

Applied philosophy

How old is the captain?

US equities have been on a strong run, partly driven by multiples reaching levels only seen during extreme market events. At the same time, valuations in the rest of the world have remained close to or below long-term averages (apart from India, for example). We analyse the relationship between cyclically-adjusted price-to-earnings ratios and ten-year forward returns to compare potential regional returns.

Human beings tend to be good at creating narratives out of seemingly unconnected events. I am regularly asked to explain movements in financial markets and can certainly find stories that sound plausible ex-post. Of course, a bigger challenge is trying to predict what they will do in the future. Believers in the theories lying at the two extremes of a range between random walk theory and efficient market hypothesis probably do not feel they should try.

Philosophically, I am somewhere between the two, and this can still make it feel like I am trying to solve Gustave Flaubert's famous riddle from 1841:

"A ship sails the ocean. It left Boston with a cargo of cotton. It grosses 200 tons. It is bound for Le Havre. The mainmast is broken, the cabin boy is on deck, there are 12 passengers aboard, the wind is blowing East-Northeast, the clock points to a quarter past three in the afternoon. It is the month of May. How old is the captain?"

Perhaps the most complex and fun exercise is trying to predict the future returns of equity markets, as far as I

am concerned. Luckily, unlike in Flaubert's riddle, I can rely on an anchor (pun fully intended): valuations. They may not be particularly useful in predicting short term returns, although there is a stronger relationship with long-term performance.

In January 2024, I analysed the relationship between the Shiller P/E and the US equity market and concluded that returns are likely to be below-average in the next ten years (see [here](#) for more). It also seems to work in the same way with a non-inflation-adjusted version of the cyclically-adjusted price-to-earnings (CAPE) ratio based on Datastream data, which can also be calculated for other markets.

At the time, US equities looked expensive after strong returns mostly driven by mega-cap growth stocks ("The Magnificent Seven", some of which do not look so magnificent now). If anything, the US has become even more expensive: the CAPE rose from 35.7x at the end of 2023 to 38.2x as of 31 May 2024. As **Figure 1** shows, it was not alone. CAPE ratios rose in all regions year-to-date, which is not unusual in market expansions. Prices can move faster than earnings (especially if we use their ten-year average).

Nevertheless, the outperformance and decoupling of US equities is evident and shows little sign of coming to an end. Despite a narrowing spread of equity returns year-to-date (in local currency terms, see **Figure 4**), the valuation gap has not diminished. Assuming valuations can be a useful guide to future returns, what does that imply for each region?

Figure 1 – Cyclically-adjusted price-to-earnings ratios since December 2004



Notes: **Past performance is no guarantee of future results.** Data as of 31 May 2024. We use Datastream Total Market indices. Cyclically-adjusted price-to-earnings ratios use a ten-year average of earnings based on monthly data between 31 December 2004 and 31 May 2024. Source: LSEG Datastream and Invesco Global Market Strategy Office

Unfortunately, the relationship between CAPE ratios and ten-year future returns is not uniform. Based on their respective r-squared values, there is a wide spread of how strong the predictive power of a region's CAPE ratio is. The US has the highest r-squared ratio of 0.78, followed by Japan with 0.57 and Emerging Markets (EM) with 0.30, while the relationship is the weakest in Europe with an r-squared of 0.18 (all calculations use daily data between 3 January 1983 and 31 May 2014, except for EM, where the data series starts on 30 December 2004). Splitting Europe into Europe ex-UK and UK does not improve the r-squared values (they are 0.13 and 0.03 respectively). At the same time, those of the Chinese (0.54) and Indian (0.68) markets are higher than the 0.31 for EM. Perhaps exchange rate movements play a role in loosening the relationship for multi-currency indices (and also for a market such as the UK, where the majority of earnings are derived from overseas).

