Uncommon truths
Tumbling European inflation is good news

Last week brought good news on US inflation but the declines were even more dramatic in Europe. However, core inflation in the Eurozone has yet to peak. We believe it will follow headline inflation lower but the ECB may want to tighten for longer than the Fed. We expect the euro to strengthen.

After recent banking inspired excitement, "normality" seemed to break out during the last week. The CBOE VIX Index of implied volatility on S&P 500 options dipped below 20 (having peaked at 30.4 on 13 March), while the equivalent for US treasuries (ICE BofA MOVE Index) fell to 136 (after peaking at 199 on 15 March). Bank sector credit default swap spreads have also come down from recent peaks, though like the MOVE index they remain higher than normal.

It has been our observation over the years that the VIX index follows a cyclical pattern: it tends to be highest during times of recession and lowest during times of prosperity (perhaps linked to profit cycles). Data released in the past week pointed to underlying weakness in the US economy. First, revised GDP data for the fourth quarter of 2022 showed that consumer spending growth was weaker than previously thought (1.0% annualised quarterly, down from the initial estimate of 2.1% and the 3.1% recorded a year earlier). Of the 2.6% growth in GDP during Q4, 1.5 percentage points came from inventory accumulation. Hence, real final sales (GDP excluding inventories) grew by only 1.1%, down from 4.5% in the previous quarter and 1.9% a year earlier.

Second, February data suggests that the 2.0% jump in both US personal disposable income and spending in January were one-offs related to fiscal transfers. Disposable income growth fell to 0.5% in February, while spending growth was limited to 0.2%. Hence, after pausing in January, the personal savings rate continued the climb seen over recent months (to 4.6% in February, from 4.4% in January and the low of 2.7% in June 2022). This suggests to us that US consumer spending will continue decelerating over the coming months and quarters. In fact, when adjusted for inflation, personal spending declined in three of the four months to February. Further, our analysis of Datastream index data suggests that US earnings per share have been falling since 2022 Q3 and have been weaker than in the other regions that we follow.

Such a slowdown in the US economy and profits may be considered bad news (leading to more financial market volatility). However, under the current circumstances, a slowdown may prove to be good news if it helps control inflation. Along with the personal income and spending data came the personal consumption expenditures (PCE) price index measure of inflation, the core version of which is closely followed by the Fed. The 12-month change in the PCE deflator fell to 5.0% in February, from 5.3% in January and the recent peak of 7.0% (June 2022). Core PCE inflation has been more stubborn but still fell to 4.6% from 4.7% (the recent peak was September's 5.2%).

That decline in inflation was reported on Friday and may have contributed to the buoyancy of US equity and bond markets as the week closed. March data for the more popular consumer price index is due on 12 April but was published last week for many European countries. Given that we are now more than 12 months on from the commodity price jump that followed the invasion of Ukraine, there was a big drop in headline inflation in most of Europe in March. **Figure 1** shows the extent of the recent decline in Eurozone headline inflation. It also shows how Eurozone inflation has lagged US inflation over recent years (perhaps due to the petrol/gasoline tax wedge being larger in Europe, which reduces the effect of oil price gains on inflation).

