

The Big Picture

Global Asset Allocation 2024 Outlook

Quarterly update from Invesco's Global Market Strategy Office
19 November 2023



The Big Picture

Global Asset Allocation: 2024 Outlook

Given our view that 2024 will bring much lower interest rates, we look forward to better returns on fixed income assets than for some time, and expect riskier assets to eventually benefit from lower rates and the prospect of better growth. Overall, we expect the best multi asset returns since 2019. Consequently, we reduce cash to Zero within our Model Asset Allocation, while increasing investment grade, high yield, bank loans and REITS (all Overweight) and equities (still Underweight). We prefer European and emerging market (EM) assets.

Model asset allocation

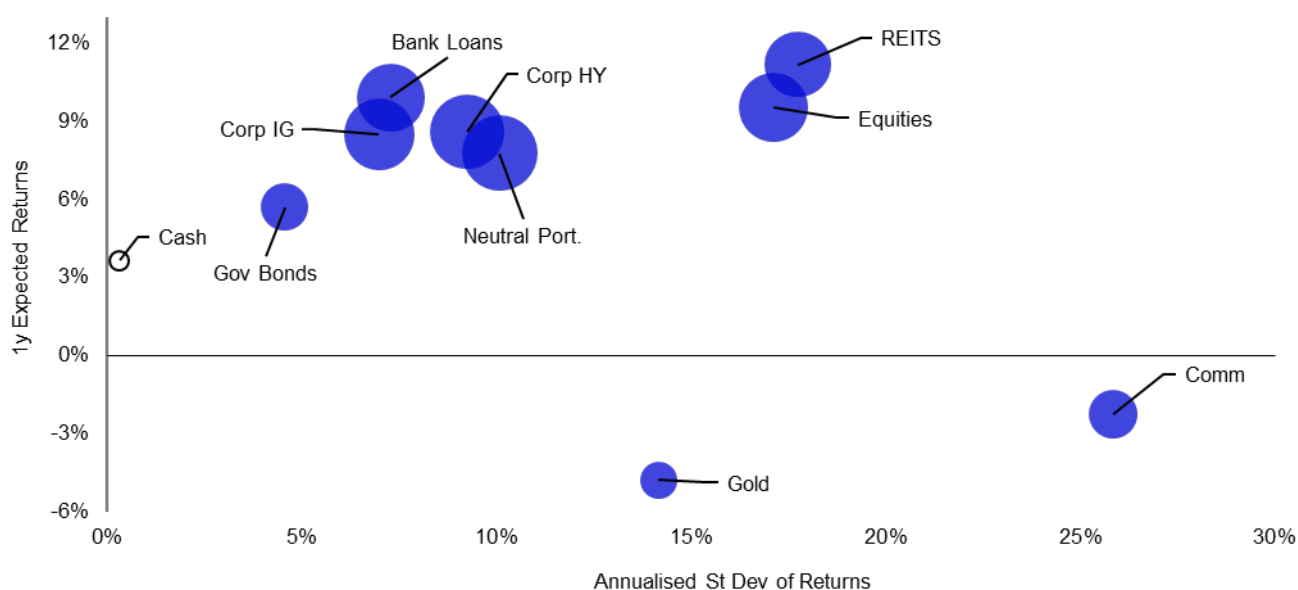
In our view:

- Cash rates are higher than for some time but we think there are better options. We reduce to Zero.
- Corporate investment grade (IG) has an attractive risk-reward trade-off. We increase to Maximum.
- Bank loans also offer an attractive risk-reward trade-off. We go further Overweight.
- Corporate high yield (HY) usually does well in an economic recovery. We increase to Overweight.
- Equities offer decent potential but not on a risk-adjusted basis. We increase but remain Underweight.
- Real estate (REITS) has the potential to produce the best returns. We go further Overweight.
- Government yields are higher than for some time but we favour other assets. We remain Underweight.
- Commodities could be helped by weakening dollar but some are expensive. We remain at Zero.
- Gold may be helped by falling yields and weakening dollar but is expensive. We remain at Zero.
- Regionally, we favour Europe and EM (embracing risk).
- US dollar expected to weaken and we partially hedge into JPY.

Our best-in-class assets for 2024 (based on projected returns in local currency)

- EM IG
- US bank loans
- Eurozone equities

Figure 1 – Projected return versus risk for global assets to end-2024



There is no guarantee that these views will come to pass. Based on annualised local currency returns. Returns are projected but standard deviation of returns is based on 5-year historical data. Size of bubbles is in proportion to average pairwise correlation with other assets. Cash is an equally weighted mix of USD, EUR, GBP and JPY. Neutral portfolio weights shown in **Figure 3**. As of 31 October 2023. See Appendices for definitions, methodology and disclaimers. Source: ICE BofA, Credit Suisse, FTSE Russell, MSCI, S&P GSCI, LSEG Datastream and Invesco Global Market Strategy Office

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We expect the best returns across assets since 2019

Summary and conclusions: 2024 – Deploying cash

Given our view that 2024 will bring much lower interest rates in most countries, we look forward to better returns on fixed income assets than for some time, and expect riskier assets to eventually benefit from lower rates and the prospect of better growth (though some have partially priced in the good news, in our view). Overall, we expect the best multi asset returns since 2019. Consequently, we reduce cash to zero within our Model Asset Allocation, while increasing investment grade, high yield, bank loans and REITS (all are Overweight) and equities (which remain Underweight). Across regions we prefer European and emerging market (EM) assets.

We expect aggressive Fed easing, starting in 2024 Q2

Economies have been more resilient than we expected during 2023 but we believe they are slowing. We also believe that inflation will decline, though less smoothly than in 2023, and that major Western central banks will start easing in 2024 Q2. History suggests that once the Fed starts easing, it will move quickly. Defensive fixed income asset returns are likely to be boosted by high yields (or higher than for many years) and the decline in those yields that we think will go with central bank easing (implying bull steepening). Risk assets may suffer in early 2024 as economies weaken and as we await clarity from central banks but we expect better performance as the year unfolds.

Underlying assumptions

Underpinning our asset projections for 2024 are the following assumptions:

- Global GDP growth will slow and then recover
- Global inflation will fall but remain above many central bank targets
- Major western central banks start cutting rates during 2024 Q2 (but continue QT)
- Long-term government yields will fall but yield curves will steepen
- Credit spreads will widen in the US but be mixed in Europe, defaults rise
- Bank loan spreads will be stable but defaults rise
- Equity and REIT dividend growth will moderate but yield movements are mixed
- USD will weaken as Fed tightening ends
- Commodities will be mixed as the global economy slows and USD weakens

Fed to start cutting rates in 2024 Q2, which could help EM assets and support commodities

The full set of assumptions is shown in **Appendix 4**, while the resultant market targets are shown in **Figure 36**. Projected returns for global assets are shown in **Figures 1 and 38**. Perhaps the single most important forecast is that Fed and other Western central bank policy rates will fall appreciably by the end of 2024. We expect this to depress long-term bond yields (though believe yield curves will steepen), with the US dollar weakening as the Fed leads the way (it has raised rates higher and US inflation is falling ahead of other countries). We think this combination could help gold during 2024, effectively cushioning the decline back to more reasonable levels. It could also offer support to other commodities (though those sensitive to the economic cycle may remain under pressure early in the year) and could help EM assets.

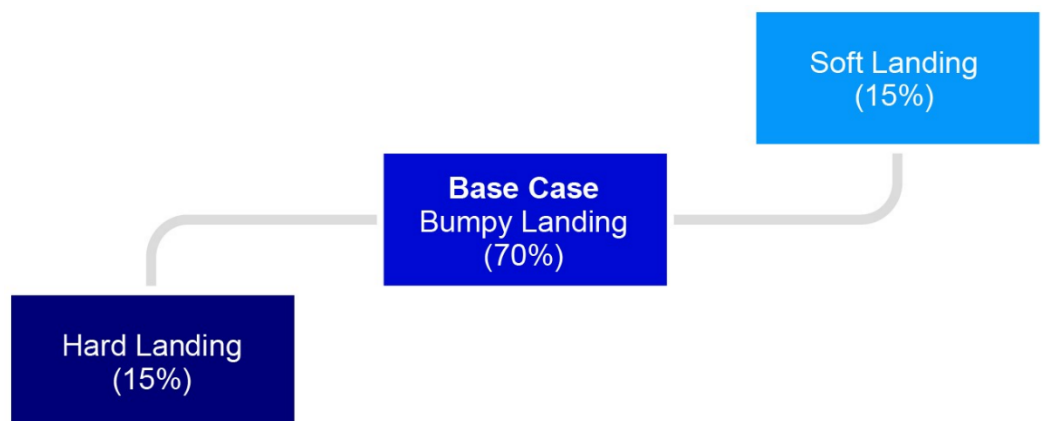
Optimisation process favours IG and bank loans

Though our projected returns are as ambitious as they have been for some time (when looking across assets), they are tempered to some extent by the view that some risk assets are already priced for economic recovery. For example, high yield spreads are narrower than we would expect at this stage of the cycle, equities have performed well in 2023 and energy commodities remain relatively expensive (except when compared to gold). Our optimisation process (based on the projections shown in **Figure 1**) unambiguously favours investment grade credit (IG) and bank loans (see **Figure 38**), while gold, commodities and equities are out of favour. When faced with difficult choices, we are now erring on the riskier side (given our view that policy rates will fall sharply during 2024).

Cash reduced to zero and IG boosted to the Maximum

Hence, within our Model Asset Allocation (see **Figure 3**), we have chosen to reduce the **cash** allocation to zero (from 10%). Though cash rates are high and it may play a useful diversification role if there is short term volatility (as we expect), we forecast better 2024 returns on other assets. Those cash reserves are deployed to add to the allocations in IG, bank loans, HY, equities and real estate (REITS), with those assets purposefully listed in ascending order of volatility. **IG** is taken to the maximum allowed 20%, with a preference for US and EM, though they were already at the maximum allocations (we now boost the eurozone to further Overweight and Japan to Neutral).

Bank loans increased to near Maximum... ...HY also boosted	Moving along the risk spectrum, we boost the allocation to bank loans to 7% (from 6%), by adding in the US. This is Overweight but we avoid going to the maximum 8% due to the risk of defaults and because its short duration may work against it as rates fall. Though high yield has performed better than we expected in 2023, and despite our forecast of widening spreads and higher default rates, the expected returns are decent. We boost the allocation to an Overweight 8% (from the Neutral 5%).
Equities increased but still Underweight, though REITS taken to further Overweight	We also boost the equity allocation but remain at an Underweight 37% (up from 34%). Though equities normally perform well in economic upswings, they have already shone in 2023 and we fear short term volatility. Further, the stretched valuation of US indices makes it hard to be optimistic about global equity returns. We add to Europe and continue to favour EM (including China). Out of the desire to embrace risk, we boost the allocation to real estate (REITS), going further Overweight to 6% (from 5%), with a preference for the US and the UK. We see the risks but think a lot is in the price.
Government bonds, gold and commodities unchanged	Otherwise, we make no changes to the Underweight allocation (22%) to government bonds , with an ongoing preference for US and EM (not China) markets. We also remain Zero allocated to gold and commodities (prices are elevated, in our opinion).
We prefer European and EM assets	Regionally, we are Overweight European and EM assets. We maintain the partial hedge out of US dollar into Japanese yen, believing the latter will rally as the BOJ normalises.
Hard and soft landing alternative scenarios	Of course, we may be wrong, so we consider two alternative scenarios: “hard landing” and “soft landing”. Figure 2 gives a summary of each scenario. A “hard landing” would favour defensive assets, in our opinion, while a “soft landing” would boost cyclical assets.

Figure 2 – Asset preferences for 2024 by scenario


Description:
 Central banks have gone too far; recession and a rapid disinflation ensue; central banks ease aggressively

Preferred assets:
 Cash, gold, sovereign debt, IG credit, defensive equities (low volatility, growth, technology, consumer staples)

Preferred regions:
 US

Preferred currencies:
 USD, CHF, JPY

Description:
 Growth slows in early 2024; inflation falls; central banks ease from Q2; growth picks up in H2; geopolitics a source of mild volatility but no more

Preferred assets:
 IG credit, bank loans, HY, real estate, cyclical and growth equities (value, size, EM incl. China, technology)

Preferred regions:
 US, Europe, EM

Preferred currencies:
 Non-USD

Description:
 Lower inflation boosts growth (via real incomes) and economies reaccelerate in H1; geopolitics fade as an influence; central banks ease but only gradually

Preferred assets:
 HY, cyclical equities (value, size, banks, basic resources), industrial metals

Preferred regions:
 Europe, EM

Preferred currencies:
 AUD, CAD

Percentages are our subjective probabilities. See appendices for definitions, methodology and disclaimers. Source: Invesco Global Market Strategy Office

Model asset allocation*
Figure 3 – Model asset allocation (19/11/2023)

	Neutral	Policy Range	Allocation	Position vs Neutral	Hedged	Currency
Cash Equivalents	5%	0-10%				
Cash	2.5%		↓ 0%			
Gold	2.5%		↓ 0%			
Bonds	40%	10-70%	↑ 50%			
Government	25%	10-40%				
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%			

*This is a theoretical portfolio and is for illustrative purposes only. It does not represent an actual portfolio and is not a recommendation of any investment or trading strategy. **China is included in Emerging Markets allocations. Cash is an equally weighted mix of USD, EUR, GBP and JPY. Currency exposure calculations exclude cash. Arrows show direction of change in allocations. See appendices for definitions, methodology and disclaimers. Source: Invesco Global Market Strategy Office

The global economy struggled during 2023 but some assets performed as though we were in a recovery phase

Gold outperformed other assets

Otherwise, cyclical assets seem to have been favoured

AI and currencies dominated stock markets

2010 showed a similar pattern to 2023 but 2011 brought a reversal of the rankings

A glance in the rear-view mirror

A year ago, we were looking ahead to a transition from contraction to recovery and added risk to the Model Asset Allocation by reducing government bonds to Neutral and adding to HY (to Overweight). We also switched out of cash and into gold, both of which we consider to be diversifiers but the latter has tended to be more volatile. From a regional perspective, we preferred US and EM assets (though remaining Underweight US equities). The global economy cannot be said to have recovered but many assets have been behaving as though it had and we became more defensive during the year.

As of end-October, gold was the best performing asset class (see **Figure 4**). Supported by falling bond yields and a weakening dollar, gold went above \$2000 per ounce in April and May. It then fell to around \$1800 by early October (as bond yields rose and the dollar strengthened) but that phase ended abruptly when Hamas attacked Israel. The gold price has since risen to around \$2000.

Sandwiched between gold and cash in the performance rankings are two cyclical assets: stocks and HY. At the same time, the worst performing assets have been REITS and the more defensive fixed income assets of government bonds and investment grade credit. As gold and REITS have some idiosyncratic drivers, the broad message seems to be that cyclical assets have been favoured during 2023.

From a regional perspective, US equity returns were aided by the concentration of stocks that enable generative AI, while the weakness of the yen and CNY dampened the performance of Japanese and Chinese assets when expressed in US dollars (see **Appendix 2**). Japanese stocks were the best performing asset category in local currency terms but were bettered by US stocks in US dollars.

Perhaps the closest template for the performance pattern seen so far during 2023 was 2010 (see **Figure 4**). Though REIT returns were much higher then (it was before demand for retail and office space were dampened by online shopping and work-from-home, respectively) and cash rates were so much lower, the broad pattern was the same. Unfortunately, the year after brought a broad reversal of the rankings, though gold was still the top performer (probably due to the Eurozone crisis) and it should be remembered that 2009 had been a strong year for cyclical assets.

Appendix 2 shows that fixed income assets suffered in the two months to the end of October as bond yields rose and that stocks and REITS suffered even more.

Figure 4 – Total returns on global assets by calendar year (in USD)

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
HY 62.0%	Gold 29.3%	Gold 11.1%	REITS 27.3%	Stocks 27.4%	REITS 12.1%	Cash 0.2%	HY 14.8%	Stocks 23.1%	Cash 2.0%	Stocks 28.4%	Gold 24.8%	CTY 40.4%	CTY 26.0%	Gold 12.0%
REITS 33.0%	REITS 18.6%	Govt 6.8%	HY 19.3%	HY 8.0%	Stocks 5.5%	REITS 0.1%	CTY 11.4%	REITS 13.9%	Govt -0.3%	REITS 21.7%	Stocks 16.5%	REITS 23.1%	Cash 1.5%	Stocks 10.1%
Stocks 30.8%	HY 13.9%	IG 4.5%	Stocks 16.5%	REITS 3.3%	IG 3.1%	Stocks -0.3%	Gold 9.0%	Gold 12.6%	Gold -1.7%	Gold 18.7%	IG 10.3%	Stocks 22.3%	Gold -0.4%	HY 5.1%
Gold 27.1%	Stocks 12.3%	HY 2.6%	IG 11.1%	Cash 0.2%	Govt 0.2%	Govt -2.6%	Stocks 8.2%	HY 10.2%	HY -3.3%	CTY 17.6%	Govt 9.2%	HY 1.4%	HY -13.2%	Cash 5.0%
IG 19.2%	CTY 9.0%	Cash 0.2%	Gold 5.6%	IG 0.1%	Cash 0.2%	IG -3.8%	REITS 4.4%	IG 9.2%	IG -3.5%	HY 13.7%	HY 8.0%	Cash 0.0%	IG -16.7%	CTY 3.3%
CTY 13.5%	IG 6.0%	CTY -1.2%	Govt 1.7%	CTY -1.2%	HY -0.1%	HY -4.2%	IG 4.3%	Govt 6.5%	REITS -5.4%	IG 11.4%	Cash 0.5%	IG -3.0%	Stocks -17.7%	IG -0.6%
Govt 2.3%	Govt 5.6%	Stocks -5.0%	Cash 0.2%	Govt -4.3%	Gold -1.8%	Gold -10.4%	Govt 1.7%	CTY 5.8%	Stocks -8.2%	Govt 5.5%	REITS -6.3%	Gold -4.0%	Govt -18.0%	Govt -6.5%
Cash 0.4%	Cash 0.3%	REITS -5.6%	CTY 0.1%	Gold -27.3%	CTY -33.1%	CTY -32.9%	Cash 0.5%	Cash 1.1%	CTY -13.8%	Cash 2.3%	CTY -23.7%	Govt -6.9%	REITS -22.8%	REITS -10.6%

Notes: **Past performance is no guarantee of future results.** Based on annual total return data from 2009 to 2023 in USD (*2023 is created by annualising data up to 31 October). Calculated using spot price of gold, BofAML 0-3-month US treasury index (Cash), BofAML Global Government Index (Govt), BofAML Global Corporate Index (IG), BofAML Global HY Index (HY), GPR General World Index (REITS), S&P GSCI total return index for commodities (CTY) and MSCI World Index (Stocks).