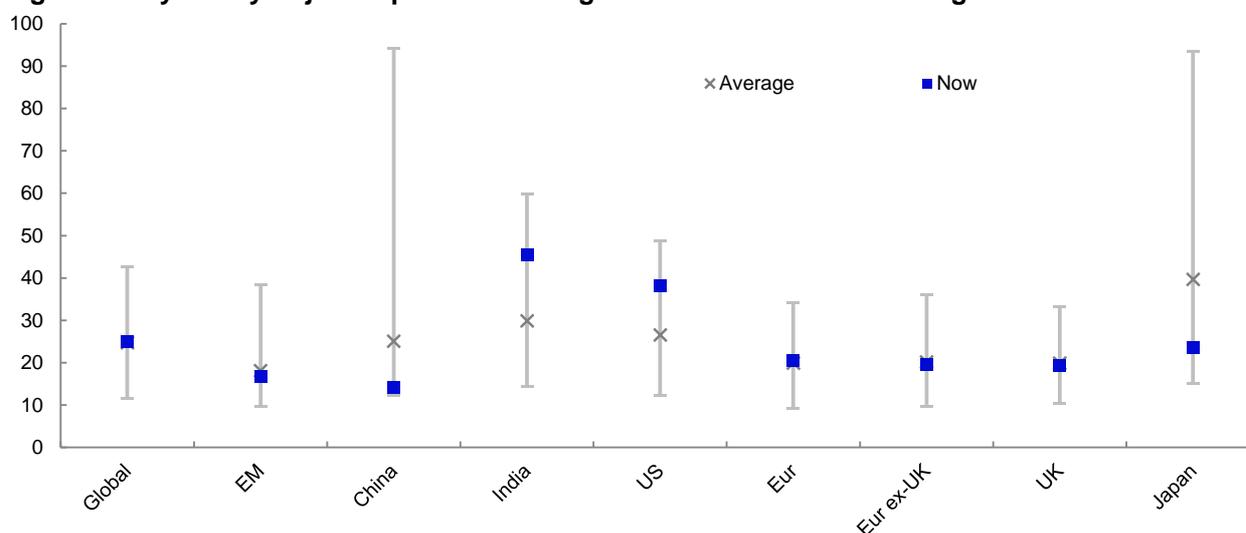
Nevertheless, using the equation produced by a simple regression between the CAPE ratios and ten-year forward returns, current valuations imply that the US faces the lowest annualised capital returns in the next decade at 2%, while Europe ex-UK may potentially have the highest annualised returns at 7.1%. In between are China and Europe (including UK stocks) at around 6%, followed by the UK at 5.6%, Japan at 5.4% and India at 4.9% (all are annualised capital returns in local currency, except for Europe ex-UK and Europe, which are in USD). Based on long-term average dividend yields, this would provide attractive annualised total returns of around 9.5% for European equities (UK returns would be similar, while Europe ex-UK would be higher at 10%), just under 8% for China and around 7%

for Japan. Indian total returns would be lower at 6.3%, while US returns would be among the lowest at approximately 4.8%.

Intuitively, this seems like a plausible outcome to me, although there are many variables at play (calculating the captain's age is not easy). While I do not necessarily have to take into account where we are in the economic cycle (the advantage of using 10-year average earnings), I must attempt to judge structural forces. Most importantly, whether we are in the relatively high growth environment of the pre-GFC period, or the "secular stagnation" of the 2010s. A return to pre-GFC growth rates and policy settings would require a rise in productivity growth, especially given the decline in population growth (perhaps provided by applications for generative artificial intelligence), which seems a long shot to me at this moment. At the same time, I think a return to the immediate post-GFC economic environment is unlikely in the short term unless governments decide on large-scale austerity (corporate leverage seems less of an issue).

Assuming that these returns are not far off the mark, they look attractive versus government bonds almost everywhere over the next decade, except the US. The exceptional run in US equities partly driven by multiple expansion may be running out of road, especially if interest rates stay relatively elevated, in my view. This environment may favour markets more exposed to value. Therefore, within equities, I would favour markets with lower valuations (see **Figure 2**), such as Europe and Emerging Markets over the US and India in the next ten years, with Japan somewhere in between.

