Uncommon truths

Beware talk of soft landings

Economies appear to be more resilient than expected. A strong US payroll gain in January encouraged talk of a soft landing and provoked a reversal of the recent uptrend in assets. I believe this will prove to be a temporary phase of market consolidation, as an overstretched US consumer pulls back and inflation continues to fall rapidly during the first half of 2023.

The exceptionally strong US payrolls data for the month of January has encouraged the notion of a soft landing. It may be thought that a 517k monthly gain in non-farm payrolls (and big upward revisions to prior months) would be cause for celebration, given the lingering fears of recession.

Of course it was not, given that it has provoked fears of inflation remaining higher for longer, which could push the Fed to raise rates even higher and for longer. Hence, bond yields have risen and the dollar has rallied, while stocks and gold have fallen. The big question is whether this reversal of recent market trends signals the start of a new bear phase (taking bond yields higher and stocks lower) or whether it is just a healthy pause in a new bull market?

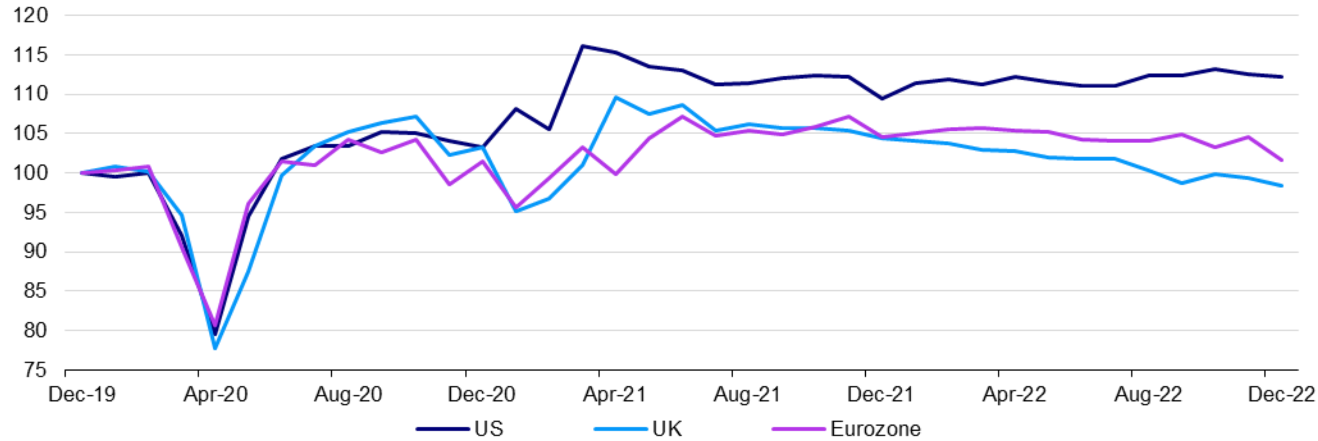
I suspect it is a healthy pause in a new uptrend in asset prices (we were bound to get consolidation at some stage). The first reason for thinking so is that I doubt the 517k payroll gain reflects the current state of the US economy. Pretty much every other indicator (ISM surveys, GDP, ADP employment, Challenger job cuts) points to a decelerating economy. Hence, I believe the outsized January payrolls gain will prove to be an aberration, my best guess being that it reflects problems with seasonal adjustments. If so, there is likely to be payback at some stage during the year (with a surprisingly weak number) and, at the very least, a reversion to lower (and falling) numbers over the next few months. Also, I wouldn't be surprised to see a downward revision to the January number when February data is published.

Even better, and despite the apparent strength of the labour market, US wage growth continues to ease. The exceptionally high peak in average hourly earnings inflation (5.9% in March 2022) may have been due to post-pandemic distortions in the labour market (in my opinion), whereby shortages in some sectors (hospitality, say) led to an abnormal bidding up of wages in some sectors. That wage inflation is moderating (to 4.4% in January 2023), even before unemployment has risen, could suggest those distortions are now fading.

Further, year-on-year commodity price gains have turned negative (based on the S&P GSCI Spot Index), which should ensure further downward pressure on headline inflation over the coming months. Hence, I am not sure the Fed should put too much weight on what I think was a rogue payroll number.

