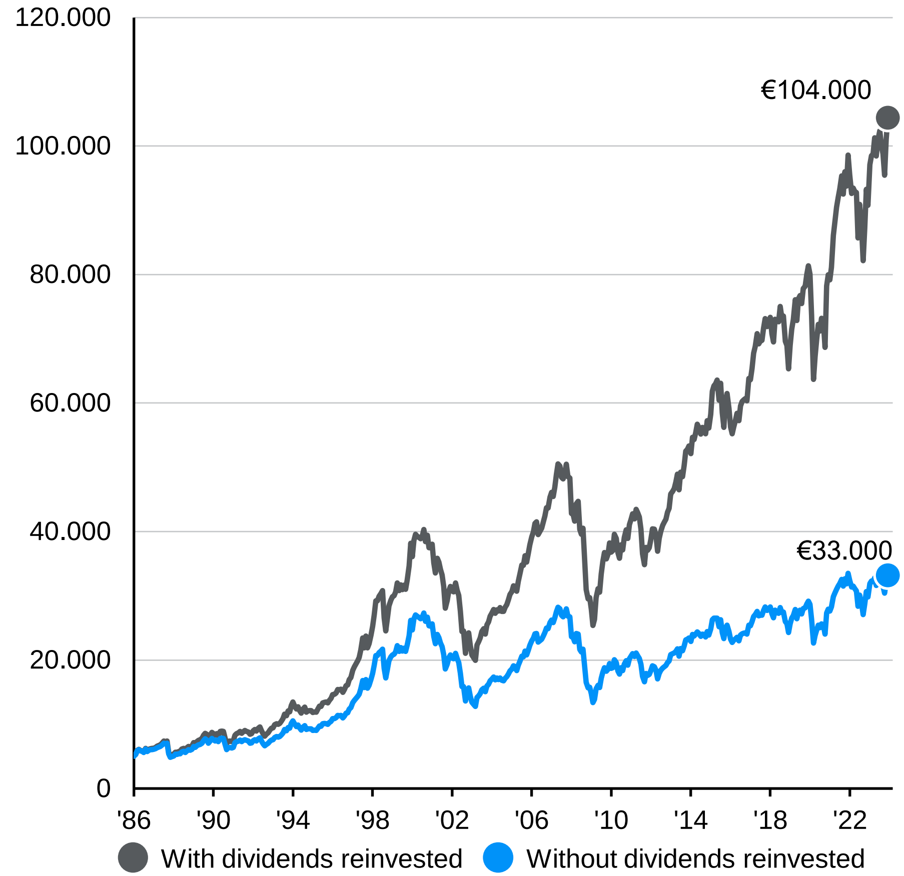
€5.000 invested annually with 5% growth per year