Source: BofAML, GPR, JP Morgan, MSCI, S&P GSCI, LSEG Datastream and Invesco Global Market Strategy Office.

Invesco's 10-year CMAs have been published

Taking a step back: focusing on the next decade using Invesco's CMAs

Before considering projections for the next year, it may be instructive to use longer term return projections as a guide. Invesco Investment Solutions have just published their 10-year capital market assumptions. **Figure 5** shows their projected returns for global asset classes in a range of currency bases (their framework differs from ours, so we have had to adapt some of their categories – for instance, we use their US Treasury Short category to represent cash and precious metals for gold). A more detailed version showing regional projections is contained in **Appendix 3**.

Figure 5: Invesco 10-year capital market assumptions (global assets, % ann.)

	USD	EUR	GBP	CHF
Cash & Gold	3.1	1.3	2.9	-0.4
Cash - US Treasury Short	5.1	3.3	4.9	1.6
Gold	1.1	-0.6	1.0	-2.3
Government Bonds	5.0	3.2	4.8	1.5
Corporate IG	5.8	4.0	5.6	2.3
Corporate HY - US HY	7.1	5.4	7.0	3.6
Bank Loans (US)	8.3	6.5	8.1	4.8
Equities	7.3	5.6	7.2	3.9
Real Estate (REITS)	6.0	4.2	5.8	2.5
Commodities	5.6	3.9	5.5	2.1

Note: Estimates as of 30 September 2023 and based on the 10-year capital market assumptions published by Invesco Investment Solutions in Long-Term Capital Market Assumptions (November 2023). The USD version of the CMAs is reproduced in Appendix 3. The above table uses the geometric expected return version for global asset classes ("gold" is based on the projections for precious metals and the "Cash & Gold" category shows the average of those two assets). These estimates reflect the views of Invesco Investment Solutions, the views of other investment teams at Invesco may differ from those presented here. **There is no guarantee that these views will come to pass.** Source: Invesco Investment Solutions

Cash, HY and bank loans dominate 10-year CMA based optimal portfolios

Not surprisingly, the further we move along the risk spectrum, the higher the projected returns, though equities real estate and commodities appear less attractive on a risk-reward basis than bank loans. When it comes to CMA based optimal solutions, the closest we get to consistent overweighting across currency bases and objectives is for cash, HY and bank loans (see **Figure 6**). At the other extreme, gold, real estate and commodities are nearly always underweighted. Equity and government bond allocations are mixed, with equities preferred when maximising return and government bonds preferred when we maximise the Sharpe ratio.

Figure 6: Optimised global allocations based on Invesco's 10-year CMA projected returns

	Neutral Portfolio	Policy Range	Maximise Sharpe Ratio				Maximise Return			
			USD	EUR	GBP	CHF	USD	EUR	GBP	CHF
Cash & Gold	5%	0-10%	10%	10%	10%	10%	4%	10%	5%	10%
Cash	2.5%	0-10%	10%	10%	10%	10%	2%	10%	2%	10%
Gold	2.5%	0-10%	0%	0%	0%	0%	2%	0%	2%	0%
Government Bonds	25%	10-40%	40%	40%	24%	27%	10%	10%	23%	10%
Corporate IG	10%	0-20%	7%	6%	18%	20%	5%	1%	10%	1%
Corporate HY	5%	0-10%	10%	10%	10%	10%	5%	10%	5%	10%
Bank Loans	4%	0-8%	8%	8%	8%	8%	3%	8%	4%	8%
Equities	45%	25-65%	25%	25%	26%	25%	65%	61%	47%	61%
Real Estate (REITS)	4%	0-8%	0%	0%	0%	0%	6%	0%	4%	0%
Commodities	2%	0-4%	0%	1%	4%	0%	2%	0%	2%	0%

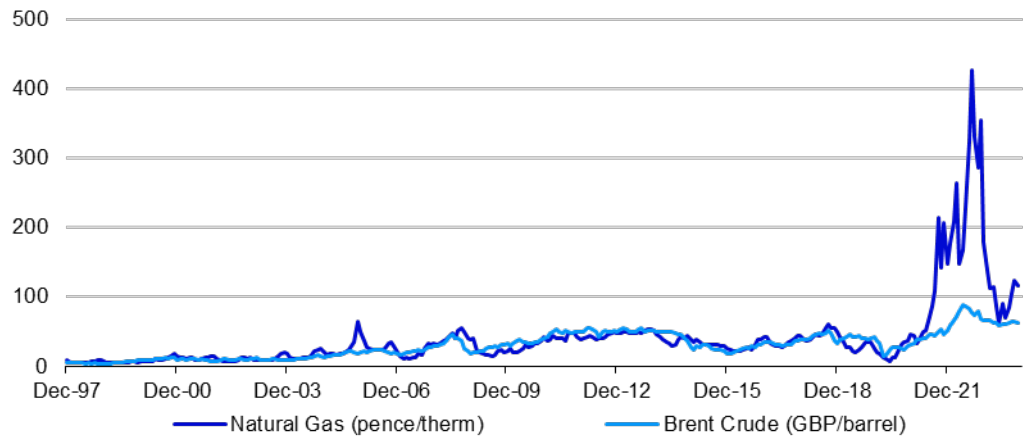
Note: optimisations are based on the 10-year projected returns published by Invesco Investment Solutions in Long-Term Capital Market Assumptions (November 2023), as shown in **Figure 5** above. Optimisations are performed by the Asset Allocation Research team using our historical 10-year covariance matrices (for each currency). "Gold" is based on the projections for precious metals and the "Cash & Gold" category shows the sum of allocations for those two assets. "Maximise Sharpe Ratio" optimisations are performed by maximising the Sharpe Ratio subject not violating the constraints implied by the policy ranges shown in the table. "Maximise Return" optimisations are performed by maximising return subject to the policy range constraints but also subject to the standard deviation of returns not exceeding that of the Neutral Portfolio (as shown in **Figure 3**). Though based on the projected returns provided by Invesco Investment Solutions, these optimal allocations do not represent their views, nor those of any other investment team at Invesco. See appendices for definitions, methodology and disclaimers. Source: Invesco Investment Solutions and Invesco Market Strategy Office

2023 was a busy year for geopolitics

Politics in 2024: A big year ahead

2023 was quiet in terms of national politics, though multiple elections in the UK (local and by-elections) confirmed the low standing of the ruling Conservative government, while Turkey's President Erdogan defied the odds to win another term in office and Spain's early elections left the country struggling to form a working government. Multiple African countries suffered military coups, with Russia's Wagner Group never far away. Geopolitics has once again dominated, with a continuation of the Russia/Ukraine war and the Hamas/Israel conflict threatening a broader conflagration. Both wars have boosted energy prices, helped by the OPEC+ agreement to restrict oil supplies (see **Figure 7**). Both BRICS and the G20 expanded membership in moves to cement their respective importance in setting the global tone (though some members are in both).

Figure 7 – Real UK energy prices as a proxy for geopolitical tensions



Notes: **Past performance is no guarantee of future results.** Monthly data from December 1997 to November 2023 (as of 16 November 2023). Real prices are deflated by the UK consumer price index, expressed in November 2023 prices. Source: LSEG Datastream and Invesco Global Market Strategy Office

A busy year ahead with the US elections likely to dominate, though it is too early to call the outcome

Looking to 2024, though November's US presidential election is likely to dominate headlines, there will be important polls elsewhere (see **Figure 8**). In Taiwan, the candidate of the incumbent Democratic Progressive Party seems likely to win again (based on opinion polls). If so, Taiwan seems likely to keep China at arm's length. Russia and Ukraine are due to hold presidential elections in March. The results of the former are not in doubt, while the latter are unlikely to happen. India is due to hold general elections in April/May, with no change of leadership likely (according to opinion polls) and the UK seems likely to have a change of government before the end of 2024.

Elections rarely have consequences for global financial markets but those of Taiwan and the US have the greatest potential to bring volatility (in our opinion).

Figure 8: Selected elections and political events during 2024

13/01/2023	Tunisia	Legislative election
13/01/2024	Taiwan	Presidential election
17/03/2024	Russia	Presidential election
31/03/2024	Ukraine	Presidential elections (may be postponed)
14/02/2024	Indonesia	General election
April/May-2024	India	General election
10/04/2024	South Korea	Legislative elections
06-09/06/2024	EU	European parliament elections
01/05/2024	South Africa	General elections
02/06/2024	Mexico	Presidential election
05/11/2024	USA	Presidential and Congressional elections
By January 2025	UK	General election

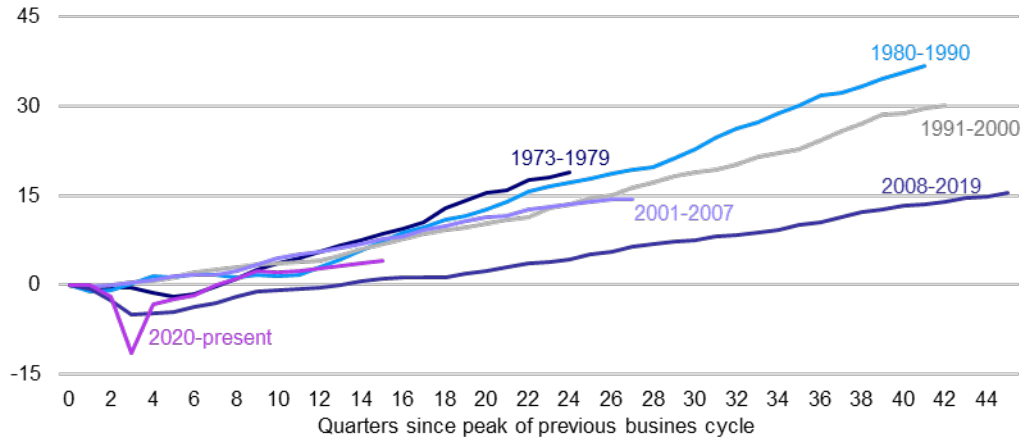
Source: International Foundation for Electoral Systems, Wikipedia, Invesco Global Market Strategy Office

A decelerating global economy

The global economic cycle: flatlining but not recession, yet

After a sharp rebound from the deep global recession of 2020, there appears to have been a loss of momentum (see **Figure 9**). The rate of growth across G7 economies now appears to be lower than during all upswings since the early 1970s (even that following the GFC). However, there is growth and the good news from those earlier upswings is that they all lasted for at least five or six years.

Figure 9 – G7 GDP upswings (% change from previous peak)



Note: quarterly data, with quarter zero being the peak of the previous cycle. As of 18 October 2023
Source: LSEG Datastream and Invesco Global Market Strategy.

Impressive resilience

It is impressive that economies appear to have withstood so easily the squeeze on real incomes provoked by the post pandemic surge in inflation and have so far not succumbed to the aggressive rise in interest occasioned by central banks.

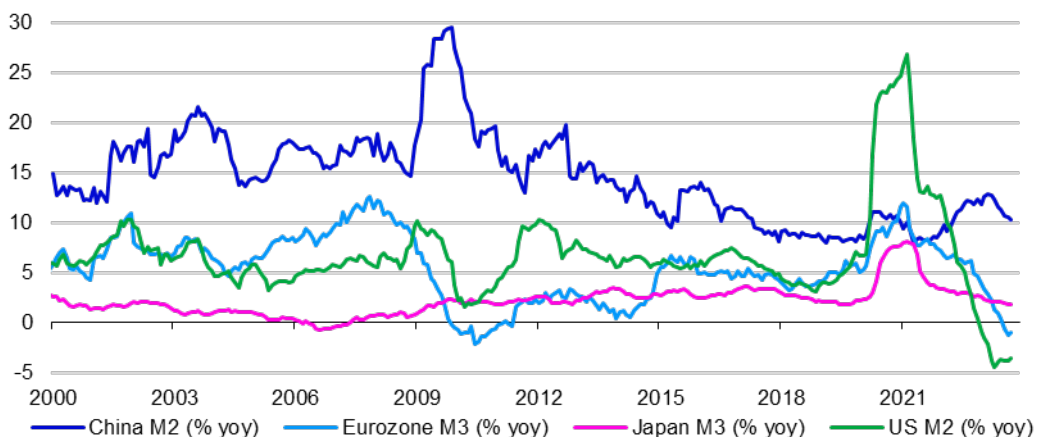
But excess savings are largely depleted and there is a monetary squeeze

Excess savings built up during the pandemic may have cushioned households against the inflation shock but that ammunition seems to have been exhausted. Government largesse (facilitated by central bank accommodation) was behind the build-up of those excess savings (see the monetary acceleration that occurred during the pandemic in **Figure 10**). However, monetary conditions have since changed for the worse, with negative money supply growth in the US and Europe, which suggests tougher economic times ahead (in our opinion). One of the few rays of monetary hope is China.

“Higher for longer” brings the risk of more financial accidents

Having already seen policy inspired financial stress in the UK (among pension funds after the Liz Truss/Kwasi Kwarteng debacle) and in the US (regional banking failures), we fear that a “higher for longer” policy by central banks would increase the risk of further financial distress and recession.

Figure 10 – Money supply growth (%)

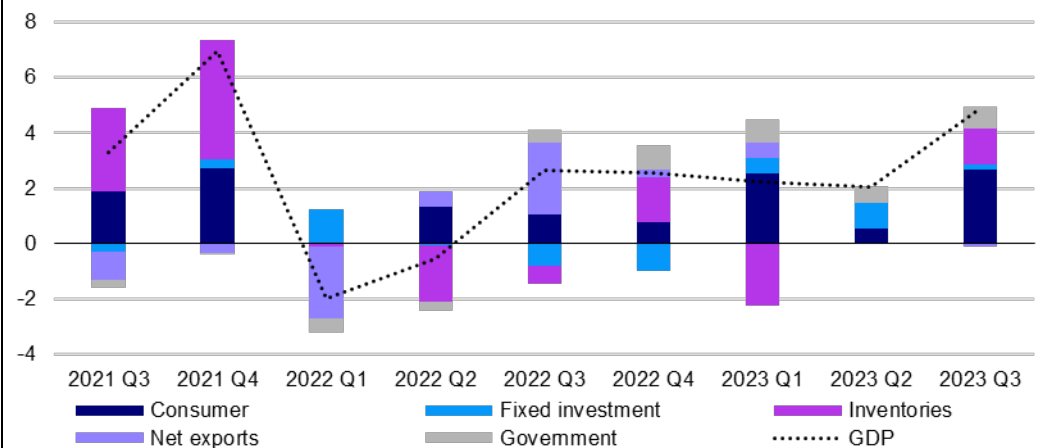


Note: monthly data from January 2000 to September 2023. As of 15 November 2023.
Source: LSEG Datastream and Invesco.

The US acceleration is not all it appears, with the consumer relying on lower savings

However, the US economy appears to have accelerated in Q3 of 2023, with annualised growth of 4.9%, though we worry it was low quality growth. **Figure 11** shows a decomposition of recent quarterly GDP growth. Consumer spending was a big driver of Q3 growth (adding 2.7% to GDP). However, that consumer burst came from a decline in the savings rate (from 5.2% in Q2 to 3.8% in Q3), rather than an increase in income (the Q1 jump in consumer spending was fuelled by a 10.7% decline in personal taxes). We doubt that the decline in savings can be counted upon as regular driver of spending.

Figure 11 – Decomposition of quarterly US GDP growth (% , annualised)



Based on quarterly data from 2021 Q3 to 2023 Q3. The chart shows the contribution to annualised quarterly growth from each component of GDP. Source: LSEG Datastream and Invesco Global Market Strategy Office

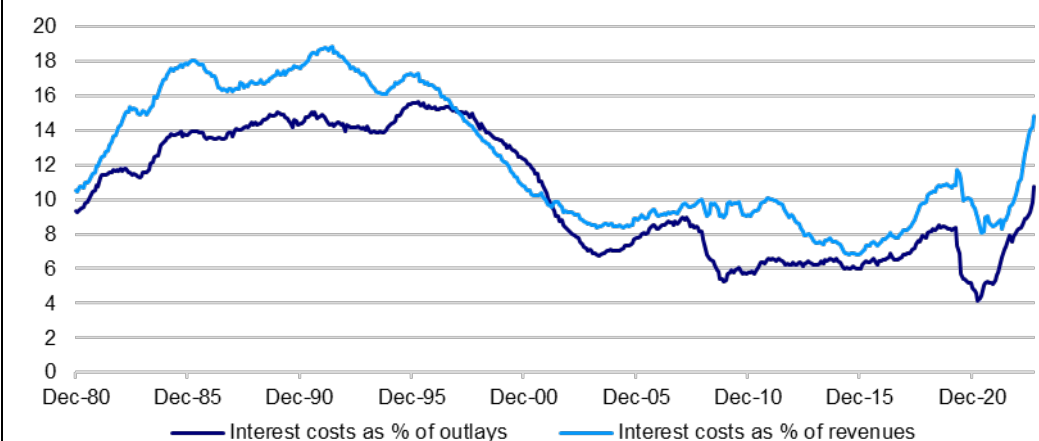
And inventory accumulation is only ever fleeting

The next biggest contributor to Q3 growth was inventory accumulation which added 1.3% to GDP. As can be seen from **Figure 11** inventories cannot be counted upon to be a regular source of growth, especially since our analysis suggests that US manufacturing and wholesale inventory-to-sales ratios are well above historical norms. Admittedly, the opposite is true for the retail sector but inventory-to-sales ratios have been trending down in that segment and we suspect may have taken a step down during the pandemic.

While government spending may be reaching its limit as debt financing costs rise

The other solid contribution to Q3 growth came from government spending, which added 0.8% to GDP. Unfortunately, our calculations suggest gross government debt was around 122% of GDP in 2023 Q3 (using GDP over the previous 12 months), nearly twice the 64% pre-GFC level (end-2007). The jump from 108% at end-2019 accounts for some of the rise in the interest cost burden shown in **Figure 12** but the jump in bond yields since end-2021 is perhaps the bigger factor. Even worse, with an average debt maturity of more than five years, the rise in yields may continue to boost financing costs over the coming years. There may be a limit to government support for the economy.

