MARKET INSIGHTS

Developments in international markets and in Greece: Prospects for the Future

Piraeus Bank S.A.

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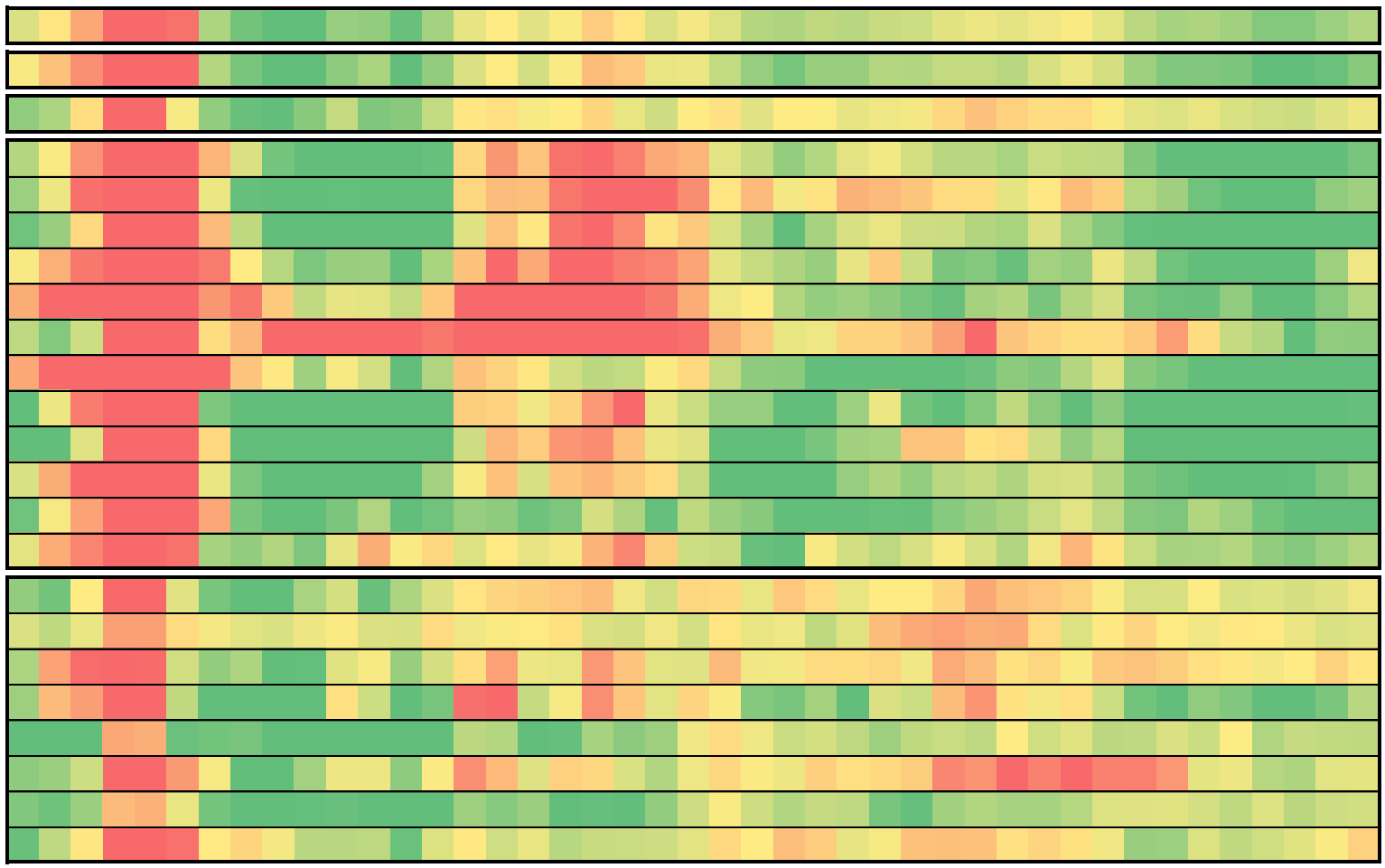
Asset Management

Global Purchasing Managers' Index (PMI) for manufacturing



		2018 Aug	2018 Sep
	Global	52,6	52,2
	Developed	53,8	53,6
	Emerging	50,8	50,3
Eurozone	Eurozone	54,6	53,2
Eurozone	France	53,5	52,5
Eurozone	Germany	55,9	53,7
Eurozone	Italy	50,1	50,0
Eurozone	Spain	53,0	51,4
Eurozone	Greece	53,9	53,6
Eurozone	Ireland	57,5	56,3
Developed	Sweden	54,6	56,6
Developed	Switzerland	64,8	59,7
Developed	UK	53,0	53,8
Developed	US	54,7	55,6
Developed	Japan	52,5	52,5
Emerging	China	50,6	50,0
Emerging	Indonesia	51,9	50,7
Emerging	Korea	49,9	51,3
Emerging	Taiwan	53,0	50,8
Emerging	India	51,7	52,2
Emerging	Brazil	51,1	50,9
Emerging	Mexico	50,7	51,7
Emerging	Russia	48,9	50,0

Source: Markit, J.P. Morgan Asset Management. The Global Purchasing Managers' Index (PMI) assesses the economic health of the manufacturing sector by surveying output and employment intentions. A score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. The 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. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