EUR



€5.000 investment with/without income reinvested

EUR, MSCI Europe returns



Source: (Left) J.P. Morgan Asset Management. For illustrative purposes only. Assumes all income reinvested. Actual investments may incur higher or lower growth rates and charges. (Right) Bloomberg, MSCI, J.P. Morgan Asset Management. Based on MSCI Europe Index and assumes no charges. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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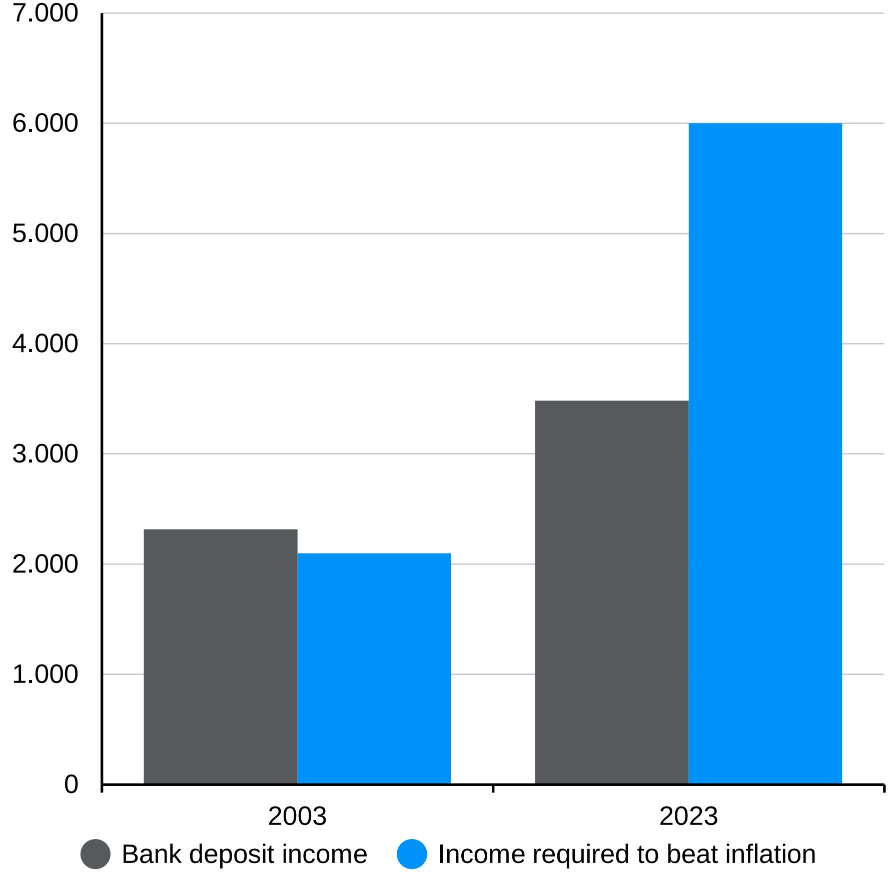
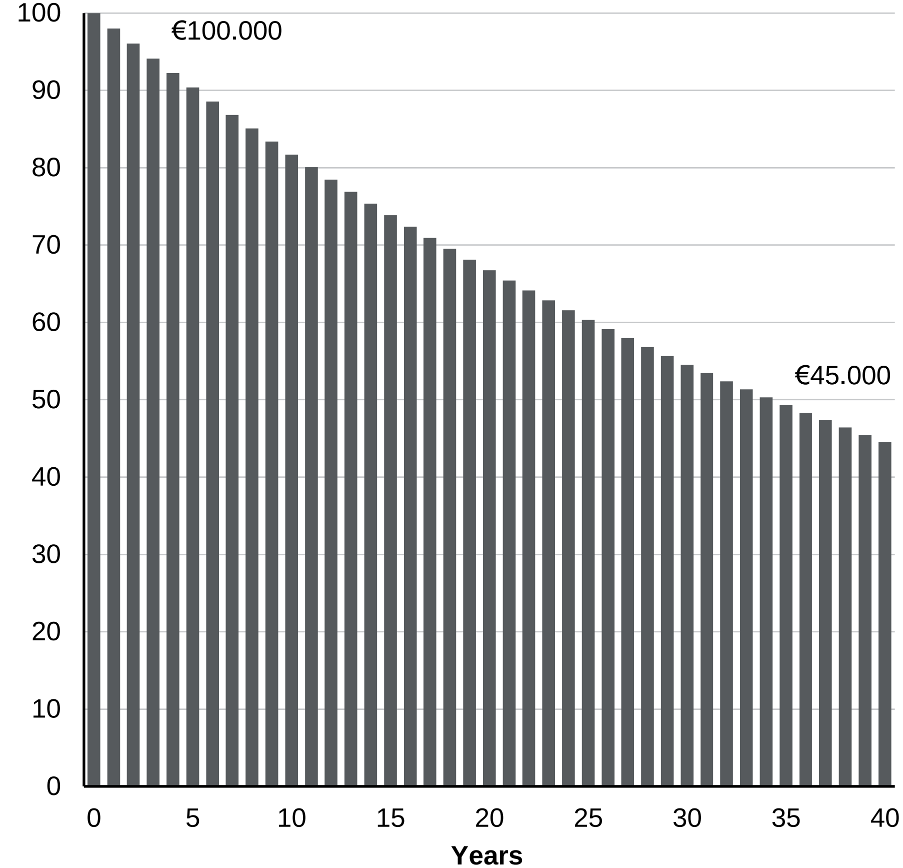
Investing principles

