

The Big Picture

Global Asset Allocation 2023 Q4

Quarterly update from Invesco's Global Market Strategy Office
20 September 2023



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We expect the global economy to continue decelerating, while recent asset behaviour is more suggestive of acceleration. Consequently, we remain cautious, expecting a period of consolidation among cyclical assets. Within our Model Asset Allocation we reduce high yield (HY) to Neutral, while adding to government bonds (still Underweight) and introducing bank loans at Overweight. The conservative stance is balanced by maintaining a regional bias towards emerging market (EM) assets.

Model asset allocation

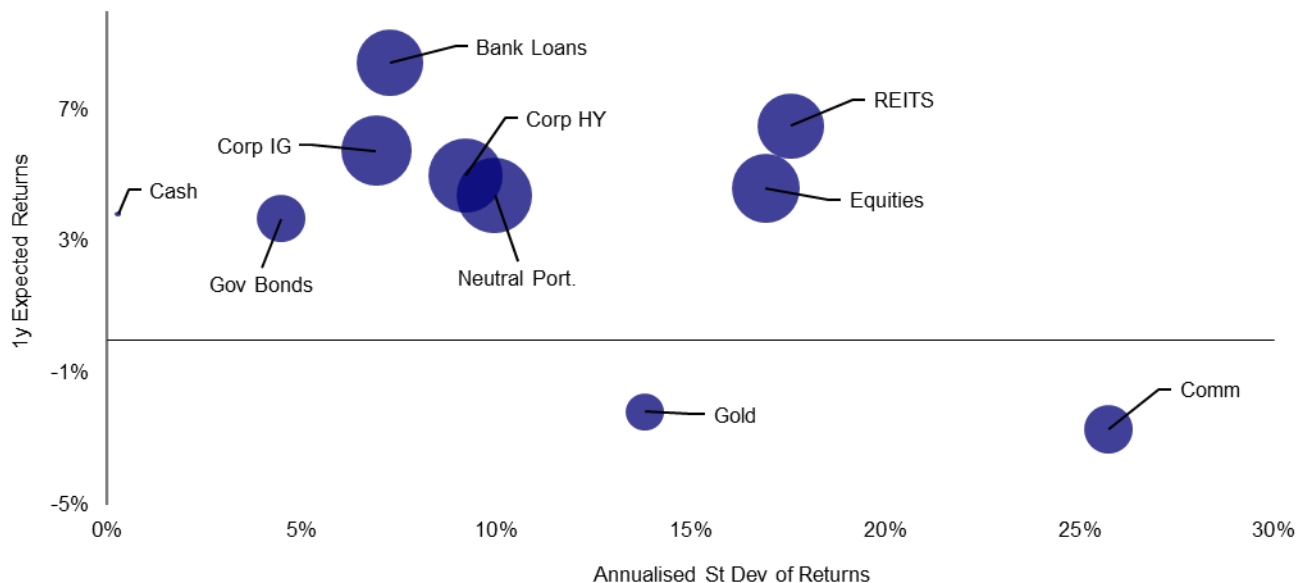
In our view:

- Cash rates are high and offer diversification. We remain at the Maximum allocation.
- Government debt outlook boosted by the recent rise in yields. We add but remain Underweight.
- Bank loans introduced to the Model Asset Allocation. We start with an Overweight stance.
- Corporate investment grade (IG) is attractive and has done well when Fed eases. We remain Overweight.
- Corporate high yield (HY) spreads have narrowed too far. We reduce to Neutral.
- Real estate (REITS) offers better returns than equities. We remain slightly Overweight.
- Equities were boosted by AI fever but we prefer other risky assets. We remain Underweight.
- Gold appears expensive. We remain at zero.
- Commodities are now even more expensive and are cyclical. We remain at zero.
- Regionally, we favour EM assets.
- USD is expensive, JPY is very weak. We partially hedge from USD to JPY.

Our best-in-class assets (based on 12m projected returns)

- EM government bonds
- US bank loans
- Chinese equities

Figure 1 – Projected 1-year returns for global assets and neutral portfolio



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 5-year pairwise correlation with other assets (hollow bubbles indicate negative correlation). Cash is an equally weighted mix of USD, EUR, GBP and JPY. Neutral portfolio weights shown in Figure 3. As of 31 August 2023. **There is no guarantee that these views will come to pass.** See Appendices for definitions, methodology and disclaimers.

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

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Summary and conclusions: Introducing bank loans	
We express caution by reducing HY in favour of government bonds and introduce bank loans at Overweight	We expect the global economy to continue decelerating, while recent asset behaviour is more suggestive of acceleration. Consequently, we remain cautious, expecting a period of consolidation among cyclical assets. Within our Model Asset Allocation we reduce high yield (HY) to Neutral, while adding to government bonds (still Underweight) and introducing bank loans at Overweight. The conservative stance is balanced by maintaining a regional bias towards emerging market (EM) assets.
Structural changes to the Big Picture include the inclusion of bank loans, consideration of sectors and factors and three thematic essays	We make a number of structural changes in this edition of The Big Picture. First, we introduce bank loans to the Model Asset Allocation (the real estate Neutral position is reduced to accommodate loans). Second, we introduce regular commentary upon sectors and factors, along with a “What if we are wrong” section. Finally, we have included three thematic essays: Adam Burton uses a flow of funds approach to analyse the medium term outlook for inflation; Andras Vig examines the historical performance of US and global assets when the Fed starts easing and Ashley Oerth writes about Artificial Intelligence (what is it and what could it mean for economies and financial markets?).
We think markets are too optimistic	We find ourselves at odds with recent market behaviour. We believe the global economy is decelerating, while we think cyclical assets are behaving as though the economy is accelerating. This leads us to expect a period of consolidation for riskier assets (at best, sideways movement). However, within our 12-month forecast horizon we expect major central banks to start cutting rates. The analysis reported in “Theme 2: What happens when the Fed starts easing?” suggests that government bonds and investment grade (IG) have tended to outperform many cyclical assets (though not equities) at that stage.
Underlying assumptions	Underpinning our projections for the next 12 months are the following assumptions: <ul style="list-style-type: none"> • Global GDP growth will slow and then recover • Global inflation will fall but remain above many central bank targets • Major western central banks are approaching the end of their tightening cycles • Long-term government yields will be mixed; yield curves steepen during 2024 • 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 and yield movements are mixed • Commodities struggle as the global economy slows (except agricultural products) • USD weakens as Fed tightening ends
Western central banks expected to ease within next 12 months	The full set of assumptions is shown in Appendix 3 , while the resultant market targets are in Figure 26 and returns for global assets are in Figure 2 . Perhaps the single most important forecast is that Fed policy rates will be lower in 12 months (even if they rise in the meantime). Elsewhere, we think ECB rates will also be lower in 12 months, while we expect BOE rates to be little changed (up, then down) and look for mild tightening from the BOJ and PBOC. We expect yield curves to steepen in 2024, with short rates finally falling (we expect US 10-year yields to fall over the next year but see upside elsewhere).
Optimisation favours cash, IG and bank loans	The 12-month projections shown in Figures 1 and 2 suggest a belief that the reward for risk will be variable. The optimisation results based on those projected returns (see Figure 28) express a preference for cash, IG and bank loans. As shown in Figure 1 , the projected return on equities is reasonable but not enough given the risk involved.
Risk scaled back a tad	In determining our Model Asset Allocation we follow the optimisation results in direction, if not magnitude (we are wary of having too many bank loans at this moment, for example). Overall, we scale back risk by reducing HY (to Neutral), while adding to government bonds (but remain Underweight) and introducing bank loans (Overweight).
HY reduced to Neutral after spread narrowing	HY spreads have narrowed again, which we find odd at a time of economic slowdown. We expect spreads to widen and defaults to rise, on top of which we note that HY tends to underperform other fixed income assets when the Fed starts to ease (see the thematic section on asset performance when the Fed eases). We reduce HY to a Neutral 5% (from an Overweight 8%), with both US and European allocations reduced to Neutral (see the detailed allocations in Figure 3).

Government bonds added to after the rise in yields (but still Underweight)	At the same time, we add to government bonds (going from 20% to 22%), though remain Underweight versus the Neutral 25%. Yields have risen over the last three months and we note that government bonds tend to perform relatively well when the Fed starts to ease (and when yields curves steepen). We maintain a bias towards longer duration instruments but expect that to change once the rate cutting cycle becomes well established (we expect Fed rates to be lower in 12 months). We have added to the US allocation after the rise in yields (further Overweight). We remain Overweight in EM (attractive spreads), Neutral in the UK and Underweight in Japan and the Eurozone.
Bank loan current yields are high; introduced at Overweight	We introduce bank loans to the Model Asset Allocation at an Overweight 6% (versus Neutral 4%). The asset class may normally be expected to underperform HY once central banks cut rates but we think valuations are favourable.
Real estate remains Overweight	Real estate (REITs) may appear to have been reduced (from 10% to 5%) but that simply reflects a reduction in the Neutral allocation (from 8% to 4%) to accommodate the bank loans asset class. We remain Overweight, though we have made some regional changes (adding to Japan and the Eurozone, reducing US and EM).
Cash remains the diversifier of choice	We maintain the Maximum allocation to cash (10% versus Neutral 2.5%). Central bank policy rates have continued to rise and we think cash now offers decent return potential, along with attractive diversification characteristics (see Figure 1).
Gold and commodities remain at zero	The other diversifying asset that we consider is gold . However, it has performed so well over recent years that we doubt that it can sustain a much higher price. We keep it at zero. We also leave the broader commodities allocation at zero, the consequence of expected cyclical weakening and prices that we find too high in many cases.
IG remains Overweight	We maintain the Overweight 18% allocation to investment grade (IG) , versus the Neutral 10%. We expect better returns than on either government bonds or HY (see Figure 1). We also note that IG tends to perform relatively well when the Fed starts easing. EM is our favourite region but we also like US and UK IG.
Equities unchanged and Underweight	We have not changed the equity allocation, remaining Underweight at 34% (Figure 1 shows a poor risk-reward trade-off, based on our forecasts). We are surprised at recent gains, given slowing economies and rising bond yields. We remain Overweight EM (especially China) and very Underweight the US (12% versus Neutral 25%). We reduce Japan to Underweight (after strong performance) and add to the Eurozone (Overweight).
EM remains the preferred region	Regionally, we favour EM assets, largely because we think they are cheap but also as a hedge in case the global economy does better than we expect.
Hedge from USD to JPY	Finally, we expect yen strength and maintain a partial hedge from USD into yen (Fig. 3).

