Uncommon truths

The Aristotle List: 10 improbable but possible outcomes for 2024

It is time to forget central scenarios and think about improbable but possible outcomes. Markets finished 2023 positively, so our list of surprises errs to the negative (these hypothetical predictions are our views of what could happen even if they do not necessarily form part of our central scenario).

Aristotle said that "probable impossibilities are to be preferred to improbable possibilities", meaning that we find it easier to believe in interesting impossibilities (B52s on the moon, say) than in unlikely possibilities. The aim of this document is to seek those unlikely possibilities -- out-of-consensus ideas for 2024 that I believe have at least a 30% chance of occurring. The concept was unashamedly borrowed from erstwhile colleague Byron Wien, who sadly passed away during 2023.

I believe the biggest returns are earned (or the biggest losses avoided) by successfully taking out-of-consensus positions. A year ago, the mood was hesitant after a difficult 2022. Hence, my improbable but possible ideas were biased to the positive side ("US core CPI inflation falls below 4.0%"; "Ukrainian government debt outperforms" and "Pakistan stocks to outperform major indices" were ideas that worked). The mood is now more optimistic (after a bullish end to 2023), so my list expresses some caution – don't look for internal consistency, as there is none.

1. The US experiences a short recession

Judging by recent performance in US equity and high yield markets, there seems little fear of recession. However, until the blowout 4.9% Q3 GDP growth (quarter-on-quarter, annualised), the US economy seemed to be decelerating (growth trending lower), which made sense given Fed tightening and the squeeze on real incomes. Further, the strong Q3 growth came from three main sources: government consumption (contributing 1.0 percentage point to GDP), inventories (1.3 ppts) and personal consumption (2.1 ppts). It is hard to imagine the government providing that level of support for long (our calculations suggest that gross government debt exceeds 120% of GDP and that government interest costs approached 16% of revenues in November 2023, a level not seen since 1997). As for inventories, their contribution tends to be fleeting, with strength in one quarter often turning to weakness in subsequent periods. Most worrying is the fact that consumer spending in Q3 was spurred by a sharp decline in savings (disposable income grew by 0.7% but savings fell by 17%). I doubt the consumer can repeat that trick over the coming quarters. Given possible delayed effects from Fed tightening, I think we might see two consecutive negative GDP quarters by the end of 2024 or an NBER defined recession.

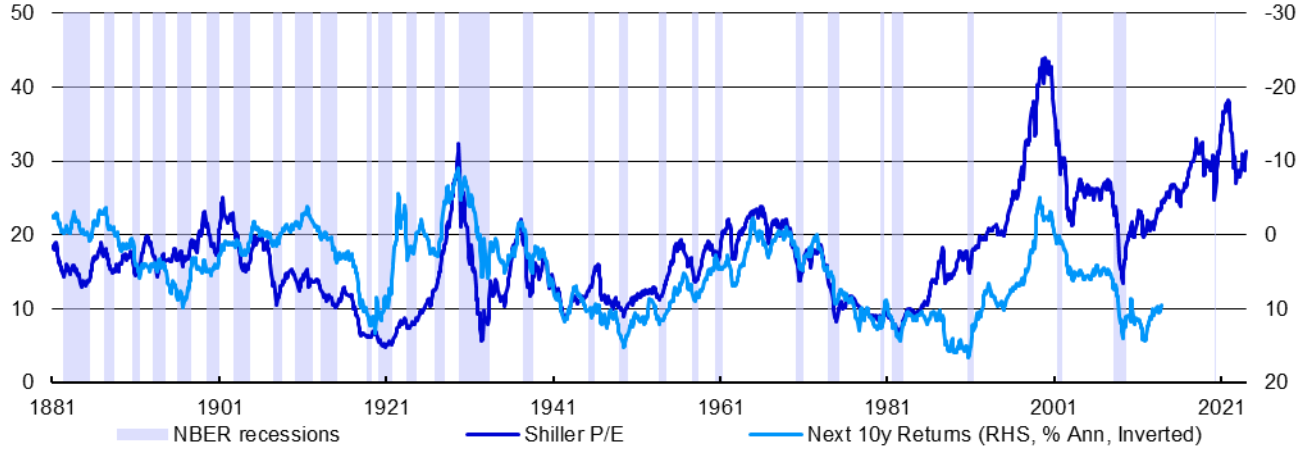
2. S&P 500 finishes the year lower than it started

Global equities finished 2023 on a strong note, with the S&P 500 gaining 24% during the year. Admittedly, that only took it back to where it was at the end of 2021 but I think the latter was overblown (the record close was 4797 on 3 January 2022). **Figure 1** suggests the US market remains expensive (Shiller PE above 31, based on our estimates). Long term returns have tended to be poor from these valuations and I suspect the optimism implied by markets may go unrewarded (especially if there is recession or higher inflation).