Figure 12 – US government interest costs as % of outlays and revenues (12 MMA)



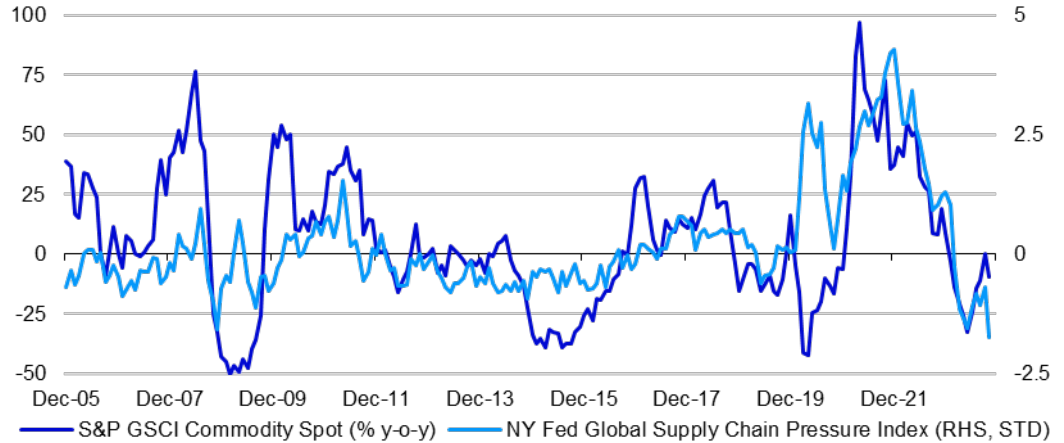
Note: monthly data from December 1980 to September 2023 (as of 31 October 2023). All data is expressed as 12-month moving averages. Source: LSEG Datastream and Invesco Global Market Strategy Office.

Headline inflation pressures have eased

Now that inflation is falling, when will central bank rates follow?

A year ago, we were expecting inflation to abate as money supply growth had eased in many countries (see **Figure 10**) and the immediate drivers of headline inflation had eased. **Figure 13** shows that those proximate causes of inflation (commodity prices and supply chain pressures) are dormant despite the recent increase in oil prices after the outbreak of hostilities between Israel and Hamas.

Figure 13 – Recent proximate drivers of inflation are now dormant



Past performance is no guarantee of future results. Monthly data from December 2005 to October 2023 (as of 14 November). NY Fed Global Supply Chain Pressure Index tracks the state of global supply chains using data from the transportation and manufacturing sectors, as constructed by the Federal Reserve Bank of New York. It is shown as standard deviations from the historical mean. Source: Federal Reserve Bank of New York, Global Supply Chain Pressure Index, S&P GSCI, LSEG Datastream and Invesco Global Market Strategy Office

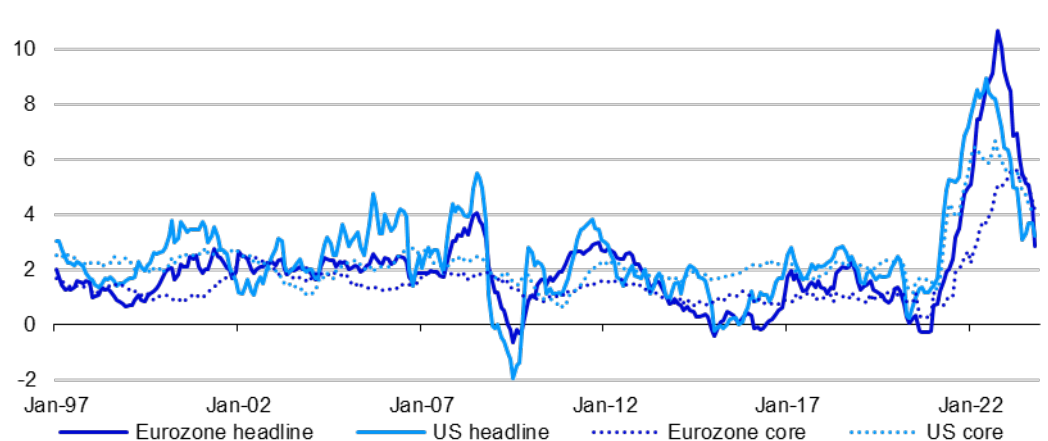
And we expect core inflation to ease with weaker economies

Figure 14 shows the extent to which headline inflation has fallen on either side of the Atlantic. Core inflation is also falling and we expect it to continue on its downward path (as economies weaken, worker wage demands ease and lower house price inflation dampens the shelter component of core indices).

The Israel v Hamas war brings back memories of 1973 and the boost to inflation but the world is now a different place

However, we doubt that inflation will fall in a straight line. If anything the hostilities between Israel and Hamas are a warning that inflation is not always a cyclical phenomenon. The aftermath of the Yom Kippur War reminds us how badly things can go wrong but there are a number of difference between then and now: first, central banks are less accommodative now (US M2 growth was in double digits and bank credit growth was above 20% at the outbreak of the Yom Kippur war, whereas M2 growth is now negative); second, oil prices are already extended in real terms (at the same level as in 1973/74 after they had more than tripled) and the global economy is less oil intensive.

Figure 14 – Inflation is on a downward path (% yoy)

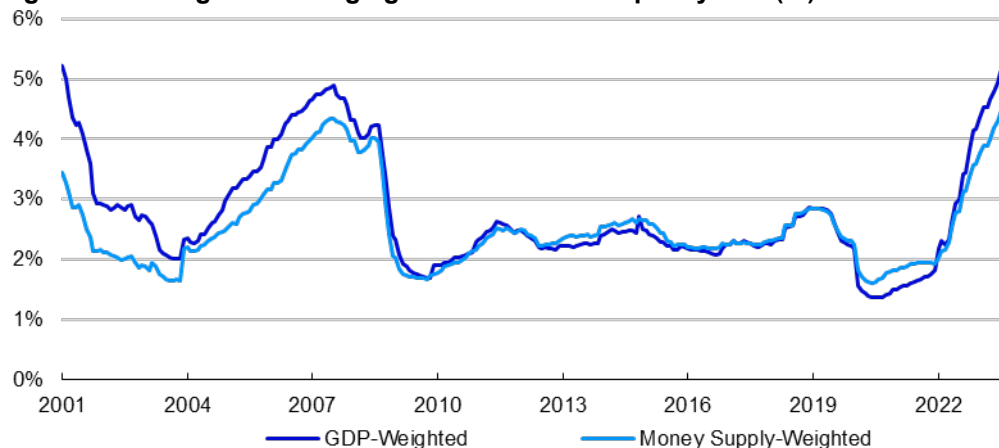


Note: monthly data from January 1997 to October 2023. Source: LSEG Datastream and Invesco Global Market Strategy Office.

Do central banks think they have done enough?

Nearly all of the 20 central banks included in our global average central bank rate (see **Figure 15**) have continued to raise rates during 2023. Obvious exceptions have been in Brazil and China (rates reduced) and Japan and Poland (no change). The rapid adjustment has taken the average global rate from the record lows of mid-2020 to levels not seen since 2000/2001. The question facing investors during 2024 is whether central banks consider that they have done enough.

Figure 15 – Weighted average global central bank policy rate (%)



Based on monthly data from February 2001 to October 2023 (as of 31 October 2023). Based on the 20 largest economies during each calendar year, according to nominal GDP in US dollars (based on data from the IMF World Economic Outlook October 2022). Source: IMF, LSEG Datastream and Invesco

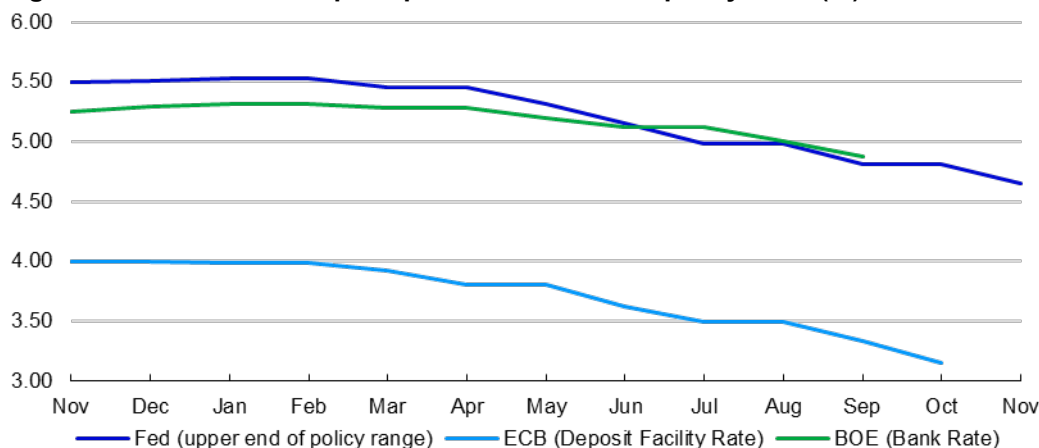
Markets expect the Fed to cut rates by around 100 bps by the end of 2024, starting in 2024 Q2

We think they have done enough, based on monetary conditions, the downward path of inflation and evidence of recent weakening in the US labour market, for example. Market participants would seem to agree, based on the market implied path of central bank policy rates shown in **Figure 16**. After the weaker than expected US labour market data for October, Fed Fund futures are now suggesting there will be no more rate hikes from the Fed and that policy rates will be almost 100 basis points lower by the end of 2024 (with the first cut coming during the 2024 Q2). The ECB and BOE are expected follow similar paths, though the BOE is expected to wait longer before making the first cut.

We agree on the timing

We agree that policy rates have peaked and recent history suggests the first Fed rate cut is due in Q2 if the July hike was the last of this cycle (during the last four rate cutting cycles, the Fed has waited an average of 8.5 months between the last hike and the first cut, which would take us to the March or May FOMC meetings).

Figure 16 – The market implied path of central bank policy rates (%)



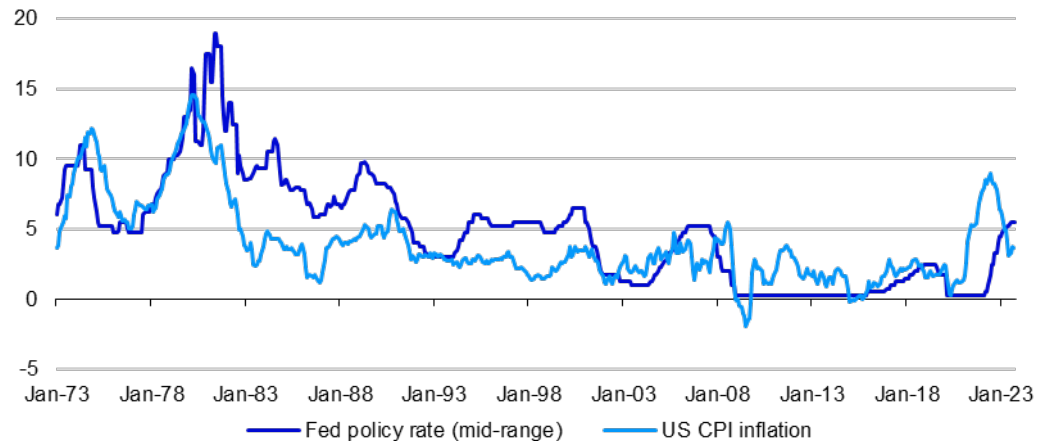
From November 2023 to December 2024 (data only available to Oct 2024 for ECB and Sep 2024 for BOE). Based on Fed Funds Futures (for the Fed) and Overnight Index Swaps (for the BOE and ECB) as calculated by Bloomberg. Rates are calculated for central bank policy meeting dates. For months where there is no meeting, we show the same rate as the month before. As of 3 November 2023.

Source: Bloomberg and Invesco Global Market Strategy Office

But we think markets underestimate how rapidly rates will fall

However, we wonder if markets are being overly cautious about the speed of rate cuts, just as we all underestimated how rapidly rates would rise. **Figure 17** shows that Fed policy rates have tended to fall precipitously once easing starts. Looking back over rate cutting cycles since 1974, the average reduction in Fed rates in the first six months of cuts was 300 basis points (based on the middle rate of the Fed Funds target range). However, rates were starting from much higher in the 1970s and 1980s, which perhaps biases the analysis. Sticking to those rate cycles when the peak was close to the current level (1995, 2001, 2007), the average decline in the first six months was 183 bps.

Figure 17 – Fed policy target rates and US consumer price inflation (%)



Notes: **past performance is no guarantee of future results.** Based on monthly data from January 1973 to October 2023. Source: LSEG Datastream, Invesco Global Market Strategy Office

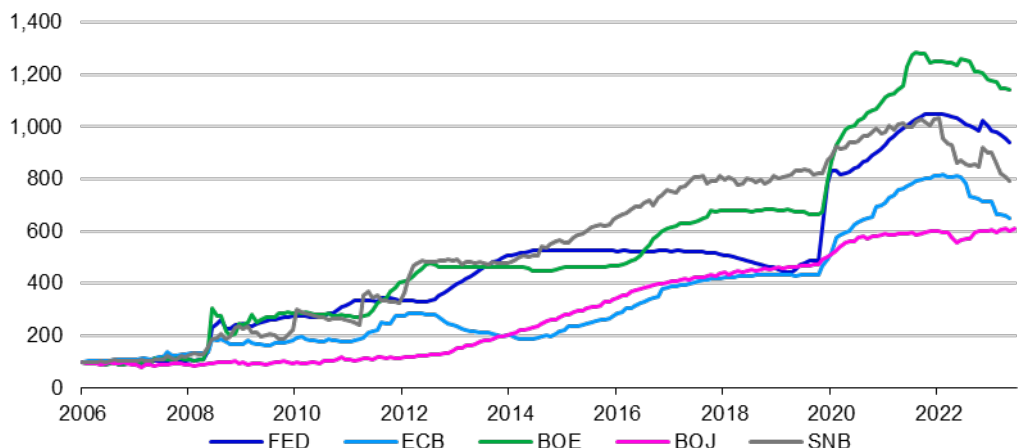
This cycle may be different but not that much

Of course there may be reasons why this cycle will be different but we are not convinced. Of the three rate cutting cycles mentioned above, only the 1995 episode had CPI inflation notably below the current 3.7% (2.8%-3.1% in the months prior to the first cut) and that was the cycle with the slowest decline in rates (only 50 bps in the first 6 months). Admittedly, inflation is falling from a much higher peak this time, which may make central banks more cautious about rate cuts (recency bias). It may also be thought that the labour market is unusually tight at the moment but the current unemployment rate of 3.9% is close to the 3.9% and 4.6% recorded just prior to the 2001 and 2007 easing cycles, respectively (it was around 5.6% in 1995).

Except that central banks are now shrinking balance sheets, which is new

There is one other big difference this time that could argue for a rapid decline in policy rates – some major central banks are purposefully reducing their balance sheets by effectively selling assets (especially government bonds). This is a form of tightening that central banks may feel the need to balance by aggressive rate cuts (see **Figure 18**).

Figure 18 – Central bank balance sheets (rebased to 100 as of 31/5/2006)



Monthly data from May 2006 to October 2023 (as of 3 November 2023). Based on local currency data. Source: BOE, LSEG Datastream and Invesco

Economic deceleration is usually bad for risky assets

Likewise, the early stages of Fed easing are not usually associated with good risk asset performance (except equities)

But 2023 has seen some risk assets perform well

With central banks behind the curve, are we likely to see abnormally good investment outcomes in 2024?

We think market signals are confusing

From economic to market cycles

That we anticipate further deceleration in the global economy would normally lead us to be cautious about risky assets, based on the historical analysis summarised in **Figure 19** (courtesy of Alessio de Longis of Invesco's Solutions Team).

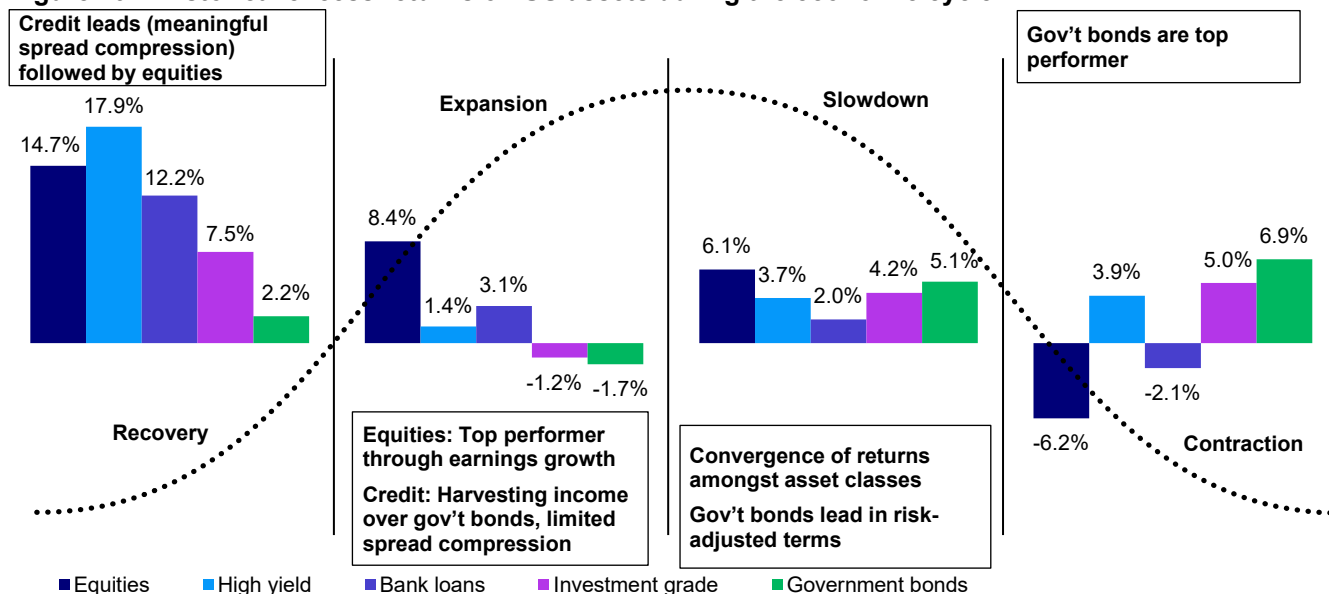
Further, **Figure 20** shows the historical pattern of asset returns in the year before and after the first easing during Fed interest rate cycles since the early 1970s. It suggests that many cyclical assets tend to perform better in the run up to the first rate cut than in the period after. On the other hand, more defensive fixed income assets (government bonds and IG) have tended to perform better after the first cut, than before it. This all makes sense considering that central banks are likely to be cutting rates when economies are weakening. Perhaps the only real surprise is that equities have tended to do so well after the first rate cut (unlike other cyclical assets).

The problem we face is to know whether the cyclical asset performance during 2023 (**Figure 4**) is reflecting the typical last hurrah before the Fed starts to ease (as in **Figure 20**) or is suggesting that markets have moved beyond the ongoing slowdown and are already discounting the recovery phase of the economic cycle.

Maybe this cycle really is different, in that central banks delayed tightening in 2021 and then had to tighten aggressively after the consequent rise in inflation (thus sparking the poor asset returns of 2022). Likewise, they have tightened further into the cycle than is normal (based on Fed behaviour relative to the US unemployment rate – see **Figure 23**). If so, this disconnect between the economy and central bank policy could result in an abnormal pattern of asset returns, with markets more focused on the future economic upturn than on the ongoing slowdown and cut in rates.