Figure 2 – Cyclically-adjusted price-to-earnings ratios within historical ranges



Notes: Data as of 31 May 2024. We use Datastream Total Market indices. Cyclically-adjusted price-to-earnings ratios use a ten-year average of earnings based on daily data between 1 January 1983 and 31 May 2024 (except for China from 1 April 2004, India from 31 December 1999 and EM from 3 January 2005).

Source: LSEG Datastream and Invesco Global Market Strategy Office

Figure 3 – Regression analysis statistics and implied capital returns

	Intercept	Slope	R-squared	Current CAPE	Implied return	Average dividend yield
Global	0.1438	-0.0031	0.35	24.87	6.6%	2.7%
EM	0.0641	-0.0022	0.31	16.60	2.7%	2.6%
China	0.0843	-0.0017	0.54	14.06	6.1%	1.8%
India	0.2433	-0.0043	0.68	45.35	4.9%	1.4%
US	0.2198	-0.0052	0.78	38.19	2.0%	2.8%
Europe	0.1323	-0.0035	0.18	20.53	6.1%	3.5%
Europe ex-UK	0.1252	-0.0028	0.13	19.51	7.1%	3.1%
UK	0.0865	-0.0016	0.03	19.21	5.6%	4.1%
Japan	0.1013	-0.0020	0.57	23.55	5.4%	1.5%

Notes: Data as of 31 May 2024. **Past performance is no guarantee of future results.** We use Datastream Total Market indices. Implied returns are calculated using the “ $y = mx + b$ ” formula, where “m” is the slope, “x” is the current CAPE and “b” is the intercept. Average dividend yields are based on daily data from 1 January 1973 to 20 May 2024 (except for EM from 2 January 1995, China from 3 May 1994 and India from 1 January 1990).

Source: LSEG Datastream and Invesco Global Market Strategy Office

Figure 4 – Asset class total returns (% annualised)