Having said that, economies (and profits) have been more resilient than many had imagined, myself included. Take for example, recent GDP data from the UK, which showed that the economy was flat in 2022 Q4 (0.0% quarter-on-quarter growth, after -0.2% in Q3). That doesn't sound great but it means that the UK appears to have avoided two consecutive quarters of negative growth, which many consider to be the technical definition of recession (though on that score, the US had a recession in the first half of 2022!). The eurozone did even better, with 0.1% growth in Q4 (after 0.3% in Q3) and the US was positively humming (0.7% after 0.8%, when expressed in the non-annualised format used elsewhere).

Figure 1 – Volume of retail sales (seasonally adjusted, rebased to December 2019 = 100)



Notes: Monthly data from December 2019 to December 2022. Retail sales are shown in price adjusted (real) terms and rebased so that the December 2019 level = 100. Source: Refinitiv Datastream and Invesco

Figure 1 shows one reason why the UK has been lagging. Its retail sales volumes (i.e. when adjusted for inflation) have been on a downward path since the post-lockdown peak of April 2021 and are now below where they were in December 2019 (as of December 2022). Eurozone retail sales volumes have fallen recently but are still 1.6% above the December 2019 level, having peaked in June and November 2021. The real outlier is the US, with retail sales volumes 12.1% higher in December 2022 than three years earlier, though broadly flatlining since mid-2021.

Closer inspection of **Figure 1** reveals that retail spending patterns across the three economies were remarkably similar in the early stages of the pandemic. Spending volumes in the US only started to diverge in January 2021 and I can think of two reasons why. First, the US was easing its Covid restrictions, with the Blavatnik Stringency Index falling from its peak of 75.5 on 1 December 2020 to 68.1 on 3 February 2021 (this index ranges from 0 to 100). That may not seem like a big easing but European countries were imposing another round of lockdowns at that stage, with the German and UK stringency indices rising from 67.6 to 83.3 and from 67.6 to 88.0, respectively. As a footnote, by the end of 2022, those indices had fallen to 14.8 (Germany), 5.6 (UK) and 37.0 (US).

The second (and perhaps more powerful) reason for the outperformance of the US consumer was fiscal. Most governments supported household incomes during 2020 but the US treasury made the second and third payments to individuals in January and March 2021, months in which aggregate personal disposable income rose by $1.8trn (a rise of around 10%) and $4.1trn (23%), respectively.

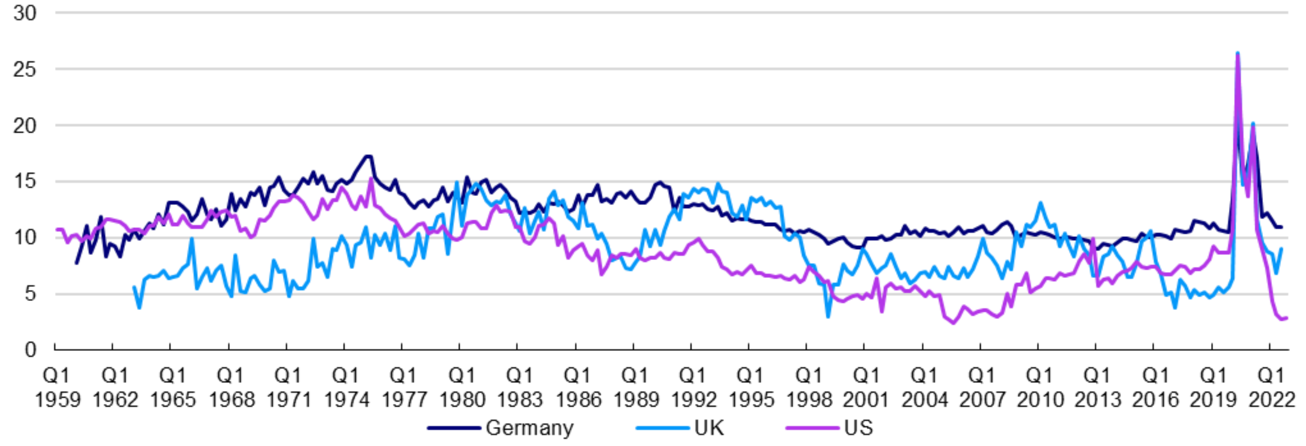
Taken together, the lack of further lockdowns in the US and the substantial boost to disposable income, explain why US retail sales volumes were so much stronger than in Europe in the first half of 2021, in my opinion. I think they have also held up relatively well since then, in the face of the squeeze on real incomes, because the US personal savings ratio has fallen close to historical lows (2.9% in 2022 Q4 versus a low of 2.5% in 2005 Q3). In fact, US households have used up all of the Covid fiscal support (and more), with net dissaving since December 2019.