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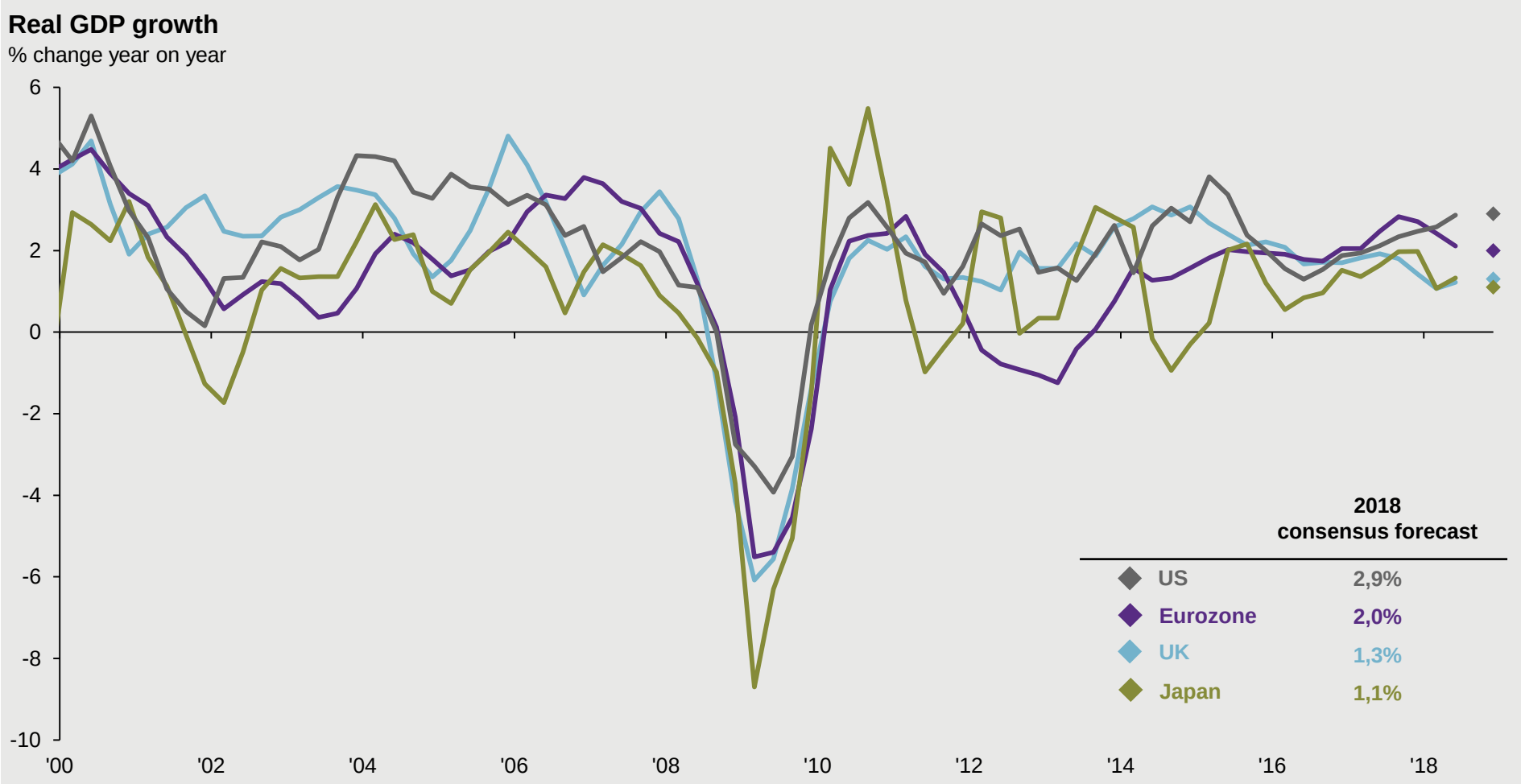
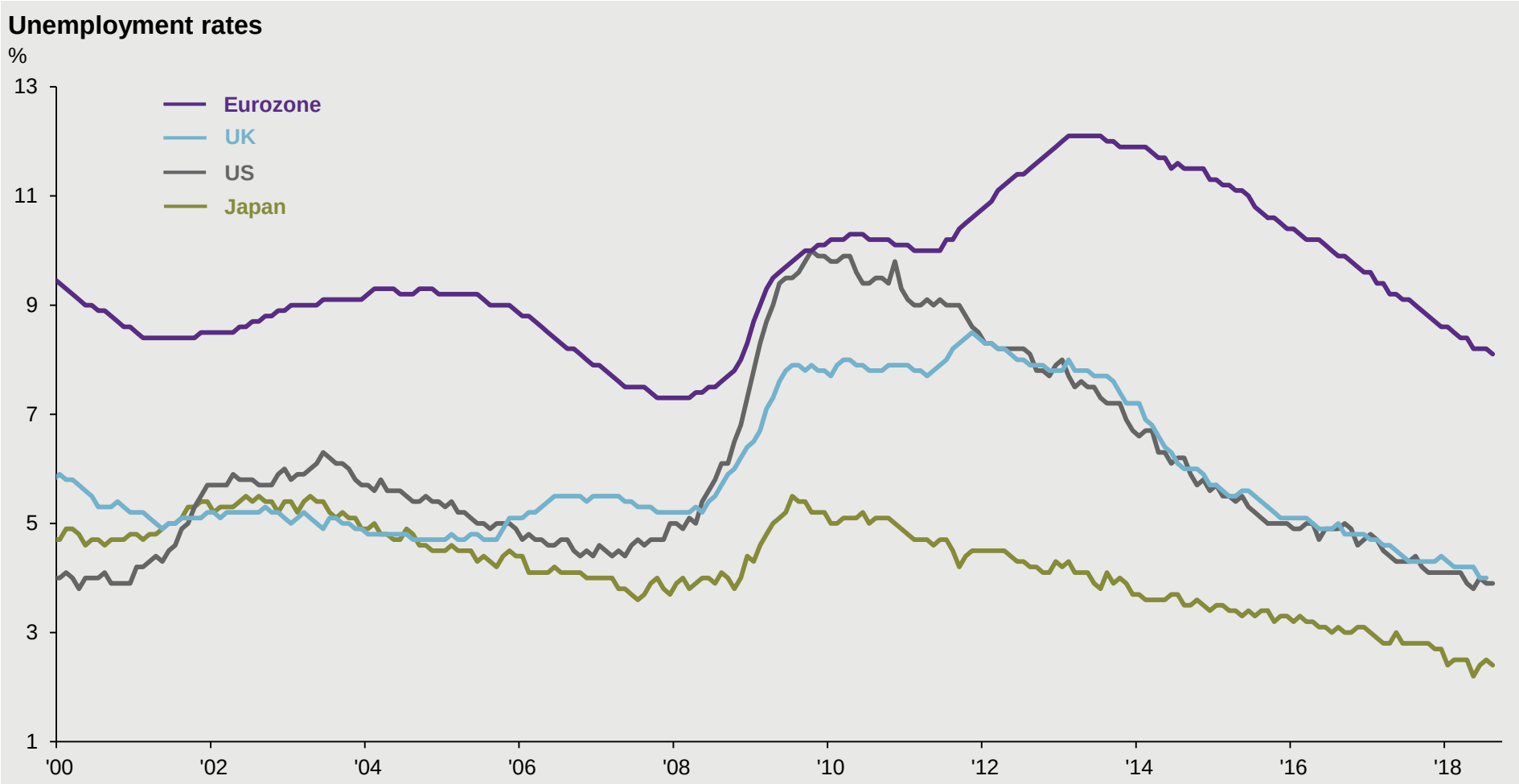


Source: BEA, Bloomberg, Eurostat, Japan Cabinet Office, ONS, Thomson Reuters Datastream, J.P. Morgan Asset Management. Forecasts are from Bloomberg contributor composite. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

Global unemployment



Source: BLS, Eurostat, Japan Ministry of Internal Affairs & Communications, ONS, Thomson Reuters 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 30 September 2018.

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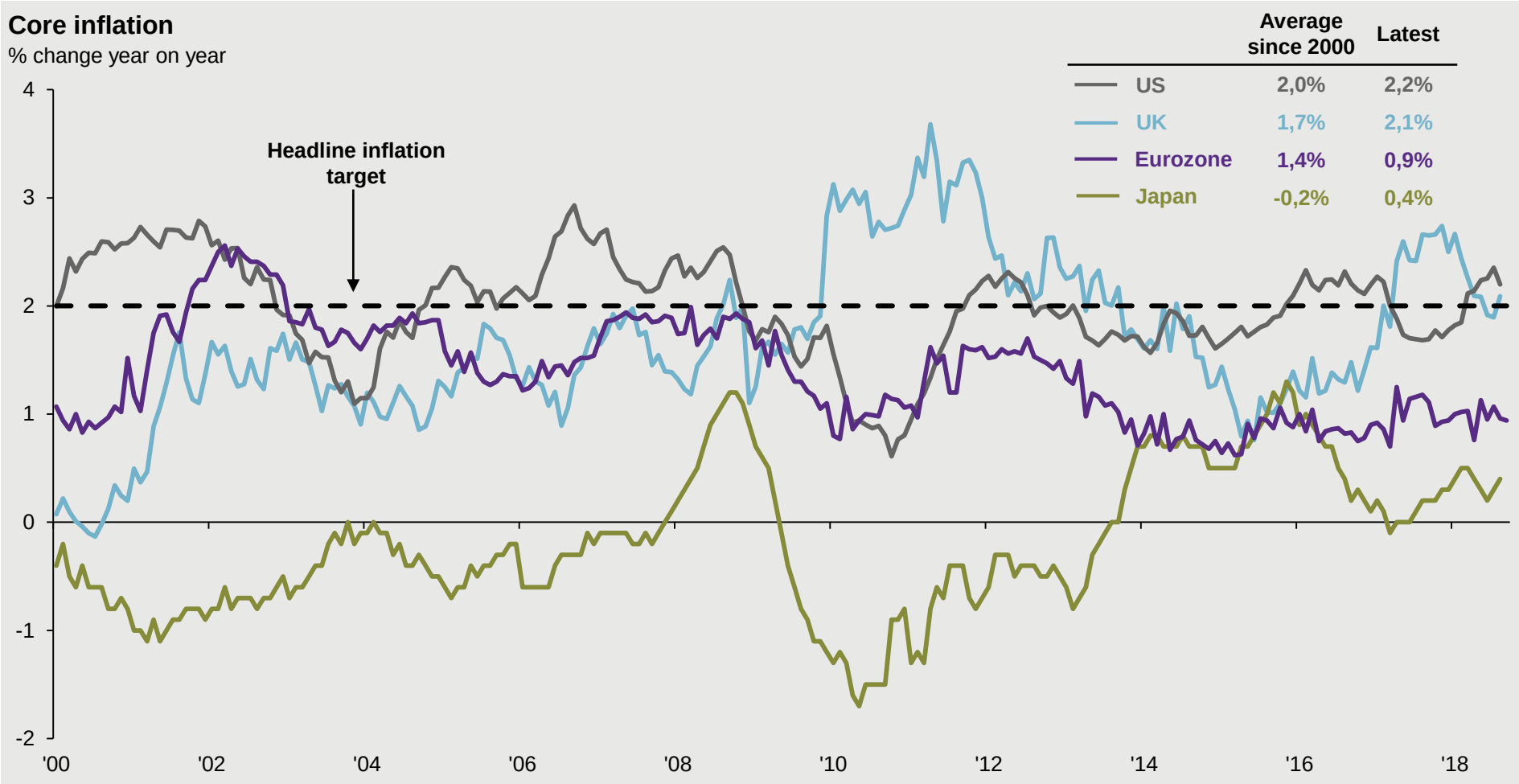
Global core inflation