3. USDJPY falls below 125

Having peaked at around 152 in November 2023 (a 33 year high), USDJPY has since fallen to around 141 (as of 29 December 2023). This rebound in the yen (fall in USDJPY) has been aided by speculation that the BOJ will soon be raising rates (I am amazed it hasn't done so already) and, of course, that the Fed is about to start easing. With real GDP growth of 1.5% in the year to

Figure 1 – US recessions, Shiller P/E and future equity returns (% yoy)



Note: **Past performance is no guarantee of future results**. Monthly data from January 1881 to December 2023. NBER recessions are periods of US recession as defined by the National Bureau of Economic Research. See appendices for definitions and disclaimers. Source: Robert Shiller, Federal Reserve Bank of St. Louis, LSEG Datastream and Invesco Global Market Strategy Office

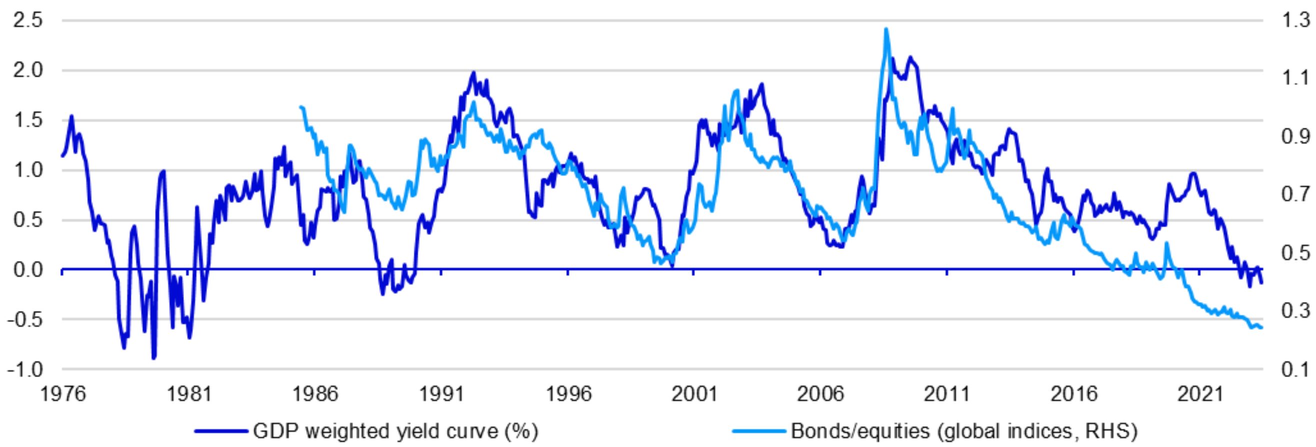
2023 Q3 (not bad given the demographics) and CPI inflation of 2.8% in November (3.8% if fresh food & energy are excluded), I find it hard to understand why the BOJ continues to operate such a loose policy (policy rate of -0.1% and continued purchases of some assets). Supposing the BOJ does start to normalise, and that most other major central banks start to ease, I expect the yen to strengthen substantially. A 10% strengthening of the yen in 2024 would take USDJPY below 125 and I think that is easily achievable (the yen would then still look historically cheap in real terms).

4. Democrats win at least two of three major races
US elections take place on 5 November 2024. As well as the race for the White House, all seats in the House of Representatives are up for re-election, along with 34 (out of 100) Senate seats. Opinion polls make uncomfortable reading for Democrats. Analyses conducted by 270toWin suggest that Donald Trump is likely to return to the White House, that Republicans are likely to retain the House, while regaining the Senate (see 270towin.com). A Republican clean sweep could enable a radical second Trump presidential term, perhaps provoking domestic and international shock waves. However, all of the races appear tight and I suspect Democrats will perform better than currently expected: Fed rate cuts may improve the national mood; Republicans have underperformed opinion poll indications in recent elections/referenda (as women rebel) and there is always the possibility that Donald Trump's legal travails finally erode his popularity. I doubt the Republicans will make a clean sweep and suspect the Democrats may come out on top in at least two of those three races.