Data as at 31/05/2024		Current Level/Ry	Total Return (USD, %)					Total Return (Local Currency, %)				
Index	1w		1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m	
Equities												
World	MSCI	786	-0.7	4.1	0.7	9.1	24.1	-0.7	3.8	0.9	10.6	24.7
Emerging Markets	MSCI	1049	-3.1	0.6	1.1	3.5	12.8	-2.5	0.5	1.9	6.6	15.1
China	MSCI	59	-3.0	2.4	9.2	6.8	4.5	-2.9	2.5	9.2	7.3	4.7
US	MSCI	5019	-0.6	4.8	0.5	10.9	28.4	-0.6	4.8	0.5	10.9	28.4
Europe	MSCI	2147	-0.2	5.0	3.2	8.8	20.5	-0.5	3.2	2.6	11.3	18.0
Europe ex-UK	MSCI	2670	-0.1	5.5	2.5	8.8	20.9	-0.5	3.6	2.0	12.0	18.7
UK	MSCI	1255	-0.6	3.6	5.5	8.8	18.9	-0.6	1.9	4.7	9.0	15.8
Japan	MSCI	3925	0.8	1.4	-3.6	7.2	19.0	0.9	1.2	0.1	19.5	33.9
Government Bonds												
World	BofA-ML	3.58	-0.2	1.0	-2.1	-5.0	-2.4	-0.2	0.4	-1.6	-2.3	-0.6
Emerging Markets	BBloom	7.80	0.2	2.3	-0.4	2.0	15.3	0.2	2.3	-0.4	2.0	15.3
China	BofA-ML	2.13	0.3	0.6	0.8	1.1	4.1	0.3	0.6	1.1	3.2	6.2
US (10y)	Datastream	4.49	-0.1	1.9	-1.5	-3.2	-3.1	-0.1	1.9	-1.5	-3.2	-3.1
Europe	BofA-ML	3.23	-0.3	1.4	-1.0	-3.9	3.8	-0.4	-0.1	-1.5	-2.2	1.9
Europe ex-UK (EMU, 10y)	Datastream	2.63	-0.4	1.2	-1.9	-5.5	1.4	-0.5	-0.3	-2.4	-3.9	-0.4
UK (10y)	Datastream	4.32	-0.4	2.3	-1.5	-4.1	6.8	-0.4	0.6	-2.3	-3.9	4.0
Japan (10y)	Datastream	1.06	-0.6	-1.6	-6.4	-13.2	-15.0	-0.5	-1.7	-2.8	-3.2	-4.4
IG Corporate Bonds												
Global	BofA-ML	5.14	0.0	1.8	-0.4	-1.1	5.4	0.0	1.3	-0.5	-0.4	4.9
Emerging Markets	BBloom	6.82	0.0	2.8	0.8	4.3	12.3	0.0	2.8	0.8	4.3	12.3
China	BofA-ML	2.87	0.1	0.3	0.5	0.2	2.6	0.1	0.3	0.8	2.3	4.6
US	BofA-ML	5.60	0.0	1.9	-0.5	-0.6	4.7	0.0	1.9	-0.5	-0.6	4.7
Europe	BofA-ML	4.01	0.0	1.8	-0.1	-1.9	7.1	-0.1	0.2	-0.6	-0.2	5.2
UK	BofA-ML	5.72	-0.2	2.7	-0.3	-1.0	11.3	-0.2	1.0	-1.1	-0.9	8.4
Japan	BofA-ML	1.12	-0.3	-0.4	-4.6	-11.0	-11.8	-0.2	-0.5	-0.9	-0.8	-0.8
HY Corporate Bonds												
Global	BofA-ML	7.97	0.0	1.6	0.6	2.1	12.1	0.0	1.2	0.5	2.5	11.7
US	BofA-ML	8.18	0.0	1.1	0.2	1.7	11.2	0.0	1.1	0.2	1.7	11.2
Europe	BofA-ML	6.66	0.1	2.5	1.5	0.8	12.7	0.1	1.0	1.0	2.6	10.7
Cash (Overnight LIBOR)												
US		5.33	0.1	0.5	0.9	2.3	5.4	0.1	0.5	0.9	2.3	5.4
Euro Area		3.91	0.0	2.0	1.1	-0.1	5.3	0.1	0.3	0.7	1.7	3.9
UK		5.20	0.1	2.5	1.8	2.3	7.8	0.1	0.5	0.9	2.2	5.3
Japan		0.08	-0.2	0.3	-3.8	-10.3	-11.4	0.0	0.0	0.0	0.0	0.0
Real Estate (REITs)												
Global	FTSE	1550	0.8	3.3	-2.4	-3.7	8.1	0.8	1.7	-2.9	-2.0	6.2
Emerging Markets	FTSE	1203	-3.3	0.7	0.5	-3.7	4.3	-3.4	-0.9	0.0	-2.1	2.5
US	FTSE	2926	1.7	4.7	-2.8	-3.4	9.2	1.7	4.7	-2.8	-3.4	9.2
Europe ex-UK	FTSE	2471	1.8	7.3	4.9	-0.9	37.0	1.8	5.7	4.4	0.9	34.5
UK	FTSE	853	1.4	7.3	3.2	-0.2	15.0	1.5	5.5	2.4	-0.1	12.0
Japan	FTSE	2071	0.6	-5.9	-9.3	-3.2	2.8	0.7	-6.0	-5.9	7.9	15.6
Commodities												
All	GSCI	3665	-1.3	-1.9	-0.8	9.5	18.4	-	-	-	-	-
Energy	GSCI	638	-1.2	-4.7	-4.9	10.1	25.1	-	-	-	-	-
Industrial Metals	GSCI	1830	-1.9	1.3	14.0	14.3	19.9	-	-	-	-	-
Precious Metals	GSCI	2634	-0.3	2.5	6.2	13.7	18.7	-	-	-	-	-
Agricultural Goods	GSCI	530	-1.8	3.4	2.4	3.3	0.1	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.08	0.0	1.7	0.4	-1.8	1.4	-	-	-	-	-
JPY		157.32	-0.2	0.3	-3.8	-10.3	-11.4	-	-	-	-	-
GBP		1.27	-0.1	1.7	0.8	-0.1	2.7	-	-	-	-	-
CHF		1.11	1.4	1.9	0.0	-6.7	1.0	-	-	-	-	-
CNY		7.24	0.0	0.0	-0.3	-2.0	-1.8	-	-	-	-	-