Cash investments

Income generated by €100.000 in a three-month bank deposit
EUR



Effect of 2% inflation on purchasing power of €100.000
EUR, thousands



Source: (Left) Eurostat, LSEG Datastream, J.P. Morgan Asset Management. Data shown are averages over the course of the calendar year. (Right) J.P. Morgan Asset Management. For illustrative purposes only, assumes no return on cash and an inflation rate of 2%. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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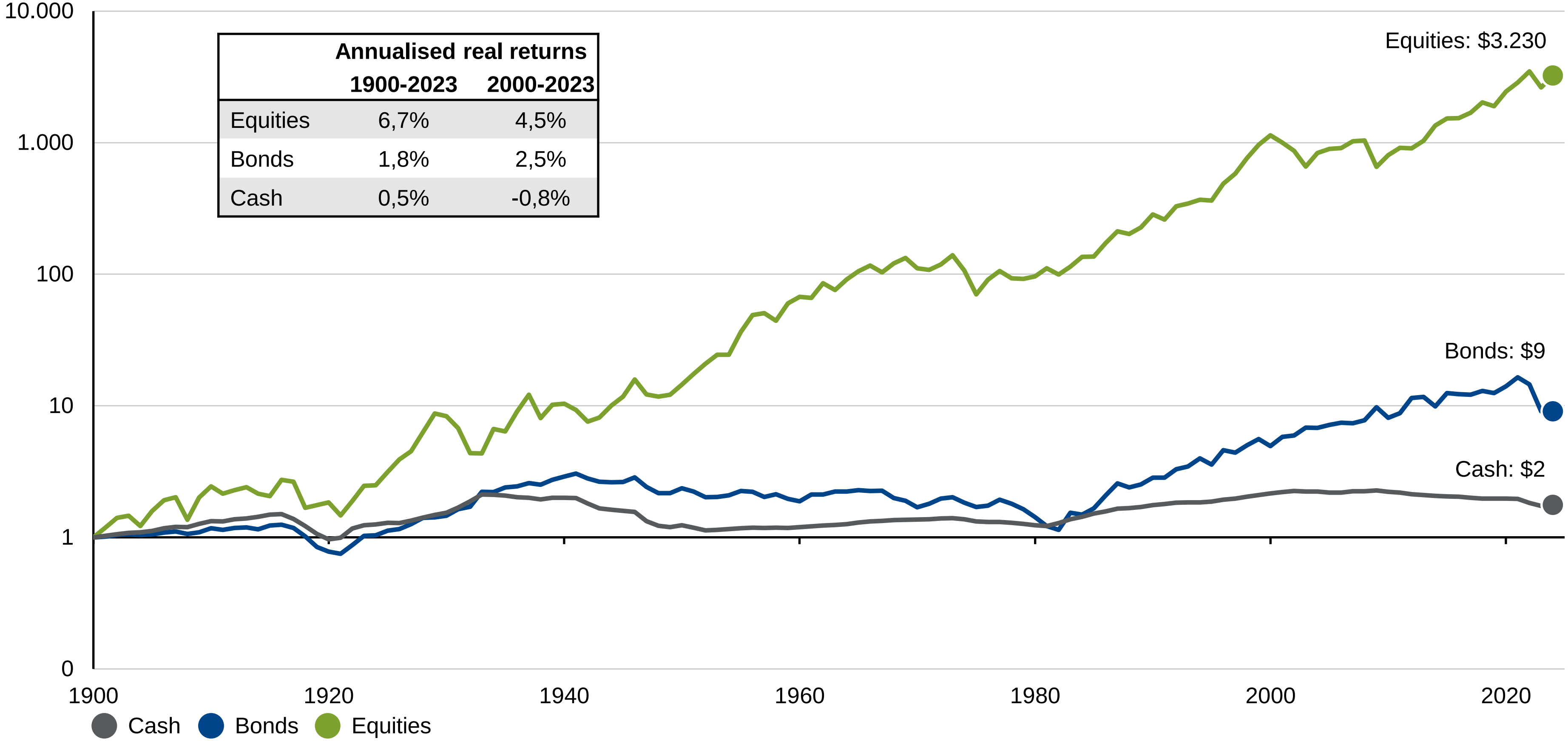
Long-term asset returns

Total return of $1 in real terms
USD, log scale for total returns

	Annualised real returns	
	1900-2023	2000-2023
Equities	6,7%	4,5%
Bonds	1,8%	2,5%
Cash	0,5%	-0,8%