5. ANC loses sole control of South Africa
Since the first universal suffrage elections in 1994, South Africa's African National Congress (ANC) has been the governing party. Starting with Nelson Mandela's victory, the ANC's share of vote had never fallen below 62%...until Cyril Ramaphosa's victory in 2019 (57.5%). Even worse, the ANC's share of vote fell below 50% (to 46%) in nationwide local elections in 2021. Recent opinion polls suggest its share of vote will be 40%-50% in the 2024 general election (between mid-May and Mid-August). The electoral system is one of proportional representation but there are some changes this time (including accommodation of independent candidates), which may complicate the outcome. Judging by opinion polls, the ANC will be the largest party in parliament but I can think of three possibilities if it has less than 50% of the seats: first, a coalition with the Economic Freedom Fighters (Marxist-Leninist black nationalist party); second, a broader coalition including both the ANC and the centrist Democratic Alliance (official opposition) and, third, the ANC enters into opposition (to a government formed by the Multi-Party Charter group of parties, led by the DA). Either, way, it looks as though South Africa is heading for coalition government, which may bring volatility.

6. Global government bonds outperform equities
As shown by **Figure 2**, global government bonds have underperformed equities since the global financial crisis (GFC). That is hardly surprising given the low bond yields on offer for most of that period. Now that bond yields have risen, I believe the long period of extreme government bond underperformance is over. Further, **Figure 2** suggests that government bonds have tended to outperform equities when yield curves steepen, which is what I predict for 2024 as central banks cut policy rates. Hence, I expect government bonds (ICE BofA Global Government Bond Index) to outperform equities (MSCI World Index) during 2024, which would be the first time since 2018 (and prior to that, 2011). I suspect that recession would help the cause.

Figure 2 – Global government bonds have tended to outperform stocks when yield curves steepen



Note **Past performance is no guarantee of future results**. Based on monthly data from January 1976 to December 2023 (as of 29 December 2023). "GDP weighted yield curve" is the average 10-year yield minus 2-year yield comparison across 10 economies (Australia, Brazil, Canada, China, Eurozone, India, Japan, Russia, UK and US), weighted by GDP. "Bonds/equities" is based on total return indices in US dollars and is the MSCI World Index divided by the ICE BofA Global Government Index.
Source: ICE BofA, MSCI, LSEG Datastream and Invesco Global Market Strategy Office

7. Geopolitics push Brent/gold above $100/$2350

A lacklustre global economy may explain why supply restrictions by OPEC+ and the Israel/Hamas conflict have had a limited effect on energy prices. However, with problems mounting in the Middle East (including the risk of Iranian involvement and problems in the Red Sea), the ongoing conflict between Russia and Ukraine and a US election cycle that could destabilise global geopolitics, I think it possible that the price of Brent goes above $100 in 2024 (up nearly 30% from 29 December 2023, based on the first month future price). Gold has gained more than $200 since the Hamas attack on Israel and I think it could go above $2350, especially with a repeat of the 2016 "Trump premium" (which I reckon added more than $200 to the price).

8. Colombian stocks to outperform major indices

In my search for exotic stock market opportunities, I usually look for the holy grail of a dividend yield that exceeds the price/earnings ratio. Last year, I chose Pakistan, which despite strong index gains remains in that valuation category. Other examples include Bahrain, Czechia, Kenya and Romania but I have chosen to go for Colombia this year. After a 7% index decline in 2023, the current MSCI COLCAP price/earnings ratio is 6.1x and the dividend yield is 11.2% (changing to 6.4x and 7.7%, respectively, based on consensus 2024 forecasts, according to Bloomberg, as of 4 January 2024). Usually, whenever valuation metrics are at such levels it signifies either that a big opportunity has presented itself or that something is about to go very wrong. The consensus estimates suggest that both earnings and dividends are expected to fall but still leaving dividend yield higher than PE. Also, the usual macro metrics (inflation and government/international balances) do not signal impending disaster and the Peso strengthened during 2023. As usual with these sorts of picks, the market is small, with a market capitalisation below $20bn.