Figure 2 shows that the decline in the household savings rate has been far more aggressive in the US than in Germany or the UK. In fact, the US savings rate is only one-third of what it was in 2019 Q4, whereas those for Germany and the UK are both higher than their pre-pandemic levels. It could be that US households were encouraged to spend larger shares of their incomes by the boost to wealth that came with the asset price gains of 2021. But in that case, I would now expect a rise in the savings rate as wealth fell during 2022. In any case, with the savings rate so low, I doubt that US consumer spending can continue to grow at the recent pace. On top of the fact that US fixed investment spending has fallen in the last three quarters, any weakening in consumer spending could imperil the notion of a soft landing.

In conclusion, I suspect the recent strong payrolls data in the US was a red herring and I expect further deceleration in that economy. Consequently, I remain confident that inflation will continue to fall rapidly throughout the first half of 2023 and that the Fed will call a halt to rate hikes in mid-2023 (despite the January uptick in inflation in countries such as Norway and Spain, which I think had more to do with what was happening a year ago than with what is happening now). I believe this will keep asset prices on an uptrend, after a short period of consolidation.

All data as of 10 February 2023, unless stated otherwise.

Figure 2 – Household savings rates (%)



Note: Quarterly data from 1959 Q1 to 2022 Q4. Source: Refinitiv Datastream and Invesco

Figure 3 – Asset class total returns (%)