Figure 1 – US and Eurozone consumer price inflation (% yoy)
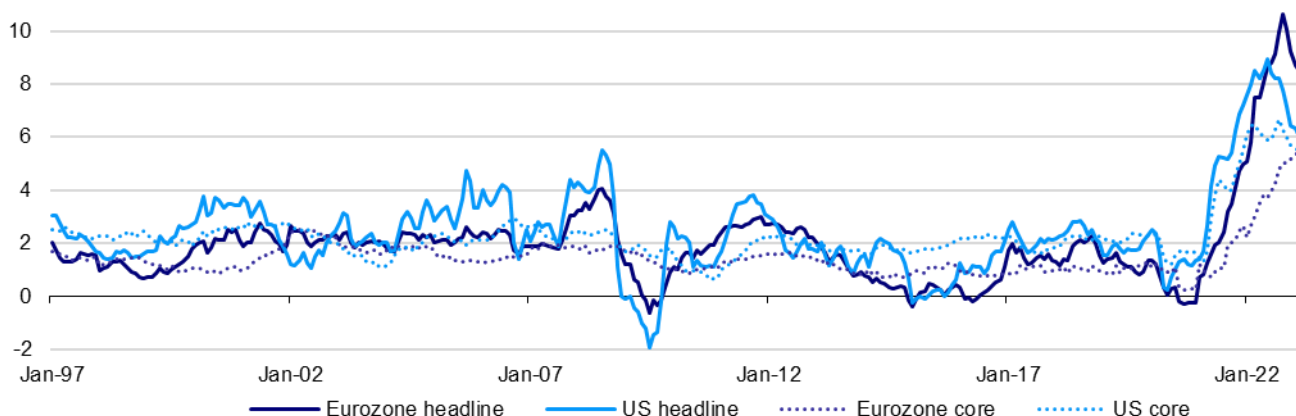
Notes: Monthly data from January 1997 to March 2023. "Core" excludes food & energy.
Source: Refinitiv Datastream and Invesco

However, European inflation was eventually pushed above that of the US by two factors, in our opinion. First was dollar strength (the Fed tightened well before the ECB), which by itself tends to increase imported inflation in Europe. Second, was the rise in European natural gas prices, which had a big knock-on effect on utilities prices. Both factors have reversed to some extent and we expect them to continue to do so. Hence, we think Eurozone headline inflation will fall below that of the US in 2023.

By country, there were dramatic declines in the month of March. For example, Dutch CPI inflation fell to 4.5% from 8.9% in February and the peak of 17.1% in September (based on the EU harmonised consumer price index). Spain also saw a dramatic decline to 3.1% from 6.0%, versus the July peak of 10.7% (again on an EU harmonised basis). These sharp declines came as a relief after the upward blip in February.

Of course, the picture is not the same in all European countries, with March EU harmonised inflation of 7.8% in Germany (down from 9.3% in February) and 6.6% in France (7.3%). For the Eurozone as a whole, headline inflation fell to 6.9% from 8.5%. Many governments subsidised the consumption of energy but to differing degrees. Hence, the peak in inflation varied by country, as has the rate of decline in recent months. Nevertheless, the March data suggests the direction of travel is downward and we believe headline inflation will continue to decline as base effects wane and natural gas prices normalise.

Unfortunately, core inflation appears to be more stubborn, with core CPI inflation in the Eurozone rising to 5.7% in March (from 5.6% in February) and apparently yet to peak. If, as is commonly supposed, core inflation is the stable anchor around which headline inflation swings, then this is worrying.

However, we believe that headline inflation has a big effect on the path of core inflation. **Figure 1** shows that US and Eurozone core inflation lagged headline inflation over the last two years. We think this makes sense: many service sector pricing contracts refer to headline inflation (see the shocking rise in UK telecom and media tariffs at the moment), while wage negotiations will often be impacted by prevailing headline inflation. The good news is that as headline inflation crumbles (also aided by the removal of supply chain obstacles), then so should the upward pressure on many of the contributors to core inflation. Even better, as house prices fall (as they are in many countries) the housing or shelter components of national price indices will decelerate.

Hence, we believe that core inflation will eventually follow headline inflation lower, as has often happened in the past (see **Figure 1**). Nevertheless, many national labour markets are tight, which could keep upward pressure on wages. **Figure 2** shows the historical relationship between German unemployment (inverted in the chart) and core inflation. There was a decent relationship before the global financial crisis (GFC), with low unemployment associated with high core inflation and vice-versa. However, the link has been less obvious since the GFC and the most recent rise in core inflation may be largely due to factors other than the labour market. Nevertheless, the ECB may feel more comfortable once unemployment rises.

We believe the sharp decline in European headline inflation is good news and will eventually lead to lower core inflation. However, the ECB may need to see a decline in core inflation before concluding that its work is done and we expect it to stick with tightening longer than the Fed (which we think is just about done), which we think will continue to support the euro.