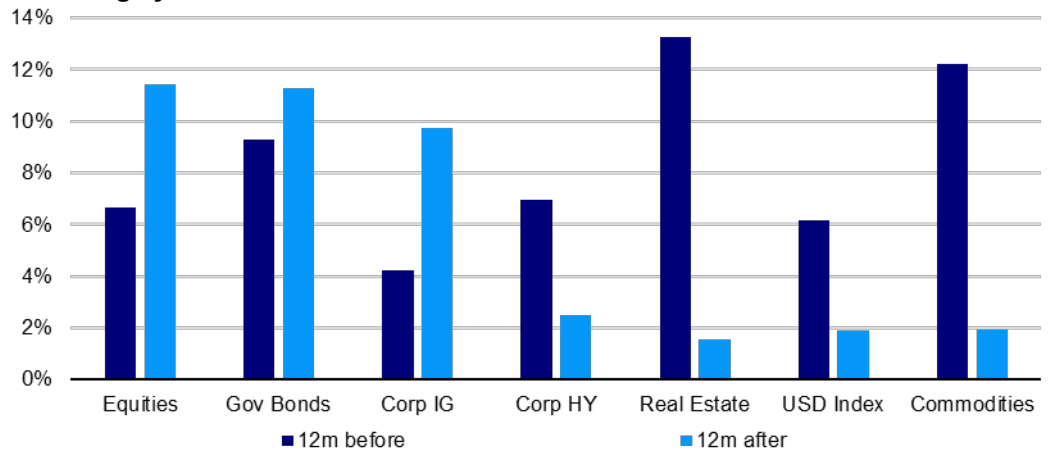
Figure 21 shows the Global Risk Appetite Cycle Indicator (GRACI) developed by Alessio and it further demonstrates the disconnect between economies and financial markets. GRACI shows the premium received by investors for taking incremental risk and has been moving higher (to post-GFC highs), while global leading indicators (Global LEI) remain weak. Are financial markets signalling an impending recovery or are markets being naïve about the speed of recovery?

Figure 19 – Historical excess returns on US assets during the economic cycle



Notes: Index return information includes back-tested data. **Returns, whether actual or back tested, are no guarantee of future performance.** Annualised monthly returns from January 1970 – December 2021, or since asset class inception if a later date. Includes latest available data as of most recent analysis. Asset class excess returns defined as follows: Equities = MSCI ACWI - US T-bills 3-Month, High Yield = Bloomberg Barclays HY - US T-bills 3-Month, Bank loans = Credit Suisse Leveraged Loan Index – US T-bills 3-Month, Investment Grade = Bloomberg Barclays US Corporate - US T-bills 3-Month, Government bonds = FTSE GBI US Treasury 7-10y - US T-bills 3-Month. For illustrative purposes only. Please see appendices for further information.
Sources: Invesco Solutions' proprietary global business cycle framework and Bloomberg L.P..

Figure 20 – US asset average total returns around the first rate cut in Fed loosening cycles since 1974



Notes: **Past performance is no guarantee of future results.** Data as of 31 August 2023. See appendices for definitions, methodology and disclaimers. Source: ICE, ICE BofA, FTSE Russell, MSCI, S&P GSCI, LSEG Datastream and Invesco Global Market Strategy Office

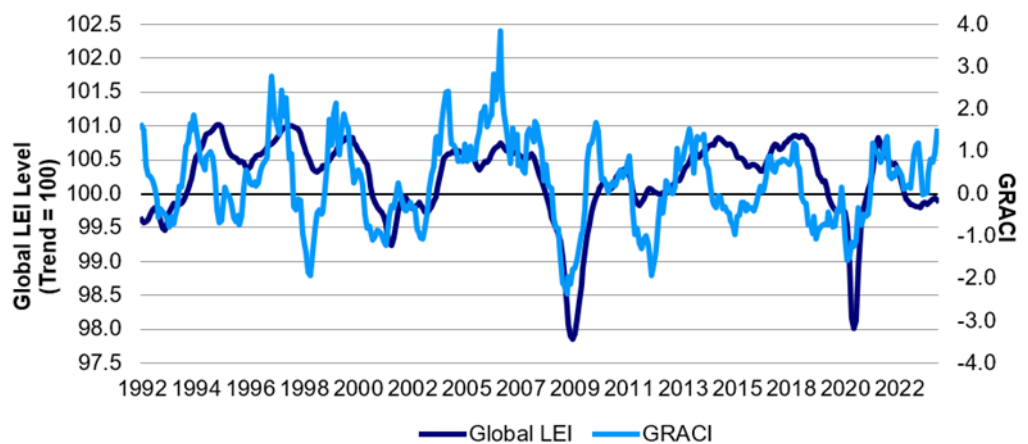
Could 2009 offer a template?

It is rare for GRACI to be so positive when the Global LEI indicator is below trend. The only other example was the 2009 recovery from the GFC. On that occasion, economies subsequently improved but risk premia shrank at the same time (though 2010 returns were still good, they were less than in 2009 – see **Figure 4**).

If so, 2024 could be a good year for markets...eventually

If that pattern is repeated, 2024 could be a good year for cyclical assets as markets focus on a future economic rebound. If not, there may still be more pain ahead as cyclical assets focus on the ongoing weakness. Not surprisingly, our **base case** for 2024 combines elements of both those outcomes. One important difference with 2009 is that central banks were then extremely accommodative, whereas they have recently tightened aggressively and are yet to ease. With a bumpy landing in the economy and a gentler (erratic) downward path in inflation, we think risky assets could remain volatile in the short term, before generating more consistent returns as 2024 unfolds.

Figure 21 – Global risk appetite and the global business cycle



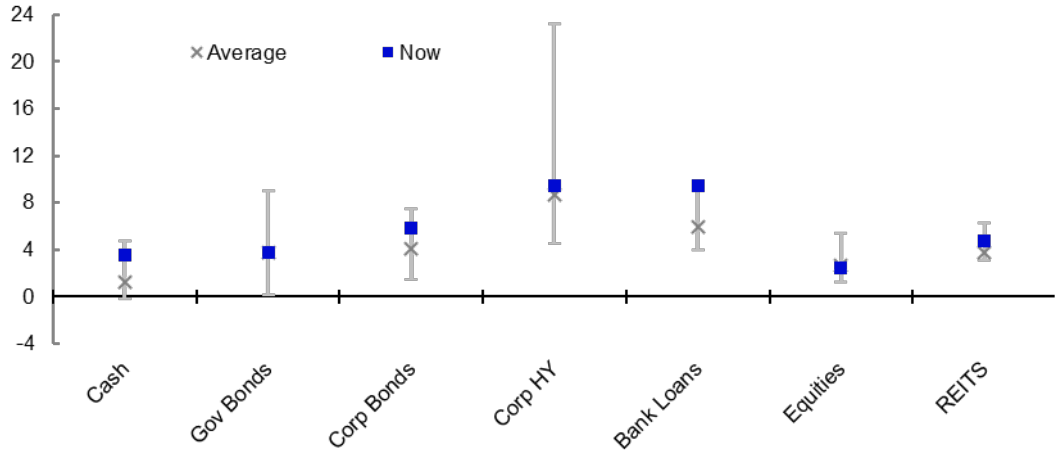
Note: **past performance does not guarantee future results.** Monthly data from January 1992 to October 2023 (as of 31 October). Both Global LEI (Leading Economic Indicator) and GRACI (Global Risk Appetite Cycle Indicator) are proprietary tools provided by Invesco Investment Solutions (IIS). Global LEI is a weighted average of leading indicators for 23 countries (both developed and emerging). A reading above (below) 100 signals growth above (below) a long-term average. GRACI measures the average incremental return received per incremental unit of risk taken in global financial markets (i.e., incremental return received for moving from government bonds to credit, from credit to developed equities, from developed equities to emerging equities, etc.). It is calculated using country-level total return indices across fixed income and equity markets. A reading above (below) zero signals a positive (negative) compensation for risk taking in global capital markets in the recent past. A rising index signals improving market sentiment and vice-versa. Sources: Bloomberg L.P., Macrobond, MSCI, FTSE, JP Morgan and Invesco Solutions

Valuations are more promising than for some time

Projections for 2024

There may be uncertainty about economic and policy cycles but the good news is that valuation starting points for many assets are better than for some time. **Figure 22** shows that global fixed income yields are at least as high as historical averages, which we think improves the return outlook. As for equities and REITS, valuations don't appear to be an impediment, though **Appendix 1** shows that US equities remain the exception (which is a problem given their weighting within global equity indices). Among other regional detail, EM yields continue to be higher than both historical norms and those available in other areas (in most cases), though we note the EM data history is relatively short.

Figure 22 – Global asset class yields within historical ranges (%)

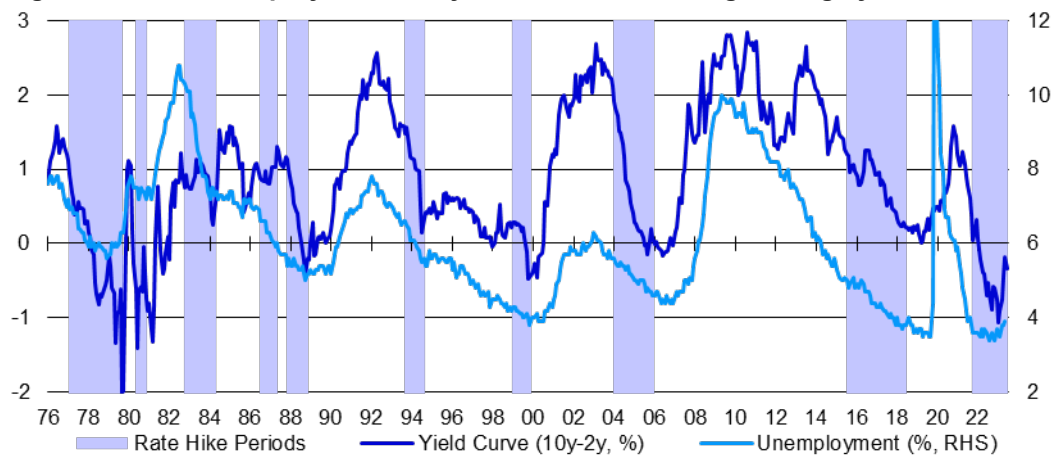


Past performance is no guarantee of future results. Start dates for historical ranges are Cash 1/1/01; Gov Bonds 31/12/85; Corp Bonds 31/12/96; Corp HY 31/12/97; Bank Loans 31/01/98; Equities 1/1/73; REITS 18/2/05. See appendices for definitions, methodology and disclaimers. As of 31 October 2023. Source: Bloomberg, BofAML, Credit Suisse, FTSE, LSEG Datastream, Invesco Global Market Strategy Office

Bull steepening expected during 2024

Figure 23 suggests that unemployment has bottomed in the US and data suggests the same is true in the UK and Germany (though not yet across the Eurozone). The chart also shows that a bottoming of unemployment usually heralds an end to Fed tightening cycles. If major Western central banks have completed their tightening cycles (we think they have) and start reducing rates during the first half of 2024, then we would expect yields to fall across the maturity spectrum. **Figure 23** suggests yields typically fall more at the short end of the curve when the Fed stops tightening. Indeed, the chart shows a good correlation between the 10y-2y yield curve and the rate of unemployment. On this basis we expect yield curve steepening in those markets where central banks switch from tightening to easing.

Figure 23 – US unemployment, the yield curve and Fed tightening cycles

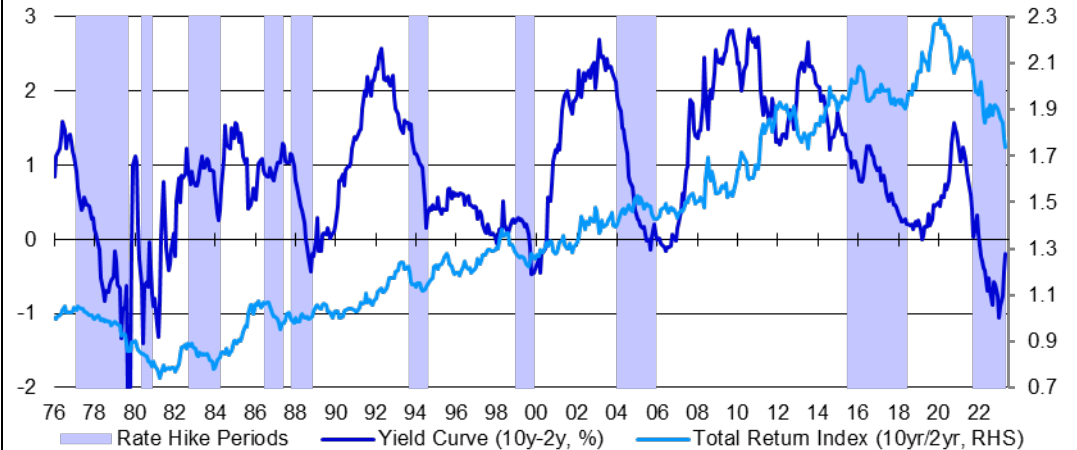


Notes: **past performance is no guarantee of future results.** Based on monthly data from June 1976 to November 2023 (as of 7 November 2023). The shaded areas show periods when the US Federal Reserve was raising interest rates (from first to last rate hike). Source: LSEG Datastream and Invesco

We prefer longer maturities, though we expect short rates to fall the most

Figure 24 shows a comparison of total returns on 10-year US treasuries versus those on 2-year treasuries. Over time, there is a tendency to be rewarded for duration risk. However, that trend is commonly broken when the Fed is raising rates (yields may rise along the curve but the effect of duration penalises longer maturity bonds). The trend is then usually re-established when the Fed stops tightening and the yield curve steepens. Unusually, there has been bear steepening in recent months, with yields rising along the curve but more at the long end. This has caused further underperformance of longer maturities but we expect the opposite during 2024 as central banks start to reduce rates. In short, we prefer to hold longer maturities as we expect yields to fall along the curve but with the effect of duration boosting returns at the long end of the curve.

Figure 24 – The Fed, yield curve and bond returns (total return index, 1/6/76 = 1.00)

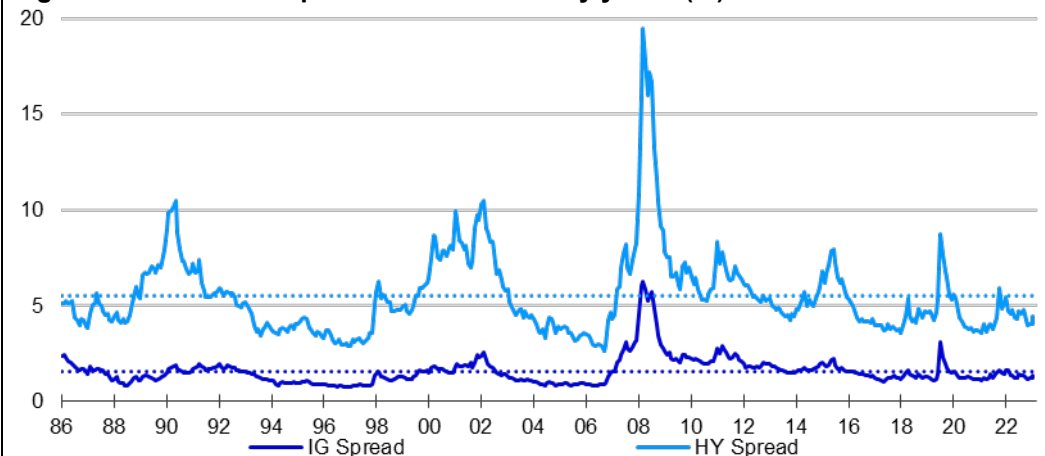


Notes: **Past performance is no guarantee of future results.** Based on monthly data from June 1976 to October 2023 (as of 31 October 2023). "Rate hike periods" show periods when the US Federal Reserve was raising its policy rate. "Yield Curve (10y-2y, %)" shows the difference between the US treasury 10-year yield and the US treasury 2-year yield. "Tot Ret (10yr/2yr, RHS)" shows the ratio between the total return index for 10-year US treasuries and that of 2-year US treasuries, rebased to 1.0 on 1 June 1976. Total returns are calculated using movements in the respective yields on a daily basis to derive price movements, which are added to income flows assuming daily sales and repurchases to maintain constant maturities. Source: LSEG Datastream and Invesco Global Market Strategy Office

Credit spreads are relatively narrow in the US and we expect some widening, along with rising defaults

Turning to credit, **Figure 25** shows that US spreads versus government yields narrowed during 2023. They are now below historical norms (in the US), which seems odd given the economic weakening that we believe is ongoing. Hence, we assume a widening of US credit spreads (but only to historical norms) and an increase in defaults in the high-yield market (globally), from very low levels to something closer to historical norms.

Figure 25 – US credit spreads versus treasury yields (%)

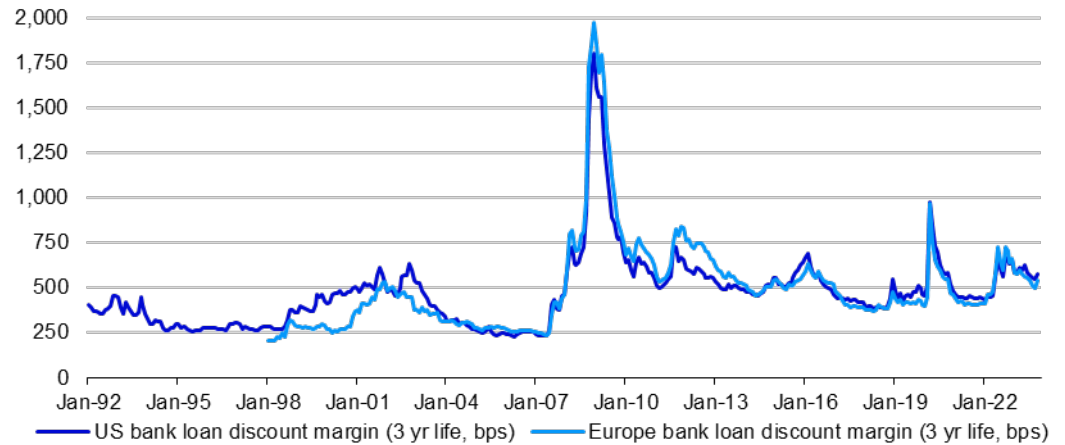


Note: **Past performance is no guarantee of future results.** Monthly data from September 1986 to October 2023 (as of 31 October 2023). IG and HY spreads are calculated by subtracting the redemption yield on the ICE BofA US Treasury Index, from the redemption yields on the ICE BofA US Corporate Index and the ICE BofA US High Yield Index, respectively. The dotted lines show the average spreads over the full period shown. Source: ICE BofA, LSEG Datastream and Invesco Global Market Strategy Office

Bank loan valuations are at worst “normal” and on some metrics look attractive

We recently introduced bank loans to our framework and showed in **Figure 22** that current yields are near historical highs (since the early 1990s). Of course, part of the reason for that is that cash rates are now higher than for some time. However, spreads versus 3-month cash rates are relatively generous (they are well above the full historical averages and even above the norms since the GFC, which are more elevated). A better measure of return potential (in our opinion, based on research we reported in [Bank Loans White Paper](#)) is discount margin. **Figure 26** suggests that discount margins are above historical norms. When we limit the historical comparison to the post-GFC period, that remains true for the US but those in Europe are in line with those historical norms.