9. Chinese stocks to outperform the US

Deploying the stopped clock principle, I am sticking with one of the ideas from last year that failed miserably: that Chinese stocks will outperform major indices. However, the underperformance reported in **Figure 4** only enhances the valuation argument. China's cyclically adjusted PE ratio was 13.1 at end-2023 compared to 35.7 in the US, 42.2 in India and its own historical average of 25.3 (see **Figure 3**). Further, I think China's economic performance has been better than many give it credit for: at 4.9% in 2023 Q3, its year-on year GDP growth was much better than the 2.9% seen in the US. With a central bank that has been easing over recent years, I suspect China's economy will continue to outperform the US. I also think that China's policy making approach has now become more predictable, which may not be the case in the US if there is a change at the White House.

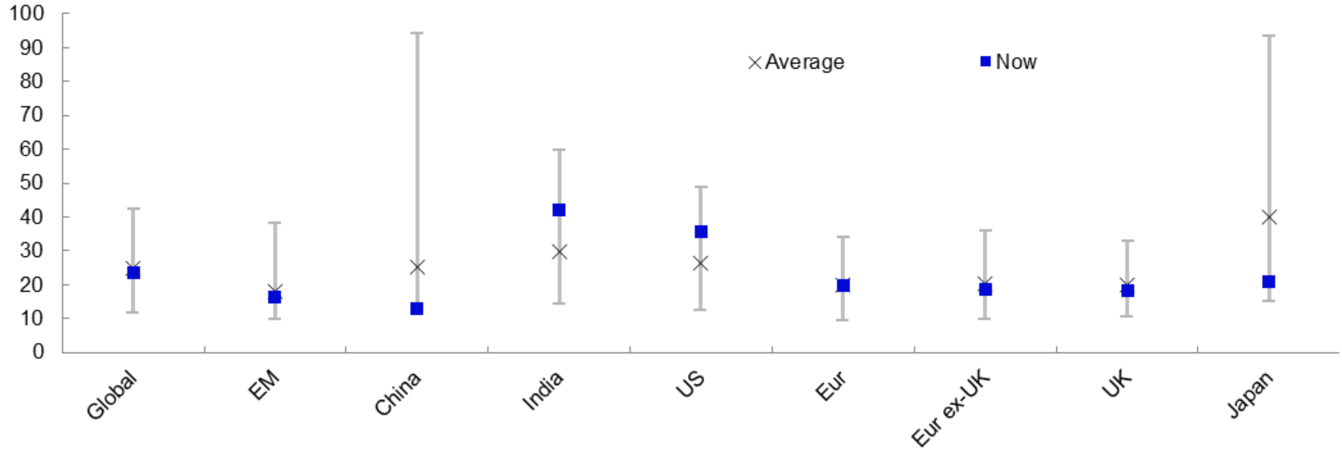
10. France wins Euro 2024

UEFA's Euro 2024 tournament will be played in Germany in June and July, with the final in Berlin on Sunday 14 July. Bookmakers seem to favour England, though that may be biased by the location of their businesses (see oddschecker.com). Predictions are made harder by the fact that three of the 24 competing nations are yet to be decided (by a process of playoffs) and that four "round of 16" competitors will be the best performing third placed teams from the group stage. Looking at the potential pathways through the competition, I suspect (unpatriotically) that England will be eliminated in the semi-finals by France, who I think will then register a Bastille Day victory against Spain.

As a gift for the new year, we offer **Figures 4, 5** and **6** which show long term performance data across assets, sectors and factors.

Unless stated otherwise, all data as of 29 December 2023

Figure 3 – China's cyclically adjusted price/earnings ratio is lower than elsewhere



Note: Cyclically adjusted price/earnings ratio uses a 10-year moving average of earnings. Based on daily data from 3 January 1983 (except for China from 1 April 2004, India from 31 December 1999 and EM from 3 January 2005), using Datastream indices. As of 29 December 2023. Source: LSEG Datastream and Invesco Global Market Strategy office

Figure 4 – Asset class total returns (% annualised)