All data as of 31 March 2023, unless stated otherwise.

Figure 2 – German unemployment and core inflation (%)
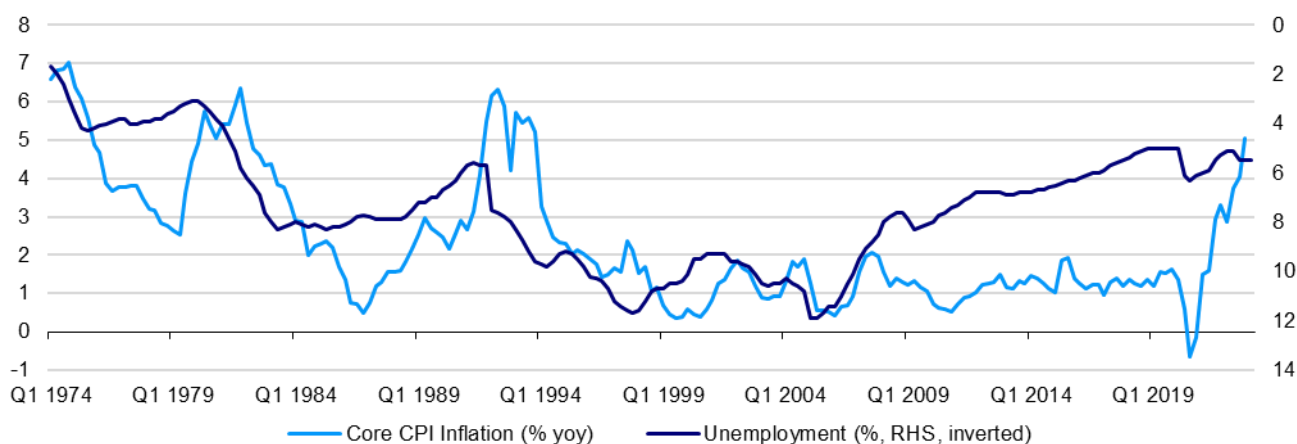
Note: Quarterly data from 1974 Q1 to 2023 Q1. "Core" excludes food and energy. Source: Refinitiv Datastream and Invesco

Figure 3 – Asset class total returns (%)