Figure 26 – Bank loan discount margin (3-year life, basis points)

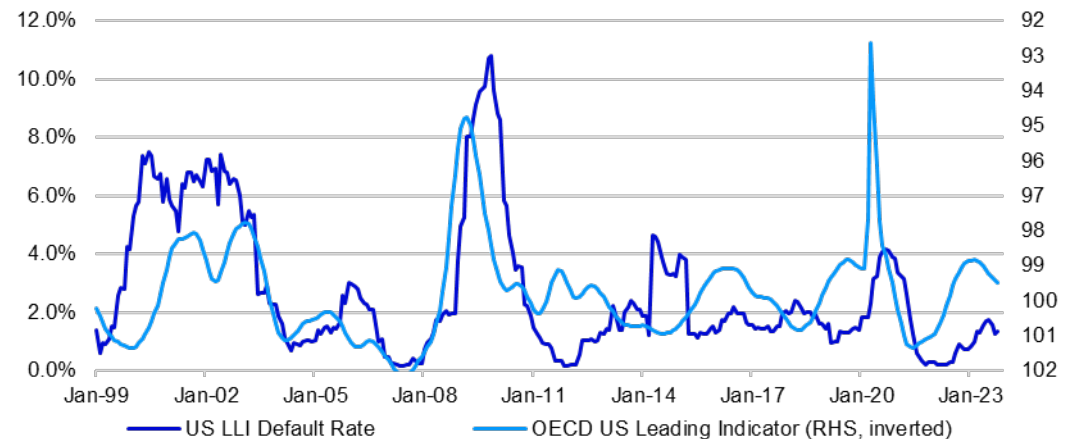


Notes: **Past performance is no guarantee of future results.** Based on monthly data from January 1992 to October 2023. Discount margin is the internal rate of return (IRR) on 3-year life loans minus the benchmark interest rate used to set loan repayment rates. IRR is the discount factor that equates cash flows (coupon plus redemption at par) to current price. The coupon rate is the 3-year interest rate swap rate plus the stated margin. Discount margins are shown for Credit Suisse Leveraged Loan Indices in the US and Europe (Western Europe). Source: Credit Suisse and Invesco Global Market Strategy Office

But bank loans have the disadvantage of being short duration and defaults have risen

Hence, bank loans would appear to be in a more comfortable position relative to benchmarks than HY (where spreads are less generous than normal despite the economic slowdown). One potential reason could be that market disruptions have caused businesses to switch funding sources from bond markets to bank loans, thus reducing the supply of the former and boosting supply of the latter. In any case, it may be just as well, since an environment of falling interest rates is not one that we would normally expect to benefit short duration instruments such as bank loans, especially now that defaults are up from cyclical lows (see **Figure 27**).

Figure 27 – US bank loan default rate versus US leading indicator

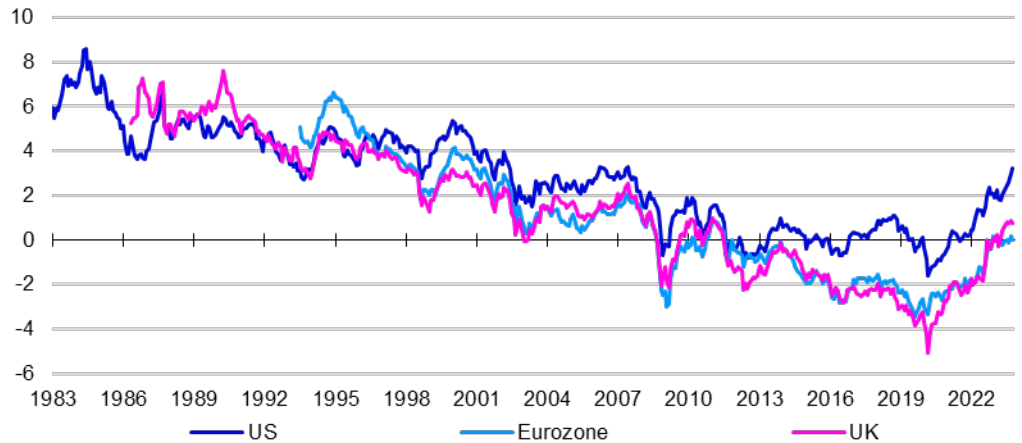


Notes: **Past performance is no guarantee of future results.** Based on monthly data from January 1999 to October 2023. Based on Morningstar LSTA US Leveraged Loan Index. Default rates are based on loan values outstanding and calculated on a trailing 12-month basis. OECD US Leading Indicator is amplitude adjusted. Source: Morningstar, OECD, LSEG Datastream and Invesco Global Market Strategy Office

Yield gaps make bonds look more attractive versus equities than for some time

Dividend yield gaps have continued to move in favour of bonds (see **Figure 28**). This is especially true in the US where bond yields have risen during 2023, while dividend yields have fallen. Bond yields have also risen in Europe but so have equity dividend yields (equity prices have not risen as much as in the US). Indeed, the US yield gap is as favourable to bonds (versus equities) as at any time since 2002 (the last time the yield gap was wider in the UK and Eurozone was in 2010/11). This suggests the choice between bonds and equities is the most difficult for some time (it was easy to favour equities when bond yields were so low).

Figure 28 – Dividend yield gaps moving in favour of bonds (%)



Note: **past performance is no guarantee of future results.** Monthly data from January 1983 to October 2023 (as of 31 October 2023). Yield gap is 10-year government bond yield minus equity dividend yield (based on Datastream equity indices). Source: LSEG Datastream and Invesco

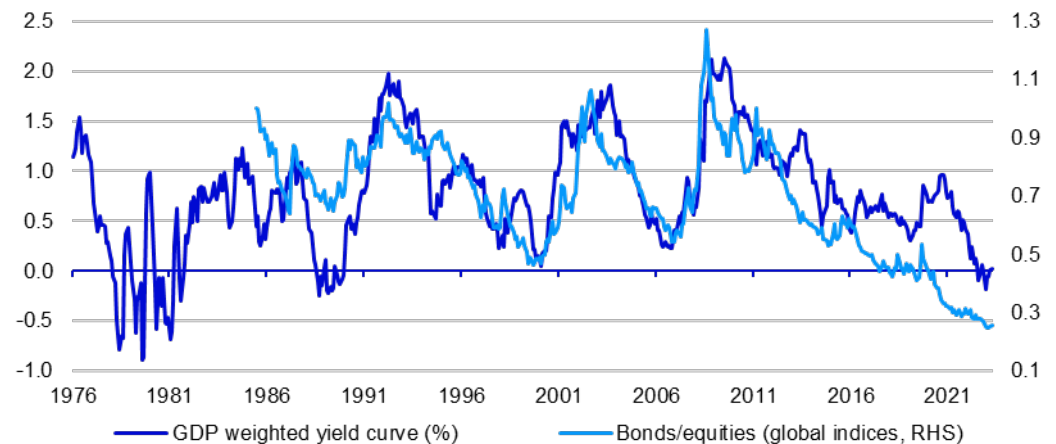
Equities have bettered bonds on a trend basis since the GFC

That the choice had been skewed so much in favour of equities is shown by the post-GFC trend outperformance of equities versus government bonds displayed in **Figure 29**. That chart also suggests a good correlation between the relative performance of equities versus bonds and the slope of yield curves. When yield curves have flattened, equities have tended to outperform government bonds and vice versa.

But rate cuts and yield curve steepening have usually seen bonds outperform

Counterintuitive as it may seem, given that we are looking forward to economic recovery in late 2024, **Figures 20** and **29** suggest that our expectation of central bank easing and yield curve steepening during 2024 should push us to a prefer government bonds to equities, especially on a risk-adjusted basis.

Figure 29 – G10 10y-2y yield curve and equities versus bonds

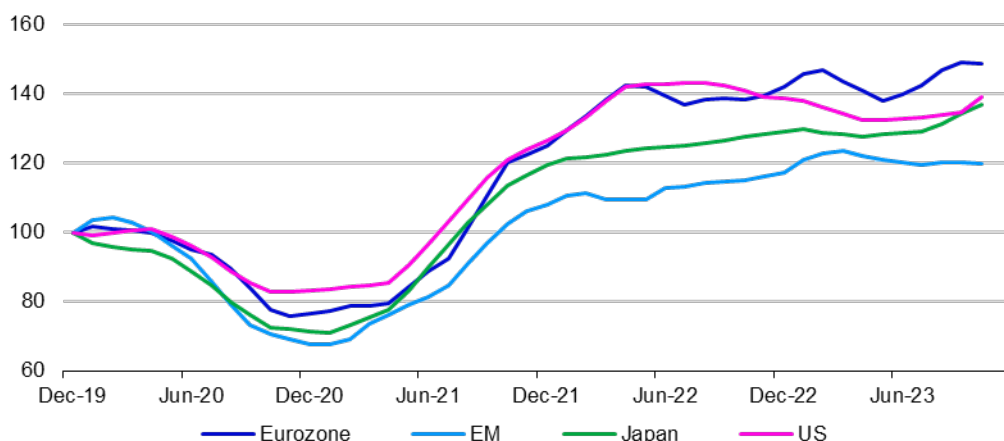


Note: **Past performance is no guarantee of future results.** Based on monthly data from January 1976 to October 2023 (as of 31 October 2023). "GDP weighted yield curve" is the average 10-year yield minus 2-year yield comparison across 10 economies (Australia, Brazil, Canada, China, Eurozone, India, 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

Profits have been flatlining and we expect that to continue as economies weaken

After a strong rebound from the Covid recession, business profits have decelerated (see **Figure 30**). After a period of weakness during 2022 and early 2023, US profits have recently recovered to late 2022 levels. Elsewhere, there has been faltering progress over the last 12 months, perhaps helped by the impact of a strong dollar on overseas earnings. Japanese profits have shown the most consistent progress, due we think to the extreme weakness of the yen. If we are right about the dollar weakening over the coming year, then US businesses could benefit relative to counterparts elsewhere. However, if the global economy continues to weaken, as we expect, we doubt that profits can rebound with any vigour, though companies that use a lot of raw materials are benefitting from the decline in commodity prices.

Figure 30 – Earnings per share (December 2019 = 100)



Note: Monthly data from December 2019 to October 2023. Based on Datastream country/regional indices, with Earnings per share derived from price indices and price/earnings ratios.
 Source: LSEG Datastream and Invesco Global Market Strategy Office

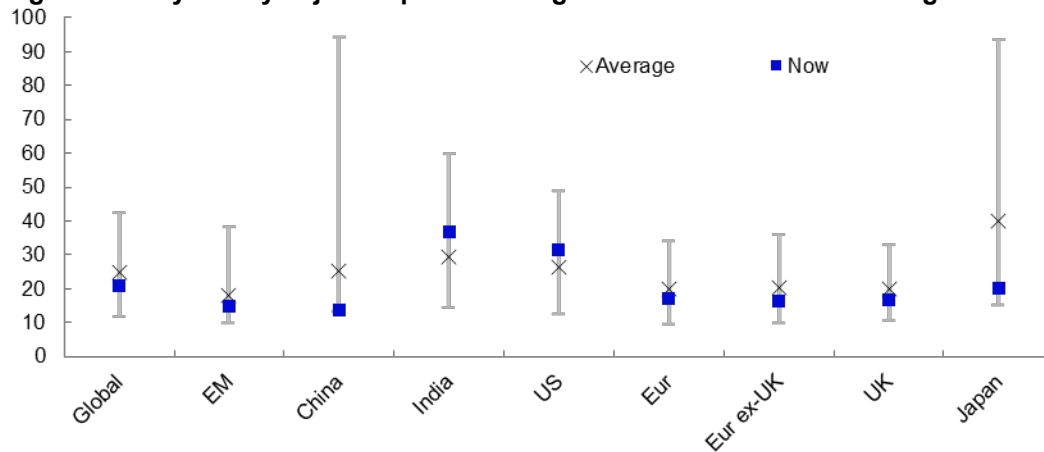
Falling bond yields and a weakening dollar may favour US stock indices but the market appears expensive

Falling bond yields and a weakening dollar could favour US equities relative to those elsewhere (falling yields should help, given the importance of growth stocks). However, US stocks have one big disadvantage – they appear expensive relative to other markets and to their own history (see **Figure 31**). This may have been justified when interest rates were abnormally low but not now that rates have normalised. Starting from these valuation levels, US stocks have typically produced poor long term returns.

We think Chinese stocks are cheap and the economy is improving

Elsewhere, the Indian market has been very popular and consequently looks expensive (we think). Better value is apparent in China (which is unpopular), EM, Europe and Japan. Based purely on valuations and economic momentum, we favour China.

Figure 31 – Cyclically adjusted price/earnings ratios within historical ranges

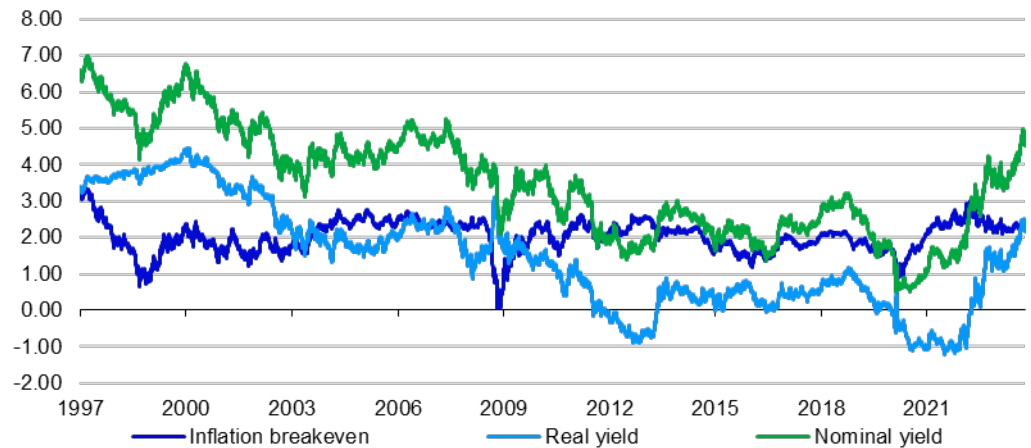


Note: Cyclically Adjusted Price/Earnings uses a 10-year moving average of earnings. Based on daily data from 3 January 1983 (except for China from 1 April 2004, India from 31 December 1999 and EM from 3 January 2005), using Datastream indices. As of 31 October 2023.
 Source LSEG Datastream and Invesco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

REITS have had a bad year, reflecting the poor fundamentals of the real estate sector. At least bond yields have peaked (we think).

The worst performing asset so far this year within our universe has been REITS (see **Figure 4**). The real estate sector has obvious problems, which started with the demise of physical retail outlets, that were then compounded by reduced demand for office space as a result of new work from home practices and have been aggravated by the rise in interest rates and bond yields. The latter has had a double effect: first, projects that were previously financed at very low rates are now having to be refinanced at much higher rates and, second, higher bond yields imply that higher discount factors must be applied to future cash flows. Looking ahead, we draw comfort from the fact that bond yields have normalised (see real US 10-year yields in **Figure 32**), which suggests to us that the worst may be over concerning the effect of rising bond yields.

Figure 32 – US 10-year government yield decomposed (%)



Note: **past performance is no guarantee of future results.** Daily data from 29 January 1997 to 9 November 2023. "Real yield" is the 10-year TIPS yield.
Source: LSEG Datastream and Invesco Global Market Strategy Office

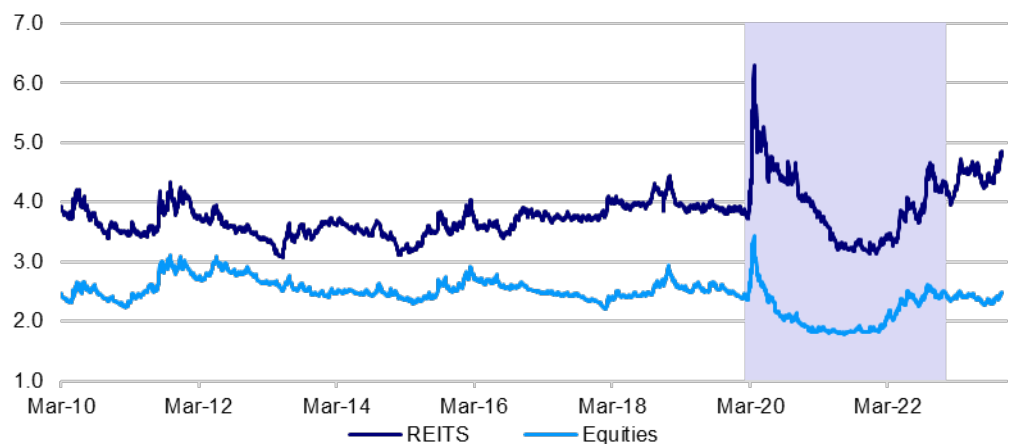
But a lot of bad news is in the price

Appendix 1 shows that REIT yields are comfortably higher than local equity yields and our analysis suggests the REIT yield premium is higher than usual, which is always a help when considering return potential. **Figure 33** shows how the global yield premium versus equities has broadened over recent years. We therefore expect some decline in REIT yields over the coming year, as government bond yields fall (though perhaps not in emerging markets).

But we are cautious on REIT dividend prospects

However, the poor fundamentals outlined above may continue to weigh on real estate cash flows and REIT dividend payments. Hence, when it comes to dividend growth projections, we remain more cautious about REITS than about broad equity markets.