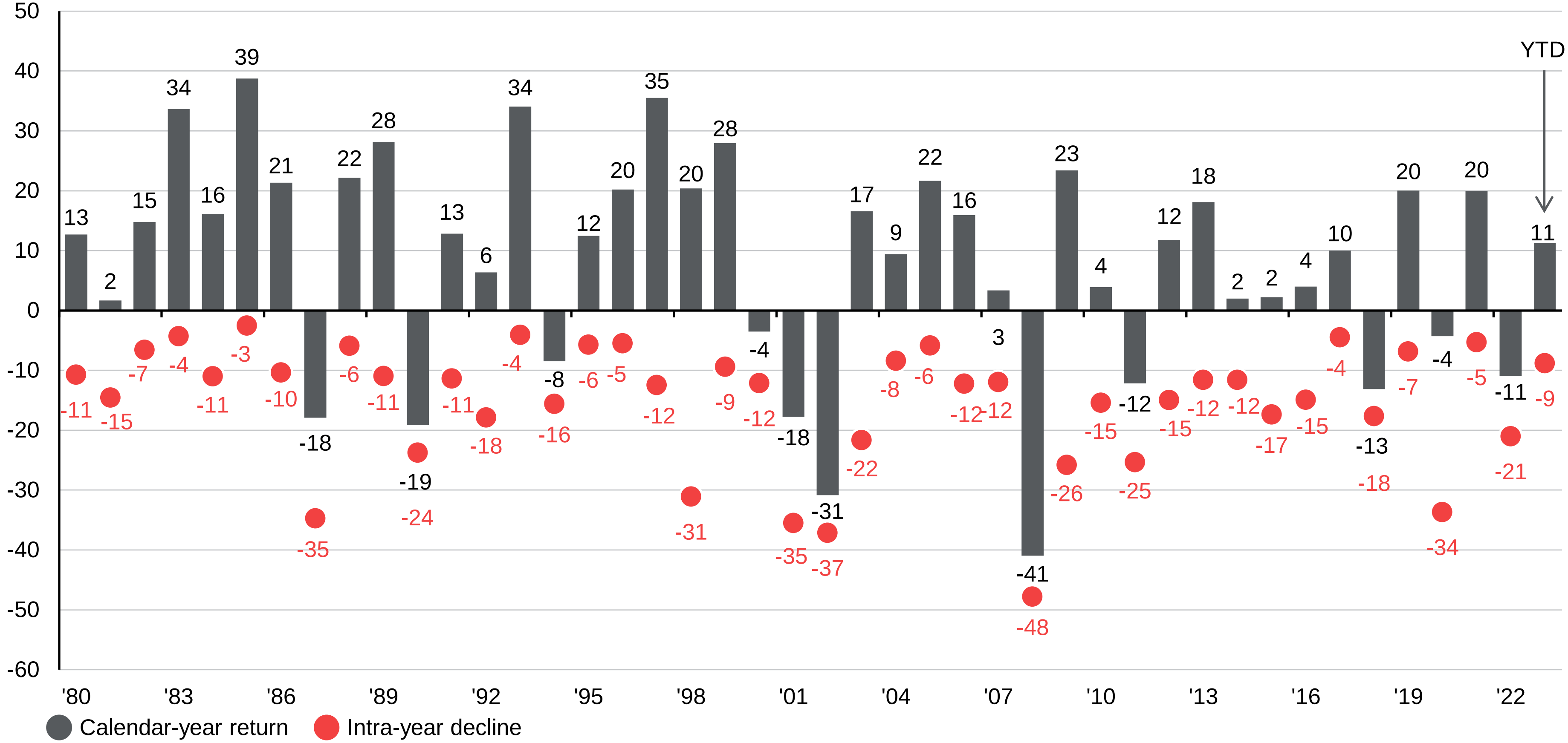
Source: Bloomberg, Bloomberg Barclays, FactSet, Shiller, Siegel, S&P Global, J.P. Morgan Asset Management. Pre-2010 returns: Shiller, Siegel; from 2010: Equities: S&P 500; Bonds: Bloomberg Barclays US Treasury 20+ year Total Return Index; Cash: Bloomberg Barclays US Treasury Bills Total Return Index. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

Annual returns and intra-year declines

Investing principles

MSCI Europe intra-year declines vs. calendar-year returns

%; despite average intra-year drops of 15,4% (median 12,0%), annual returns are positive in 33 of 44 years



Source: LSEG Datastream, MSCI, J.P. Morgan Asset Management. Returns are local currency price returns. Intra-year decline refers to the largest market fall from peak to trough within the calendar year. Returns shown are calendar years from 1980 to 2023. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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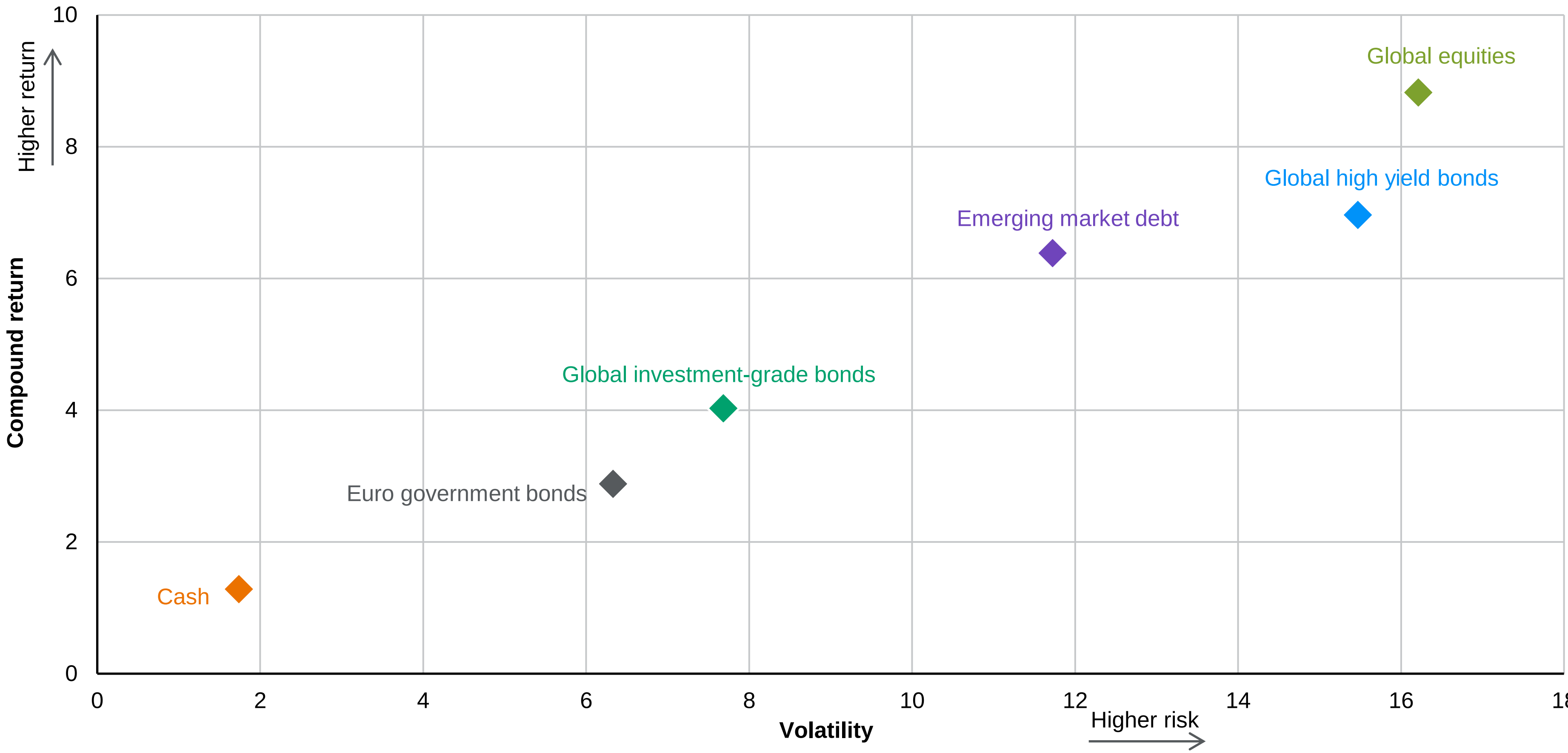
Asset class risk-return trade-off