Data as at 31/03/2023	Index	Current Level/RY	Total Return (USD, %)					Total Return (Local Currency, %)				
			1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Equities												
World	MSCI	647	3.6	3.2	7.4	7.4	-7.0	3.4	2.5	7.2	7.2	-5.1
Emerging Markets	MSCI	990	2.0	3.1	4.0	4.0	-10.3	1.7	2.2	3.8	3.8	-6.2
China	MSCI	67	2.3	4.5	4.7	4.7	-4.6	2.3	4.3	5.1	5.1	-3.1
US	MSCI	3905	3.6	3.6	7.7	7.7	-8.5	3.6	3.6	7.7	7.7	-8.5
Europe	MSCI	1903	5.1	2.5	10.7	10.7	2.0	4.2	0.3	8.8	8.8	5.7
Europe ex-UK	MSCI	2358	5.4	3.4	12.2	12.2	2.9	4.5	1.1	10.5	10.5	5.5
UK	MSCI	1127	4.2	-0.6	6.1	6.1	-0.8	3.0	-2.7	3.2	3.2	5.6
Japan	MSCI	3299	1.8	4.1	6.4	6.4	-4.8	3.7	1.8	7.3	7.3	4.4
Government Bonds												
World	BofA-ML	2.83	-0.7	3.7	3.0	3.0	-9.6	-0.6	2.5	2.7	2.7	-6.4
Emerging Markets	BBloom	7.94	0.8	1.8	3.0	3.0	-9.2	0.8	1.8	3.0	3.0	-9.2
China	BofA-ML	2.71	0.0	1.5	2.0	2.0	-4.5	0.0	0.6	0.8	0.8	3.5
US (10y)	Datastream	3.48	-0.8	3.9	4.3	4.3	-6.9	-0.8	3.9	4.3	4.3	-6.9
Europe	Bofa-ML	3.01	-0.3	4.8	3.8	3.8	-14.0	-1.2	2.3	2.0	2.0	-11.9
Europe ex-UK (EMU, 10y)	Datastream	2.30	-0.5	5.8	5.2	5.2	-14.6	-1.5	3.3	3.3	3.3	-12.5
UK (10y)	Datastream	3.38	-0.5	5.1	6.0	6.0	-18.2	-1.6	2.9	3.2	3.2	-12.9
Japan (10y)	Datastream	0.33	-2.2	4.1	2.6	2.6	-6.8	-0.4	1.7	3.5	3.5	2.3
IG Corporate Bonds												
Global	BofA-ML	4.97	0.2	2.7	3.4	3.4	-6.9	-0.1	2.0	2.9	2.9	-5.7
Emerging Markets	BBloom	7.64	0.9	1.8	3.3	3.3	-5.7	0.9	1.8	3.3	3.3	-5.7
China	BofA-ML	3.57	0.0	1.4	2.0	2.0	-5.4	0.0	0.4	0.9	0.9	2.5
US	BofA-ML	5.27	0.2	2.6	3.5	3.5	-5.2	0.2	2.6	3.5	3.5	-5.2
Europe	BofA-ML	4.20	0.5	3.5	3.4	3.4	-9.9	-0.4	1.0	1.6	1.6	-7.7
UK	BofA-ML	5.59	0.1	3.1	5.4	5.4	-16.8	-1.0	1.0	2.5	2.5	-11.4
Japan	BofA-ML	0.77	-1.9	3.1	0.3	0.3	-9.4	-0.1	0.7	1.1	1.1	-0.7
HY Corporate Bonds												
Global	BofA-ML	8.71	1.7	1.1	3.6	3.6	-4.4	1.5	0.6	3.2	3.2	-3.7
US	BofA-ML	8.55	1.8	1.1	3.7	3.7	-3.6	1.8	1.1	3.7	3.7	-3.6
Europe	BofA-ML	7.46	1.7	2.1	4.5	4.5	-6.8	0.8	-0.4	2.7	2.7	-4.5
Cash (Overnight LIBOR)												
US		4.81	0.1	0.4	1.0	1.0	2.7	0.1	0.4	1.0	1.0	2.7
Euro Area		2.97	0.9	2.2	1.0	1.0	-1.5	0.1	0.2	0.5	0.5	0.7
UK		4.36	0.5	2.7	2.0	2.0	-5.1	0.1	0.3	0.9	0.9	2.3
Japan		-0.10	0.8	4.4	0.3	0.3	-6.5	0.0	0.0	0.0	0.0	-0.1
Real Estate (REITs)												
Global	FTSE	1551	4.4	-2.9	0.8	0.8	-20.3	3.4	-5.2	-1.0	-1.0	-18.4
Emerging Markets	FTSE	1315	0.1	-0.9	-2.5	-2.5	-16.4	-0.8	-3.2	-4.2	-4.2	-14.4
US	FTSE	2872	6.1	-2.5	2.6	2.6	-19.5	6.1	-2.5	2.6	2.6	-19.5
Europe ex-UK	FTSE	2037	5.0	-10.8	-4.9	-4.9	-38.8	4.1	-12.9	-6.6	-6.6	-37.3
UK	FTSE	720	6.6	-6.1	1.4	1.4	-35.2	5.5	-8.0	-1.4	-1.4	-31.0
Japan	FTSE	2077	0.6	-0.5	-2.9	-2.9	-14.0	2.5	-2.8	-2.0	-2.0	-5.7
Commodities												
All	GSCI	3323	4.6	-1.1	-4.9	-4.9	-10.0	-	-	-	-	-
Energy	GSCI	558	6.3	-3.5	-8.6	-8.6	-11.0	-	-	-	-	-
Industrial Metals	GSCI	1688	1.7	0.3	0.7	0.7	-21.0	-	-	-	-	-
Precious Metals	GSCI	2231	-0.3	8.3	7.4	7.4	0.2	-	-	-	-	-
Agricultural Goods	GSCI	557	3.4	3.4	-0.4	-0.4	-8.4	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.08	0.7	2.5	1.3	1.3	-2.0	-	-	-	-	-
JPY		132.80	-1.6	2.6	-1.3	-1.3	-8.4	-	-	-	-	-
GBP		1.24	1.1	2.1	2.8	2.8	-6.1	-	-	-	-	-
CHF		1.09	0.6	3.0	1.1	1.1	0.9	-	-	-	-	-
CNY		6.87	0.0	0.9	0.4	0.4	-7.7	-	-	-	-	-