Figure 33 – Global real estate (REIT) and equity dividend yields (%)

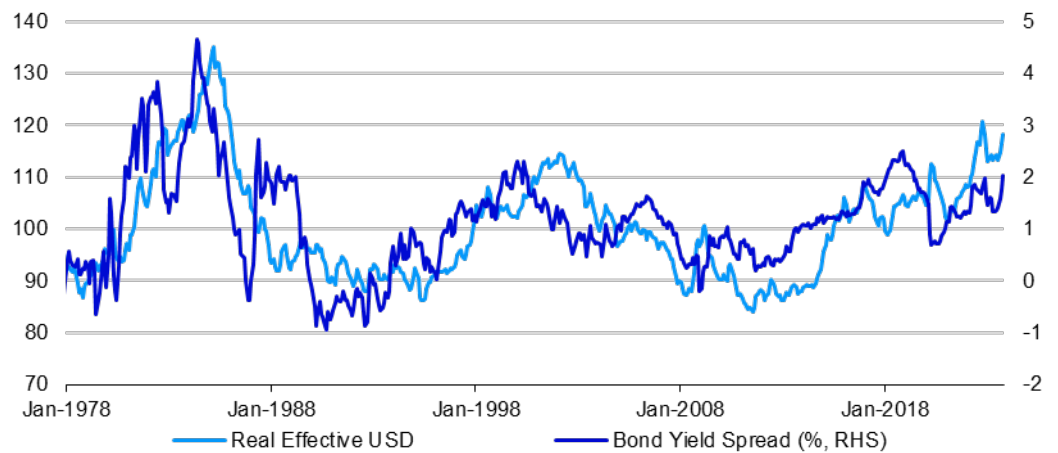


Note: daily data from 2 March 2010 to 31 October 2023. REIT dividend yield is based on FTSE EPRA/NAREIT Global Index. Equity dividend yield are based on the Datastream World Index. Shaded area shows the Covid-19 pandemic period (from 1 February 2020 to end-2022).
Source: FTSE Russell, LSEG Datastream and Invesco Global Market Strategy Office

We expect yield spreads to move against the dollar in 2024

We expected the US dollar to weaken during 2022, which it did for a while. However, the rebound in US treasury yields, taking the 10-year close to 5%, caused a recovery in the greenback. **Figure 34** displays a decent correlation between the real trade weighted value of the dollar and the spread between US bond yields and those elsewhere. It also shows that the dollar is as expensive as at any time since 1985. When currencies become so expensive, they provoke an economic reaction that causes a deterioration in the current account and an eventual weakening of the currency. Further, we think that short term currency movements are determined by financial flows and we expect yield spreads to move against the dollar during 2024 as the Fed eases more rapidly than other major central banks (especially the BOJ which we think needs to move to a less accommodative stance). **Figure 36** shows our yield and currency projections for 2024.

Figure 34 – Real effective US dollar and bond yield spread

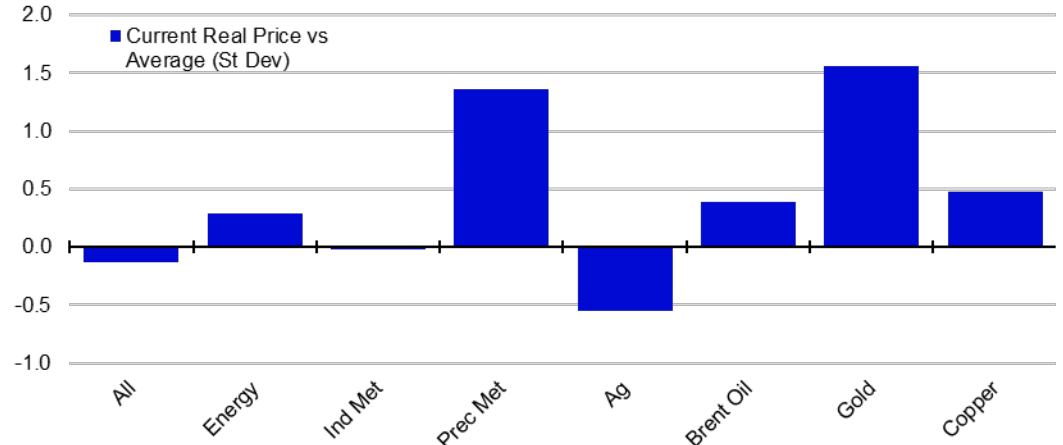


Note: **Past performance is no guarantee of future results.** Monthly data from January 1978 to October 2023. Real effective US dollar is an index calculated by the OECD as the trade weighted value of the US dollar versus a basket of currencies and adjusted for CPI inflation differentials. Bond yield spread is the US 10-year treasury yield minus the average of the 10-year government yields of: Germany, Japan and the UK. As of 31 October 2023. Source: OECD, LSEG Datastream and Invesco Global Market Strategy Office.

A weakening dollar could support commodities (or cushion them against the effect of slowing economies and elevated prices)

We think a weakening dollar could benefit a number of asset categories: emerging markets, US equities versus those of elsewhere (in local currency terms) and commodities. Focusing on commodities, **Figure 35** suggests that a number remain expensive compared to historical norms (in real terms). However, when it comes to positioning for the transition to a recovery regime and weakening dollar, we think industrial metals could be well placed. Gold looks expensive but we think a combination of falling treasury yields and depreciating dollar could limit downside during 2024.

Figure 35 – Commodity prices deflated by US CPI versus historical norms



Abbreviations: "Ind Met" is industrial metals, "Prec Met" is precious metals and "Ag" is agriculture. Historical ranges start on: All and Ag 31/12/69; Energy 31/12/82; Ind Met 3/1/77; Prec Met 2/1/73; Brent 1/6/87; gold 1/1/74; copper 1/1/74. As of 31 October 2023. See appendices for definitions, methodology and disclaimers. Source: GSCI, LSEG Datastream and Invesco Global Market Strategy Office

Assumptions include a rapid decline in major policy rates in during 2024

Underpinning our projections to end-2024 are the following assumptions:

- Global GDP growth will slow and then recover
- Global inflation will fall but remain above many central bank targets
- Major western central banks start cutting rates during 2024 Q2 (but continue QT)
- Long-term government yields will fall but yield curves will steepen
- Credit spreads widen in the US but are mixed in Europe and defaults rise
- Bank loan spreads are stable but defaults rise
- Equity and REIT dividend growth moderates but yield movements are mixed
- USD weakens as Fed tightening ends
- Commodities are mixed as the global economy slows and USD weakens

US long yields fall more than elsewhere and the dollar weakens

The assumptions behind our projections are laid out in **Appendix 4**, while **Figure 36** shows how they translate into market targets. Perhaps the single most important forecast is that Fed and other major central bank policy rates have peaked and will be falling by mid-2024 (except for the BOJ and PBOC). We expect this to help long-term bond yields move lower, though not as much as at the short end (implying a bull steepening of yield curves). We predict the US dollar will weaken as the Fed signals that that rate cuts are in sight. We think this combination could limit the downside to commodities that we expect to come in the first part of the forecast horizon due to economic deceleration (and lofty prices). We also believe that the ending of the Fed's tightening cycle and a weakening of the dollar could help EM assets.

EM assets appear to be relatively cheap

Appendix 2 shows that EM assets have had a mixed 2023, with bonds holding up well, while equities were dragged down by China. We think EM valuations are relatively attractive (see **Appendix 1**) and we expect higher than average returns in most asset categories. Given our belief that economic momentum will be better in China than in the West (due to policy support), we remain optimistic that Chinese equities will rebound (given how cheap they are), though we are less optimistic about Chinese bonds.

The most bullish return projections for some time

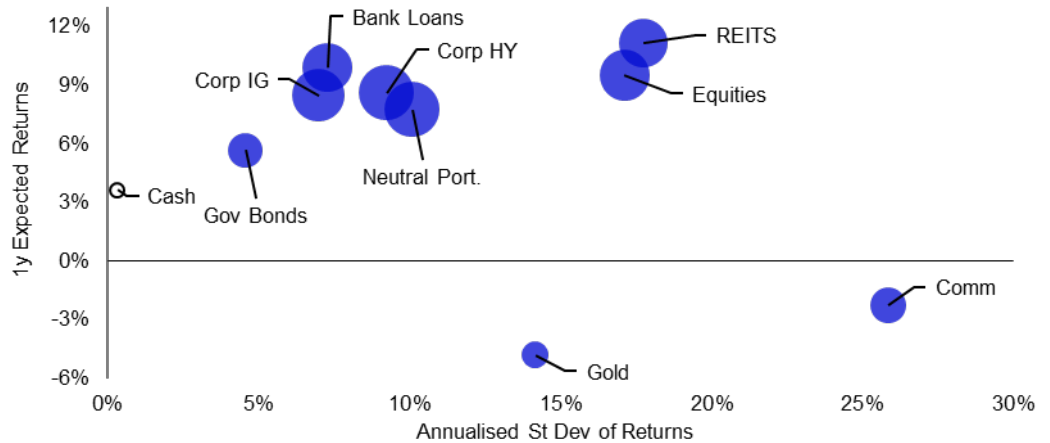
More generally, with higher yields on fixed income assets and the prospect of falling interest rates, our overall return projections are higher than for some time.

Figure 36 – Market forecasts

		Current (31/11/23)	Forecast End-2024
Central Bank Rates	US	5.50	4.00
	Eurozone	4.00	3.25
	China	3.45	3.50
	Japan	-0.10	0.10
	UK	5.25	4.00
10yr Bond Yields	US	4.91	4.15
	Eurozone	2.77	2.65
	China	2.71	2.80
	Japan	0.92	1.25
	UK	4.52	4.30
Exchange Rates/US\$	EUR/USD	1.06	1.15
	USD/CNY	7.32	7.00
	USD/JPY	151.69	130.00
	GBP/USD	1.22	1.30
	USD/CHF	0.90	0.86
Equity Indices	S&P 500	4194	4400
	Euro Stoxx 50	4061	4675
	FTSE A50	11992	14000
	Nikkei 225	30859	31750
	FTSE 100	7322	7725
Commodities (US\$)	Brent/barrel	87	80
	Gold/ounce	1996	1900
	Copper/tonne	8029	8300

Notes: **There is no guarantee that these views will come to pass.** See Appendices for definitions, methodology and disclaimers. Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Figure 37 – Projected return versus risk for global assets to end-2024



Based on local currency returns. Returns are projected but standard deviation of returns is based on 5-year historical data. Size of bubbles is in proportion to average pairwise correlation with other assets. Cash is an equally weighted mix of USD, EUR, GBP and JPY. Neutral portfolio weights shown in **Figure 3**. As of 31 October 2023. **There is no guarantee that these views will come to pass.** See Appendices for definitions, methodology and disclaimers. Source: ICE BofA, Credit Suisse, FTSE Russell, MSCI, S&P GSCI, LSEG Datastream and Invesco Global Market Strategy Office

We are more optimistic about the multi asset outlook than for some time

A combination of high interest rates and the expectation they will fall in 2024 leads us to be more optimistic about a broad range of assets than for some time (see **Figure 37**). For the most part, we expect higher returns on the riskier assets. However, commodities (including gold) are the obvious exceptions. Though we expect Fed rate cuts and dollar weakness, which should support commodity prices (in our opinion), we are concerned that some prices are already high (see **Figure 35**) and that ongoing economic weakness may depress prices of industrial commodities in the short term. Gold has performed well during 2023 but that limits the scope for further upside, in our opinion.

When in doubt, we choose the riskier alternatives while maintaining some balance

Trying to construct a diversified multi-asset portfolio on the back of our projections requires more than simply choosing our favourite assets: after all, we may be wrong. We use an optimisation process to help do that and **Figure 38** shows the results. The outcomes are clearest for IG and bank loans (Overweight in all cases) and gold, equities and commodities (Underweight). We largely follow the suggestions of the optimiser when they are clear and err on the riskier side when they are not.

Figure 38 – Optimised allocations for global assets (using local currency returns)

	Neutral Portfolio	Policy Range	Projected Returns	Optimisations Sharpe Ratio	Max Return	Model Asset Allocation*
Cash & Gold	5%	0-10%	-0.6%	10%	0%	↓ 0%
Cash	2.5%	0-10%	3.6%	10%	0%	0%
Gold	2.5%	0-10%	-4.8%	0%	0%	0%
Govt Bonds	25%	10-40%	5.7%	40%	17%	22%
Corporate IG	10%	0-20%	8.5%	17%	20%	↑ 20%
Corporate HY	5%	0-10%	8.6%	0%	10%	↑ 8%
Bank Loans	4%	0-8%	9.9%	8%	8%	↑ 7%
Equities	45%	25-65%	9.5%	25%	37%	↑ 37%
Real Estate	4%	0-8%	11.2%	0%	8%	↑ 6%
Commodities	2%	0-4%	-2.3%	0%	0%	0%

Notes: *This is a theoretical portfolio and is for illustrative purposes only. It does not represent an actual portfolio and is not a recommendation of any investment or trading strategy. Based on local currency returns (for both the one-year projected returns and five-year historical covariance matrix). Cash is an equally weighted mix of USD, EUR, GBP and JPY. "Sharpe Ratio" shows the results of maximising the Sharpe Ratio. "Max Return" maximises returns while not exceeding the volatility of the Neutral Portfolio. **There is no guarantee that these views will come to pass.** See appendices for definitions, methodology and disclaimers. Source: Invesco Global Market Strategy Office

We reduce cash to zero and boost a range of assets, adding to overall risk

Model Asset Allocation: deploying cash

Given our view that 2024 will bring much lower interest rates in most countries, we look forward to better returns on fixed income assets than for some time, and expect riskier assets to eventually benefit from lower rates and the prospect of better growth (though some have partially priced in the good news, in our view). Overall, we expect the best multi asset returns since 2019. Consequently, we reduce cash to zero within our Model Asset Allocation, while increasing investment grade (IG), high yield (HY), bank loans and REITS (all are Overweight) and equities (which remain Underweight). From a regional perspective we prefer European and EM assets.

We expect a rapid decline in interest rates to boost fixed income returns and eventually those on riskier assets

The biggest dilemma we face is that cyclical assets such as equities and HY have done relatively well in 2023, at a time of global deceleration. Hence some valuations are challenging and we fear the possibility of volatility in the short term as the global economy slows even further. However, we expect a rapid decline in central bank interest rates, which we think will not only drive fixed income returns but also eventually enable riskier assets to move to higher levels. Though accepting there are some risks from geopolitics and elections, we doubt they will have an enduring effect on returns.

Cash a good diversifier but reduced to Zero

Hence, we reduce the **cash** allocation from the Maximum 10% to Zero. Though we think cash rates are attractive, and believe cash could be a useful diversifier among the short term volatility that we expect, we forecast better 2024 returns on most other assets.

IG boosted to the Maximum allowed

The deployment of those cash reserves allows us to boost the allocations to a range of assets categories: IG credit, bank loans, HY credit, equities and REITS (in ascending order of volatility). The allocation to **investment grade** is increased to the Maximum allowed 20% (from 18%), with an increase in the Eurozone (Overweight) and Japan (Neutral). We expect the best returns in the US and EM but were already at the Maximum positions in those regions (see **Figure 3** for regional allocations).

Bank loans increased to further Overweight

Moving along the risk spectrum, we boost the allocation to **bank loans** to 7% (from 6%), by adding in the US. This is Overweight and close to the maximum 8%. We resist going to the maximum allocation in case we have underestimated upcoming defaults and because the short duration nature of the asset class may work against it as rates fall.

HY taken to Overweight, despite the risks

Though **high yield** has performed better than we expected in 2023, and despite our forecast of widening spreads and higher default rates, the expected returns are decent. Therefore we boost the allocation to an Overweight 8% (from the Neutral 5%). This is not without risk: the projected return is little higher than for the less volatile IG and the optimisation process gives conflicting outcomes (see **Figure 38**). However, it usually performs well as economies recover (**Figure 19**) and we are trying to increase the riskiness of the allocations. We have added to positions in the US and Europe.

Adding to equities but still Underweight (hard to be enthused about US indices)

We have also boosted the **equity** allocation but remain at an Underweight 37% (up from 34%). Though equities normally perform well in economic upswings, they have already shone in 2023 and we fear short term volatility. Further, we find it difficult to be enthusiastic about capitalisation-weighted large cap US indices, which makes it hard to be optimistic about global equity returns (we expect higher returns on the much less volatile bank loan asset class, for example). We add to European allocations and continue to favour EM (including China). Out of the desire to embrace risk, we boost the allocation to **real estate** (REITS), going further Overweight to 6% (from 5%), with a preference for the US and the UK. We see the risks but think a lot is in the price.

And real estate is boosted...a lot is in the price

No changes to government bonds. Gold and commodities too expensive

Otherwise, we make no changes to the Underweight allocation (22%) to **government bonds**, with an ongoing preference for US and EM (not China) markets. Yields are up but we expect better returns on other assets. We also make no changes to the Zero allocations to **gold** and **commodities**. This is partly due to elevated prices and partly out of short term concern for industrial commodities as economies weaken.

Europe, EM favoured. USD hedged into yen

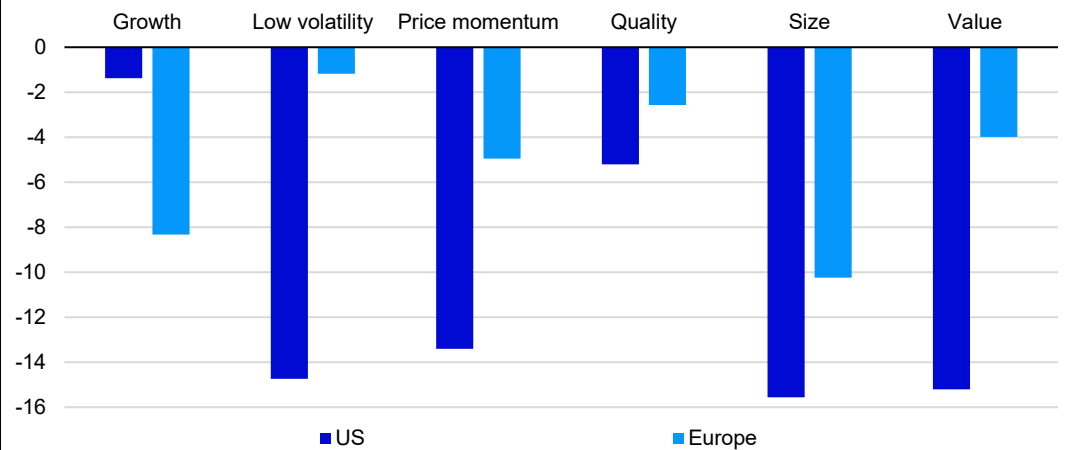
Regionally, we are Overweight European and EM assets. We maintain the partial hedge out of US dollar into Japanese yen, believing the latter will rally as the BOJ normalises.

Factor leadership likely to change during 2024, eventually favouring value and price momentum

Equity factors and sectors

The excitement around generative artificial intelligence has muddied the picture somewhat in 2023 contributing to strong but narrow returns dominated by quality and US growth (see **Figure 39**, noting that all of our factor indices have underperformed because they are equal weighted). We expect this to fade in the next 12 months allowing a closer alignment between macroeconomic fundamentals and market returns. Our base case suggests a difficult period in the short term followed by a more settled environment if economic “green shoots” emerge, which we think will allow equities to transition into the mid-cycle phase. Historically, based on US returns, this implies outperformance by value and price momentum and a continued underperformance of size and low volatility.