Figure 2 – Expected global total returns (annualised, local currency) and Model Asset Allocation*

	Expected 1-year Total Return	Neutral Portfolio	Policy Range	Model Asset Allocation	Position Vs Neutral
Cash & Gold	0.8%	5%	0-10%		Overweight
Cash	3.8%	2.5%	0-10%		Overweight
Gold	-2.2%	2.5%	0-10%		Underweight
Government Bonds	3.7%	25%	10-40%	↑	22% Underweight
Corporate IG	5.8%	10%	0-20%		18% Overweight
Corporate HY	5.0%	5%	0-10%	↓	5% Neutral
Bank Loans	8.4%	4%	0-8%	↑	6% Overweight
Equities	4.6%	45%	25-65%		34% Underweight
Real Estate (REITS)	6.5%	4%	0-8%		5% Overweight
Commodities	-2.7%	2%	0-4%		0% Underweight

*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. Arrows show direction of change in allocations. Bank loans have been added in this edition and has been accommodated by reducing the Neutral position for real estate from 8% to 4%. The arrows for bank loans and real estate are relative to the new Neutral positions. See appendices for definitions, methodology and disclaimers. **There is no guarantee that these views will come to pass.** Source: Invesco Global Market Strategy Office

Model asset allocation*

Figure 3 – Model asset allocation (20/09/2023)

	Neutral	Policy Range	Allocation	Position vs Neutral	Hedged	Currency
Cash Equivalents	5%	0-10%	10%			
Cash	2.5%		10%			
Gold	2.5%		0%			
Bonds	40%	10-70%	45%			
Government	25%	10-40%	22%			
US	8%		13%			
Europe ex-UK (Eurozone)	7%		2%			
UK	1%		1%			
Japan	7%		2%			
Emerging Markets	2%		4%			
China**	0.2%		0%			
Corporate IG	10%	0-20%	18%			
US Dollar	5%		10%			40% JPY
Euro	2%		3%			
Sterling	1%		2%			
Japanese Yen	1%		0%			
Emerging Markets	1%		3%			
China**	0.1%		0%			
Corporate HY	5%	0-10%	5%			
US Dollar	4%		4%			
Euro	1%		1%			
Bank Loans	4%	0-10%	6%			
US	3%		4%			
Europe	1%		2%			
Equities	45%	25-65%	34%			
US	25%		12%			
Europe ex-UK	7%		8%			
UK	4%		4%			
Japan	4%		2%			
Emerging Markets	5%		8%			
China**	2%		4%			
Real Estate	4%	0-16%	5%			
US	1%		1%			
Europe ex-UK	1%		1%			
UK	1%		1%			
Japan	1%		2%			
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%		43%			
EUR	19%		20%			
GBP	7%		11%			
JPY	13%		13%			
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. Bank loans have been added in this edition and has been accommodated by reducing the Neutral position for real estate from 8% to 4%. The arrows for bank loans and real estate are relative to the new Neutral positions. See appendices for definitions, methodology and disclaimers.

Source: Invesco Global Market Strategy Office

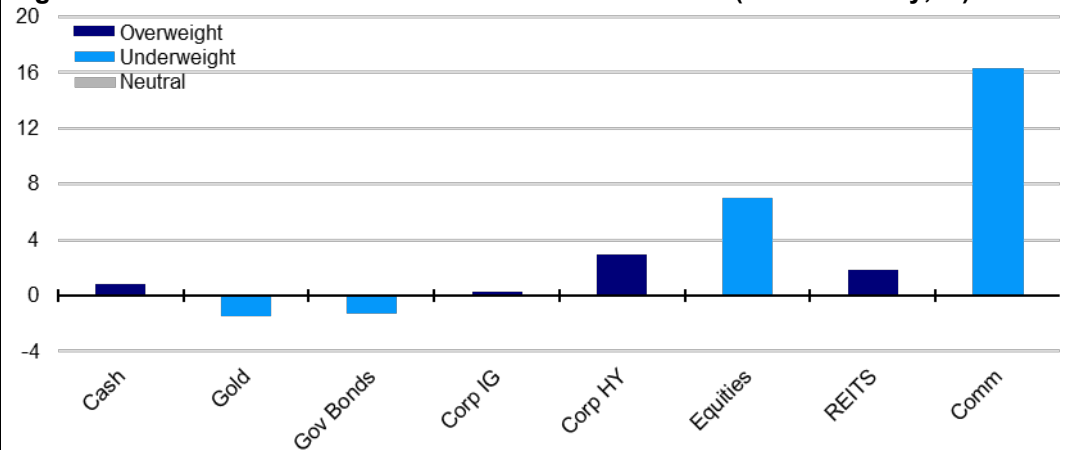
Cyclical assets outperformed over the last three months

Since we last wrote

In the last Big Picture document we reduced government bonds to Underweight within our Model Asset Allocation (see [Big Picture 2023 Q3](#) published on 18 June 2023), while adding to IG (going further Overweight) and REITS (to Overweight). From a regional perspective we added to EM assets. **Figure 4** shows how global assets have performed since then (as of 31 August 2023). Full regional detail is shown in **Appendix 2**.

Asset performance has been broadly positive since then (see **Figure 4**). Luckily, we were Underweight the two asset categories that produced negative returns (gold and government bonds). However, we were also Underweight the two best performing categories (equities and commodities). **Appendix 2** shows that energy was the main contributor to positive broad commodity index performance, while equities were led higher by Japan, the US and China in local currency terms (we were Neutral, Underweight and Overweight, respectively). In general, our Overweight EM stance generated mixed results (as did that of the UK).

Figure 4 – Global asset class total returns since 31/05/23 (local currency, %)*

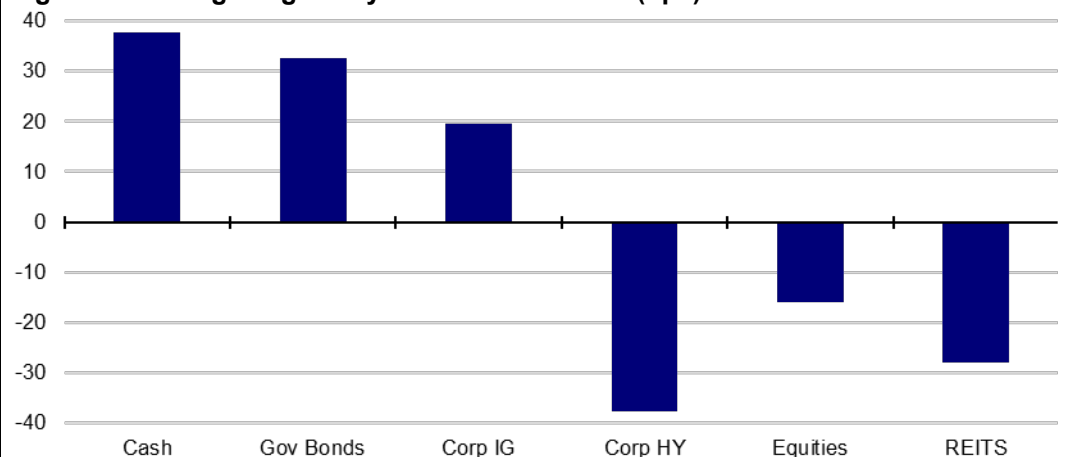


Past performance is no guarantee of future results. *31/05/23 to 31/08/23. Colours represent model allocations during this period. See appendices for definitions and disclaimers. Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Interest rates up but spreads narrowed in favour of riskier assets

Cash rates again increased as central banks tightened (see **Figure 5**). Government bond and investment grade (IG) yields also increased, which dampened the performance of those assets. There appears to have been a narrowing of credit spreads versus government bonds, especially HY, which explains the strong performance of the latter. In general, there was a decline in the yield on cyclical assets (HY, equities and REITS), suggesting optimism about the cycle. Is that optimism justified?

Figure 5 – Change in global yields since 31/05/23 (bps)



Past performance is no guarantee of future results. From 31/05/23 to 31/8/23. See appendices for definitions and disclaimers. Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Proprietary indicators suggest we are in a recovery regime

Where are we in the cycle?

Figure 6 shows two proprietary indicators from Invesco Investment Solutions, designed to help decide where we are in economic and market cycles. The Global LEI (leading economic indicator) measure suggests that global growth is running close to historical norms, while the GRACI (Global Risk Appetite Cycle Indicator) suggests that risk appetite has improved, which together suggest an improved cyclical picture.

Figure 6 – Global risk appetite and the global business cycle



Note: **past performance does not guarantee future results.** Monthly data from January 1992 to August 2023 (as of 31 August). Both Global LEI (Leading Economic Indicator) and GRACI (Global Risk Appetite Cycle Indicator) are proprietary tools provided by Invesco Solutions. 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

Regional data flows appear to be converging

Figure 7 suggests there had been a divergence in economic data flows, with positive surprises in the US and negative surprises in China and Europe. This is perhaps one reason why the US dollar has strengthened in recent months, despite the downgrading of US government debt by Moody's. However, the most recent sets of data point to a closing of the surprise gap. In particular, Chinese data appears to be improving, with August retail sales and industrial production surprising to the upside, for example, while the edge has come off US data strength. Chinese and European data can hardly be described as positive but at least expectations were limited, whereas there appeared to have been growing (we fear misplaced) optimism about the US economy.

Figure 7 – Citigroup Economic Surprise Indices

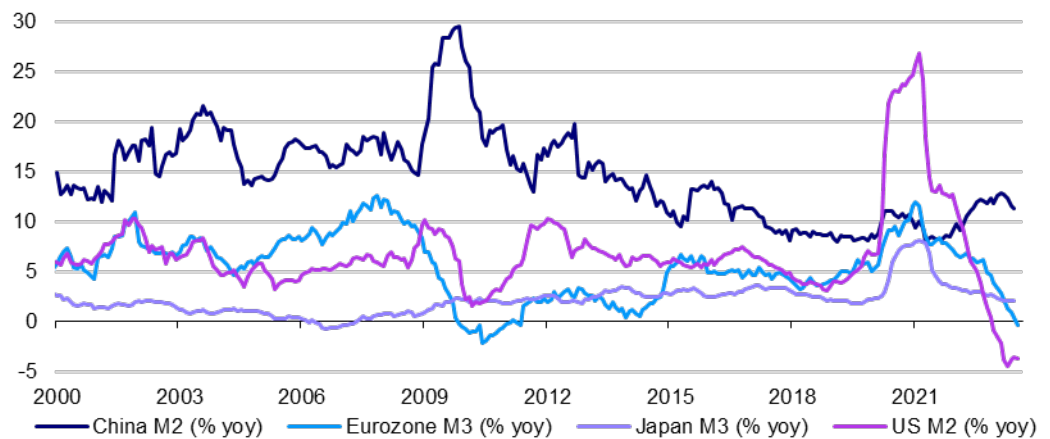


Note: based on daily data from 1 January 2019 to 18 September 2023. Source: Citigroup, Refinitiv Datastream and Invesco Global Market Strategy Office

Global money supply growth is easing but China offers a big contrast to the US

One reason for expecting continued slowdown in the global economy is the deceleration of monetary aggregates. **Figure 8** shows a marked deceleration in US and Eurozone money supplies, with negative year-on-year growth. That is of course the result of the central bank reaction to high inflation that itself was caused by the rapid expansion of money supplies in 2020 and 2021. In any case, shrinking money supply hardly seems likely to foster healthy economic growth (see Adam Burton's thematic section on fund flows and global inflation). However, the chart also shows that it is not the same everywhere: money supply growth has also fallen in Japan but remains positive. Even better, monetary conditions seem accommodative in China, which could be an important support for that economy, along with the incremental fiscal support.

Figure 8 – Global money supply growth



Note: monthly data from January 1980 to July 2023.
Source: Refinitiv Datastream and Invesco Global Market Strategy Office

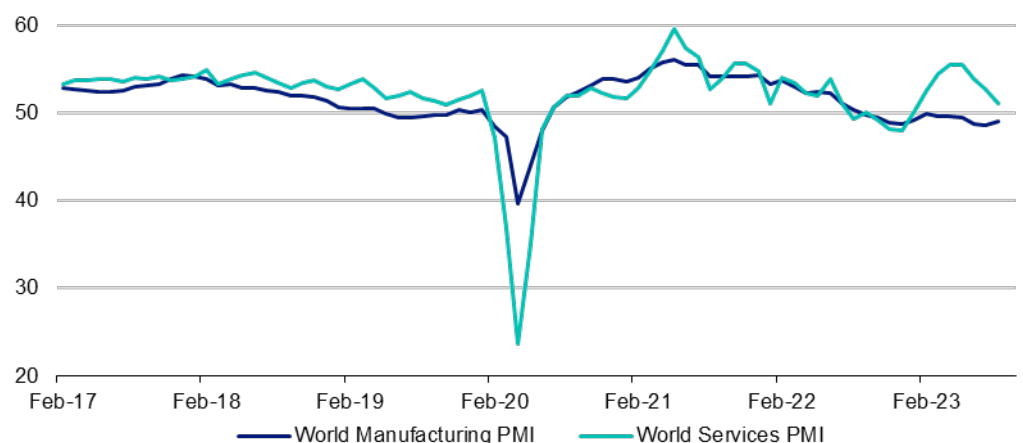
PMIs suggest that service sector activity is now slowing...