Data as at 29/12/2023	Index	Current Level/RY	Total Return (USD, %) 1y	3y	5y	10y	Total Return (Local Currency, %) 1y	3y	5y	10y
Equities										
World	MSCI	727	22.4	6.4	12.4	8.5	21.7	7.9	12.9	9.6
Emerging Markets	MSCI	1024	10.1	-4.1	4.1	3.1	10.2	-1.6	5.9	5.7
China	MSCI	55	-10.9	-17.4	-2.5	1.1	-10.5	-16.8	-2.4	1.2
US	MSCI	4552	26.8	9.4	15.9	12.0	26.8	9.4	15.9	12.0
Europe	MSCI	2020	19.2	6.2	9.8	4.8	13.7	8.9	9.9	6.9
Europe ex-UK	MSCI	2516	21.1	5.5	10.8	5.6	15.8	8.4	10.9	7.5
UK	MSCI	1177	12.9	8.5	7.0	2.6	6.8	10.5	6.9	5.3
Japan	MSCI	3698	21.7	0.9	7.4	5.4	28.7	11.8	12.8	8.6
Government Bonds										
World	BofA-ML	2.96	3.8	-7.4	-1.8	-0.4	3.8	-4.1	-0.5	1.2
Emerging Markets (USD)	BBloom	7.65	15.4	-4.7	1.8	4.2	15.4	-4.7	1.8	4.2
China	BofA-ML	2.45	3.3	2.0	3.7	3.3	5.1	4.8	4.4	5.0
US (10y)	Datastream	3.87	3.7	-5.6	0.7	1.8	3.7	-5.6	0.7	1.8
Europe	Bofa-ML	2.68	10.1	-8.7	-1.6	-0.8	6.3	-5.6	-0.9	1.4
Europe ex-UK (EMU, 10y)	Datastream	2.00	10.5	-9.3	-2.7	-0.9	6.7	-6.2	-2.1	1.3
UK (10y)	Datastream	3.60	12.2	-8.9	-2.0	-0.8	6.1	-7.2	-2.1	1.8
Japan (10y)	Datastream	0.62	-3.4	-9.9	-4.8	-1.9	2.2	-0.2	0.0	1.1
IG Corporate Bonds										
Global	BofA-ML	4.73	9.4	-3.9	1.7	1.8	8.1	-2.9	1.9	2.6
Emerging Markets (USD)	BBloom	7.00	10.8	-6.1	2.4	4.7	10.8	-6.1	2.4	4.7
China	BofA-ML	3.21	2.7	1.2	3.3	3.1	4.5	4.0	4.0	4.7
US	BofA-ML	5.19	8.3	-3.1	2.7	3.0	8.3	-3.1	2.7	3.0
Europe	BofA-ML	3.61	11.7	-6.0	-0.6	-0.8	7.9	-2.7	0.1	1.4
UK	BofA-ML	5.16	16.1	-6.7	0.7	0.4	9.8	-5.0	0.6	3.0
Japan	BofA-ML	0.85	-4.1	-9.9	-4.7	-2.5	1.5	-0.1	0.1	0.4
HY Corporate Bonds										
Global	BofA-ML	7.82	13.5	0.0	4.2	3.7	12.5	0.7	4.3	4.2
US	BofA-ML	7.79	13.5	2.0	5.2	4.5	13.5	2.0	5.2	4.5
Europe	BofA-ML	6.51	16.0	-2.6	2.5	1.2	12.1	0.8	3.2	3.4
Cash (Overnight LIBOR)										
US		5.40	5.0	2.2	1.8	1.3	5.0	2.2	1.8	1.3
Euro Area		3.90	6.9	-2.6	-0.4	-2.2	3.2	0.9	0.3	0.0
UK		5.19	10.6	0.0	1.4	-1.7	4.7	2.0	1.4	0.9
Japan		-0.02	-5.7	-9.8	-4.9	-2.9	0.0	-0.1	-0.1	0.0
Real Estate (REITs)										
Global	FTSE	1635	9.5	1.4	3.1	4.2	5.8	4.9	3.8	6.6
Emerging Markets	FTSE	1274	-1.3	-9.0	-4.3	0.8	-4.7	-5.8	-3.7	3.1
US	FTSE	3069	12.6	7.3	6.5	7.0	12.6	7.3	6.5	7.0
Europe ex-UK	FTSE	2568	22.2	-8.9	-0.5	3.2	18.0	-5.7	0.2	5.5
UK	FTSE	883	16.1	-3.4	1.4	0.1	9.8	-1.6	1.3	2.7
Japan	FTSE	2171	5.2	-2.8	0.3	-1.0	11.3	7.7	5.3	2.0
Commodities										
All	GSCI	3347	-3.1	19.6	8.7	-3.7	-	-	-	-
Energy	GSCI	579	-3.2	29.9	8.6	-6.6	-	-	-	-
Industrial Metals	GSCI	1601	-5.1	4.3	6.1	1.5	-	-	-	-
Precious Metals	GSCI	2317	11.4	2.0	8.8	4.1	-	-	-	-
Agricultural Goods	GSCI	513	-7.8	9.7	7.8	-1.8	-	-	-	-
Currencies (vs USD)**										
EUR		1.10	3.5	-3.4	-0.7	-2.2	-	-	-	-
JPY		141.06	-5.7	-9.8	-4.8	-2.9	-	-	-	-
GBP		1.27	5.8	-1.9	0.1	-2.5	-	-	-	-
CHF		1.19	9.7	1.7	3.2	0.6	-	-	-	-
CNY		7.10	-1.9	-2.7	-0.6	-1.6	-	-	-	-