Data as at 10/02/2023		Current	Total Return (USD, %)					Total Return (Local Currency, %)				
	Index	Level/RY	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Equities												
World	MSCI	647	-1.4	3.8	7.0	7.0	-8.9	-1.1	3.9	6.8	6.8	-6.4
Emerging Markets	MSCI	1014	-2.4	0.0	6.1	6.1	-16.2	-1.3	0.4	5.7	5.7	-11.4
China	MSCI	69	-2.9	-1.5	8.2	8.2	-16.5	-2.8	-1.0	8.5	8.5	-14.9
US	MSCI	3887	-1.2	4.7	6.9	6.9	-8.6	-1.2	4.7	6.9	6.9	-8.6
Europe	MSCI	1868	-2.2	2.3	8.0	8.0	-6.2	-1.2	2.7	7.9	7.9	1.2
Europe ex-UK	MSCI	2293	-2.8	2.4	8.5	8.5	-6.9	-1.6	2.8	8.6	8.6	-1.0
UK	MSCI	1141	0.0	2.0	6.2	6.2	-4.0	0.2	2.5	5.8	5.8	8.3
Japan	MSCI	3330	0.6	6.6	6.1	6.1	-8.8	0.8	5.9	5.6	5.6	3.2
Government Bonds												
World	BofA-ML	3.01	-1.6	0.0	1.2	1.2	-14.2	-1.1	0.0	1.0	1.0	-9.2
Emerging Markets	BBloom	7.94	-3.4	1.0	2.5	2.5	-16.4	-3.4	1.0	2.5	2.5	-16.4
China	BofA-ML	2.72	-0.7	-0.3	2.4	2.4	-4.1	0.1	0.0	0.2	0.2	2.5
US (10y)	Datastream	3.76	-1.7	-0.8	1.5	1.5	-11.7	-1.7	-0.8	1.5	1.5	-11.7
Europe	Bofa-ML	3.01	-2.8	-0.5	1.7	1.7	-19.6	-1.1	0.0	1.7	1.7	-13.6
Europe ex-UK (EMU, 10y)	Datastream	2.33	-3.1	-0.5	2.3	2.3	-21.2	-1.4	0.0	2.3	2.3	-15.4
UK (10y)	Datastream	3.40	-2.9	1.0	2.9	2.9	-23.5	-2.6	1.6	2.5	2.5	-13.7
Japan (10y)	Datastream	0.50	-0.3	2.6	2.4	2.4	-11.0	-0.1	1.9	1.8	1.8	0.7
IG Corporate Bonds												
Global	BofA-ML	4.93	-1.8	0.6	2.3	2.3	-11.0	-1.4	0.7	2.3	2.3	-8.7
Emerging Markets	BBloom	7.38	-2.2	0.8	3.4	3.4	-15.1	-2.2	0.8	3.4	3.4	-15.1
China	BofA-ML	3.59	-0.6	-0.2	2.5	2.5	-4.9	0.2	0.2	0.3	0.3	1.7
US	BofA-ML	5.32	-1.7	0.4	2.3	2.3	-9.0	-1.7	0.4	2.3	2.3	-9.0
Europe	BofA-ML	3.96	-2.5	0.7	2.2	2.2	-15.4	-0.8	1.2	2.1	2.1	-9.2
UK	BofA-ML	5.20	-2.2	1.8	4.4	4.4	-21.6	-1.9	2.4	3.9	3.9	-11.6
Japan	BofA-ML	0.88	-0.3	0.9	0.8	0.8	-13.3	-0.1	0.2	0.3	0.3	-1.8
HY Corporate Bonds												
Global	BofA-ML	8.40	-1.8	0.8	3.4	3.4	-7.5	-1.4	0.9	3.4	3.4	-5.9
US	BofA-ML	8.45	-1.8	0.2	3.1	3.1	-5.2	-1.8	0.2	3.1	3.1	-5.2
Europe	BofA-ML	6.85	-1.9	2.2	4.2	4.2	-11.5	-0.2	2.7	4.2	4.2	-5.0
Cash (Overnight LIBOR)												
US		4.31	0.1	0.4	0.2	0.2	1.8	0.1	0.4	0.2	0.2	1.8
Euro Area		2.00	1.8	2.0	1.3	1.3	-5.3	0.0	0.2	0.1	0.1	0.1
UK		3.55	1.2	-0.7	1.2	1.2	-9.3	0.1	0.3	0.1	0.1	1.6
Japan		-0.13	3.3	6.0	2.5	2.5	-10.8	0.0	0.0	0.0	0.0	-0.1
Real Estate (REITs)												
Global	FTSE	1671	-2.2	5.5	7.7	7.7	-12.9	-0.5	6.0	7.6	7.6	-6.4
Emerging Markets	FTSE	1396	-1.4	-1.1	3.0	3.0	-16.6	0.3	-0.7	2.9	2.9	-10.5
US	FTSE	3098	-1.8	8.0	9.8	9.8	-9.4	-1.8	8.0	9.8	9.8	-9.4
Europe ex-UK	FTSE	2409	-4.6	3.6	11.5	11.5	-31.0	-3.0	4.1	11.5	11.5	-25.8
UK	FTSE	834	-3.6	5.4	9.1	9.1	-31.4	-3.4	6.0	8.7	8.7	-22.7
Japan	FTSE	2125	-0.1	0.7	-1.5	-1.5	-13.5	0.1	0.0	-2.0	-2.0	-2.1
Commodities												
All	GSCI	3443	4.0	3.2	-1.5	-1.5	8.5	-	-	-	-	-
Energy	GSCI	591	7.3	3.8	-3.2	-3.2	14.7	-	-	-	-	-
Industrial Metals	GSCI	1711	-3.2	-0.9	2.1	2.1	-13.9	-	-	-	-	-
Precious Metals	GSCI	2104	-0.1	-1.1	1.3	1.3	0.5	-	-	-	-	-
Agricultural Goods	GSCI	569	1.4	6.1	1.8	1.8	6.3	-	-	-	-	-
Currencies (vs USD)*												
EUR		1.07	-1.1	-0.5	-0.3	-0.3	-6.6	-	-	-	-	-
JPY		131.42	-0.2	0.6	-0.2	-0.2	-11.7	-	-	-	-	-
GBP		1.21	-0.2	-0.6	0.4	0.4	-11.3	-	-	-	-	-
CHF		1.08	0.2	-0.1	0.1	0.1	0.2	-	-	-	-	-
CNY		6.81	-0.5	-0.5	1.3	1.3	-6.7	-	-	-	-	-