Source: Bank of Japan, BLS, Eurostat, ONS, Thomson Reuters Datastream, J.P. Morgan Asset Management. CPI is the Consumer Price Index. Core inflation for the US and Japan is defined as CPI excluding food and energy. Core inflation for the UK and the eurozone is defined as CPI less energy, food, alcohol and tobacco. Japan core CPI has been adjusted down by 2% from April 2014 to March 2015 to remove the estimated impact of the consumption tax hike over this period. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

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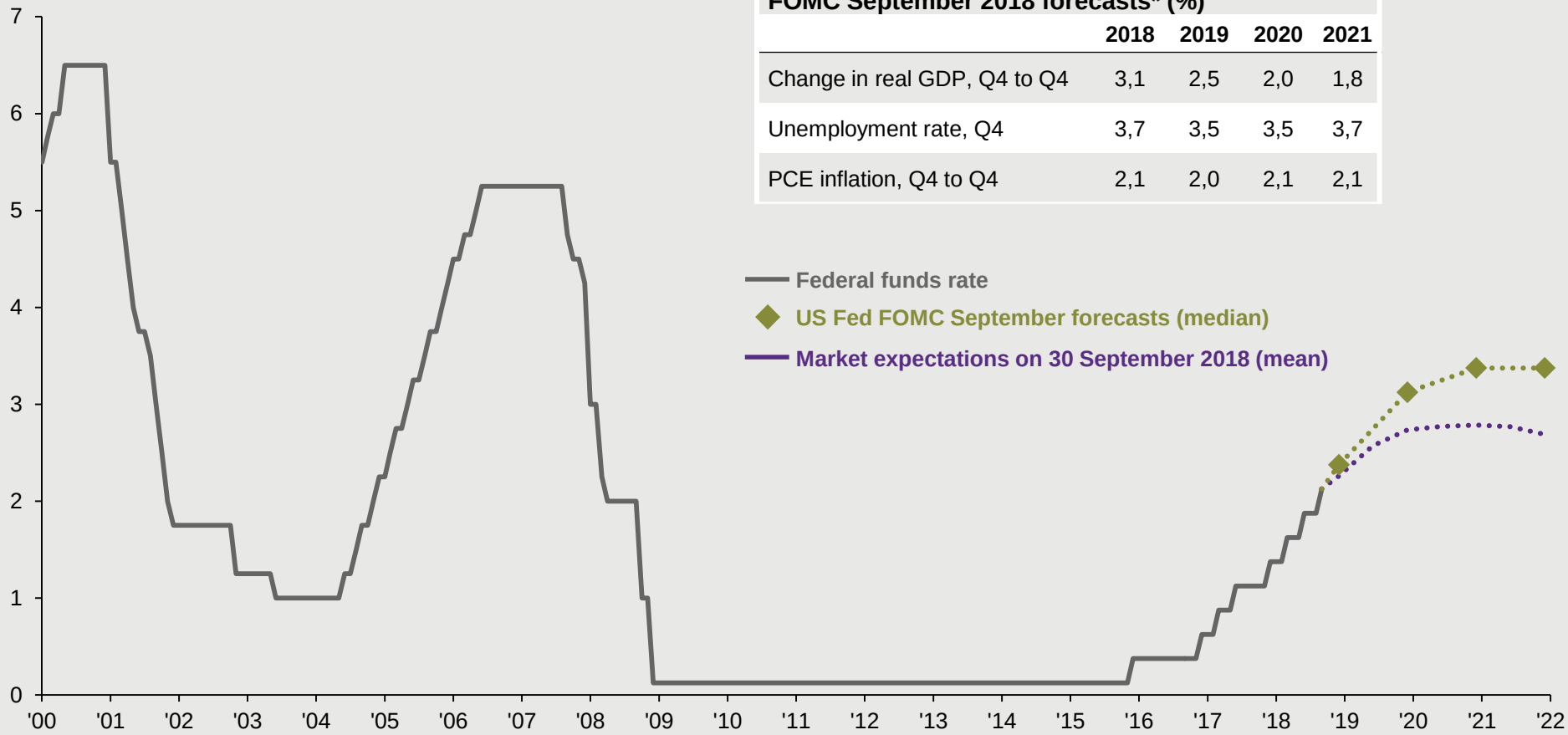
US Federal Reserve policy rate

Federal funds policy rate expectations

% Fed funds rate, FOMC and market expectations



FOMC September 2018 forecasts* (%)

	2018	2019	2020	2021
Change in real GDP, Q4 to Q4	3,1	2,5	2,0	1,8
Unemployment rate, Q4	3,7	3,5	3,5	3,7
PCE inflation, Q4 to Q4	2,1	2,0	2,1	2,1

Source: Bloomberg, US Federal Reserve, J.P. Morgan Asset Management. *Forecasts are median estimates of Federal Open Market Committee (FOMC) participants. PCE is personal consumption expenditure. Market expectations are calculated using OIS forwards. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

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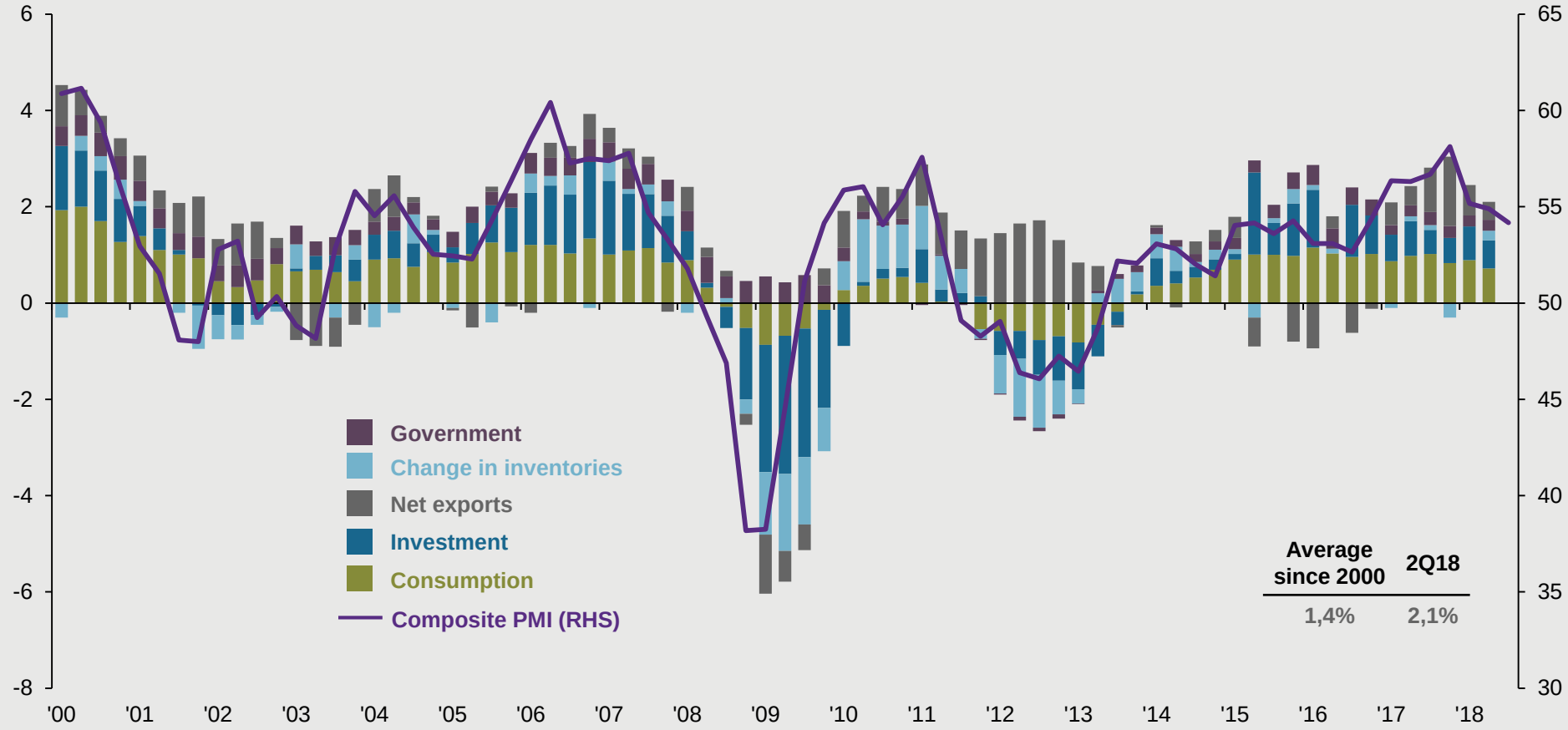
Contribution to eurozone real GDP growth and composite PMI