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: LSEG Datastream and Invesco Global Market Strategy Office

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

Data as at 29/12/2023	Global			
	1y	**3y**	**5y**	**10y**
Energy	**-8.8**	**10.9**	**-3.5**	**-5.4**
Basic Materials	**-7.0**	**0.8**	**0.8**	**-0.7**
Basic Resources	-6.4	3.5	3.5	-0.3
Chemicals	-7.9	-2.6	-2.6	-1.9
Industrials	**-0.7**	**-0.1**	**0.4**	**0.0**
Construction & Materials	9.9	3.3	1.2	-0.8
Industrial Goods & Services	-2.1	-0.5	0.3	0.2
Consumer Discretionary	**5.0**	**-5.8**	**-1.7**	**-0.8**
Automobiles & Parts	16.4	-3.6	1.7	-1.5
Media	3.0	-10.9	-5.1	-3.3
Retailers	6.1	-7.2	-1.2	0.3
Travel & Leisure	1.0	-3.3	-5.6	-2.7
Consumer Products & Services	-0.5	-4.6	-0.2	0.6
Consumer Staples	**-16.2**	**-3.9**	**-4.6**	**-2.7**
Food, Beverage & Tobacco	-16.3	-2.8	-4.3	-2.8
Personal Care, Drug & Grocery Stores	-15.9	-5.9	-5.4	-2.7
Healthcare	**-13.1**	**-2.8**	**-1.4**	**1.2**
Financials	**-3.4**	**4.0**	**-1.3**	**-1.0**
Banks	-3.9	4.3	-3.5	-2.9
Financial Services	-0.5	3.5	2.1	1.6
Insurance	-6.8	4.3	-0.9	-0.1
Real Estate	**-10.1**	**-5.8**	**-7.3**	**-3.2**
Technology	**27.6**	**3.0**	**10.0**	**8.8**
Telecommunications	**-5.7**	**-4.1**	**-4.9**	**-4.3**
Utilities	**-13.3**	**-1.2**	**-2.9**	**-1.1**

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

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

Data as at 29/12/2023	Absolute				Relative to Market			
	1y	3y	5y	10y	1y	3y	5y	10y
Growth	30.4	11.9	20.0	13.3	3.5	1.4	3.6	1.1
Low volatility	3.5	8.7	13.2	12.4	-17.9	-1.5	-2.3	0.3
Price momentum	12.3	9.3	14.1	10.8	-10.8	-0.9	-1.5	-1.2
Quality	19.6	12.9	15.4	11.6	-5.1	2.4	-0.4	-0.5
Size	14.5	11.6	12.5	9.1	-9.1	1.2	-2.9	-2.6
Value	11.6	14.5	14.4	9.8	-11.4	3.8	-1.3	-2.1
Market	26.0	10.3	15.9	12.1				
Market - Equal-Weighted	13.4	9.9	14.0	10.5				

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 29/12/2023	Absolute				Relative to Market			
	1y	3y	5y	10y	1y	3y	5y	10y
Growth	14.4	1.8	13.7	10.2	-0.5	-6.8	2.8	2.8
Low volatility	10.9	7.9	10.3	10.3	-3.6	-1.3	-0.4	2.9
Price momentum	11.5	0.6	9.4	8.8	-3.1	-8.0	-1.1	1.4
Quality	13.8	5.8	11.5	8.6	-1.1	-3.2	0.7	1.3
Size	10.9	1.5	9.1	6.3	-3.6	-7.1	-1.4	-0.9
Value	16.4	12.7	10.1	6.8	1.2	3.1	-0.5	-0.4
Market	15.0	9.3	10.7	7.2				
Market - Equal-Weighted	14.1	4.5	8.8	6.9				