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 10/02/2023	Global				
	1w	**1m**	**QTD**	**YTD**	**12m**
Energy	**4.0**	**-0.6**	**-3.4**	**-3.4**	**23.0**
Basic Materials	**-1.2**	**-3.1**	**-0.4**	**-0.4**	**5.1**
Basic Resources	-1.9	-4.2	0.0	0.0	9.1
Chemicals	-0.2	-1.4	-0.9	-0.9	0.0
Industrials	**0.0**	**-0.5**	**-0.2**	**-0.2**	**3.4**
Construction & Materials	-0.9	0.4	2.0	2.0	1.6
Industrial Goods & Services	0.1	-0.6	-0.5	-0.5	3.7
Consumer Discretionary	**-1.5**	**2.1**	**5.1**	**5.1**	**-7.3**
Automobiles & Parts	0.9	13.7	14.2	14.2	-16.9
Media	-2.4	3.0	7.2	7.2	-11.3
Retailers	-1.8	-1.6	1.5	1.5	-9.9
Travel & Leisure	-0.8	0.4	3.3	3.3	1.5
Consumer Products & Services	-2.8	0.2	4.2	4.2	0.5
Consumer Staples	**0.2**	**-5.2**	**-6.9**	**-6.9**	**5.1**
Food, Beverage & Tobacco	0.3	-4.6	-6.4	-6.4	6.2
Personal Care, Drug & Grocery Stores	-0.1	-6.4	-7.9	-7.9	2.8
Healthcare	**0.7**	**-3.8**	**-6.5**	**-6.5**	**6.7**
Financials	**0.7**	**-0.7**	**-0.4**	**-0.4**	**0.9**
Banks	0.6	0.1	0.4	0.4	-0.8
Financial Services	0.2	-0.8	-0.3	-0.3	-0.5
Insurance	1.7	-2.6	-2.6	-2.6	8.6
Real Estate	**-0.8**	**0.3**	**-0.1**	**-0.1**	**-5.9**
Technology	**-1.1**	**6.9**	**7.3**	**7.3**	**-10.4**
Telecommunications	**-0.1**	**-1.9**	**-1.0**	**-1.0**	**-1.2**
Utilities	**0.3**	**-6.8**	**-8.0**	**-8.0**	**8.1**

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 10/02/2023	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	-2.2	6.5	11.0	11.0	-1.8	-1.2	2.0	4.0	4.0	6.4
Low volatility	0.7	-1.1	-0.4	-0.4	3.3	1.8	-5.4	-6.6	-6.6	11.9
Price momentum	1.4	0.9	1.7	1.7	-0.3	2.5	-3.4	-4.7	-4.7	8.0
Quality	-1.0	3.8	8.7	8.7	2.5	0.1	-0.7	1.9	1.9	11.0
Size	-2.9	5.3	12.1	12.1	-0.8	-1.9	0.8	5.0	5.0	7.5
Value	-1.7	4.0	9.6	9.6	-3.4	-0.7	-0.4	2.7	2.7	4.7
Market	-1.1	4.5	6.7	6.7	-7.7					
Market - Equal-Weighted	-1.4	3.1	6.9	6.9	-2.2					

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 10/02/2023	Absolute					Relative to Market				
	1w	1m	QTD	YTD	12m	1w	1m	QTD	YTD	12m
Growth	-3.5	4.2	9.5	9.5	-9.8	-2.9	1.4	1.5	1.5	-9.8
Low volatility	-0.6	1.4	4.4	4.4	-0.6	0.0	-1.4	-3.2	-3.2	-0.7
Price momentum	0.3	1.9	4.3	4.3	-10.4	0.9	-0.9	-3.3	-3.3	-10.5
Quality	-1.6	4.3	9.5	9.5	-3.6	-1.0	1.5	1.5	1.5	-3.6
Size	-2.0	4.2	9.8	9.8	-9.0	-1.4	1.4	1.7	1.7	-9.1
Value	-1.1	5.5	13.8	13.8	-2.2	-0.5	2.6	5.4	5.4	-2.3
Market	-0.6	2.8	7.9	7.9	0.1					
Market - Equal-Weighted	-1.8	3.4	8.9	8.9	-7.0					

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%**	↓	**5%**	
Cash	2.5%		↓	0%	
Gold	2.5%		↑	5%	
Bonds	**40%**	**10-70%**	↑	**48%**	
Government	25%	10-40%	↓	**25%**	
US	8%			11%	
Europe ex-UK (Eurozone)	7%		↓	5%	
UK	1%		↑	2%	
Japan	7%		↓	3%	
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%		↑	7%	
Euro	1%		↑	1%	
Equities	**45%**	**25-65%**		**37%**	
US	25%		↑	19%	
Europe ex-UK	7%		↓	2%	
UK	4%		↓	2%	
Japan	4%		↑	6%	
Emerging Markets	5%		↓	8%	
China**	2%			4%	
Real Estate	**8%**	**0-16%**		**10%**	
US	2%			3%	
Europe ex-UK	2%		↓	1%	
UK	1%			2%	
Japan	2%		↑	2%	
Emerging Markets	1%			2%	
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%		↑	54%	
EUR	20%		↓	11%	
GBP	7%		↓	8%	
JPY	15%			11%	
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 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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