Notes: *The currency section is organised so that in all cases the numbers show the movement in the mentioned currency versus USD (+ve indicates appreciation, -ve indicates depreciation). **Past performance is no guarantee of future results.** Please see appendix for definitions, methodology and disclaimers.

Source: LSEG Datastream and Invesco Global Market Strategy Office

Figure 5 – Global equity sector total returns relative to market (%)

Data as at 31/05/2024	Global				
	1w	1m	QTD	YTD	12m
Energy	1.1	-3.6	-0.9	-3.4	-4.3
Basic Materials	0.1	-0.7	3.1	-3.4	-2.4
Basic Resources	0.0	0.7	7.0	-1.0	3.7
Chemicals	0.2	-2.7	-2.4	-6.9	-10.4
Industrials	-0.2	-1.0	-1.3	-0.6	1.4
Construction & Materials	-0.4	-0.2	-0.7	0.8	8.8
Industrial Goods & Services	-0.2	-1.1	-1.4	-0.9	0.4
Consumer Discretionary	0.4	-1.8	-3.4	-3.0	-3.1
Automobiles & Parts	0.4	-4.9	-5.1	-10.7	-8.9
Media	0.5	1.9	-0.9	7.0	6.8
Retailers	0.2	-0.3	-2.0	3.2	7.0
Travel & Leisure	-0.2	-4.4	-5.2	-7.7	-10.9
Consumer Products & Services	1.0	-1.5	-4.1	-5.8	-9.7
Consumer Staples	0.3	-2.3	-0.7	-6.1	-15.3
Food, Beverage & Tobacco	0.2	-2.4	-0.5	-6.7	-16.8
Personal Care, Drug & Grocery Stores	0.7	-2.1	-1.1	-5.1	-12.3
Healthcare	0.3	-1.2	-2.0	-2.1	-7.8
Financials	0.5	0.3	1.1	2.0	6.8
Banks	0.6	-0.7	2.1	2.6	7.9
Financial Services	0.1	1.0	-0.2	-0.1	5.6
Insurance	1.0	1.4	0.7	4.3	6.2
Real Estate	1.0	-0.8	-2.9	-10.2	-11.3
Technology	-1.4	3.9	2.7	7.8	11.4
Telecommunications	1.6	-0.4	-1.7	-6.5	-9.9
Utilities	0.2	1.7	6.5	1.1	-4.9

Notes: Returns shown are for Datastream sector indices versus the total market index. **Past performance is no guarantee of future results.** Source: Refinitiv Datastream and Invesco

Figure 6a – US factor index total returns (% annualised)

Data as at 31/05/2024	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	-1.2	2.4	-4.1	8.3	29.2	-0.7	-2.5	-4.7	-2.7	0.8
Low volatility	0.4	2.3	-1.3	8.1	14.7	0.9	-2.5	-1.9	-2.9	-10.5
Price momentum	-0.9	3.9	-1.5	10.9	27.7	-0.5	-1.0	-2.1	-0.3	-0.4
Quality	0.9	2.9	-3.5	6.5	24.9	1.4	-2.0	-4.2	-4.3	-2.6
Size	0.4	2.3	-4.2	1.0	21.6	0.9	-2.5	-4.8	-9.2	-5.1
Value	1.3	4.0	0.0	7.5	31.1	1.8	-0.9	-0.7	-3.4	2.3
Market	-0.5	5.0	0.7	11.3	28.2					
Market - Equal-Weighted	-0.2	2.8	-2.2	5.6	21.0					