Global purchasing manager index (PMI) data points to a convergence of conditions between services and manufacturing sectors (see **Figure 9**). Demand for services was strong as lockdowns ended, most recently in China. Manufacturing activity had already slowed, given that most goods demand was satisfied, even during lockdowns. However, those PMIs suggest that service sector activity is now following that of manufacturing lower, as often happens.

...while financial markets see recovery on the horizon

Hence, the global economy appears to be slowing but the picture varies by sector and by region. It is hard to identify any major economy that is suffering anything other than slow growth or mild recession. Meanwhile, asset class performance suggests that markets are convinced that the economic cycle is about to improve, with **Figure 4** and **Appendix 2** showing that cyclical assets have outperformed in the last three months.

Figure 9 – Global purchasing manager indices



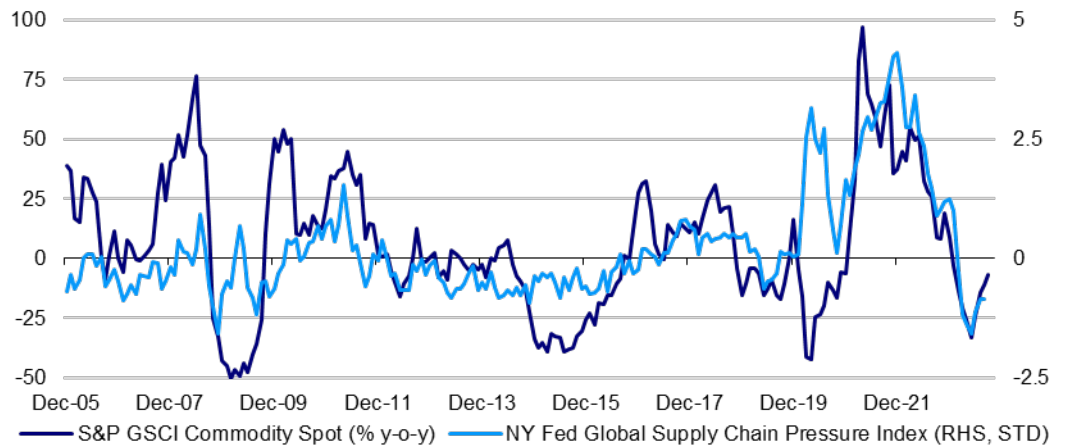
Note: monthly data from February 2017 to August 2023, showing JP Morgan PMIs, provided by S&P Global.
Source: JP Morgan, S&P Global, Refinitiv Datastream and Invesco Global Market Strategy Office

Global disinflation forces are easing

Is inflation levelling out?

Inflation remains a key metric, as central banks assess whether they have done enough to bring it under control. **Figure 10** shows that global supply chain pressures remain limited and seem unlikely to be the source of inflation that they were in 2020/21.

Figure 10 – Global disinflation pressures are easing



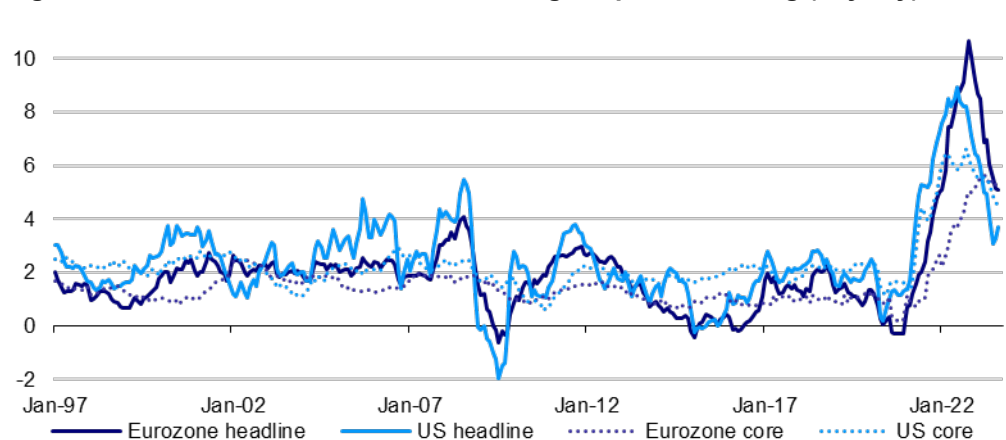
Past performance is no guarantee of future results. Monthly data from December 2005 to September 2023 (as of 6 September 2023). NY Fed Global Supply Chain Pressure Index tracks the state of global supply chains using data from the transportation and manufacturing sectors, as constructed by the Federal Reserve Bank of New York. “STD” is standard deviations from historical mean. Source: Federal Reserve Bank of New York, Global Supply Chain Pressure Index, S&P GSCI, Refinitiv Datastream and Invesco Global Market Strategy Office.

However, commodity prices are now less of a depressing influence than they were, with energy prices rebounding over recent months (see **Appendix 2**). We think this is the main reason that headline inflation has levelled out or turned up in recent months (see **Figure 11**). It is hard to imagine energy prices trending higher if the global economy weakens, so we would categorise the recent levelling out as a temporary pause in a downward trend.

We expect inflation to continue falling but not in a straight line

Interestingly, core inflation has continued falling, despite the rise in headline rates. By definition, the core rate is not directly impacted by swings in energy prices and, now that it has started to fall, we expect it to go lower over the coming year or so (see the section on global inflation and fund flows by Adam Burton). We are confident that the economic slowdown already seen, along with the ongoing depressing effect of central bank tightening, will result in lower inflation.

Figure 11 – Eurozone CPI inflation following US path with a lag (% y-o-y)



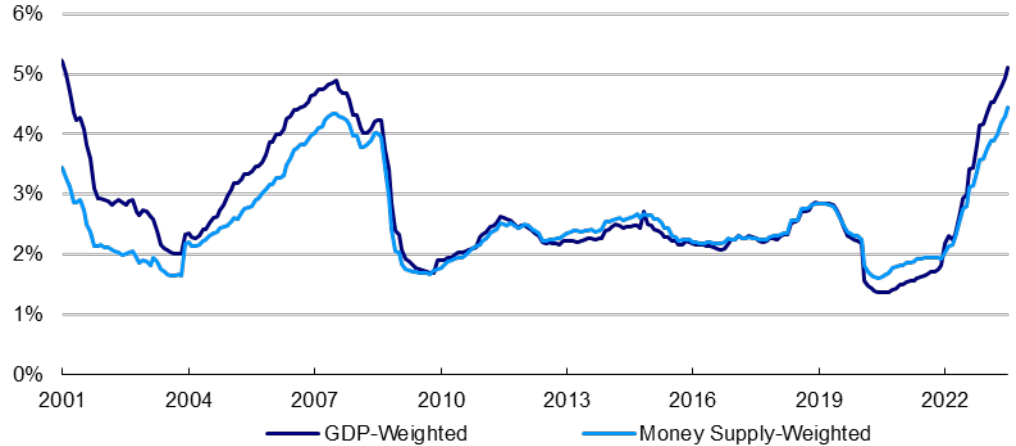
Note: Based on monthly data from January 1997 to August 2023.
Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Policy rates now above pre-GFC peaks, having started at record lows

Are central banks about to ease?

Despite the temporary halt to rate hikes around the US regional banking crisis, major central banks have continued to tighten. **Figure 12** shows how much policy rates have risen in the 20 largest economies, taking them above pre-global financial crisis (GFC) levels. That is a lot of tightening in a relatively short period of time and the big question is whether tightening central banks judge that they have done enough.

Figure 12 – Weighted average central bank policy rate (%)



Based on monthly data from February 2001 to August 2023 (as of 31 August 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, Refinitiv Datastream and Invesco Global Market Strategy Office

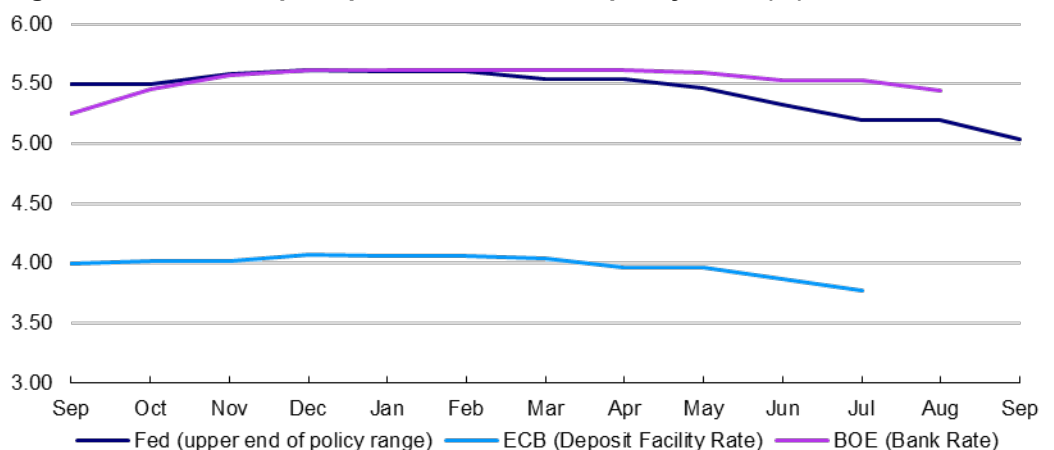
Markets think major central banks are close to terminal rates

Rates have gone higher than we expected but the market implied path of central bank policy rates (as calculated by Bloomberg) suggests a collective belief that Fed, ECB and BOE rates are close to peaking (see **Figure 13**). Indeed, it appears that the first rate cuts are expected around mid-2024. We note that since 1974, the Fed has waited an average of five months between the last hike and the first cut (nine months since 1995).

We expect major western central bank rates to be lower in 12 months

Given our belief that the global economy continues to slow, we expect central bank rates to be lower in most major economies in 12 months' time (see **Figure 26**). The obvious exceptions are China and Japan. Though PBOC rates may be reduced in the short term, we doubt they will fall substantially over the next year, given the easing bias of recent years. As for the BOJ, we remain surprised that no steps have been taken to normalise policy (apart from widening the target band of 10-year JGB yields) and expect some tightening action over the next 12 months.