Notes: **Past performance is no guarantee of future results.** *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). Please see appendix for definitions, methodology and disclaimers. Source: Refinitiv Datastream and Invesco

Figure 4 – Global equity sector total returns relative to market (%)

Data as at 31/03/2023	Global				
	1w	1m	QTD	YTD	12m
Energy	**0.8**	**-2.6**	**-7.2**	**-7.2**	**4.8**
Basic Materials	**0.7**	**-1.1**	**-1.5**	**-1.5**	**-2.9**
Basic Resources	1.3	-0.4	-1.7	-1.7	-3.6
Chemicals	-0.1	-2.0	-1.1	-1.1	-1.8
Industrials	**0.2**	**-0.8**	**-0.3**	**-0.3**	**4.5**
Construction & Materials	-0.1	-1.9	2.9	2.9	6.9
Industrial Goods & Services	0.3	-0.6	-0.7	-0.7	4.2
Consumer Discretionary	**1.4**	**1.2**	**7.0**	**7.0**	**-2.3**
Automobiles & Parts	2.3	-1.3	16.2	16.2	-15.0
Media	1.4	0.5	7.5	7.5	-7.6
Retailers	1.7	1.9	2.0	2.0	-8.0
Travel & Leisure	1.1	-0.4	4.8	4.8	9.3
Consumer Products & Services	0.5	3.3	8.5	8.5	12.3
Consumer Staples	**-1.0**	**1.2**	**-4.3**	**-4.3**	**8.8**
Food, Beverage & Tobacco	-0.9	1.1	-3.5	-3.5	10.2
Personal Care, Drug & Grocery Stores	-1.1	1.2	-5.8	-5.8	6.2
Healthcare	**-1.0**	**0.5**	**-7.2**	**-7.2**	**2.2**
Financials	**-0.1**	**-7.8**	**-7.3**	**-7.3**	**-2.8**
Banks	-0.4	-9.9	-8.5	-8.5	-4.0
Financial Services	0.2	-5.2	-5.4	-5.4	-4.4
Insurance	-0.1	-6.9	-7.8	-7.8	3.4
Real Estate	**0.1**	**-4.2**	**-5.7**	**-5.7**	**-12.5**
Technology	**-0.6**	**7.6**	**14.3**	**14.3**	**-2.3**
Telecommunications	**-1.2**	**0.6**	**1.1**	**1.1**	**0.8**
Utilities	**0.5**	**2.4**	**-5.9**	**-5.9**	**4.1**

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

Figure 5a – US factor index total returns (%)

Data as at 31/03/2023	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	3.9	3.1	12.2	12.2	-1.9	0.4	-0.5	4.4	4.4	6.3
Low volatility	3.2	1.7	-0.5	-0.5	-1.8	-0.3	-1.9	-7.4	-7.4	6.4
Price momentum	4.4	0.3	-0.1	-0.1	-5.1	0.9	-3.2	-7.1	-7.1	2.9
Quality	4.2	1.4	6.7	6.7	1.2	0.7	-2.2	-0.8	-0.8	9.7
Size	5.2	-4.2	3.1	3.1	-8.7	1.7	-7.6	-4.1	-4.1	-1.1
Value	5.0	-7.8	-2.0	-2.0	-12.7	1.4	-11.1	-8.9	-8.9	-5.4
Market	3.5	3.7	7.5	7.5	-7.7					
Market - Equal-Weighted	4.4	-0.9	2.9	2.9	-6.3					