Historic risk vs. return for selected asset classes

%, annualised return 2004 – 2023 in EUR



Source: Bloomberg Barclays, LSEG Datastream, MSCI, J.P. Morgan Asset Management. Volatility is the standard deviation of annual returns since 2004. Cash: J.P. Morgan Cash EUR (3M); Euro government bonds: Bloomberg Barclays Euro Aggregate – Treasury; Global investment-grade bonds: Bloomberg Barclays Global Aggregate – Corporate; Emerging market debt: J.P. Morgan EMBI Global Diversified; Global high yield bonds: ICE BofA Global High Yield; Global equities: MSCI All-Country World Index (includes developed and emerging markets). Past performance is not a reliable indicator of current and future results.
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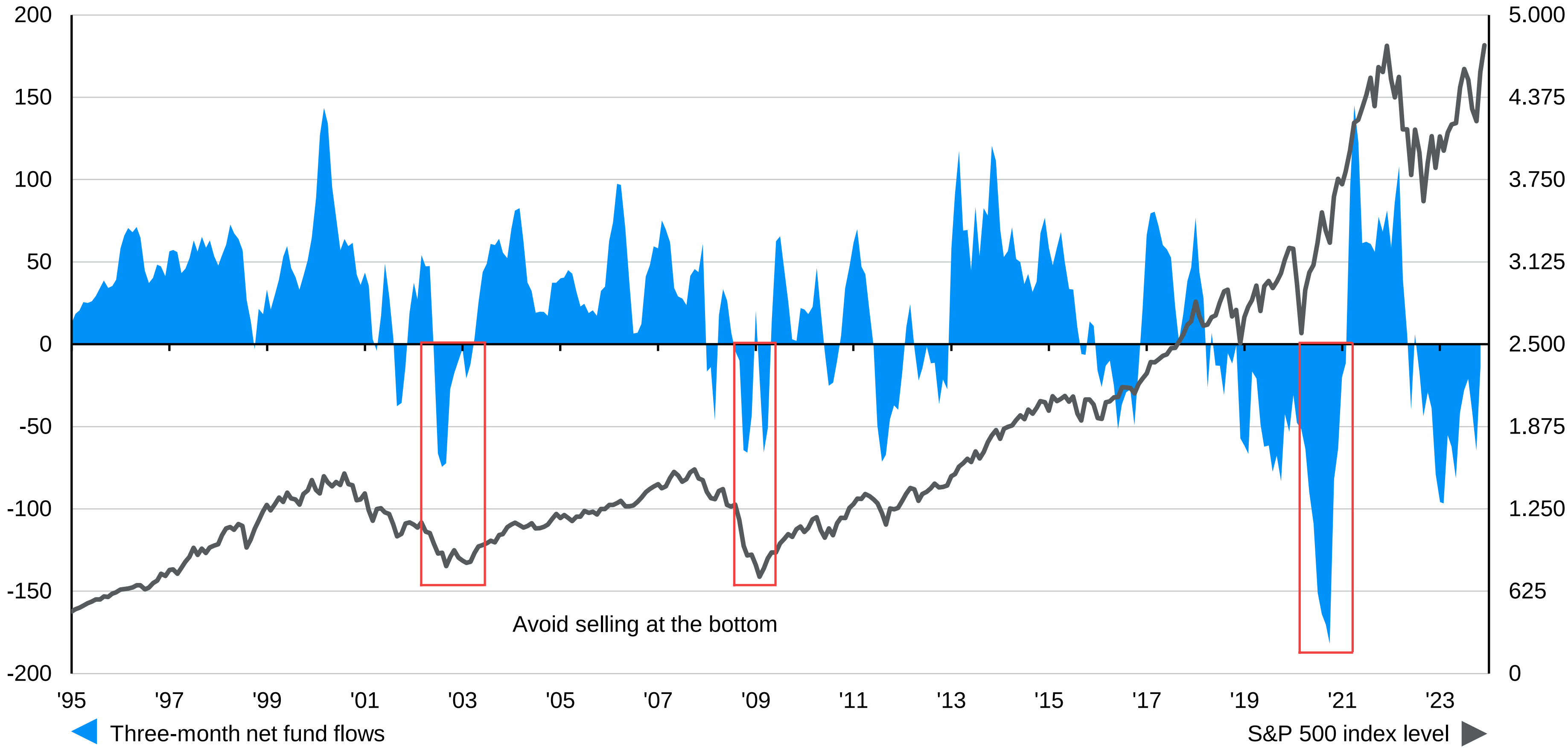
S&P 500 and fund flows