Figure 13 – Market implied path of central bank policy rates (%)



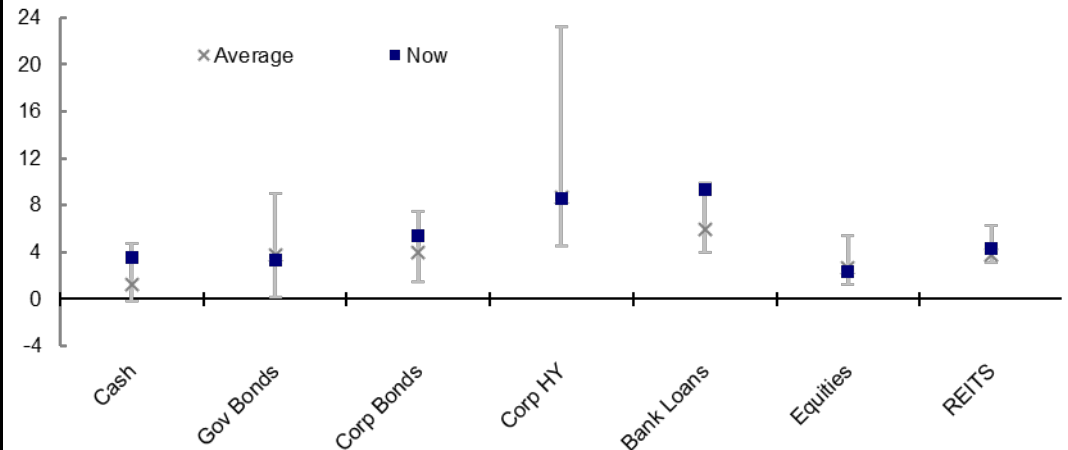
From September 2023 to September 2024. Based on Fed Funds Futures (for the Fed) and Overnight Index Swaps (for the BOE and ECB) as calculated by Bloomberg. Rates calculated for central bank policy meeting dates. For months where there is no meeting, we show the same rate as the month before. As of 18 September 2023. Source: Bloomberg and Invesco Global Market Strategy Office

Financial markets appear to be already pricing a future economic recovery

What are markets telling us?

As already seen in **Figures 4 and 5**, recent asset class performance is what we might normally expect to see at the start of an economic upswing. That presents a problem, as we are yet to be convinced that the global economy is spontaneously recovering (and most central banks have continued to tighten). At best, financial markets seem to have anticipated a recovery that is yet to occur, suggesting that cyclical asset gains may be limited when the economy does recover. At worst, it may suggest that cyclical assets will suffer if recovery expectations are disappointed.

Figure 14 – Global asset yields within historical ranges (%)



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 August 2023.

Source: Refinitiv Datastream and Invesco Global Market Strategy Office

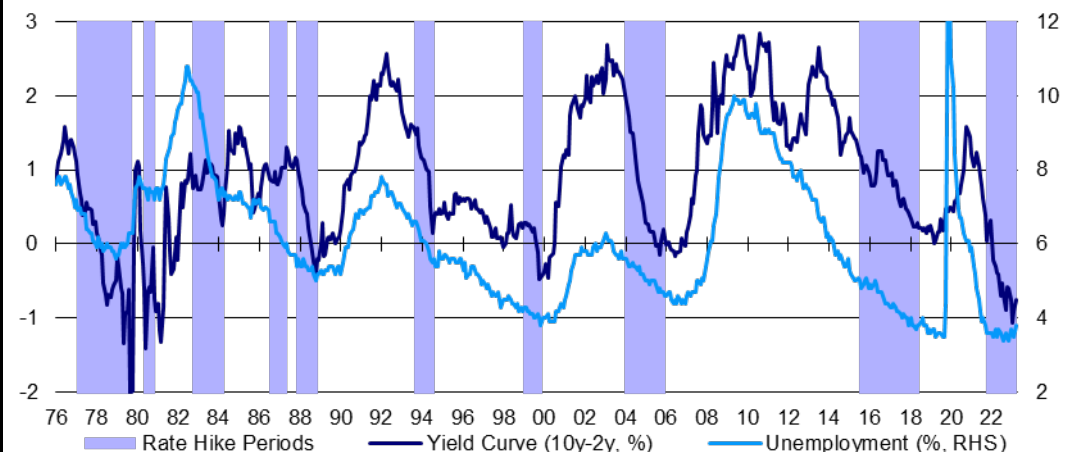
Cash rates higher than normal, as are yields on bank loans and IG

The rise in policy rates (**Figure 12**) has pushed cash rates above historical norms (see **Figure 14**, though the comparison period for cash only started in 2001). Yields on most other assets are close to historical norms, though IG and bank loan yields are more generous than usual.

Steeply inverted yield curves may start to steepen over the next 12 months

Government bond yield curves have become steeply inverted. **Figure 15** shows how inversion is common towards the end of Fed tightening cycles. It also shows that the yield curve tends to steepen once unemployment has bottomed and the Fed starts to ease. We suspect unemployment is about to turn up in many countries, suggesting that central bank easing and yield curve steepening may start within our 12-month horizon.

Figure 15 – US unemployment, the yield curve and Fed tightening cycles



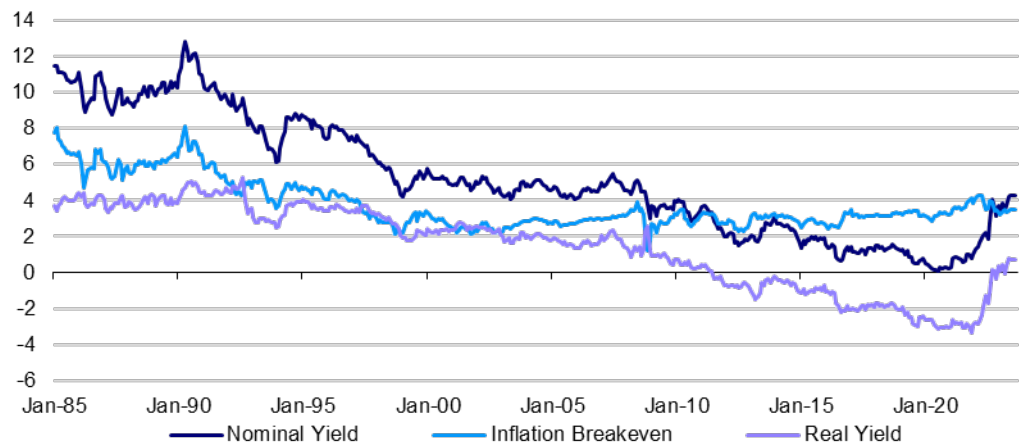
Notes: past performance is no guarantee of future results. Based on monthly data from June 1976 to August 2023 (as of 31 August 2023). The shaded areas show periods when the US Federal Reserve was raising interest rates (from first to last rate hike).

Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Government bonds are now more attractive and tend to perform well when the Fed starts easing (along with IG)

Figure 16 confirms that government yields are back to pre-GFC levels. Despite a steady climb in UK inflation expectations over the past decade, the main contributor to the recent rise in nominal yields has been the rise in the real component, which is back to GFC era levels. That may reflect optimism about the cycle but we think it is also due to reductions in central bank holdings of government bonds. The era of grossly unattractive government yields is over (in our opinion) and the later thematic section on Fed easing shows that government bonds and IG have tended to perform well after the first rate cut.

Figure 16 – UK 10-year gilt yield decomposed (%)



Note: **past performance is no guarantee of future results.** Monthly data from January 1985 to August 2023 (as of 31 August 2023). “Real yield” is the 10-year UK inflation-protected gilt yield. Source: Refinitiv Datastream and Invesco Global Market Strategy Office

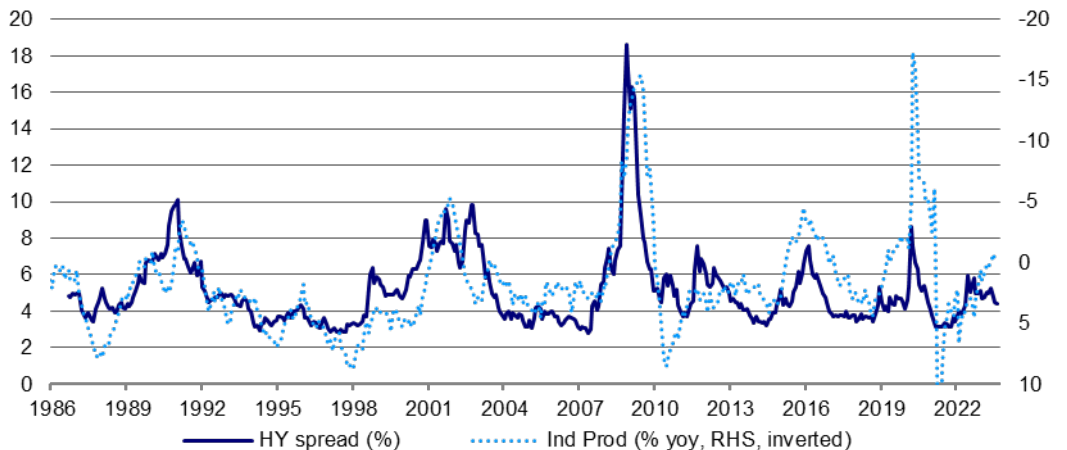
We favour long duration

As already mentioned, yield curves are extremely inverted, so that short maturity yields are higher than longer duration counterparts. With no movement in yields from here, that would favour short duration instruments. However, as central bank tightening cycles draw to a close, we expect attention to focus on future rate reductions, with long yields moving lower in anticipation. Hence, we favour longer duration and will likely continue doing so until the central bank easing cycle is well established.

US HY spreads have priced in a lot of good news and may widen, just as defaults rise

Elsewhere within the fixed income universe, we have already noted that credit spreads appear to have narrowed. **Figure 17** shows the cyclical nature of the US high yield spread. It also shows how unusual it is for that spread to narrow while the US economy is decelerating (industrial production growth is inverted in the chart). It may be that financial markets are anticipating the economic recovery. If so, the scope for further spread narrowing is limited. We fear spread widening and a rise in defaults.

Figure 17 – US high yield spread versus industrial production growth



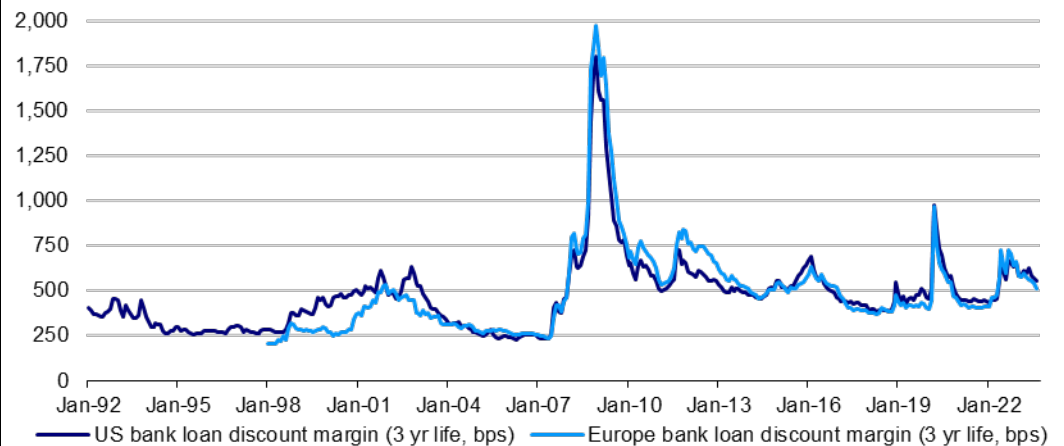
Notes: Past performance is no guarantee of future results. Monthly data from January 1986 to August 2023 (as of 31 August 2023). HY spread is the difference between the yield to maturity on the ICE BofA US High Yield Index and the US 10-year treasury yield.

Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Bank loans added to our framework and yields look attractive (to us)...we expect spreads to be stable

This edition sees the introduction of bank loans to our asset allocation framework. We have already noted that current yields on bank loan indices are at or close to record highs (see **Figure 14**). However, that was based on our global aggregate and **Appendix 1** shows that US yields may be near historical highs but European yields are not (the GFC bounce in European yields exceeded that in the US). However, we have found that current yield has been a poor guide to future performance (see [white paper](#)). Our analysis led us to prefer discount margin as a predictor of future returns and **Figure 18** suggests they are in the middle of recent historical ranges. Overall, we assume little change in bank loan spreads (versus a widening of HY spreads).