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: Refinitiv Datastream and Invesco

Figure 5b – European factor index total returns relative to market (% annualised)

Data as at 31/03/2023	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	4.7	0.3	9.2	9.2	-10.1	0.6	0.5	0.6	0.6	-13.2
Low volatility	3.2	1.1	8.4	8.4	2.3	-0.9	1.3	-0.2	-0.2	-1.4
Price momentum	4.3	-2.8	3.4	3.4	-7.7	0.2	-2.6	-4.8	-4.8	-11.0
Quality	4.7	-2.0	8.7	8.7	-2.8	0.5	-1.8	0.2	0.2	-6.2
Size	4.2	-3.9	6.0	6.0	-7.4	0.1	-3.7	-2.4	-2.4	-10.7
Value	4.8	-9.0	5.2	5.2	-3.1	0.7	-8.8	-3.1	-3.1	-6.6
Market	4.1	-0.2	8.6	8.6	3.7					
Market - Equal-Weighted	4.5	-2.3	7.6	7.6	-3.6					

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: Refinitiv Datastream and Invesco

Figure 6 – Model asset allocation

	Neutral	Policy Range		Allocation	Position vs Neutral
Cash Equivalents	**5%**	**0-10%**	↑	**10%**	
Cash	2.5%		↑	10%	
Gold	2.5%		↓	0%	
Bonds	**40%**	**10-70%**		**48%**	
Government	25%	10-40%		25%	
US	8%		↑	12%	
Europe ex-UK (Eurozone)	7%			5%	
UK	1%			2%	
Japan	7%		↓	2%	
Emerging Markets	2%			4%	
China**	0.2%			0%	
Corporate IG	10%	0-20%		15%	
US Dollar	5%			9%	
Euro	2%			2%	
Sterling	1%			2%	
Japanese Yen	1%			0%	
Emerging Markets	1%			2%	
China**	0.1%			0%	
Corporate HY	5%	0-10%		8%	
US Dollar	4%		↓	6%	
Euro	1%		↑	2%	
Equities	**45%**	**25-65%**	↓	**34%**	
US	25%		↓	12%	
Europe ex-UK	7%		↑	5%	
UK	4%		↑	5%	
Japan	4%		↓	4%	
Emerging Markets	5%			8%	
China**	2%			4%	
Real Estate	**8%**	**0-16%**	↓	**8%**	
US	2%			3%	
Europe ex-UK	2%			1%	
UK	1%			2%	
Japan	2%		↓	1%	
Emerging Markets	1%		↓	1%	
Commodities	**2%**	**0-4%**	↓	**0%**	
Energy	1%			0%	
Industrial Metals	0.3%			0%	
Precious Metals	0.3%			0%	
Agriculture	0.3%			0%	
Total	**100%**			**100%**	

Currency Exposure (including effect of hedging)					
USD	48%		↓	45%	
EUR	20%		↑	18%	
GBP	7%		↑	14%	
JPY	15%		↓	10%	
EM	9%		↓	15%	
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 7 – Model allocations for Global sectors