US mutual fund and ETF flows and S&P 500

USD billions, three-month net flows (LHS); index level (RHS)



Source: Investment Company Institute, LSEG Datastream, S&P Global, J.P. Morgan Asset Management. Fund flows are US long-term equity fund flows with ETF flows included from 2006 onwards. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.*
Data as of 31 December 2023.

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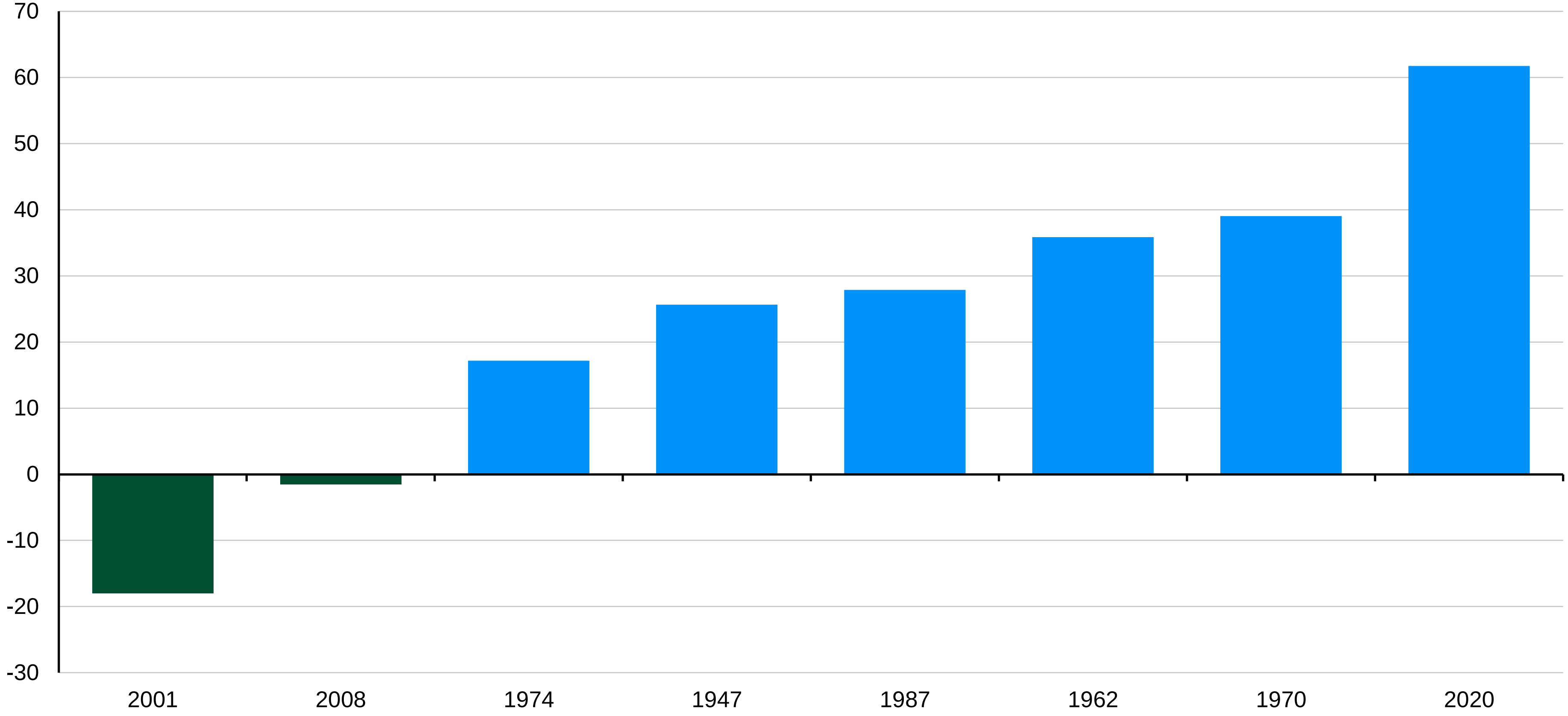
Investing principles