Figure 18 – Bank loan discount margin (3-year life, basis points)

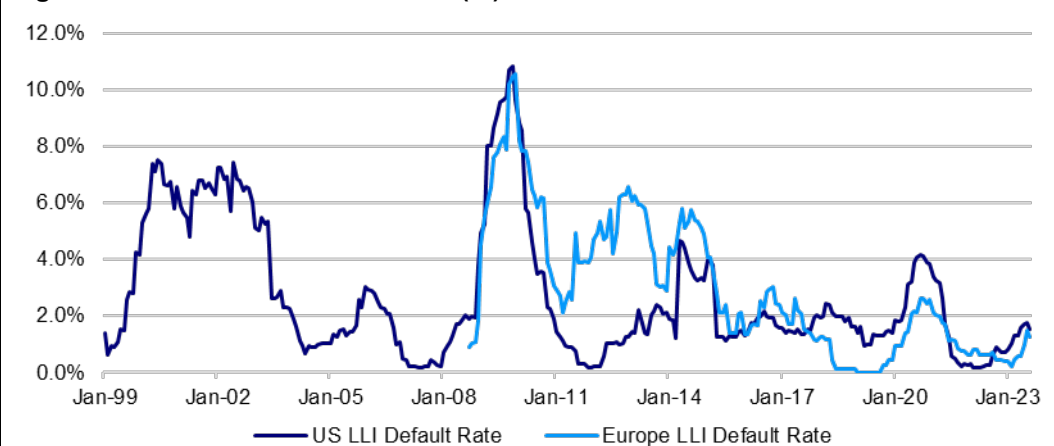


Notes: **Past performance is no guarantee of future results.** Based on monthly data from January 1992 to August 2023. Discount margin is the internal rate of return (IRR) on 3-year life loans minus the benchmark interest rate used to set loan repayment rates. IRR is the discount factor that equates 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

We fear a rise in defaults and HY may normally be preferred when central banks ease. However, we think bank loans offer better value than HY

The bank loans asset class has a cyclical element due to the risk of defaults. **Figure 19** shows that default rates are rising and we expect a further increase towards historical norms. Even so, our projections suggest that high current yields offer sufficient compensation for the default risk that we envisage (see the projected returns in **Figure 27**). The one disadvantage of the asset class is the very short duration, which may be a handicap as we look forward to central bank rate cuts. From this perspective, high yield credit would normally be expected to perform better than bank loans when central banks are easing, though will suffer the same rise in default rates, in our opinion. Valuations may favour bank loans, while cyclical considerations may favour HY.

Figure 19 – Bank loan default rates (%)

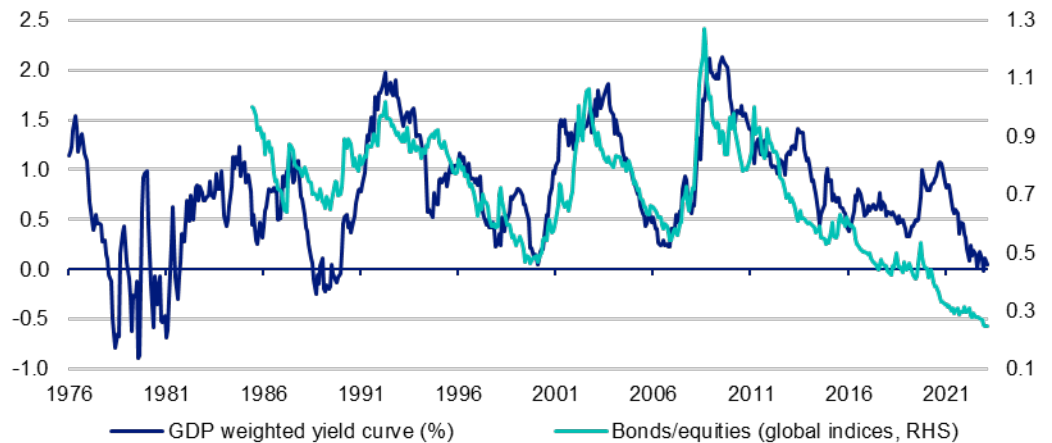


Notes: **Past performance is no guarantee of future results.** Monthly data from January 1999 to August 2023. Based on Morningstar LSTA US Leveraged Loan Index and Morningstar European Leveraged Loan Index. Default rates are based on loan values outstanding and calculated on a trailing 12-month basis. Source: Morningstar and Invesco Global Market Strategy Office

Steepening yield curves have historically seen bonds outperform equities

We have already mentioned that the US yield curve has become very inverted. **Figure 20** shows that the 10y-2y yield curve across G10 countries has been flattening since around the GFC, with the most recent leg downward coming since early 2021. The chart also shows that the performance of global bonds versus global equities seems to have been historically linked to changes in the shape of the yield curve: steepening yield curves seem to be associated with outperformance by bonds, while flattening yield curves seem to go with outperformance by equities. If history is any guide, and if the average G10 yield curve steepens over the coming year or so (as we expect), then government bonds could outperform stocks.

Figure 20 – G10 yield curve and bonds versus equities



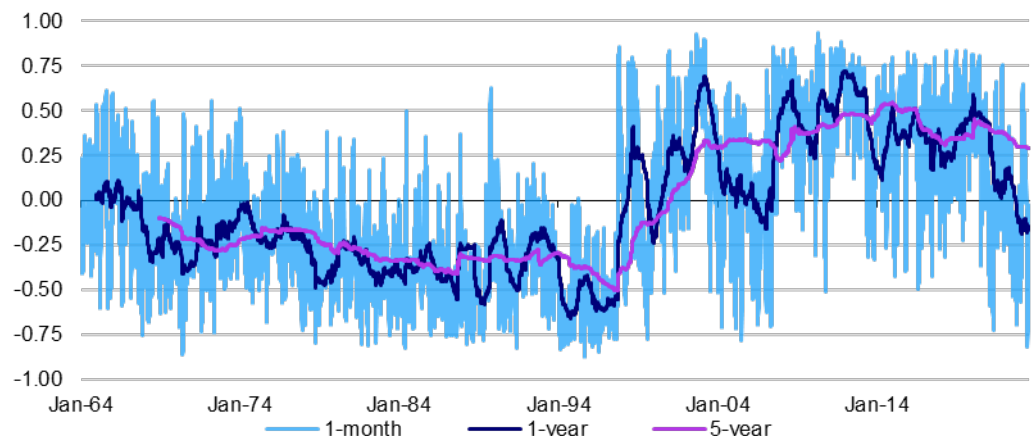
Note **Past performance is no guarantee of future results.** Based on monthly data from January 1976 to August 2023. "GDP weighted yield curve" is the average 10-year yield minus 2-year yield comparison across 10 economies (Australia, Brazil, Canada, China, Eurozone, India, Japan, Russia, UK and US), 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, Refinitiv Datastream and Invesco Global Market Strategy Office

It is not clear how equities will react to falling bond yields

On top of concerns about the economic cycle, we face uncertainty about the relationship between equities and bond yields. Having been predominantly positive since the start of this century, the correlation between bond yields and equity prices turned negative during 2022, which is how theory suggests it should be (see **Figure 21**). It is not yet clear whether we are witnessing a permanent change but if the correlation remains negative, equities could benefit if bond yields fall as the Fed and other central banks ease. We are supposing it will be the case. If not, equities may suffer a relapse if profits fall and central banks cut rates. This clouds the outlook for equities, in our opinion.

Figure 21 – Correlation between daily changes in S&P 500 and US 10-year yield



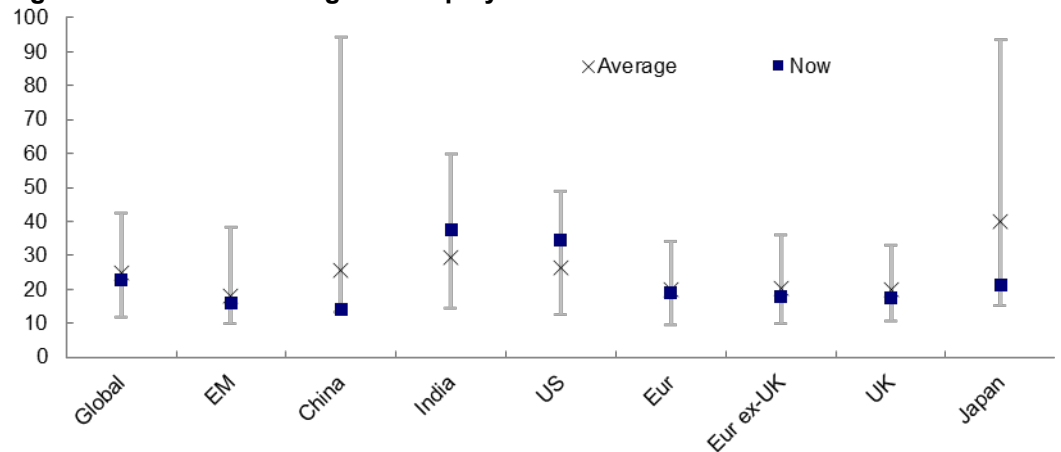
Note: **past performance is no guarantee of future results.** Based on daily data from 31 December 1963 to 11 September 2023. Correlations are calculated based on the percentage daily changes in the S&P 500 and 10-year US treasury yield. The correlations are measured over 1-month, 1-year and 5-year periods.

Source: Refinitiv Datastream and Invesco Global Market Strategy Office

China remains the cheapest major equity market

Among major equity markets, we still believe that China represents good value, based upon the cyclically adjusted PE ratios (CAPEs) shown in **Figure 22**. Not only are Chinese equities cheap within their own historical context but they are also cheaper than other major markets (with what we believe will be better economic momentum and a central bank that is still easing). The biggest contrast is with the US and India, both of which are more expensive than usual, suggesting there is a lot of good news in the price. Though Japanese equities appear to be better value than normal, it has to be remembered that the historical average is distorted by the 1980s bubble. Overall, we think Japanese and European equities are in the valuation middle ground.

Figure 22 – Historical ranges for equity market CAPEs

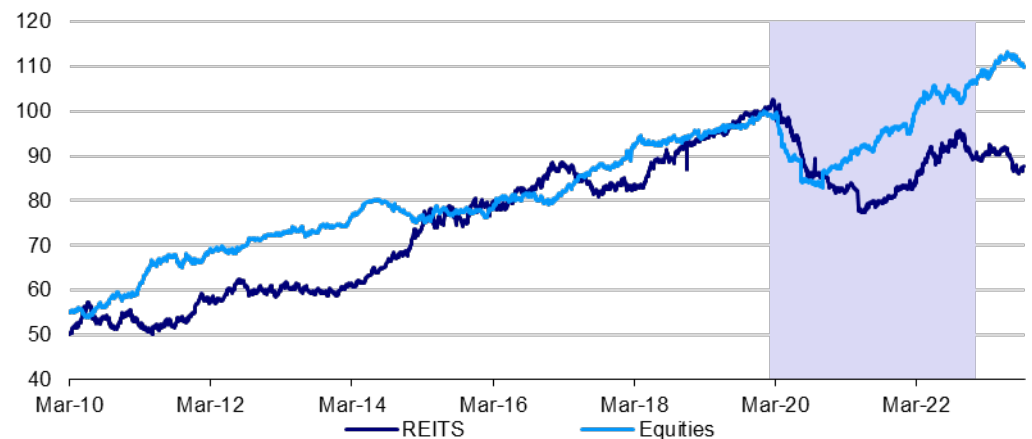


Note: CAPE = Cyclically Adjusted Price/Earnings and uses a 10-year moving average of earnings. Based on daily data from 3 January 1983 (except for China from 1 April 2004, India from 31 December 1999 and EM from 3 January 2005), using Datastream indices. As of 31 August 2023.