	Neutral	Invesco		Preferred Region
Energy	**8.1%**	**Underweight**		**EM**
Basic Materials	**4.5%**	**Overweight**	**↑**	**Europe**
Basic Resources	2.6%	Overweight	↑	Europe
Chemicals	1.9%	Neutral		Japan
Industrials	**13.1%**	**Neutral**		**Japan**
Construction & Materials	1.5%	Underweight		US
Industrial Goods & Services	11.6%	Neutral		Japan
Consumer Discretionary	**13.6%**	**Overweight**	**↑**	**Europe**
Automobiles & Parts	2.3%	Neutral	↑	Europe
Media	1.0%	Neutral	↓	Japan
Retailers	4.6%	Overweight	↑	Europe
Travel & Leisure	2.0%	Underweight		EM
Consumer Products & Services	3.7%	Overweight		Europe
Consumer Staples	**6.7%**	**Overweight**		**US**
Food, Beverage & Tobacco	4.4%	Overweight		US
Personal Care, Drug & Grocery Stores	2.3%	Overweight		Europe
Healthcare	**10.7%**	**Overweight**		**US**
Financials	**16.2%**	**Underweight**		**Japan**
Banks	7.9%	Underweight		Japan
Financial Services	5.2%	Underweight		EM
Insurance	3.1%	Neutral	↑	Europe
Real Estate	**3.2%**	**Neutral**	**↓**	**EM**
Technology	**16.5%**	**Overweight**		**US**
Telecommunications	**3.5%**	**Underweight**	**↓**	**Japan**
Utilities	**3.8%**	**Underweight**		**Europe**

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

Methodology for asset allocation, expected returns and optimal portfolios

Portfolio construction process

The optimal portfolios are theoretical and not real. We use optimisation processes to guide our allocations around "neutral" and within prescribed policy ranges based on our estimations of expected returns and using historical covariance information. This guides the allocation to global asset groups (equities, government bonds etc.), which is the most important level of decision. For the purposes of this document the optimal portfolios are constructed with a one-year horizon.

Which asset classes?

We look for investibility, size and liquidity. We have chosen to include equities, bonds (government, corporate investment grade and corporate high-yield), REITs to represent real estate, commodities and cash (all across a range of geographies). We use cross-asset correlations to determine which decisions are the most important.

Neutral allocations and policy ranges

We use market capitalisation in USD for major benchmark indices to calculate neutral allocations. For commodities, we use industry estimates for total ETP market cap + assets under management in hedge funds + direct investments. We use an arbitrary 5% for the combination of cash and gold. We impose diversification by using policy ranges for each asset category (the range is usually symmetric around neutral).

Expected/projected returns

The process for estimating expected returns is based upon yield (except commodities, of course). After analysing how yields vary with the economic cycle, and where they are situated within historical ranges, we forecast the direction and amplitude of moves over the next year. Cash returns are calculated assuming a straight-line move in short term rates towards our targets (with, of course, no capital gain or loss). Bond returns assume a straight-line progression in yields, with capital gains/losses predicated upon constant maturity (effectively supposing constant turnover to achieve that). Forecasts of corporate investment-grade and high-yield spreads are based upon our view of the economic cycle (as are forecasts of credit losses). Coupon payments are added to give total returns. Equity and REIT returns are based on dividend growth assumptions. We calculate total returns by applying those growth assumptions and adding the forecast dividend yield. No such metrics exist for commodities; therefore, we base our projections on US CPI-adjusted real prices relative to their long-term averages and views on the economic cycle. All expected returns are first calculated in local currency and then, where necessary, converted into other currency bases using our exchange rate forecasts.

Optimising the portfolio

Using a covariance matrix based on monthly local currency total returns for the last 5 years and we run an optimisation process that maximises the Sharpe Ratio. Another version maximises Return subject to volatility not exceeding that of our Neutral Portfolio. The optimiser is based on the Markowitz model.

Currency hedging

We adopt a cautious approach when it comes to currency hedging as currency movements are notoriously difficult to accurately predict and sometimes hedging can be costly. Also, some of our asset allocation choices are based on currency forecasts. We use an amalgam of central bank rate forecasts, policy expectations and real exchange rates relative to their historical averages to predict the direction and amplitude of currency moves.

Definitions of data and benchmarks for Figure 3

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). 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 ICE BofA government bond total return index for the World and Europe. The emerging markets yields and returns are based on the Bloomberg emerging markets sovereign US dollar bond index.

Corporate investment grade (IG) bonds: ICE BofA investment grade corporate bond total return indices, except for in emerging markets where we use the Bloomberg emerging markets corporate US dollar bond index.

Corporate high yield (HY) bonds: ICE BofA 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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