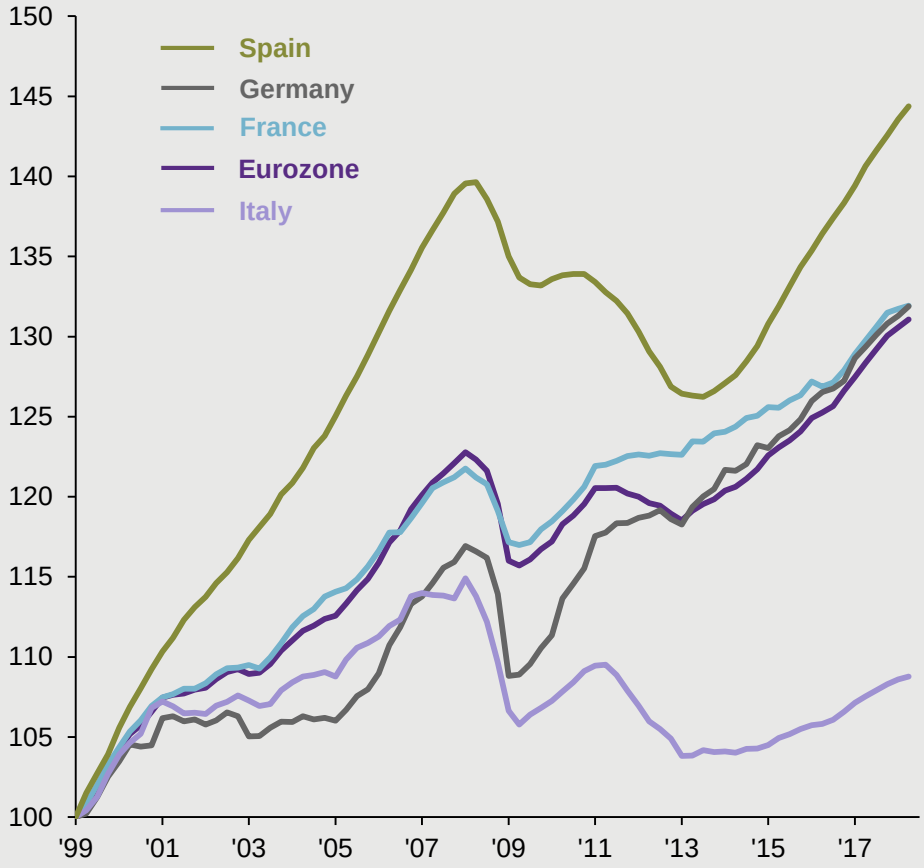
% change year on year (LHS); index level (RHS)



Source: Eurostat, Markit, Thomson Reuters Datastream, J.P. Morgan Asset Management. PMI is Purchasing Managers' Index where a score of 50 indicates that economic activity is neither expanding nor contracting, above 50 indicates expansion. PMI data is shown with quarterly frequency. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

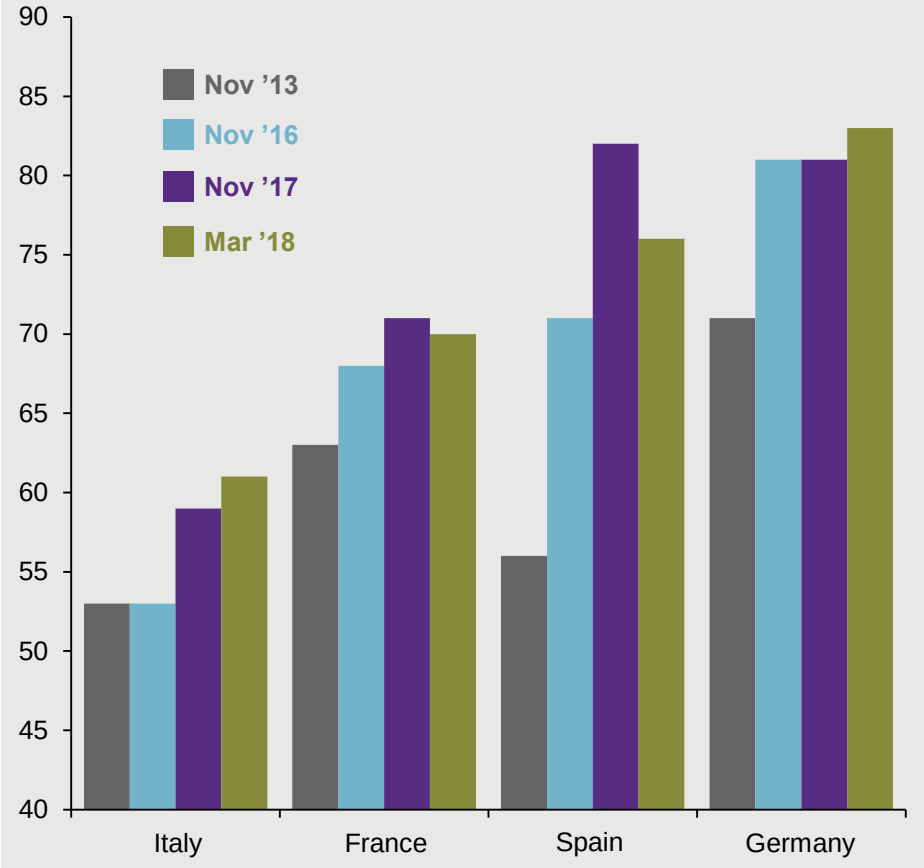
Eurozone real GDP levels

Index level rebased to 100 in 1999



Survey results: *Do you support the euro?*

% answering "yes"

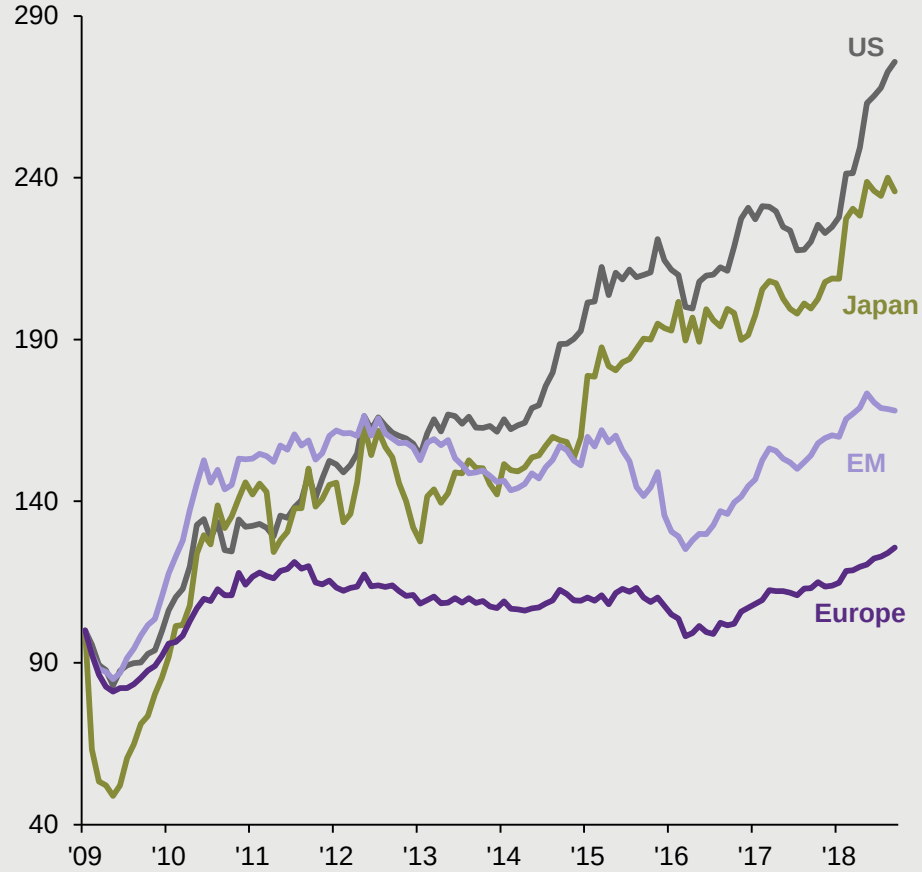


Source: (Left) Eurostat, Thomson Reuters Datastream, J.P. Morgan Asset Management. (Right) Eurobarometer survey, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