AI could fade as an influence on US market performance. We think REITS represent better (if precarious) value

Of course, the US equity market has been helped by enthusiasm for stocks associated with artificial intelligence (AI), of which there are more in the US than elsewhere. We think AI has the potential to become the next investment bubble but for now the critical ingredient of an abundant supply of credit is missing (see the later section on AI by Ashley Oerth). Among other sectors, real estate has suffered. **Figure 23** shows that broad equity market dividends have started to fall, so REITS are no longer alone on that score. The fundamental problems of the sector suggest that REIT dividends may struggle to close the pandemic era deficit and we expect lacklustre growth (if any) over the next year. However, we believe that is now reflected in the price, with REIT yields more generous than usual compared to the broad equity market (see **Figure 14**).

Figure 23 – Global real estate (REIT) and equity dividends (31/12/19 = 100)



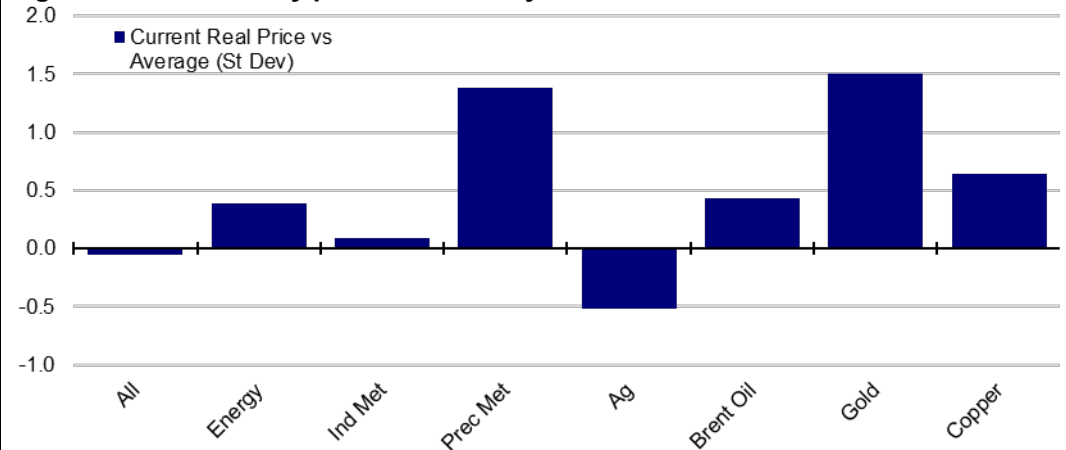
Note: daily data from 2 March 2010 to 11 September 2023. For both REITS and Equities, the level of dividends is calculated from the reported dividend yield and index levels (and indexed to 100 on 31 December 2019). REIT dividends are based on FTSE EPRA/NAREIT Global Index. Equity dividends are based on the Datastream World Index. Shaded area shows the Covid-19 pandemic period (from 1 February 2020 to end-2022). Source: FTSE Russell, Refinitiv Datastream and Invesco Global Market Strategy Office

Can recent energy price strength be maintained if the global economy weakens?

Commodities and currencies

The rise in commodity prices over the last three months (especially energy) has exacerbated the premium versus historical norms, when measured in real terms (see **Figure 24**). Precious metals (including gold) appear very expensive and we doubt prices can move sustainably higher. Agricultural products remain cheap compared to historical norms. With a weakening global economy, we doubt that energy commodities can maintain recent high prices (despite the best efforts of OPEC and Russia).

Figure 24 – 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 August 2023. See appendices for definitions, methodology and disclaimers. Source: GSCI, Refinitiv Datastream, Invesco

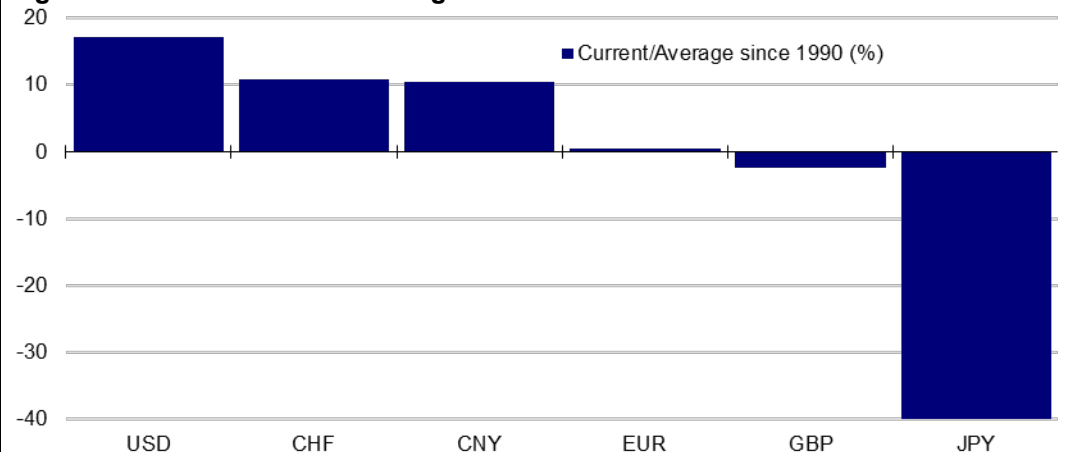
US dollar has been mixed over last three months...

Our scepticism about commodities makes it difficult to be enthusiastic about EM currencies as a group. When it comes to developed world currencies, the US dollar has gained ground over the last three months versus the Japanese yen and Chinese yuan (due to the fact that those central banks are not tightening) but lost ground against major western developed world currencies (see **Appendix 2**).

... but remains expensive, while the yen is very cheap (in our opinion)

Judging by real trade weighted indices (**Figure 25**), the US dollar remains the most overvalued among major currencies versus historical norms. At the other extreme is the yen, which has weakened as the BOJ has maintained a very loose stance while other major central banks have tightened aggressively. We believe the 10% decline in the yen versus the dollar during 2023 is a big factor in the outperformance of Japanese stocks in local currency terms. However, we believe the yen will strengthen significantly as the BOJ starts to normalise its policy stance, which we think it is likely to do (see **Figure 26**).

Figure 25 – Real effective exchange rates



*Currency indices measured against a trade-weighted basket of currencies and adjusted for inflation differentials. As of 31 July 2023. Source: OECD, Datastream and Invesco Global Market Strategy Office

Economies to slow and then recover...but that recovery seems already priced in

We assume lower growth and inflation will allow central banks to soften their approach and bring eventual recovery

We expect Fed rates to be lower in 12 months and yield curves to steepen

Equity and REIT yields to face conflicting influences

Projections for the next year

We think the global economy is decelerating, which brings short-term risk for the more cyclical assets. However, we have a 12-month forecast horizon, within which we expect some major central banks to stop tightening and then start easing, which could help some asset categories, in our view. Our asset class projections are predicated upon the idea that a lot of that economic recovery is already priced into markets.

Underpinning our projections for the next 12 months 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 are approaching the end of their tightening cycles
- Long-term government yields will be mixed; yield curves steepen during 2024
- 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 and yield movements are mixed
- Commodities struggle as the global economy slows (except agricultural products)
- USD weakens as Fed tightening ends

The assumptions behind our projections are laid out in **Appendix 3**, while **Figure 26** shows the implied market targets. Perhaps the single most important forecast is that Fed policy rates will be markedly lower in 12 months (even if they rise in the meantime). Elsewhere, we think that ECB rates will also be lower in 12 months, while we expect BOE rates to be little changed (up, then down) and look for mild tightening from the BOJ and PBOC. We expect yield curves to steepen during 2024, with short rates eventually falling (we expect US 10-year yields to fall over the next year but see upside elsewhere).

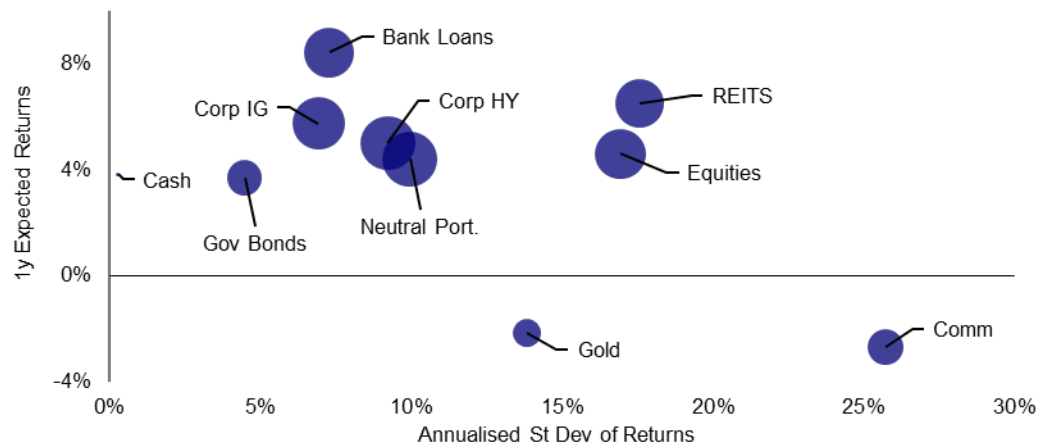
Yields on equities and real estate will face competing forces: slowing economies could push them to the upside (perhaps balanced by falling bond yields) but they could then fall as economies recover. Overall, we expect little change, except for Chinese equities and UK REITS (declines expected) and EM REITS (increase expected).

Figure 26 – Market forecasts

		Current (31/08/23*)	Forecast 12-month
Central Bank Rates	US	5.50	4.75
	Eurozone	4.00	3.50
	China	3.45	3.50
	Japan	-0.10	0.10
	UK	5.25	5.25
10yr Bond Yields	US	4.10	3.75
	Eurozone	2.44	2.65
	China	2.59	2.80
	Japan	0.64	0.90
	UK	4.36	4.50
Exchange Rates/US\$	EUR/USD	1.08	1.15
	USD/CNY	7.26	7.00
	USD/JPY	145.55	125.00
	GBP/USD	1.27	1.30
	USD/CHF	0.88	0.86
Equity Indices	S&P 500	4508	4450
	Euro Stoxx 50	4297	4650
	FTSE A50	12602	14300
	Nikkei 225	32619	33500
	FTSE 100	7439	7650
Commodities (US\$)	Brent/barrel	87	80
	Gold/ounce	1942	1900
	Copper/tonne	8405	8500

Notes: * except for central bank rates which take account of subsequent changes. **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 27 – Projected 12m return versus risk for global assets



Notes: 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 (hollow bubbles indicate negative correlation). Cash is an equally weighted mix of USD, EUR, GBP and JPY. Neutral portfolio weights shown in **Figure 3**. As of 31 August 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, Refinitiv Datastream and Invesco Global Market Strategy Office

Changes to projected returns largely reflect shifts in yields but also changed assumptions

Some of the return projections shown in **Figure 27** are higher than in the last edition (cash, government bonds, IG and gold), while others are lower (REITS, equities and commodities). The changes since last time broadly reflect the respective movements in asset yields (see **Figure 5**), though some assumptions have changed (for example, less pessimism about HY spreads and default rates). Bank loan spreads are more generous than HY spreads, which explains the higher projected returns for bank loans (though the lack of duration may be a handicap when rates fall).