Figure 39 – US and European year-to-date factor relative total returns (%)

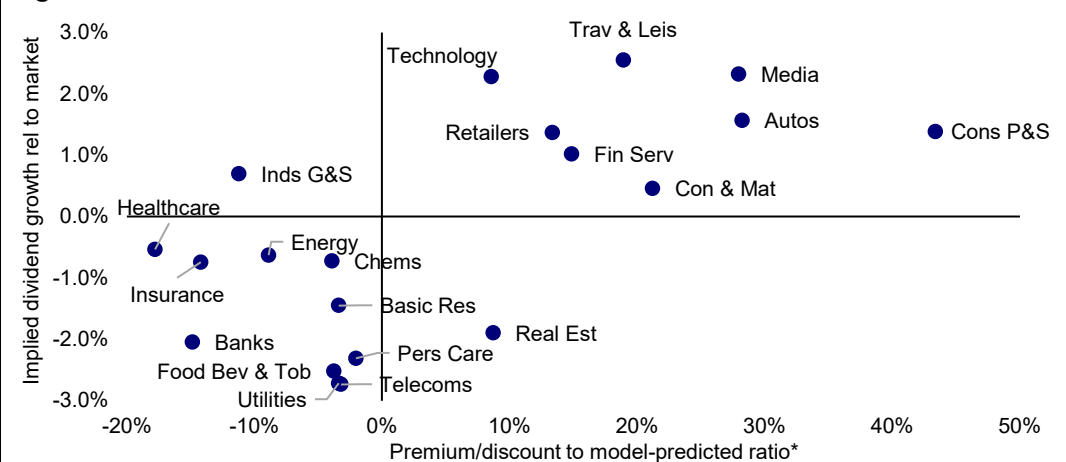


Note: **Past performance is no guarantee of future results.** As of 31 October 2023. Returns are relative to the S&P 500 (US) and the Stoxx 600 (Europe). See appendices for methodology and disclaimers. Source: LSEG Datastream and Invesco Global Market Strategy Office

Our sector allocation favours industrials and real estate and we expect to add undervalued cyclical sectors as economies recover

As we outlined in our latest [Strategic Sector Selector](#), as long as uncertainty remains about when an eventual economic recovery will start, we prefer to maintain a significant exposure to defensive sectors, apart from utilities (due to their high leverage). We have started preparing our model sector allocation for a recovery by having industrial goods & services and real estate as key Overweights, which also tended to do well in the mid-cycle phase of equity market expansions. As the picture clears, we would also seek to increase our allocation to undervalued cyclical sectors (see **Figure 40**), especially financials, while reducing our exposure to defensives.

Figure 40 – Global sectors valuation matrix



Notes: On the horizontal axis, we show how far a sector’s valuation is above/below that implied by our multiple regression model (dividend yield relative to market). The vertical axis shows the perpetual real growth in dividends required to justify current prices relative to that implied for the market. We consider the sectors in the top right quadrant expensive on both measures, and those in the bottom left are considered cheap. See appendices for methodology and disclaimers. Data as of 31 October 2023. Source: LSEG Datastream and Invesco Global Market Strategy Office

Base case assumes that lower growth and less inflation allow central banks to ease in 2024

“Hard landing” scenario assumes significant recession

“Soft landing” scenario assumes less inflation and more growth

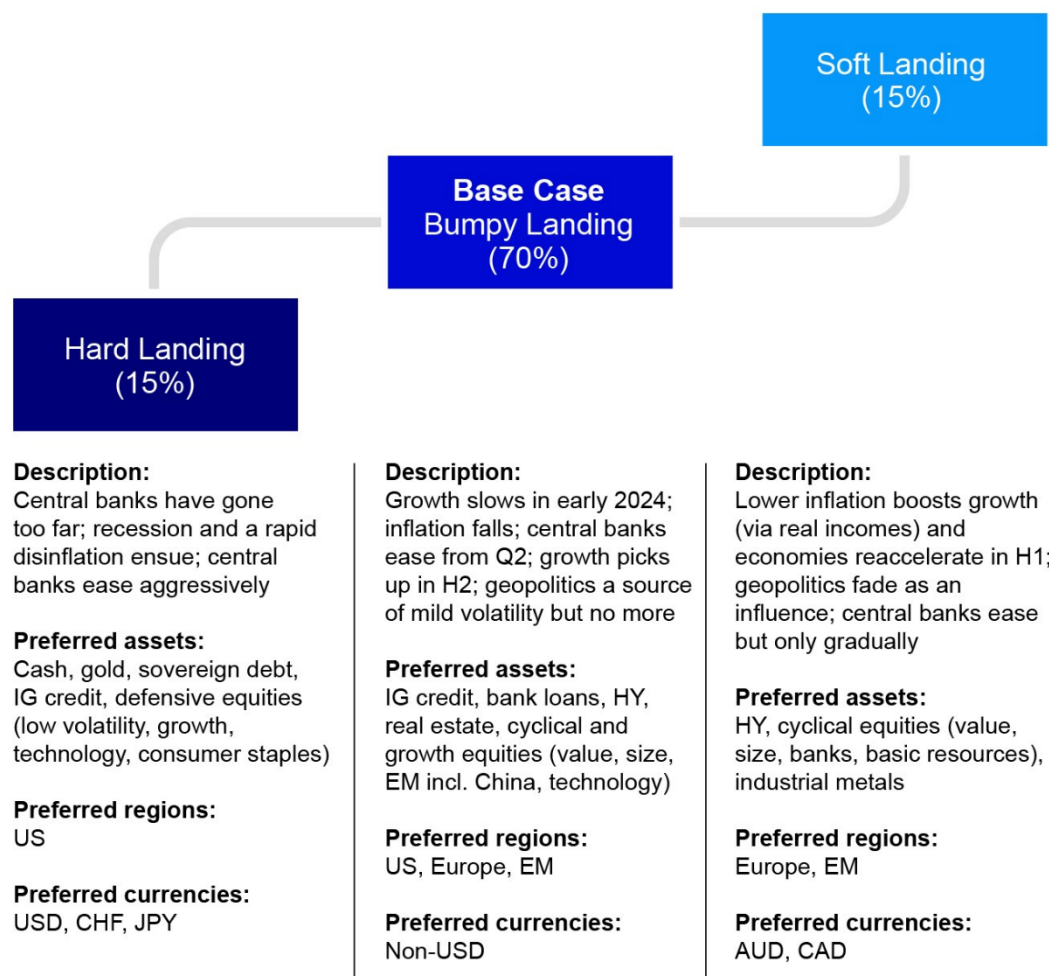
Alternative scenarios

Our base case for 2024 can be described as a “bumpy landing”, with economies slowing, inflation falling, central banks easing and economies recovering by the end of 2024. Though we do not expect global recession, we think that continued deceleration could provoke volatility in financial markets until central banks make it clear that tightening is over and that easing is on the cards. The asset preferences have been described earlier in the document. Given the uncertainties surrounding the base case, we consider two alternative scenarios: “hard landing” and “soft landing”. **Figure 41** gives a summary description of all three scenarios, along with our asset preferences.

The “hard landing” scenario assumes that the lagged response to central bank tightening (and depletion of excess savings) drives the US and many other economies into a significant recession. This is assumed to damage risk assets and to bring rapid easing by central banks, which benefits defensive fixed income assets. In general, the preferences shown in **Figure 41** are for what we consider to be defensive assets, with gold expected to benefit from the decline in US treasury yields. We assume that US assets would outperform in this scenario, as would the USD, along with so-called “safe haven” currencies such as CHF and JPY.

The “soft landing” scenario imagines that lower inflation boosts real incomes and that AI boosts productivity. Essentially, the current slowdown would be viewed as nothing more than a mid-cycle pause, with rapid acceleration back to trend growth or higher. Our asset preferences for this scenario are cyclical assets such as equities and industrial commodities, with preferences for European and EM assets and resource related FX.

Figure 41 – Asset preferences for 2024 by scenario

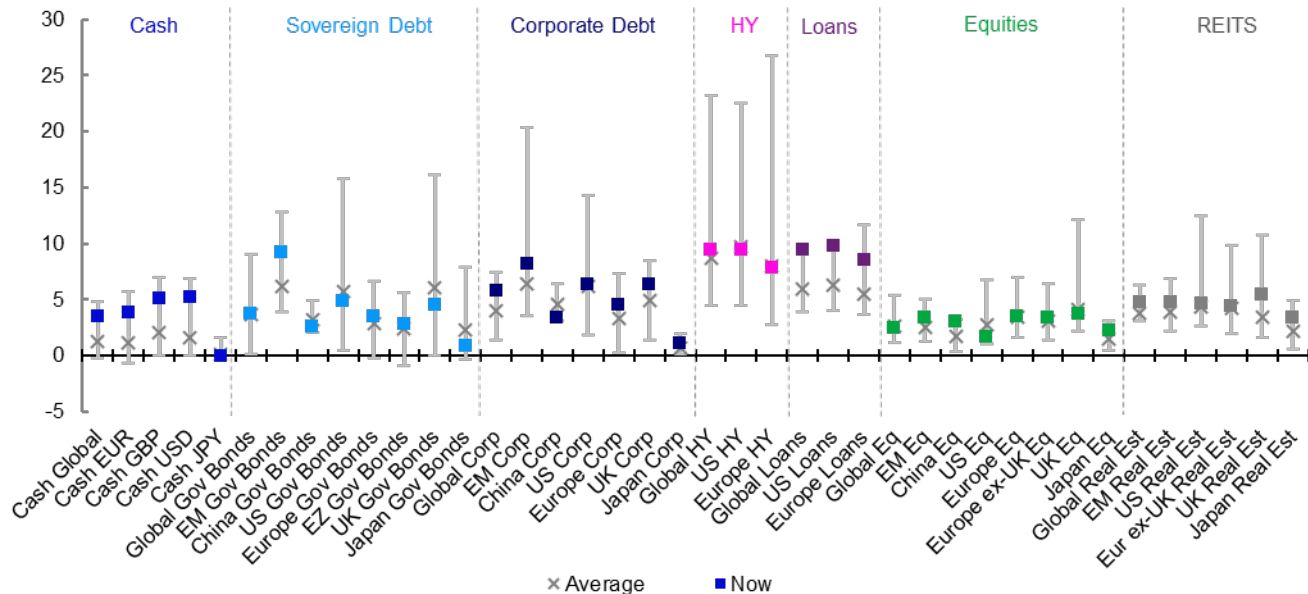


Percentages are our subjective probabilities. See appendices for definitions, methodology and disclaimers. Source: Invesco Global Market Strategy Office

Appendices

Appendix 1: Global valuations vs history

Regional yields within historical ranges (%)



Notes: As of 31 October 2023. **Past performance is no guarantee of future results.** “Loans” are bank loans. See appendices for definitions, methodology and disclaimers. Source: Bloomberg, Credit Suisse, BofAML, FTSE, LSEG Datastream and Invesco

Appendix 2: Asset class total returns

Data as at 31/10/2023	Index	Current Level/Ry	Total Return (USD, %)				Total Return (Local Currency, %)			
			2m	YTD	12m	5y*	2m	YTD	12m	5y*
Equities										
World	MSCI	637	-7.0	7.2	11.1	8.0	-6.1	8.6	10.0	8.8
Emerging Markets	MSCI	915	-6.3	-1.8	11.3	2.0	-5.3	0.7	10.2	4.0
China	MSCI	56	-6.9	-11.1	21.3	-2.5	-6.9	-10.0	21.1	-2.3
US	MSCI	3986	-6.9	10.9	10.1	10.9	-6.9	10.9	10.1	10.9
Europe	MSCI	1756	-7.5	4.6	16.5	5.5	-4.6	5.2	9.5	6.5
Europe ex-UK	MSCI	2162	-8.3	5.2	17.6	6.1	-5.8	6.3	10.2	7.2
UK	MSCI	1062	-5.0	2.3	12.9	3.5	-0.8	1.4	7.1	4.5
Japan	MSCI	3269	-6.4	6.6	17.2	3.3	-2.6	22.3	19.5	9.6
Government Bonds										
World	BofA-ML	3.74	-4.6	-5.4	-0.7	-3.0	-2.9	-2.1	-2.0	-1.3
Emerging Markets (USD)	BBloom	9.17	-6.8	-1.3	10.4	-1.0	-6.8	-1.3	10.4	-1.0
China	BofA-ML	2.59	-0.8	-1.6	2.6	3.5	-0.5	3.6	2.9	4.5
US (10y)	Datastream	4.91	-5.6	-5.1	-2.9	-0.1	-5.6	-5.1	-2.9	-0.1
Europe	BofA-ML	3.48	-4.8	-1.1	4.8	-3.3	-2.3	-0.1	-2.0	-2.0
Europe ex-UK (EMU, 10y)	Datastream	2.77	-4.8	-0.2	4.3	-4.4	-2.2	0.8	-2.4	-3.1
UK (10y)	Datastream	4.52	-4.7	-1.9	0.0	-4.5	-0.5	-2.7	-5.1	-3.5
Japan (10y)	Datastream	0.92	-6.3	-13.9	-4.5	-6.1	-2.5	-1.2	-2.7	-0.4
IG Corporate Bonds										
Global	BofA-ML	5.83	-3.8	-0.5	5.3	0.0	-2.9	0.0	3.5	0.5
Emerging Markets (USD)	BBloom	8.24	-4.6	-1.3	14.1	0.4	-4.6	-1.3	14.1	0.4
China	BofA-ML	3.34	-0.6	-1.8	1.7	3.0	-0.2	3.4	2.0	4.0
US	BofA-ML	6.40	-4.2	-1.4	3.3	1.0	-4.2	-1.4	3.3	1.0
Europe	BofA-ML	4.49	-3.1	1.8	11.1	-2.4	-0.5	2.8	3.9	-1.0
UK	BofA-ML	6.34	-4.4	1.9	8.8	-2.2	-0.2	1.0	3.2	-1.1
Japan	BofA-ML	1.06	-4.8	-12.8	-2.7	-5.8	-1.0	0.1	-0.9	-0.1
HY Corporate Bonds										
Global	BofA-ML	9.41	-2.3	4.3	9.3	2.0	-1.7	4.5	7.7	2.3
US	BofA-ML	9.50	-2.4	4.7	5.8	2.9	-2.4	4.7	5.8	2.9
Europe	BofA-ML	7.87	-2.6	4.8	16.5	0.2	0.0	5.8	9.0	1.6
Cash (Overnight LIBOR)										
US		5.31	0.8	4.1	4.8	1.7	0.8	4.1	4.8	1.7
Euro Area		3.88	-1.8	1.4	10.0	-1.2	0.6	2.6	2.8	0.2
UK		5.19	-3.3	4.3	10.5	0.2	0.9	3.8	4.3	1.2
Japan		-0.02	-4.1	-13.6	-2.0	-5.8	0.0	0.0	0.0	-0.1
Real Estate (REITs)										
Global	FTSE	1367	-10.2	-9.0	-4.1	-1.0	-7.8	-8.1	-10.4	0.4
Emerging Markets	FTSE	1144	-7.3	-12.5	8.5	-5.2	-4.8	-11.6	1.5	-3.9
US	FTSE	2552	-11.0	-6.7	-6.3	1.6	-11.0	-6.7	-6.3	1.6
Europe ex-UK	FTSE	1940	-8.7	-6.7	3.2	-6.8	-6.3	-5.8	-3.5	-5.5
UK	FTSE	671	-10.6	-9.7	-4.2	-5.5	-6.6	-10.5	-9.1	-4.5
Japan	FTSE	1983	-5.2	-5.5	0.0	-1.2	-1.4	8.5	1.9	4.8
Commodities										
All	GSCI	3592	-0.2	2.8	-0.4	5.9	-	-	-	-
Energy	GSCI	649	0.5	6.2	-1.9	4.2	-	-	-	-
Industrial Metals	GSCI	1533	-1.9	-8.5	3.5	4.8	-	-	-	-
Precious Metals	GSCI	2232	1.5	7.4	20.9	9.2	-	-	-	-
Agricultural Goods	GSCI	525	-1.7	-6.1	-6.4	8.1	-	-	-	-
Currencies (vs USD)**										
EUR		1.06	-2.4	-1.2	7.0	-1.3	-	-	-	-
JPY		151.69	-4.0	-13.6	-1.9	-5.7	-	-	-	-
GBP		1.21	-4.2	0.9	5.4	-1.0	-	-	-	-
CHF		1.10	-3.0	1.5	10.0	2.1	-	-	-	-
CNY		7.32	-0.8	-5.7	-0.2	-1.0	-	-	-	-

Notes: *Five-year returns are annualised. **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: Refinitiv Datastream and Invesco.