Equities

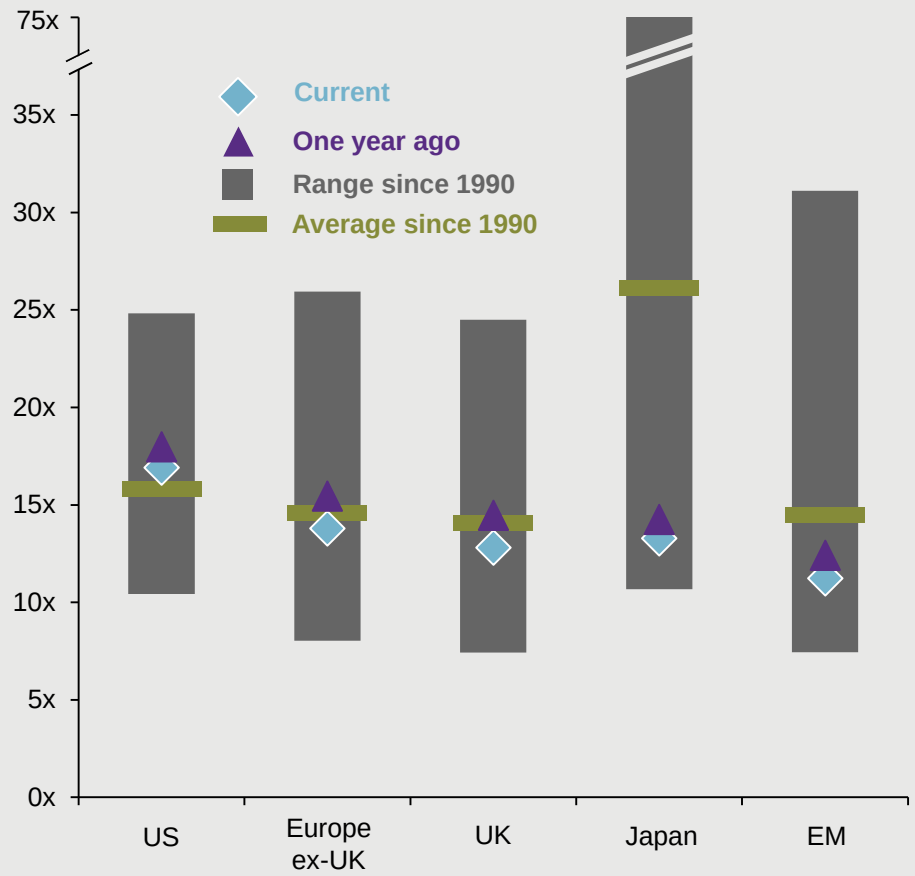
Global earnings per share

NTM EUR earnings per share estimates, rebased to 100 in Jan 2009



Global forward price-to-earnings ratios

x, multiple



Source: (Left) IBES, MSCI, Standard & Poor's, Thomson Reuters Datastream, J.P. Morgan Asset Management. NTM is next 12 months. (Right) IBES, MSCI, Standard & Poor's, Thomson Reuters Datastream, J.P. Morgan Asset Management. Earnings and valuation charts use MSCI indices for all regions/countries, except for the US, which is the S&P 500. EM is emerging markets. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.*
Data as of 30 September 2018.

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Current and historical yields for selected indices

% yield, fluctuations over the last 10 years*

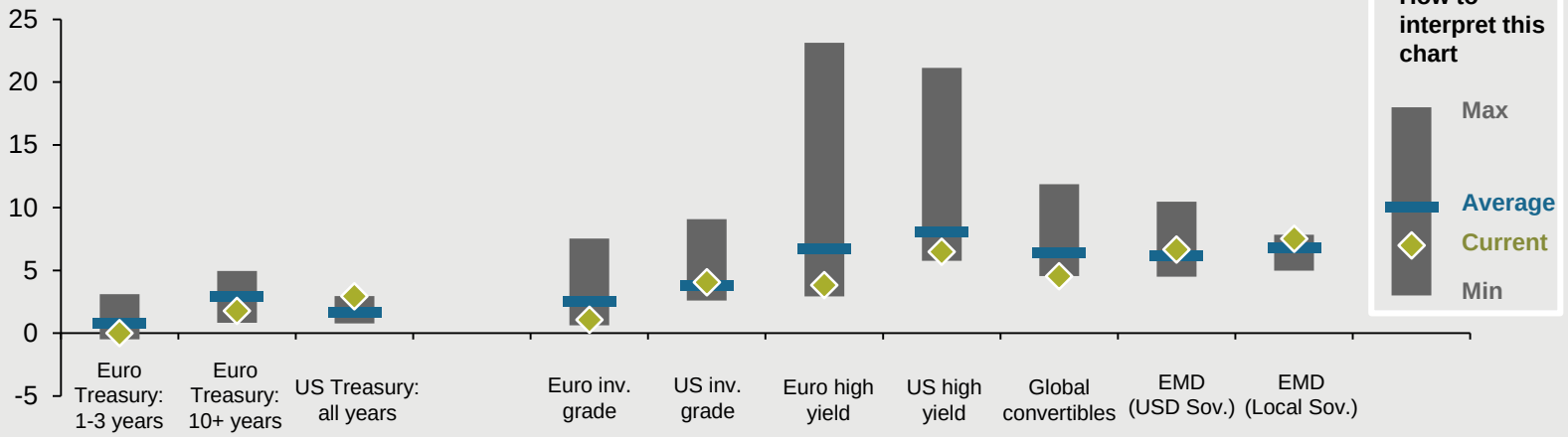
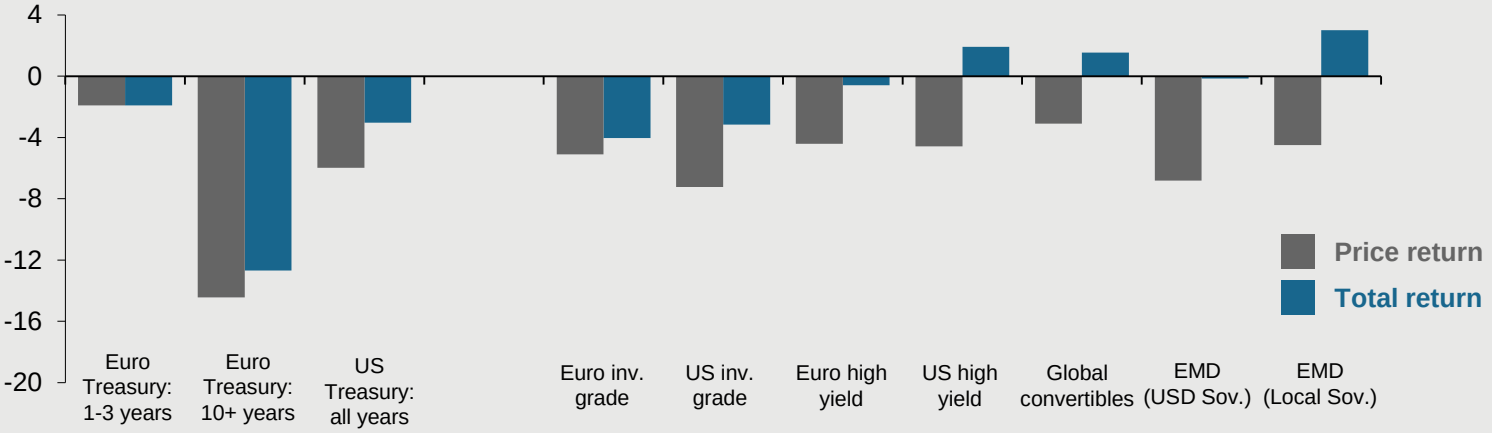


Illustration of the impact a 1% rise in local interest rates may have on selected indices

% change, assumes a parallel shift in the yield curve and spreads are maintained



Source: (All charts) Thomson Reuters Datastream, J.P. Morgan Asset Management.

*Historical yield range is based on the last 10 years of data, with the exception of global convertibles, which is based on nine years, due to data availability.