25% drawdowns and subsequent returns

Subsequent 12-month returns after 25% drawdowns

%, S&P 500 total return in USD



Source: Bloomberg, S&P Global, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results.
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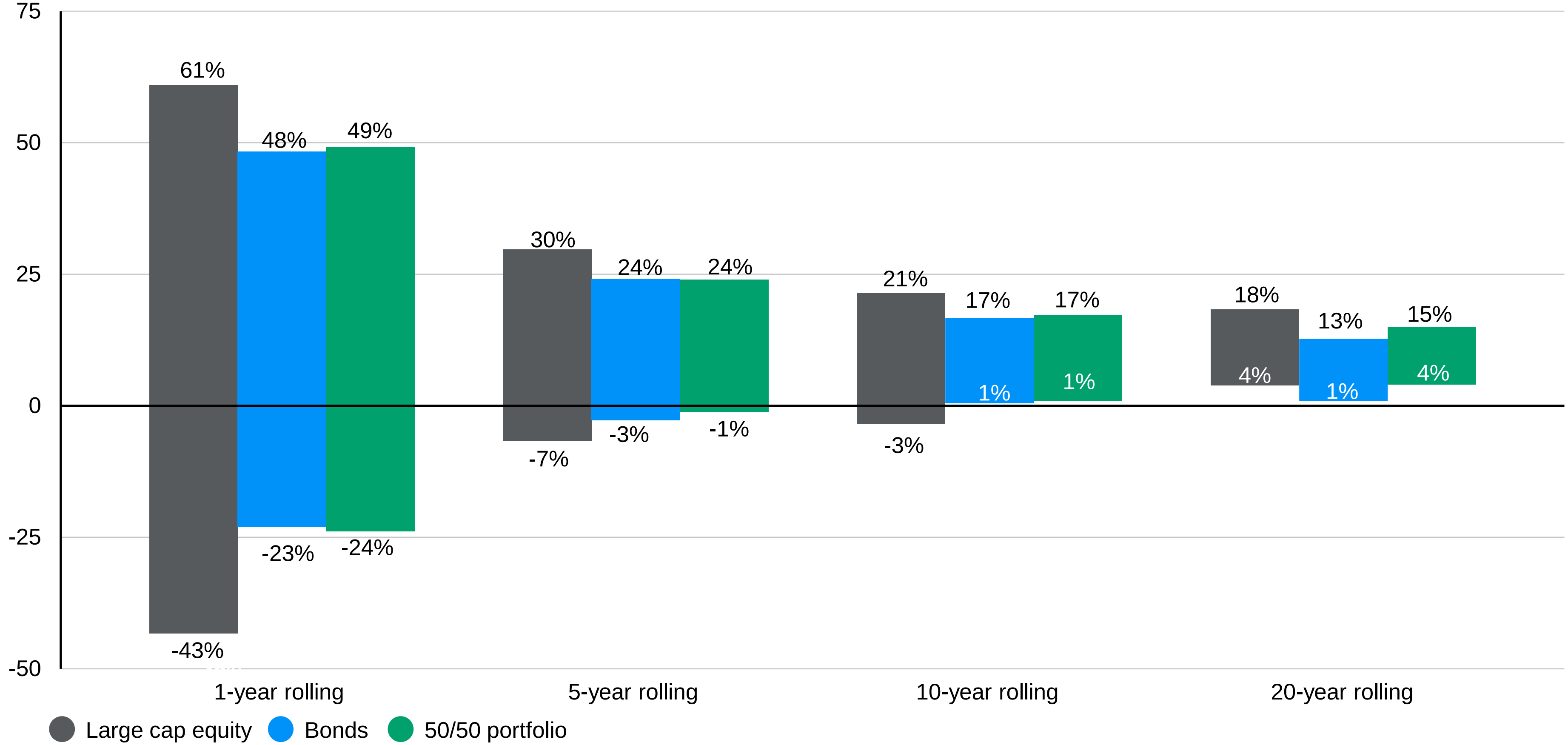
US asset returns by holding period

Range of equity and bond total returns

%, annualised total returns, 1950-present



Source: Bloomberg Barclays, LSEG Datastream, S&P Global, Strategas/Ibbotson, J.P. Morgan Asset Management. Large cap equity represents the S&P 500 Composite and Bonds represents the Strategas/Ibbotson US Government Bond Index, the US Long-term Corporate Bond Index until 2000 and the Bloomberg Barclays US Agg. Corporate – Investment Grade Index from 2000 onwards. Returns shown are per annum and are calculated based on monthly returns from 1950 to latest available and include dividends. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.*
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Asset class returns (EUR)