Optimisation favours cash, IG and bank loans

We use an optimisation process to help balance risk and reward and **Figure 28** shows the results. The outcome favours cash, IG and bank loans, while shunning commodities, gold, and equities (the outcomes are mixed for government bonds, HY and real estate).

HY reduced, govt bonds boosted and bank loans start at Overweight

Within our Model Asset Allocation, we follow the output of the optimiser, in direction if not magnitude. We reduce HY to Neutral, while increasing government bonds (but remaining Underweight) and introducing bank loans at Overweight.

Figure 28 – 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%	0.8%	10%	6%	10%
Cash	2.5%	0-10%	3.8%	10%	6%	10%
Gold	2.5%	0-10%	-2.2%	0%	0%	0%
Govt Bonds	25%	10-40%	3.7%	40%	10%	↑ 22%
Corporate IG	10%	0-20%	5.8%	17%	20%	18%
Corporate HY	5%	0-10%	5.0%	0%	10%	↓ 5%
Bank Loans	4%	0-8%	8.4%	8%	8%	↑ 6%
Equities	45%	25-65%	4.6%	25%	38%	34%
Real Estate	4%	0-8%	6.5%	0%	8%	5%
Commodities	2%	0-4%	-2.7%	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. Bank loans have been added in this edition and has been accommodated by reducing the Neutral position for real estate from 8% to 4%. The arrows for bank loans and real estate are relative to the new Neutral positions. **There is no guarantee that these views will come to pass.** See appendices for definitions, methodology and disclaimers. Source: Invesco Global Market Strategy Office

Model Asset Allocation: Introducing bank loans	
We express caution by reducing HY in favour of government bonds and introduce bank loans at Overweight	We expect the global economy to continue decelerating, while recent asset behaviour is what we would expect with acceleration. Consequently, we remain cautious, expecting a period of consolidation among cyclical assets. Within our Model Asset Allocation we reduce high yield (HY) to Neutral, while adding to government bonds (still Underweight) and introducing bank loans at Overweight (see Figure 28). The conservative stance is balanced by maintaining a regional bias towards emerging market (EM) assets.
HY reduced to Neutral	HY spreads have narrowed again, which we find odd at a time of economic slowdown. We expect spreads to widen and defaults to rise, on top of which we note that HY tends to underperform other fixed income assets when the Fed starts to ease (see the thematic section on asset performance when the Fed eases). We reduce HY to a Neutral 5% (from an Overweight 8%), with both US and European allocations reduced to Neutral (see the detailed allocations in Figure 3).
Government bonds increased after the rise in yields but remain Underweight	At the same time, we add to government bonds (going from 20% to 22%), though remain Underweight versus the Neutral 25%. Yields have risen over the last three months and we note that government bonds tend to perform relatively well when the Fed starts to ease (and when yields curves steepen). We maintain a bias towards longer duration instruments but expect that to change once the rate cutting cycle becomes well established (we expect Fed rates to be lower in 12 months). We have added to the US allocation after the rise in yields (further Overweight). We remain Overweight in EM (attractive spreads), Neutral in the UK and Underweight in Japan and the Eurozone.
Bank loans introduced with an Overweight	We introduce bank loans to the Model Asset Allocation at an Overweight 6% (versus Neutral 4%). We view bank loans as somewhere between cash (with near zero duration) and HY (with default risk). The asset class may normally be expected to underperform HY once central banks cut rates but we find the valuation comparison to favour bank loans at the moment. We are Overweight in both the US and Europe.
Real estate remains slightly Overweight	Real estate (REITs) may appear to have been reduced (from 10% to 5%) but that simply reflects a reduction in the Neutral allocation (from 8% to 4%) to accommodate the bank loans asset class. Hence, we remain Overweight, though we have made some regional changes (adding to Japan and the Eurozone, reducing US and EM).
Cash remains at the Maximum allocation	We maintain the Maximum allocation to cash (10% versus Neutral 2.5%). Central bank policy rates have continued to rise and we think cash now offers decent return potential, along with attractive diversification characteristics (see Figure 27).
Gold and commodities still at Zero	The other diversifying asset that we consider is gold . However, it has performed so well that we doubt that it can sustain a much higher price. We therefore keep it at zero. We also leave the broader commodities allocation at zero, the consequence of expected cyclical weakening and prices that we find too high in many cases.
We stay Overweight IG	We maintain the Overweight 18% allocation to investment grade (IG) , versus the Neutral 10%. We expect better returns than on either government bonds or HY (see Figure 27). We also note that IG tends to perform relatively well when the Fed starts easing. EM is our favourite region but we also like US and UK IG.
We remain Underweight equities	We have not changed the equity allocation and remain Underweight with an unchanged 34% allocation (Figure 27 suggests the risk-reward trade-off is worse than for many other assets, based on our forecasts). We are surprised at recent gains given slowing economies and rising bond yields. We remain Overweight EM equities (especially China) and the big Underweight is the US (12% versus Neutral 25%). We reduce Japan to Underweight (after strong performance) and add to the Eurozone (Overweight).
EM favoured	Regionally, we favour EM assets, largely because we think they are cheap but also as a hedge in case the global economy does better than we expect.
We hedge from USD into yen	Finally, we expect yen strength and maintain a partial hedge from USD into yen.

The AI driven phase seems to be over and central bank policies may dominate again

Changing economic regime could spell danger

We have boosted allocations to defensive sectors in anticipation of greater volatility

Fed easing has typically been associated with outperformance by retailers and defensive sectors

Equity sectors

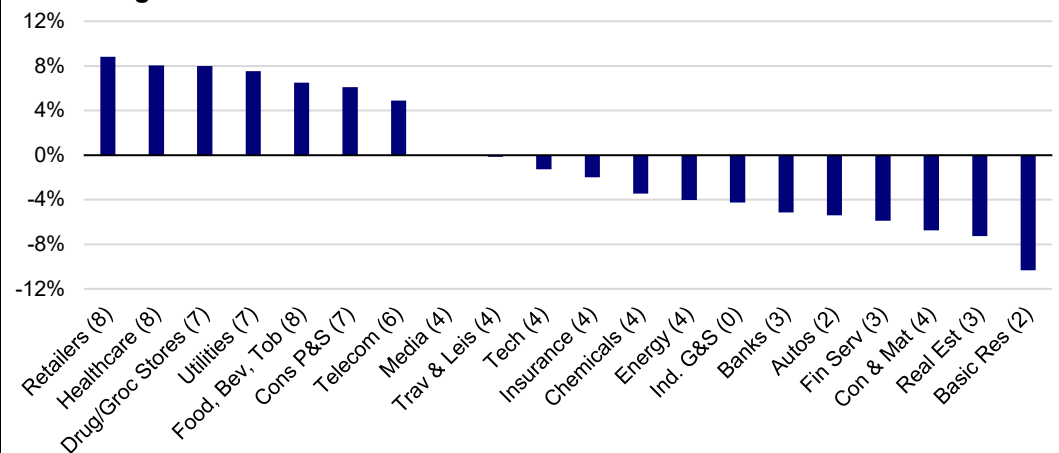
Sector allocation has not become easier since our last Strategic Sector Selector. After strong returns in the first half of 2023, global equity returns have lacked direction since the end of June. This is mostly a direct consequence of the narrow rally that characterised the first half of the year, in our view. The outsized influence of the technology sector is difficult to counterbalance, and it seems that the AI-driven uplift has run out of steam. Valuations have stopped supporting the market, which we think is closely connected to the regime change in the macroeconomic and monetary policy environment. Economic indicators have been stronger than we expected, especially in the US, the improvement in inflation rates has slowed down and reversed in some cases (driven by higher energy prices), while central banks are approaching “terminal rates”.

We think that the stalling rally could be a sign that we may be at the beginning of a transition period between the early-cycle phase and the mid-market phase (see [Decomposing equity cycles](#) for more detail). If our assessment is correct, it would explain why the rally has stalled and early cyclical sectors, such as consumer discretionary have underperformed since the end of Q2 2023. These periods are characterised by gradual drawdowns, some of which have been in the low double-digits.

We have pre-emptively positioned our Model Sector Allocation for a fading growth factor and technology-led rally by downgrading the sectors most exposed to that, while increasing our allocations to defensive sectors as a nod to a period of potentially higher volatility (see [here](#) for the full detail). However, the scenario we envisaged has only partly played out so far, in the sense that market leadership has remained narrow and has been led by cyclical sectors, which could be partly explained by the more resilient macroeconomic environment.

Our expectation for the next 12 months is an equity market moving to an environment more closely driven by economic growth. This most likely implies limited returns in the next 6-9 months, especially if high interest rates put a break on surprisingly resilient growth. Moderating inflation will eventually allow central banks to start a period of easing, but we do not think it is imminent. When it does come, and based on the historical patterns shown in **Figure 29**, our Model Sector Allocation would seem well-placed to outperform with its current tilt to defensives and Overweight in retailers. Nevertheless, in preparation for the mid-cycle phase, we also balance that by keeping our Overweight to real estate, while gradually increasing exposure to financial services and insurance, sectors that have tended to outperform in that part of the cycle.

Figure 29 – Median annualised relative total returns for global sectors in periods of Fed easing



Notes: **Past performance is no guarantee of future results.** Showing median annualised total returns for Datastream World Level 3 sector indices relative to the Datastream World Total Market index during the nine US Federal Reserve Bank easing cycles we identified since 1974. Numbers in brackets show the number of periods in which the sector outperformed. See **Appendix 6** for easing cycle dates.
Source: Refinitiv Datastream and Invesco Global Market Strategy Office

European factor returns are consistent with investor caution but the picture has been confused in the US by the emergence of AI

Factor returns seem consistent with the late cycle phase, though a turning point may have been reached

We favour a balanced factor exposure, ahead of price momentum reestablishing itself during the mid-cycle phase

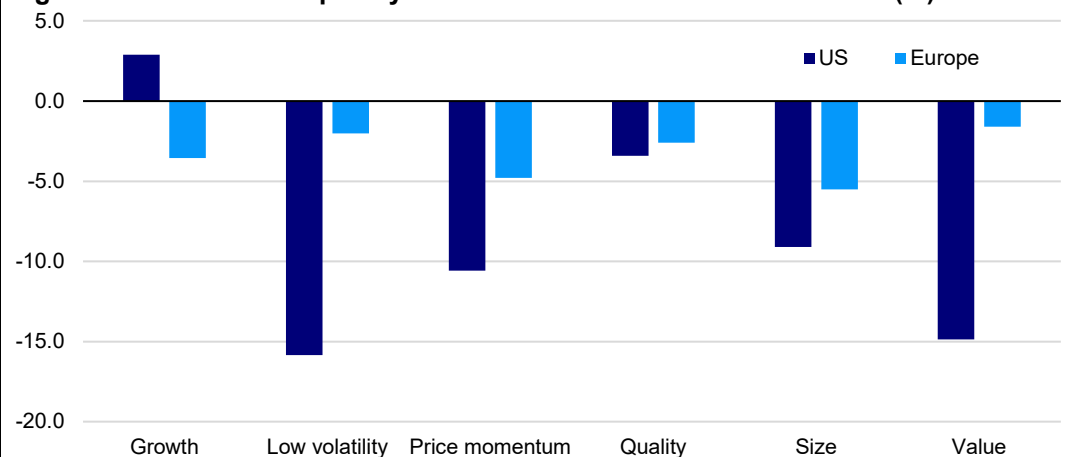
Equity factors

At the beginning of 2023, we had a fairly clear idea of the style factor leadership that we expected and watched as our expectations played out to a certain extent with the outperformance of growth over value in the US, although the picture has been more mixed in Europe (see **Figure 30**). Size underperformed in both regions, which not only implies that our equal-weighted factor indices would underperform their respective market capitalisation-weighted benchmarks, but also suggests that investors remain somewhat cautious in embracing this rally. However, the latter seems to apply mostly to Europe where low volatility has been one of the best performers year-to-date, while it has been the worst performer in the US. Cautiousness seems to be reinforced by the relatively strong returns by our quality factor index in both regions. At the same time, the relatively weak returns from price momentum suggests a rotation within the market, which is clearer in the US (out of value and low volatility into growth), while in Europe no such pattern has manifested itself (the ranking of factor returns is similar to 2022, although there is less dispersion).