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%**	↓	**0%**			
Cash	2.5%		↓	0%			
Gold	2.5%			0%			
Bonds	**40%**	**10-70%**	↑	**50%**			
Government	25%	10-40%		22%			
US	8%			13%			
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%	↑	20%			
US Dollar	5%			10%		40%	JPY
Euro	2%		↑	4%			
Sterling	1%			2%			
Japanese Yen	1%		↑	1%			
Emerging Markets	1%			3%			
China**	0.1%			0%			
Corporate HY	5%	0-10%	↑	8%			
US Dollar	4%		↑	6%			
Euro	1%		↑	2%			
Bank Loans	**4%**	**0-10%**	↑	**7%**			
US	3%		↑	5%			
Europe	1%			2%			
Equities	**45%**	**25-65%**	↑	**37%**			
US	25%			12%			
Europe ex-UK	7%		↑	10%			
UK	4%		↑	5%			
Japan	4%			2%			
Emerging Markets	5%			8%			
China**	2%			4%			
Real Estate	**4%**	**0-16%**	↑	**6%**			
US	1%		↑	2%			
Europe ex-UK	1%			1%			
UK	1%		↑	2%			
Japan	1%		↓	1%			
Emerging Markets	1%			0%			
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	52%		↑	44%	
EUR	19%		↑	21%	
GBP	7%		↓	10%	
JPY	13%		↓	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 Global Market Strategy Office

Figure 8 – Model allocations for global sectors

	Neutral	Invesco	Preferred Region
Energy	**8.1%**	**Neutral ↑**	**EM**
Basic Materials	**4.2%**	**Neutral**	**Europe**
Basic Resources	2.4%	Neutral	Europe
Chemicals	1.8%	Neutral	US
Industrials	**12.8%**	**Overweight ↑**	**US**
Construction & Materials	1.6%	Underweight	US
Industrial Goods & Services	11.2%	Overweight ↑	US
Consumer Discretionary	**14.5%**	**Underweight ↓**	**Europe**
Automobiles & Parts	2.9%	Underweight	Japan
Media	1.0%	Underweight	Japan
Retailers	4.8%	Neutral ↓	US
Travel & Leisure	2.1%	Underweight	EM
Consumer Products & Services	3.7%	Neutral	Europe
Consumer Staples	**6.0%**	**Overweight**	**Europe**
Food, Beverage & Tobacco	3.9%	Overweight	Europe
Personal Care, Drug & Grocery Stores	2.1%	Overweight	US
Healthcare	**9.7%**	**Overweight**	**US**
Financials	**15.3%**	**Neutral**	**Europe**
Banks	7.3%	Neutral	Europe
Financial Services	4.9%	Underweight	US
Insurance	3.0%	Neutral	Europe
Real Estate	**2.8%**	**Overweight**	**US**
Technology	**19.7%**	**Neutral**	**US**
Telecommunications	**3.6%**	**Overweight**	**Europe**
Utilities	**3.3%**	**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: LSEG Datastream and Invesco Global Market Strategy Office

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), bank loans, 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, high-yield and bank loan spreads are based upon our view of the economic cycle (as are forecasts of credit losses). Coupon/interest 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 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 4

Sources: we source data from LSEG 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 1 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 Barclays 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 Barclays 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

Definitions of data and benchmarks for Figure 1

US Shiller PE and Earnings Per Share (EPS): the Shiller PE is a price to earnings ratio constructed by dividing price by the average earnings per share in the previous 10 years (with both numerator and denominator adjusted for inflation). It is what is commonly known as a cyclically adjusted PE ratio. It is constructed by US academic Robert Shiller. Data is monthly from 1881 (source Robert Shiller – see here).

US stock/equity index: we have calculated a total return index for broad US stocks based on index and dividend data from US academic Robert Shiller and Datastream. The index prior to 1926 is Robert Shiller's recalculation of data from Common Stock Indexes by Cowles & Associates (see here). From 1926 to 1957, the Shiller data is based on the S&P Composite Index and thereafter is based on the S&P 500 as we know it today.

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