2015	2016	2017	2018	2019	2020	2021	2022	2023	1Q '23	10-year ann. return	Vol.
REITs 13,9%	HY bonds 18,2%	EM equities 21,0%	Govt bonds 4,6%	DM equities 30,8%	EM equities 8,9%	REITs 50,5%	Cmdty 23,7%	DM equities 20,2%	REITs 12,7%	DM equities 11,6%	REITs 22,4%
EMD 12,7%	Cmdty 15,1%	DM equities 8,1%	HY bonds 1,5%	REITs 30,4%	DM equities 6,9%	Cmdty 36,8%	Hedge funds 1,9%	HY bonds 9,6%	DM equities 6,9%	REITs 10,1%	Cmdty 16,9%
DM equities 11,0%	EM equities 14,9%	Portfolio 1,7%	IG bonds 1,3%	EM equities 21,1%	Portfolio 1,6%	DM equities 31,6%	Cash 0,0%	Portfolio 8,7%	EMD 4,6%	Portfolio 6,6%	DM equities 13,2%
Govt bonds 7,7%	EMD 13,4%	Cash -0,3%	REITs 0,7%	Portfolio 18,9%	IG bonds 1,3%	Portfolio 16,6%	HY bonds -7,6%	REITs 7,7%	IG bonds 4,3%	HY bonds 6,0%	EM equities 11,7%
IG bonds 7,4%	REITs 12,6%	EMD -3,2%	EMD 0,6%	EMD 17,2%	Govt bonds 0,5%	Hedge funds 11,5%	Portfolio -9,3%	EMD 7,3%	Portfolio 4,1%	EMD 5,5%	EMD 10,2%
Hedge funds 7,3%	DM equities 11,4%	HY bonds -3,2%	Cash -0,3%	HY bonds 15,8%	Cash -0,3%	HY bonds 9,1%	IG bonds -11,3%	EM equities 6,5%	Govt bonds 3,6%	EM equities 5,3%	Portfolio 8,5%
HY bonds 6,7%	Portfolio 10,3%	REITs -4,0%	Portfolio -1,6%	IG bonds 13,6%	HY bonds -0,9%	EMD 5,7%	Govt bonds -12,1%	IG bonds 5,9%	EM equities 3,4%	IG bonds 4,0%	HY bonds 8,1%
Portfolio 6,3%	IG bonds 7,4%	IG bonds -4,2%	Hedge funds -2,0%	Hedge funds 10,6%	Hedge funds -2,0%	EM equities 5,2%	DM equities -12,3%	Cash 3,3%	HY bonds 3,2%	Hedge funds 3,7%	IG bonds 7,8%
Cash 0,1%	Hedge funds 5,6%	Govt bonds -5,8%	DM equities -3,6%	Cmdty 9,7%	EMD -3,4%	IG bonds 4,5%	EMD -12,4%	Govt bonds 0,7%	Cash 1,0%	Govt bonds 1,9%	Govt bonds 6,8%
EM equities -4,9%	Govt bonds 4,7%	Hedge funds -6,9%	Cmdty -6,8%	Govt bonds 7,5%	Cmdty -11,1%	Govt bonds 0,5%	EM equities -14,5%	Hedge funds -0,4%	Hedge funds -2,5%	Cmdty 1,1%	Hedge funds 6,4%
Cmdty -16,1%	Cash -0,2%	Cmdty -10,7%	EM equities -9,9%	Cash -0,3%	REITs -13,6%	Cash -0,5%	REITs -20,2%	Cmdty -11,0%	Cmdty -8,6%	Cash 0,2%	Cash 1,1%

Source: Bloomberg Barclays, FTSE, J.P. Morgan Economic Research, LSEG Datastream, MSCI, J.P. Morgan Asset Management. Annualised return and volatility covers the period from 2014 to 2023. Vol. is the standard deviation of annual returns. Govt bonds: Bloomberg Barclays Global Aggregate Government Treasuries; HY bonds: ICE BofA Global High Yield; EMD: J.P. Morgan EMBI Global Diversified; IG bonds: Bloomberg Barclays Global Aggregate – Corporate; Cmdty: Bloomberg Commodity; REITs: FTSE NAREIT All REITS; DM equities: MSCI World; EM equities: MSCI EM; Hedge funds: HFRI Global Hedge Fund Index; Cash: J.P. Morgan Cash Index EUR (3M). Hypothetical portfolio (for illustrative purposes only and should not be taken as a recommendation): 30% DM equities; 10% EM equities; 15% IG bonds; 12,5% government bonds; 7,5% HY bonds; 5% EMD; 5% commodities; 5% cash; 5% REITs and 5% hedge funds. All returns are total return, in EUR, and are unhedged. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 31 December 2023.

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