Notes: **Past performance is no guarantee of future results.** All indices are subsets of the S&P 500 index, they are rebalanced monthly, use data in US dollars and are equal-weighted. Growth includes stocks in the top third based on both their 5-year sales per share trend and their internal growth rate (the product of the 5-year average return on equity and the retention ratio); Low volatility includes stocks in the bottom quintile based on the standard deviation of their daily returns in the previous three months; Price momentum includes stocks in the top quintile based on their performance in the previous 12 months; Quality includes stocks in the top third based on both their return on invested capital and their EBIT to EV ratio (earnings before interest and taxes to enterprise value); Size includes stocks in the bottom quintile based on their market value in US dollars. Value includes stocks in the bottom quintile based on their price to book value ratios. The market represents the S&P 500 index. Source: LSEG Datastream and Invesco Global Market Strategy Office

Figure 6b – European factor index total returns relative to market (% annualised)

Data as at 31/05/2024	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	-1.1	4.0	4.5	5.6	16.1	-0.8	0.5	1.8	-4.6	-2.1
Low volatility	-0.4	3.3	3.1	9.0	12.0	-0.1	-0.2	0.4	-1.6	-5.5
Price momentum	-0.4	5.6	4.7	15.7	27.6	-0.1	2.0	2.0	4.5	7.6
Quality	-0.7	4.6	5.8	11.6	25.8	-0.4	1.0	3.1	0.8	6.1
Size	-0.2	5.1	4.4	8.1	18.7	0.1	1.6	1.7	-2.3	0.1
Value	0.7	5.4	7.3	11.1	28.5	1.1	1.9	4.5	0.4	8.3
Market	-0.3	3.5	2.7	10.7	18.6					
Market - Equal-Weighted	-0.3	4.5	3.5	8.6	18.1					

Notes: **Past performance is no guarantee of future results.** All indices are subsets of the STOXX 600 index, they are rebalanced monthly, use data in euros and are equal-weighted. Growth includes stocks in the top third based on both their 5-year sales per share trend and their internal growth rate (the product of the 5-year average return on equity and the retention ratio); Low volatility includes stocks in the bottom quintile based on the standard deviation of their daily returns in the previous three months; Price momentum includes stocks in the top quintile based on their performance in the previous 12 months; Quality includes stocks in the top third based on both their return on invested capital and their EBIT to EV ratio (earnings before interest and taxes to enterprise value); Size includes stocks in the bottom quintile based on their market value in euros; Value includes stocks in the bottom quintile based on their price to book value ratios. The market represents the STOXX 600 index. Source: LSEG Datastream and Invesco Global Market Strategy Office

Figure 7 – Model asset allocation

	Neutral	Policy Range	Allocation	Position vs Neutral	Hedged	Currency
Cash Equivalents	5%	0-10%	6%	↑		
Cash	2.5%		6%	↑		
Gold	2.5%		0%			
Bonds	40%	10-70%	41%	↓		
Government	25%	10-40%	22%			
US	8%		13%			25% JPY
Europe ex-UK (Eurozone)	7%		2%			
UK	1%		1%			
Japan	7%		2%			
Emerging Markets	2%		4%			
China**	0.2%		0%			
Corporate IG	10%	0-20%	16%	↓		
US Dollar	5%		8%	↓		50% JPY
Euro	2%		3%	↓		
Sterling	1%		2%			
Japanese Yen	1%		0%	↓		
Emerging Markets	1%		3%			
China**	0.1%		0%			
Corporate HY	5%	0-10%	3%	↓		
US Dollar	4%		2%	↓		
Euro	1%		1%	↓		
Bank Loans	4%	0-10%	8%	↑		
US	3%		6%	↑		
Europe	1%		2%			
Equities	45%	25-65%	35%	↓		
US	25%		10%	↓		
Europe ex-UK	7%		12%	↑		
UK	4%		4%	↓		
Japan	4%		1%	↓		
Emerging Markets	5%		8%			
China**	2%		4%			
Real Estate	4%	0-16%	6%			
US	1%		2%			
Europe ex-UK	1%		1%			
UK	1%		1%	↓		
Japan	1%		1%			
Emerging Markets	1%		1%	↑		
Commodities	2%	0-4%	4%			
Energy	1%		1%	↑		
Industrial Metals	0.3%		2%	↑		
Precious Metals	0.3%		0%			
Agriculture	0.3%		1%	↑		
Total	100%		100%			
Currency Exposure (including effect of hedging)						
USD	52%		39%	↓		
EUR	19%		23%	↑		
GBP	7%		10%			
JPY	13%		13%	↑		
EM	9%		16%	↑		
Total	100%		100%			