Fixed income sectors shown are Europe Treasury 1-3: Bloomberg Barclays Europe Government Agg. 1-3 Years; Europe Treasury 10+: Bloomberg Barclays Europe Government Agg. 10+ Years; US Treasury: Bloomberg Barclays US Agg. Treasury; Euro inv. grade: Bloomberg Barclays Euro Agg. – Corporates; US inv. grade: Bloomberg Barclays US Corporate Investment Grade; Euro high yield: BofA/Merrill Lynch Euro Non-Financial High Yield Constrained; US high yield: BofA/Merrill Lynch US High Yield Constrained; Global convertibles: Bloomberg Barclays Credit/Rate Sensitive; EMD USD Sov.: J.P. Morgan EMBI Global; EMD Local Sov.: JPM GBI-EM Composite.

For illustrative purposes only. Change in bond price is calculated using both duration and convexity, with the exception of Convertibles, which is historical change. Past performance is not a reliable indicator of current and future results.

Guide to the Markets - Europe. Data as of 30 September 2018.

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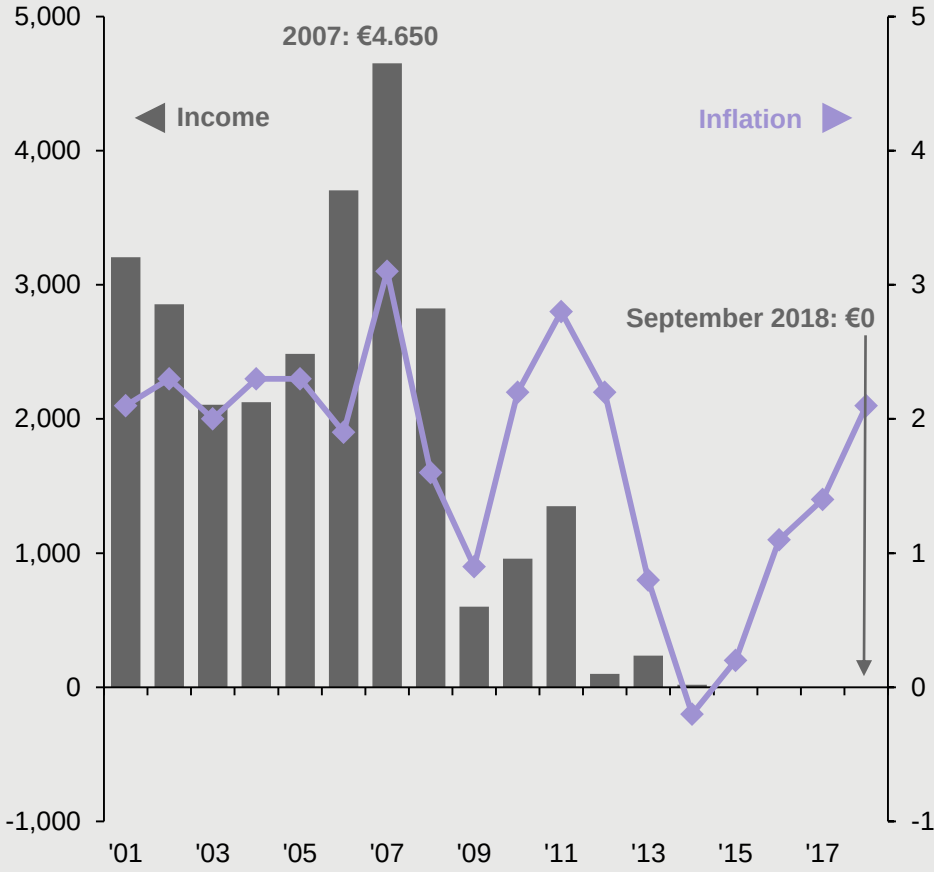
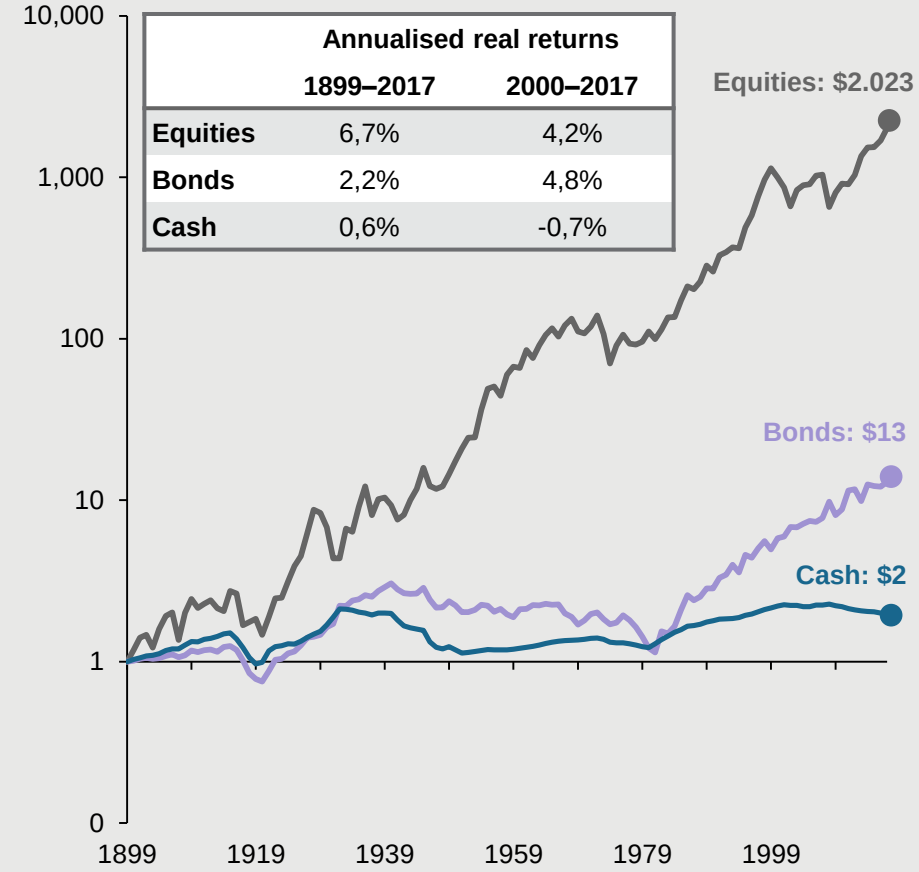
Income generated by €100.000 in a three-month bank deposit

EUR (LHS); % change year on year (RHS)



Total return of $1 in real terms

USD, log scale, total returns



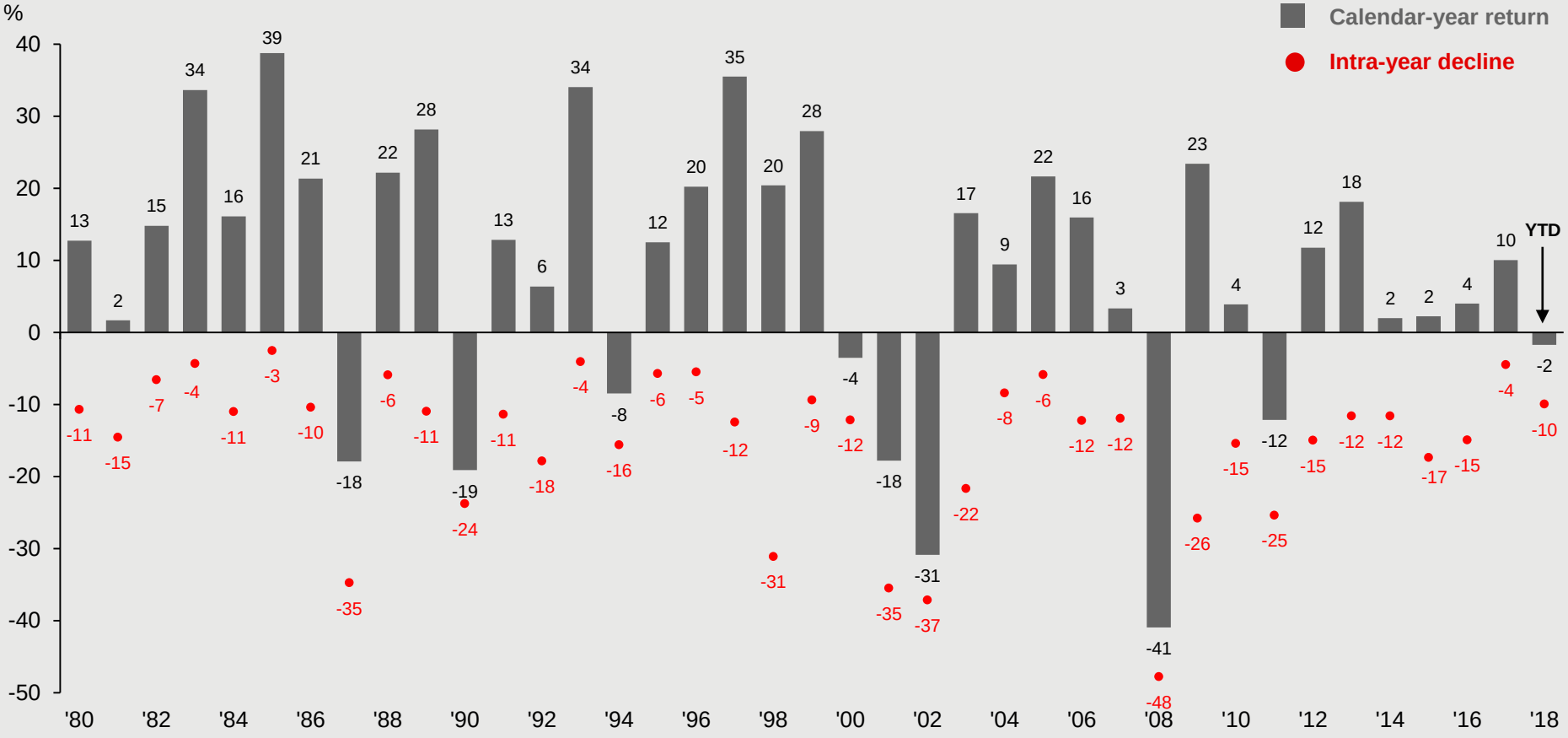
	Annualised real returns	
	1899–2017	2000–2017
Equities	6,7%	4,2%
Bonds	2,2%	4,8%
Cash	0,6%	-0,7%