Appendix 3: Invesco 10-year Capital Market Assumptions (USD version)

	Asset Class	Index	Expected	Expected	Expected	Arithmetic
			geometric	arithmetic	Risk	
			return	return	%	return to
			%	%	%	risk ratio
Fixed income	US Treasury Short	BBG BARC US Treasury Short	5.1	5.1	1.5	3.39
	US Treasury Intermediate	BBG BARC US Treasury Intermediate	4.7	4.8	4.6	1.03
	US Treasury Long	BBG BARC US Treasury Long	3.7	4.4	12.1	0.36
	US TIPS	BBG BARC US TIPS	4.8	5.0	5.8	0.86
	US Bank Loans	CSFB Leverage Loan Index	8.3	8.6	8.3	1.04
	US Aggregate	BBG BARC US Aggregate	5.3	5.5	6.1	0.90
	US Inv Grd Corps	BBG BARC US Investment Grade	5.5	5.8	7.8	0.74
	US MBS	BBG BARC US MBS	5.8	6.0	6.7	0.90
	US Preferred Stocks	BOA ML Fixed Rate Pref Securities	5.5	6.2	12.2	0.51
	US High-Yield Corps	BBG BARC US High Yield	7.1	7.6	10.1	0.75
	US Muni	BOA ML US Muni	4.4	4.6	7.0	0.66
	US Muni (Taxable)	ICE BOA US Taxable Muni Securities Plus	5.1	5.4	8.0	0.68
	US HY Muni	BBG US Muni Bond HY	5.0	5.4	8.7	0.62
	Global Aggregate	BBG BARC Global Aggregate	5.0	5.2	7.2	0.73
	Global Aggregate-Ex US	BBG BARC Global Aggregate- Ex US	5.0	5.5	10.5	0.52
	Global Treasury	BBG BARC Global Treasuries	5.0	5.3	8.6	0.61
	Global Sovereign	BBG BARC Global Sovereign	4.9	5.3	8.1	0.65
	Global Corporate	BBG BARC Global Corporate	5.7	6.0	8.0	0.76
	Global Inv Grd	BBG BARC Global Corporate Inv Grd	5.8	6.1	8.2	0.74
	Eurozone Corporate	BBG BARC Euro Aggregate Credit - Corporate	5.7	6.5	13.5	0.48
Eurozone Treasury	BBG BARC Euro Aggregate Government - Treasury	5.4	6.2	12.7	0.48	
Asian Dollar Inv Grd	BOA Merrill Lynch ACIG	5.7	6.0	8.2	0.73	
EM Aggregate	BBG BARC EM Aggregate	6.9	7.6	13.0	0.59	
EM Agg IG	BBG BARC EM USD Agg IG	5.5	5.8	8.8	0.66	
China Policy Bk & Tsy	BBG BARC China PB Tsy TR	5.0	5.0	4.2	1.20	
China RMB Credit	BBG BARC China Corporate	5.2	5.3	3.7	1.44	
Equities	World Equity	MSCI ACWI	7.3	8.7	17.1	0.51
	World Ex-US Equity	MSCI ACWI Ex-US	7.9	9.5	18.9	0.50
	US Broad	Russell 3000	7.2	8.6	17.5	0.49
	US Large Cap	S&P 500	7.0	8.3	16.8	0.49
	US Mid Cap	Russell Midcap	7.8	9.5	19.5	0.49
	US Small Cap	Russell 2000	9.4	11.6	22.8	0.51
	MSCI EAFE	MSCI EAFE	7.3	8.8	18.7	0.47
	MSCI Europe	MSCI Europe	7.6	9.2	18.9	0.49
	Eurozone	MSCI Euro X UK	7.6	9.4	19.9	0.47
	UK Large Cap	FTSE 100	7.4	9.2	20.1	0.46
	UK Small Cap	FTSE Small Cap UK	8.8	11.6	25.6	0.45
	Canada	S&P TSX	7.2	9.0	20.3	0.44
	Japan	MSCI JP	5.5	7.8	22.4	0.35
	Emerging Market	MSCI EM	9.6	12.2	24.8	0.49
	Asia Pacific Ex JP	MSCI APXJ	9.3	12.0	24.9	0.48
China Large Cap	CSI 300	9.7	14.6	34.3	0.42	
Alternatives	Global Infra	DJ Brookfield Global Infra	9.6	10.6	14.8	0.72
	Global REITs	FTSE EPRA/NAREIT Developed Index	6.0	7.5	18.7	0.40
	Hedge Funds	HFRI HF Index	4.4	4.8	8.6	0.55
	Commodities	S&P GSCI	5.6	8.1	23.8	0.34
	Agriculture	S&P GSCI Agriculture	5.4	7.4	21.3	0.35
	Energy	S&P GSCI Energy	6.2	11.9	37.0	0.32
	Industrial Metals	S&P GSCI Industrial Metals	6.1	8.7	24.1	0.36
Precious Metals	S&P GSCI Precious Metals	1.1	2.7	18.4	0.15	

Notes: Estimates as of 30 September 2023, as published in Long-Term Capital Market Assumptions (November 2023). These estimates reflect the views of Invesco Investment Solutions, the views of other investment teams at Invesco may differ from those presented here.

There is no guarantee that these views will come to pass. TIPS = treasury inflation protected securities, MBS = mortgage-backed securities. Source: Invesco Investment Solutions

Appendix 4: Key assumptions
Key assumptions for 1-year projected returns

	US	Eurozone/ Europe ex-UK	UK	Japan	EM	China
Central bank rates (%)	4.00	3.25	4.00	0.10	-	3.75
Sovereign spreads vs rates (bps)	50	25	50	100	-	-
Corporate IG spreads vs sovereign (bps)	140	90	180	20	-	-
Corporate HY spreads vs sovereign (bps)	500	450	-	-	-	-
Bank Loan spreads v 3M cash rates (bps)	420	460	-	-	-	-
Corporate HY default rates (%)	2.5	2.0	-	-	-	-
Corporate HY recovery rates (%)	30	30	-	-	-	-
Bank Loan default rates (%)	3.0	3.0	-	-	-	-
Bank Loan recovery rates (%)	40	40	-	-	-	-
Equities dividend growth (%)*	5.0	5.0	0.0	7.0	2.0	3.0
Equities dividend yield (%)*	1.6	3.1	3.6	2.4	3.2	2.3
Real estate (REITS) dividend growth (%)*	3.0	-2.0	2.0	5.0	5.0	-
Real estate (REITS) dividend yield (%)*	4.5	4.2	5.2	3.4	5.0	-

Notes: *assumptions for Europe ex-UK. One-year assumptions are based on our analysis of how current values compare to historical norms (assuming some degree of reversion to the mean, except where our analysis suggests historical norms are unlikely to be a guide to the future), adjusted for our view about the development of the economic and financial market cycles over the next year in each region.

There is no guarantee that these views will come to pass.

Source: Invesco Global Market Strategy Office

Appendix 5: 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.

Appendix 6: Definitions of data and benchmarks

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 euro, British pound and 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 values in the market forecast table (**Figure 36**) use Datastream benchmark 10-year yields for the US, Eurozone, Japan and the UK and the Thomson Reuters China benchmark 10-year yield for China. Historical and projected yields and returns (**Figures 1, 22, 36, 37**) are based on Bank of America Merrill Lynch government bond indices with historical ranges starting on 31 December 1985 for the Global, Europe ex-UK, UK and Japanese indices, 30 January 1978 for the US and 31 December 2004 for China. The emerging markets yields and returns are based on the Bloomberg emerging markets sovereign US dollar bond index with the historical range starting on 28 February 2003. The same indices are used to construct Appendix 1.

Corporate investment grade (IG) bonds: Bank of America Merrill Lynch investment grade corporate bond indices with historical ranges starting on 31 December 1996 for the Global, 31 January 1973 for the US dollar, 1 January 1996 for the euro, 31 December 1996 for the British pound, 6 September 2001 for the Japanese yen and 31 December 2004 for the China indices. The emerging markets yields and returns are based on the Bloomberg emerging markets corporate US dollar bond index with the historical range starting on 28 February 2003.

Corporate high yield (HY) bonds: Bank of America Merrill Lynch high yield indices with historical ranges starting on 29 August 1986 for the US dollar, and 31 December 1997 for the Global and euro indices.

Bank Loans: Credit Suisse Leveraged Loan Indices with historical ranges starting on 31 January 1992 for the US index, 31 January 1998 for the Western Europe Index and 31 January 1998 for the Global Index (the global index is constructed by Invesco Global Market Strategy Office as a weighted average of the US and Western European indices, using market capitalisation as the weighting factor). **Figure 22** and **Appendix 1** are based on current yield. Data is sourced from Credit Suisse and Bloomberg.

Equities: We use MSCI benchmark indices to calculate projected returns and calculate long-term total returns with historical ranges starting on 31 December 1969 for the Global, US, Europe ex-UK, UK and Japanese indices, 31 December 1987 for the emerging markets index and 31 December 1992 for the China index (**Figures 1, 37 & 38**). Equity index valuations (**Figures 22, 31 and Appendix 1**) are based on dividend yields and price-earnings ratios using Datastream benchmark indices with historical ranges starting on 1 January 1973 for the Global, US, Europe ex-UK and Japanese indices, 31 December 1969 for the UK index, 2 January 1995 for the Emerging Markets index, 26 August 1991 for the China A-Shares index and 1 January 1990 for the India index.

Real estate: We use FTSE EPRA/NAREIT indices with historical ranges starting on 29 December 1989 for the US, Europe ex-UK, UK and Japanese indices, 18 February 2005 for the Global index, and 31 October 2008 for the Emerging Markets index.

Commodities: Goldman Sachs Commodity Index with historical ranges starting on 31 December 1969 for the All Commodities and Agriculture indices, 31 December 1982 for the Energy index, 3 January 1977 for the Industrial Metals index, and 2 January 1973 for the Precious Metals index. "Industrial commodities" is oil & gas and industrial metals.

Definitions of data and benchmarks for Appendix 2

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 Bank of America Merrill Lynch government bond total return index for China, 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: Bank of America Merrill Lynch investment grade corporate bond total return indices and the Barclays Bloomberg emerging markets corporate US dollar bond total return index for emerging markets.

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

Bank Loans: Credit Suisse Leveraged Loan Indices (the global index is constructed by Invesco Global Market Strategy Office as a weighted average of the US and Western European indices). Data is sourced from Credit Suisse.

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

Appendix 7: Dates, data, definitions and source information for Fed rate cuts (Figure 20)
US Federal Reserve Bank easing cycles since 1974

Start (date of first target rate cut)	End (date of last target rate cut)
31/07/1974	12/01/1976
22/04/1980	12/08/1980
07/07/1981	14/12/1982
30/08/1984	21/08/1986
06/06/1989	04/09/1992
06/07/1995	17/11/1998
03/01/2001	25/06/2003
18/09/2007	16/12/2008
01/08/2019	16/03/2020

Source: Refinitiv Datastream and Invesco

US asset total returns in the 12 months before the first Federal Reserve rate cut

	Fed Rate (bp)	Equities	Gov Bonds	Corp IG	Corp HY	Real Estate	USD Index	Commodities
Jul-74	150	-18.9%		-0.9%			8.4%	34.9%
Apr-80	625	2.5%		-13.9%			0.4%	6.9%
Jul-81	775	19.4%	-6.5%	-8.3%			30.2%	-9.7%
Aug-84	206.25	-4.8%	7.8%	6.4%			6.8%	4.2%
Jun-89	256.25	26.7%	13.0%	14.1%	10.6%		13.2%	29.9%
Jul-95	175	27.3%	15.3%	14.6%	15.3%	9.1%	-8.9%	-5.1%
Jan-01	100	-14.9%	16.5%	10.4%	-4.7%	32.4%	8.3%	46.8%
Sep-07	0	14.2%	6.8%	4.9%	6.6%	0.9%	-7.1%	9.1%
Aug-19	50	8.2%	12.2%	10.7%	6.9%	10.8%	4.1%	-7.0%
Last 12m	300	15.8%	-4.2%	0.9%	7.0%	-3.1%	-4.7%	-1.8%
Average	259.72	6.6%	9.3%	4.2%	7.0%	13.3%	6.2%	12.2%

Notes: **Past performance is no guarantee of future results.** Data as of 31 August 2023. We show the change in the target rate of the US Federal Reserve Bank in basis points and the US Dollar total returns of each asset class in the 260 trading days before the first interest rate cut in each monetary easing cycle (day 0 = the day before the first cut). See above table for the list of easing cycles and the date of the first interest rate cut in each. Gov = government, IG = investment grade, HY = high yield. We use the following benchmarks for each asset class: equities = MSCI USA, government bonds = Datastream benchmark 10-year Treasury Index, corporate investment grade = ICE BofA US Corporate Index, corporate high yield = ICE BofA US High Yield Index, real estate = FTSE EPRA NAREIT US Index, USD index = DXY US Dollar Index, commodities = S&P GSCI Commodity Total Return Index. The averages exclude returns in the last 12-months. Source: FTSE Russell, ICE, ICE BofA, MSCI, S&P GSCI, Refinitiv Datastream and Invesco Global Market Strategy Office

US asset total returns in the 12 months after the first Federal Reserve rate cut

	Fed Rate (bp)	Equities	Gov Bonds	Corp IG	Corp HY	Real Estate	USD Index	Commodities
Jul-74	-575	38.1%		6.2%			0.2%	-1.1%
Apr-80	-100	-10.2%		11.8%			10.7%	8.2%
Jul-81	-650	33.4%	10.1%	9.3%			9.2%	-1.6%
Aug-84	-375	16.9%	28.6%	26.8%			-2.2%	-5.3%
Jun-89	-156.25	27.1%	6.8%	7.8%	-1.3%		-9.7%	15.1%
Jul-95	-75	-9.6%	1.3%	4.7%	9.7%	23.2%	7.8%	48.4%
Jan-01	-475	-17.1%	2.4%	9.7%	4.3%	11.0%	7.3%	-29.8%
Sep-07	-325	12.6%	12.4%	-0.1%	-3.0%	-14.3%	-1.0%	14.3%
Aug-19	-225	11.9%	17.5%	11.6%	2.7%	-13.7%	-5.1%	-30.5%
Average	-328.47	11.4%	11.3%	9.8%	2.5%	1.5%	1.9%	2.0%

Notes: **Past performance is no guarantee of future results.** Data as of 31 August 2023. We show the change in the target rate of the US Federal Reserve Bank in basis points and the US Dollar total returns of each asset class in the 260 trading days after the first interest rate cut in each monetary easing cycle (day 0 = the day before the first cut). See above table for the list of easing cycles and the date of the first interest rate cut in each. Gov = government, IG = investment grade, HY = high yield. We use the following benchmarks for each asset class: equities = MSCI USA, government bonds = Datastream benchmark 10-year Treasury Index, corporate investment grade = ICE BofA US Corporate Index, corporate high yield = ICE BofA US High Yield Index, real estate = FTSE EPRA NAREIT US Index, USD index = DXY US Dollar Index, commodities = S&P GSCI Commodity Total Return Index.

Source: FTSE Russell, ICE, ICE BofA, MSCI, S&P GSCI, Refinitiv Datastream and Invesco Global Market Strategy Office

Appendix 8: Sector classifications, valuation methodology, sector name abbreviations (Figure 40) and equity factor definitions (Figure 39)

We use a sector classification created by merging the two main systems used by Standard & Poor's (S&P) for the US and Stoxx for Europe. We have decided to classify our 10 top level industries using categories that most closely resemble the Global Industry Classification Standard (GICS) and at the level below that (super sectors) we are using the Industry Classification Benchmark (ICB). The former is used for the S&P 500 index and the latter for the Stoxx 600, our benchmark indices for this document. The two systems overlap in most cases and the only material difference seems to be in the consumer sectors. Therefore, we define consumer staples as the aggregate of personal & household goods and food & beverage, while consumer discretionary includes automobiles & parts, media, retail and travel & leisure. For the rest, we assume 100% overlap for the corresponding top-level sectors.

Autos = Automobiles & parts
 Basic Res = Basic Resources
 Chem = Chemicals
 Con & Mat = Construction & Materials
 Fin Serv = Financial Services
 Food & Bev = Food & Beverage
 Ind G&S = Industrial Goods & Services
 Pers & Hh Gds = Personal & Household Goods
 Real Est = Real Estate
 Tech = Technology
 Telecoms = Telecommunications
 Trav & Leis = Travel & Leisure

Multiple regression analysis

We have run a multiple regression analysis to examine how macroeconomic factors influence sector valuations. We have used the dividend yield relative to market as the dependent variable and have run the regressions with the following independent variables:

Monthly series since 31/01/1991:

- 1-year change in: industrial production, consumer price index
- The level of: real oil price (US CPI adjusted), real copper price (US CPI adjusted), consumer confidence index, manufacturing confidence index, 10-year benchmark government bond yield, net debt/EBITDA (only for non-financial sectors), return on equity

We calculate a global measure of industrial production growth, consumer price index growth, consumer confidence, manufacturing confidence and government bond yields using data from four regions or countries representing 65% of global Gross Domestic Product: United States, Europe, Japan and China. The global measures are weighted averages using Datastream global index market capitalisations as weights.

This analysis shows us which independent variables have a statistically significant relationship with sector valuation ratios. In addition, the regression coefficients tell us how much each independent variable influences those ratios. Finally, we use those coefficients to calculate what the valuation ratios should be, based on the model, and compare them to currently observed valuations. In theory, this allows us to determine whether a sector is undervalued or overvalued based on the macroeconomic factors we have used.

Leverage and profitability ratios

We calculate Net Debt/EBITDA from sector and market level aggregates supplied by Refinitiv Datastream. They define Net Debt as Total Debt minus Cash, where Cash represents Cash & Due from Banks for Banks, Cash for Insurance companies and Cash & Short Term Investments for all other industries. We tend to exclude Financials from

Net Debt/EBITDA comparisons for it is difficult to distinguish debt they sell as a product and debt they incur during the operation of the business. In addition, Refinitiv Datastream define EBITDA – Earnings before Interest, Taxes and Depreciation – as the earnings of a company before interest expense, income taxes and depreciation. It is calculated by taking the pre-tax income and adding back interest expense on debt and depreciation, depletion and amortisation and subtracting interest capitalised.

Implied perpetual growth models

A valuation cross-check is sought by calculating the perpetual real growth in dividends required to justify current prices. This then allows an evaluation of whether those implied growth rates are realistic.

We use a simple perpetual growth model to calculate implied growth. If $\text{Price} = \text{Dividend}/(\text{Discount Factor} - \text{Growth})$, then $\text{Growth} = \text{Discount Factor} - \text{Dividend Yield}$. The Discount Factor is equal to $\text{Risk Free Rate} + (\text{Beta} \times \text{Market Risk Premium})$. Everything is expressed in real terms to eliminate the distorting influence of inflation, the output being growth in real terms. The important ingredients are derived as follows:

- The risk-free rate is an equity market capitalisation weighted average of US, UK, Eurozone, Japanese and Chinese 10-year real yields.
- Sector betas are calculated using five years of weekly price movements relative to the global market index.
- The risk premium is derived from US equity and treasury market returns since 1871.
- The dividend yield for each sector is the 12-month trailing yield calculated by Datastream.

Equity factor index definitions

All indices are subsets of the S&P 500 index for the US and the Stoxx 600 for Europe, 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.

Appendix 9: IIS Capital Market Assumptions methodology (Figure 5 & Appendix 3)

We show a summary of the Capital Market Assumptions produced by Invesco's Investment Solutions team (IIS) and this is a summary of their methodology.

Invesco Investment Solutions (IIS) employ a fundamentally based "building block" approach to estimating asset class returns. Estimates for income and capital gain components of returns for each asset class are informed by fundamental and historical data. Components are then combined to establish estimated returns. This is a summary of key elements of the methodology used to produce long-term (10-year) and medium term (5-year) estimates.

Fixed income returns are composed of the average of the starting (initial) yield and expected yield for bonds, estimated changes in valuation given changes in the Treasury yield curve, roll return which reflects the impact on the price of bonds that are held over time, and a credit adjustment which estimates the potential impact on returns from credit rating downgrades and defaults.

Equity returns are composed of: a dividend yield, calculated using dividend per share divided by price per share, buyback yield, calculated as the percentage change in shares outstanding resulting from companies buying back or issuing shares, valuation change, the expected change in value given the current Price/Earnings (P/E) ratio and the assumption of reversion to the long-term average P/E ratio, and the estimated growth of earnings based on the long-term average real GDP per capita and inflation.

Alternative returns are composed of a variety of public versus private assets with heterogeneous drivers of return given their distinct nature. They range from a beta driven proxy to public markets or a bottom up, building block methodology like that of fixed income or equities, depending on whether they are more bond like or stock like.

Volatility estimates for the different asset classes are derived using rolling historical quarterly returns of various market benchmarks. Given that benchmarks have differing histories within and across asset classes, volatility estimates of shorter-lived benchmarks are normalised to ensure that all are measured over similar time periods.

For the full Capital Market Assumptions methodology, please contact the IIS team.

Important information

Your capital is at risk. You may not get back the amount you invested.

By accepting this document, you consent to communicating with us in English, unless you inform us otherwise. Data as of 31 October 2023 unless stated otherwise.

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