Notes: **China is included in Emerging Markets allocations. This is a theoretical portfolio and is for illustrative purposes only. See the latest [The Big Picture](#) document for more details. It does not represent an actual portfolio and is not a recommendation of any investment or trading strategy. Arrows indicate the direction of the most recent changes.

Source: Invesco

Figure 8 – Model allocations for Global sectors

	Neutral	Invesco	Preferred Region
Energy	7.0%	Neutral	EM
Basic Materials	3.9%	Neutral	Japan
Basic Resources	2.3%	Neutral	Japan
Chemicals	1.6%	Neutral	US
Industrials	13.2%	Overweight	US
Construction & Materials	1.8%	Underweight	US
Industrial Goods & Services	11.5%	Overweight	US
Consumer Discretionary	14.5%	Neutral	US
Automobiles & Parts	2.5%	Underweight	Europe
Media	1.1%	Neutral	Japan
Retailers	5.2%	Overweight	US
Travel & Leisure	2.0%	Underweight	EM
Consumer Products & Services	3.7%	Neutral	Japan
Consumer Staples	5.4%	Overweight	US
Food, Beverage & Tobacco	3.5%	Overweight	US
Personal Care, Drug & Grocery Stores	1.9%	Overweight	Europe
Healthcare	9.3%	Overweight	US
Financials	15.6%	Overweight	US
Banks	7.4%	Overweight	Europe
Financial Services	5.2%	Overweight	US
Insurance	3.0%	Underweight	US
Real Estate	2.7%	Neutral	Japan
Technology	21.9%	Neutral	EM
Telecommunications	3.4%	Underweight	US
Utilities	3.2%	Underweight	US

Notes: These are theoretical allocations which are for illustrative purposes only. They do not represent an actual portfolio and are not a recommendation of any investment or trading strategy. See the latest [Strategic Sector Selector](#) for more details.

Source: Refinitiv Datastream and Invesco

Appendix

Definitions of data and benchmarks for Figure 4

Sources: we source data from Datastream unless otherwise indicated.

Cash: returns are based on a proprietary index calculated using the Intercontinental Exchange Benchmark Administration overnight LIBOR (London Interbank Offer Rate). From 1st January 2022, we use the Refinitiv overnight deposit rate for the euro, the British pound and the Japanese yen. The global rate is the average of the euro, British pound, US dollar and Japanese yen rates. The series started on 1st January 2001 with a value of 100.

Gold: London bullion market spot price in USD/troy ounce.

Government bonds: Current levels, yields and total returns use Datastream benchmark 10-year yields for the US, Eurozone, Japan and the UK, and the Bank of America Merrill Lynch government bond total return index for the World and Europe. The emerging markets yields and returns are based on the Bloomberg Barclays emerging markets aggregate government bond index.

Corporate investment grade (IG) bonds: Bank of America Merrill Lynch investment grade corporate bond total return indices. The emerging markets yields and returns are based on the Bloomberg Barclays emerging markets aggregate corporate bond index.

Corporate high yield (HY) bonds: Bank of America Merrill Lynch high yield total return indices

Equities: We use MSCI benchmark gross total return indices for all regions.

Commodities: Goldman Sachs Commodity total return indices

Real estate: FTSE EPRA/NAREIT total return indices

Currencies: Global Trade Information Services spot rates

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Data as of 31 May 2024 unless stated otherwise.

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