Source: (Left) Bloomberg, Eurostat, J.P. Morgan Asset Management. Inflation is the percentage change year on year for the eurozone harmonised index of consumer prices. (Right) Bloomberg, Bloomberg Barclays, FactSet, Shiller, Siegel, Standard & Poor's, 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 30 September 2018.

Annual returns and intra-year declines

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

Despite average intra-year drops of 15,3% (median 12,0%), annual returns are positive in 30 of 38 years



Source: MSCI, Thomson Reuters Datastream, J.P Morgan Asset Management. Returns are based on local price only and do not include dividends. Intra-year decline refers to the largest market fall from peak to trough within a short time period during the calendar year. Returns shown are calendar years from 1980 to 2017. Current year is year to date. Past performance is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

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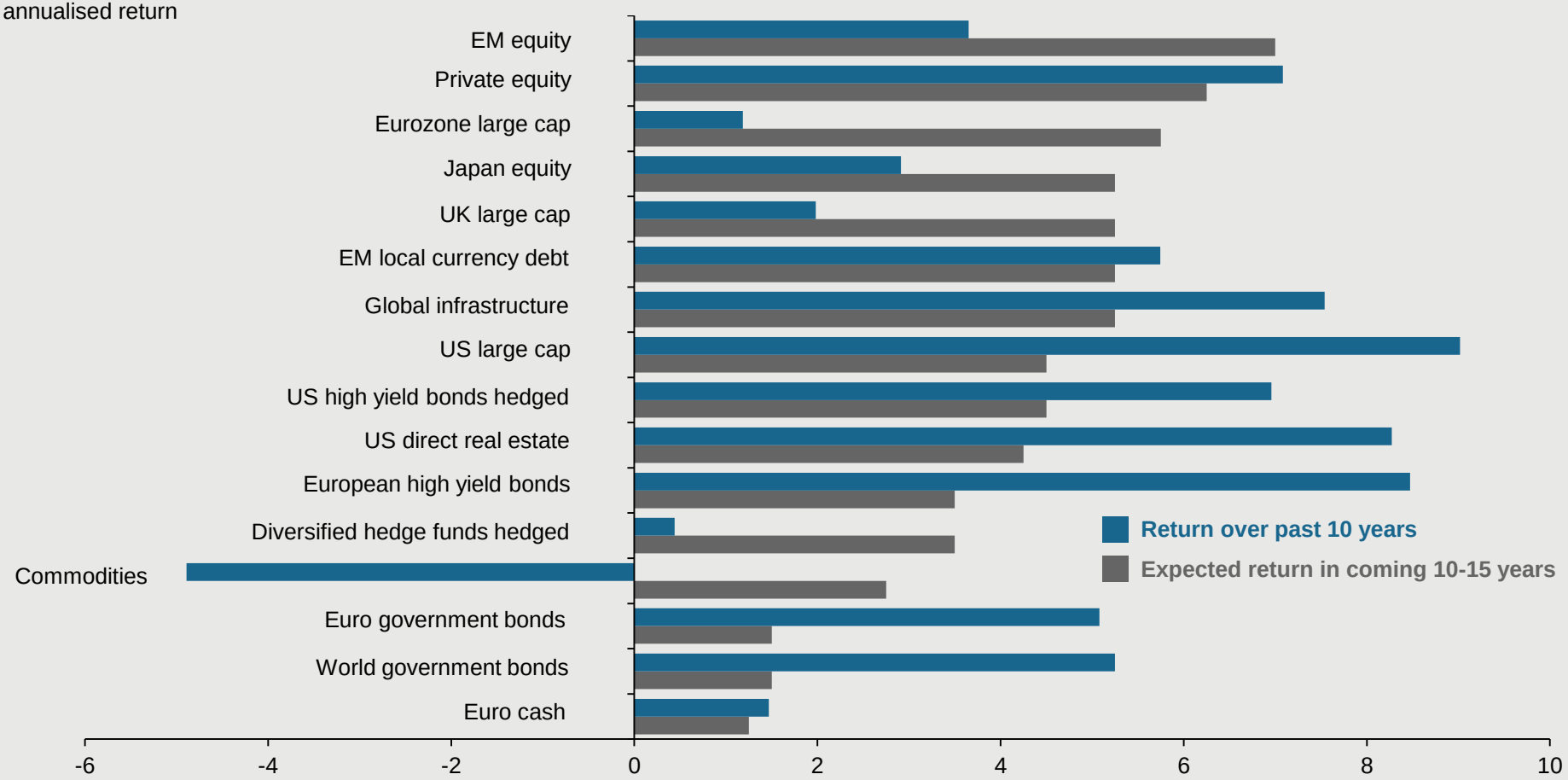
Past and expected returns

%, annualised return



Source: *2018 Long-Term Capital Market Assumptions*, J.P. Morgan Multi-Asset Solutions, J.P. Morgan Asset Management. Returns are nominal and in euros. The projections in the chart above are based on J.P. Morgan Asset Management's (JPMAM) 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 is not a reliable indicator of current and future results. *Guide to the Markets - Europe.* Data as of 30 September 2018.

J.P. Morgan Asset Management: Index definitions

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

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

The **S&P 400 Mid Cap Index** is representative of 400 stocks in the mid-range sector of the domestic stock market, representing all major industries.

The **Russell 3000 Index**® measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

The **Russell 1000 Index** ® measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Growth Index** ® measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 1000 Value Index** ® measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell Midcap Index** ® measures the performance of the 800 smallest companies in the Russell 1000 Index.

The **Russell Midcap Growth Index** ® measures the performance of those Russell Midcap companies with higher price-to-book ratios and higher forecasted growth values. The stocks are also members of the Russell 1000 Growth index.

The **Russell Midcap Value Index** ® measures the performance of those Russell Midcap companies with lower price-to-book ratios and lower forecasted growth values. The stocks are also members of the Russell 1000 Value index.

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

The **Russell 2000 Growth Index** ® measures the performance of those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index** ® measures the performance of those Russell 2000 companies with lower price-to-book ratios and lower forecasted growth values.

The **Russell Top 200 Index** ® measures the performance of the largest cap segment of the U.S. equity universe. It includes approximately 200 of the largest securities based on a combination of their market cap and current index membership and represents approximately 68% of the U.S. market.

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

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

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

The **MSCI Small Cap Indices**SM target 40% of the eligible Small Cap universe within each industry group, within each country. MSCI defines the Small Cap universe as all listed securities that have a market capitalization in the range of USD200-1,500 million.

The **MSCI All Country Asia Pacific ex-Japan Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed and emerging markets in the Pacific region. The **MSCI All Country Asia Pacific ex-Japan Index** consists of the following 11 developed and emerging market countries: Australia, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Taiwan, and Thailand.

The **MSCI China Index** is an unmanaged index considered representative of stocks of China.

The **MSCI KOKUSAI Index** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets excluding Japan. The MSCI KOKUSAI Index consists of the following 23 developed market country indices: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the United Kingdom, and the United States*.

The **Nikkei 225 Index** is a price-weighted average of the 225 top-rated Japanese companies listed in the first section of the Tokyo Stock Exchange.

The **Tokyo Price Index (TOPIX)** is a capitalization-weighted index lists all firms that are considered to be under the 'first section' on the TSE, which groups all of the large firms on the exchange into one pool. The second section groups all of the remaining smaller firms.

The **FTSE 100** Index is an index of the 100 largest companies (by market capitalization) in the United Kingdom.

The **FTSE All Share** Index is an index of the 630 largest companies (by market capitalization) in the United Kingdom.

The **MSCI Value and Growth Indices**SM cover the full range of developed, emerging and All Country MSCI Equity indexes. As of the close of May 30, 2003, MSCI implemented an enhanced methodology for the MSCI Global Value and Growth Indices, adopting a two dimensional framework for style segmentation in which value and growth securities are categorized using different attributes - three for value and five for growth including forward-looking variables. The objective of the index design is to divide constituents of an underlying MSCI Standard Country Index into a value index and a growth index, each targeting 50% of the free float adjusted market capitalization of the underlying country index. Country Value/Growth indices are then aggregated into regional Value/Growth indices. Prior to May 30, 2003, the indices used Price/Book Value (P/BV) ratios to divide the standard MSCI country indices into value and growth indices. All securities were classified as either "value" securities (low P/BV securities) or "growth" securities (high P/BV securities), relative to each MSCI country index.

The following **MSCI Total Return Indices**SM are calculated with gross dividends**:**

This series approximates the maximum possible dividend reinvestment. The amount reinvested is the dividend distributed to individuals resident in the country of the company, but does not include tax credits.

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

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

Credit Suisse/Tremont Hedge Fund Index is compiled by Credit Suisse Tremont Index, LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The Index uses the Credit Suisse/Tremont database, which tracks over 4500 funds, and consists only of funds with a minimum of US$50 million under management, a 12-month track record, and audited financial statements. It is calculated and rebalanced on a monthly basis, and shown net of all performance fees and expenses. It is the exclusive property of Credit Suisse Tremont Index, LLC.

The **NCREIF Property Index** is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only. All properties in the NPI have been acquired, at least in part, on behalf of tax-exempt institutional investors - the great majority being pension funds. As such, all properties are held in a fiduciary environment.

The **NAREIT EQUITY REIT Index** is designed to provide the most comprehensive assessment of overall industry performance, and includes all tax-qualified real estate investment trusts (REITs) that are listed on the NYSE, the American Stock Exchange or the NASDAQ National Market List.

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J.P. Morgan Asset Management: Index definitions

The **Dow Jones Industrial Average** measures the stock performance of 30 leading blue-chip U.S. companies
The **Dow Jones-UBS Commodity Index** is composed of futures contracts on physical commodities and represents twenty two separate commodities traded on U.S. exchanges, with the exception of aluminum, nickel, and zinc.
West Texas Intermediate (WTI) is underlying commodity in the New York Mercantile Exchange's oil futures contracts.
The **S&P GSCI Index** is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities. The returns are calculated on a fully collateralized basis with full reinvestment.
The **Bloomberg Barclays U.S. Aggregate Index** represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
This **U.S. Treasury Index** is a component of the U.S. Government index.
The **Bloomberg Barclays High Yield Index** covers the universe of fixed rate, non-investment grade debt. Pay-in-kind (PIK) bonds, Eurobonds, and debt issues from countries designated as emerging markets (e.g., Argentina, Brazil, Venezuela, etc.) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
The **Bloomberg Barclays 1-3 Month U.S. Treasury Bill Index** includes all publicly issued zero-coupon U.S. Treasury Bills that have a remaining maturity of less than 3 months and more than 1 month, are rated investment grade, and have $250 million or more of outstanding face value.
The **Bloomberg Barclays Euro-Aggregate Index** consists of bond issued in the euro or the legacy currencies of the sovereign countries participating the European Monetary Union (EMU).
The **Global Bond Index Emerging Market Broad Diversified Index (GBI-EM)** is a comprehensive global local emerging markets index, and consists of liquid, fixed-rate, domestic currency government bonds.
The **Bloomberg Barclays Global Aggregate Corporate Index** consists of corporate issues in Europe, the US and Asia-pacific regions.
The **Bloomberg Barclays Global High Yield Index** is an unmanaged index considered representative of fixed rate, noninvestment-grade debt of companies in the U.S., developed markets and emerging markets.
The **Bloomberg Barclays Emerging Markets Index** includes USD-denominated debt from emerging markets in the following regions: Americas, Europe, Middle East, Africa, and Asia. As with other fixed income benchmarks provided by Barclays Capital, the index is rules-based, which allows for an unbiased view of the marketplace and easy replicability.
The Bloomberg Barclays MBS Index covers the mortgage-backed pass-through securities of Ginnie Mae, Fannie Mae, and Freddie Mac. Aggregate components must have a weighted average maturity of at least one year, must have $250 million par amount outstanding, and must be fixed rate mortgages.
The **Bloomberg Barclays Corporate Bond Index** is the Corporate component of the U.S. Credit index.
The **Bloomberg Barclays TIPS Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
The **J.P. Morgan EMBI Global Index** includes U.S. dollar denominated Brady bonds, Eurobonds, traded loans and local market debt instruments issued by sovereign and quasi-sovereign entities.
The **Li Keqiang Index** is a composite measure composed of China's electricity production, financial institution loans and railway freight.
The **Euro Stoxx 600 Index** represents large, mid and small capitalisation companies across 18 European countries.
The **JPMorgan GBI-EM Global Diversified** consists of regularly traded, liquid fixed-rate, domestic currency government bonds to which international investors can gain exposure. The weightings among the countries are more evenly distributed within this index.
The **JPMorgan Corporate Emerging Markets Bond Index (CEMBI)**: The CEMBI tracks total returns of US dollar-denominated debt instruments issued by corporate entities in Emerging Markets countries, and consists of an investable universe of corporate bonds. Both indices are also available in Diversified version.
The **JPMorgan CEMBI Index** is a USD denominated external debt index tracking bond issued by sovereigns and quasi-sovereigns in the developing nations.
The **J.P. Morgan Domestic High Yield Index** is designed to mirror the investable universe of the U.S. dollar domestic high yield corporate debt market.
The **CS/Tremont Equity Market Neutral Index** takes both long and short positions in stocks with the aim of minimizing exposure to the systematic risk of the market (i.e. a beta of zero).*
The **CS/Tremont Multi-Strategy Index** consists of funds that allocate capital based on perceived opportunities among several hedge fund strategies. Strategies adopted in a multi-strategy fund may include, but are not limited to, convertible bond arbitrage, equity long/short, statistical arbitrage and merger arbitrage.
The **Bloomberg Barclays U.S. Dollar Floating Rate Note (FRN) Index** provides a measure of the U.S. dollar denominated floating rate note market.
*Market Neutral returns for November 2008 are estimates by J.P. Morgan Funds Market Strategy, and are based on a December 8, 2008 published estimate for November returns by CS/Tremont in which the Market Neutral returns were estimated to be +0.85% (with 69% of all CS/Tremont constituents having reported return data). Presumed to be excluded from the November return are three funds, which were later marked to $0 by CS/Tremont in connection with the Bernard Madoff scandal. J.P. Morgan Funds believes this distortion is not an accurate representation of returns in the category. CS/Tremont later published a finalized November return of -40.56% for the month, reflecting this mark-down. CS/Tremont assumes no responsibility for these estimates.
The **Office of National Statistics (ONS) Index** is a mix-adjusted average housing price index. The index is calculated monthly using mortgage financed transactions from the Regulated Mortgage Survey by the Council of Mortgage Lenders.
The **Nationwide House Price Index** is a mix adjusted index constructed from Nationwide lending data across the UK.
The **Halifax House Price Index** is constructed from mortgage data derived from Halifax lending data across the UK.
The **MSCI AC World High Dividend Yield Index** is composed of those securities that have higher-than-average dividend yield within its parent index, a track record of consistent dividend payments and the capacity to sustain future dividend payments.

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Asset Management

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Unless otherwise stated, all data as of 30 September 2018 or most recently available.

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