What does that tell us about investor positioning? As we examined in [The strange case of US factor returns](#), it most closely resembles the late-cycle phase in the equity market cycle (at least in the US), even though the underperformance of price momentum suggests we have passed a turning point. What muddies the picture somewhat is the excitement around generative artificial intelligence and the boost it has given to technology sector valuations (alongside stocks viewed as “tech-like”). In Europe, it seems to us that markets are both reflecting a high level of uncertainty and perhaps positioning for a stagflationary environment with the outperformance of both value and low volatility.

Now that the monetary tightening cycle is drawing to a close in both the US and Europe and uncertainty around the future direction of monetary policy increases, we expect one of the main drivers of returns to fade in importance (especially as far as the growth and value factors are concerned). In the near term, we would prefer a balanced approach to factor exposures as long as no clear leadership emerges. Also, this uncertainty may favour low volatility, especially if a material drawdown is ahead of us until equities reach the more stable mid-cycle stage. We may reach that within the next 12 months if economic growth reaccelerates and inflation stays close to central bank targets. At that point, we would favour price momentum and would expect low volatility and size to underperform as market leadership is established and large cap stocks outperform.

Figure 30 – US and European year-to-date factor relative total returns (%)



Note: **Past performance is no guarantee of future results.** Data as of 31 August 2023. Based on daily data from 31 December 2022 to 31 August 2023. See appendices for methodology and disclaimers.
Source: Refinitiv Datastream and Invesco Global Market Strategy Office

Much confusion about the economic cycle

We assume further slowdown and flatlining cyclical assets but we may be wrong

Alternative 1: prolonged cycle (late expansion phase)

Alternative 2: a new cycle (early expansion phase)

What if we are wrong about the cycle?

With economies having slowed but not entering recession (or marginally so, at worst), there is plenty of debate about whether recession is still possible or whether a soft landing is more likely, with economic acceleration on the cards. The strong performance of cyclical assets (including the equity value factor) over recent months suggests the reacceleration argument is winning the day. However, there are cross currents, notably the outperformance of the quality equity factor, which we would normally expect during the late expansion phase (see **Figure 31**).

Our Model Asset Allocation is predicated upon the idea that the global economy is still slowing and that markets have been too hasty in allowing for economic recovery (or for a soft landing). At best, this suggests cyclical assets will flatline as recovery unfolds. At worst, it points to the risk of a correction in such assets, especially if economies and profits disappoint.

However, we may be wrong about the state of the cycle. If the economic expansion is prolonged, with reacceleration after a pause, we may find that we are still in the late expansion phase of the cycle, with more central bank tightening to come. That may explain why equities and commodities have done so well of late (the Fed easing section suggests that is normal in the 12 months before the Fed eases). **Figure 31** (“Best-in-class”) shows that in such a scenario we would favour equities (quality, basic resources and industrials), industrial commodities (base metals and energy) and REITs (Japan).

Alternatively, if the slowdown is over and we are embarking on a new cycle, the early expansion phase of **Figure 31** is more apt. Under such a scenario we would favour equities (value, financials, China), bank loans (Europe), HY (US), EM debt and base metals (see the “Best-in-class” selections).

Figure 31 – The economic and asset class roller coaster

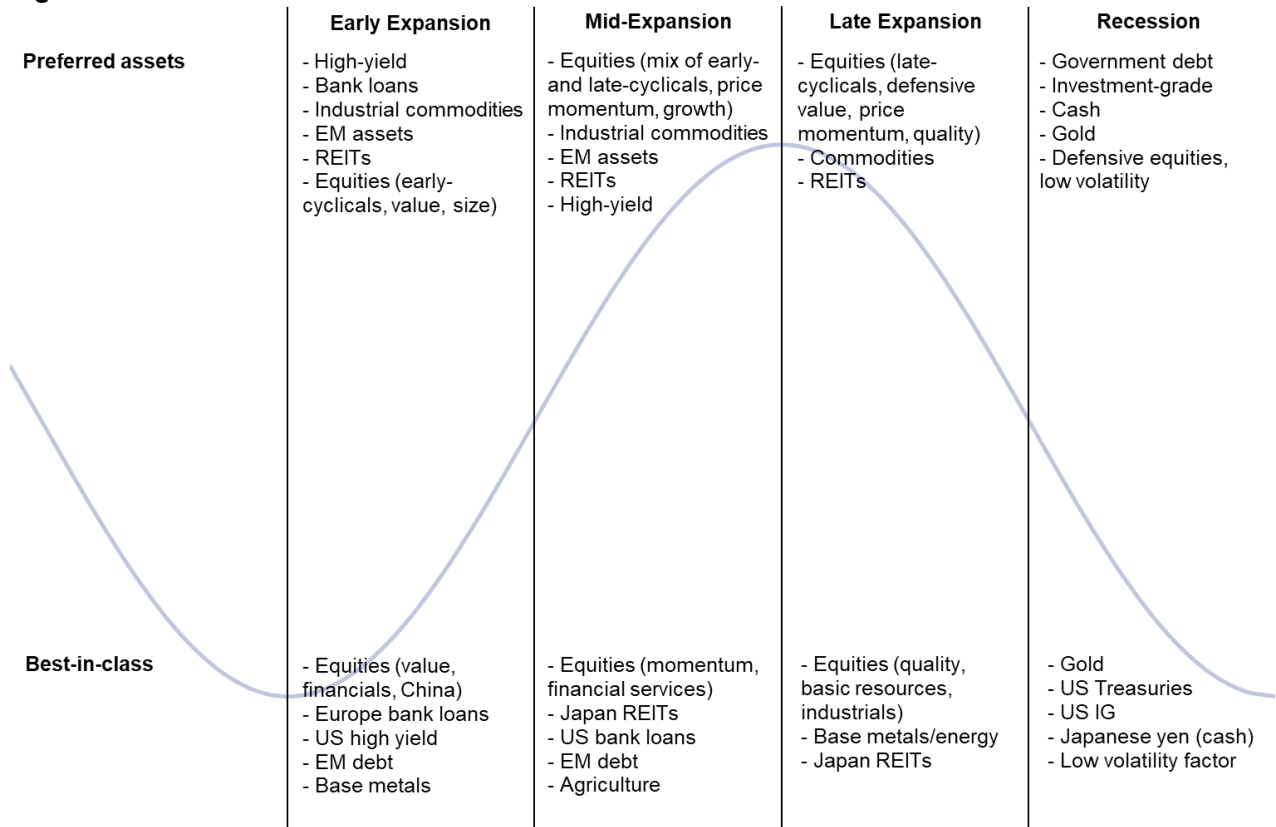


Chart shows a schematic portrayal of the global economic cycle. The selection of “Preferred assets” is based on our research published in “Asset allocation in pictures” in November 2017 and shows assets that usually perform better at each stage of the cycle. “Best-in-class” shows our view of which parts of those preferred assets we would favour based on current valuations and projected returns. See appendices for definitions, methodology and disclaimers. Source: Invesco Global Market Strategy Office

After a sharp rise in inflation, what is the medium term outlook for inflation?

Any model of inflation must be able to explain the recent divergence across countries

Strong correlation between changes in money stock and spending

China's economy has outperformed since 2019

Excess savings on a downtrend...

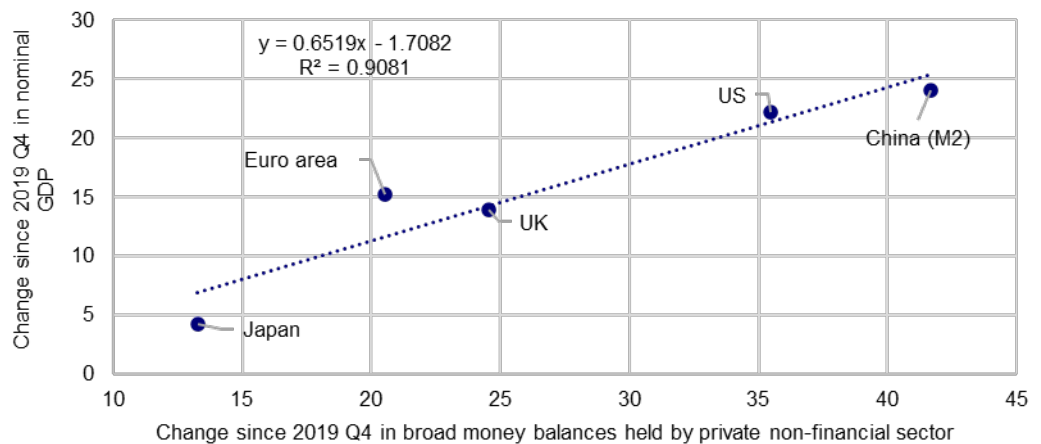
Theme 1: The outlook for global inflation - a flow of funds analysis

A consequence of the COVID-19 pandemic and the associated responses from monetary and fiscal authorities has been a resurgence of inflation across the global economy, with several countries experiencing the highest rates of inflation in decades, whether measured by headline prices, core prices, or the broadest deflators. Last year we had (often poorly defined) debate between “Team Transitory” arguing prices/inflation would return to their pre COVID levels after the supply shocks had abated versus “Team Persistent” putting forward the case that either structural changes or large increases in the money supply would herald a period of significantly above target inflation. Today this discourse is seemingly on the backburner; investors are now rightly concerned with the “stickiness” of inflation, particularly core inflation and the medium-term outlook.

First, it may help to assess the past four years. Despite the global nature of the COVID-19 pandemic and shocks to global supply chains, inflation has not been evenly distributed across the global economy. For example, as measured by the GDP deflator, prices have risen since 2019 Q4 by 16% in the US, 14% in the UK, 12% in the Euro area, but just 2½% in Japan. Some countries (China, Switzerland) have had almost no inflation, whilst others (Turkey, Argentina) have had inflation rates of around 100%. Any theory used in forecasting inflation needs to be able to account for these discrepancies.

Figure 32 highlights the strong correlation between the change in the money stock held in the private non-financial sector (households and non-financial corporations) and the change in nominal GDP since 2019 Q4. This methodology is an extension of work by the Bank of England and is constructed using the flow of funds releases from central banks, which chronicle financial assets and liabilities by counterparties.

Figure 32 – Relationship between broad money balances and nominal GDP (%)



Note: Broad money includes all currency, all bank deposits, and all money market fund shares. Data covers the period from 2019 Q4 to 2023 Q1 (2023 Q2 for the US). Sources: Federal Reserve, Bureau of Economic Analysis, European Central Bank, Eurostat, Bank of England, Office for National Statistics, Bank of Japan, Cabinet Office, People's Bank of China, National Bureau of Statistics of China and Invesco Global Market Strategy Office.

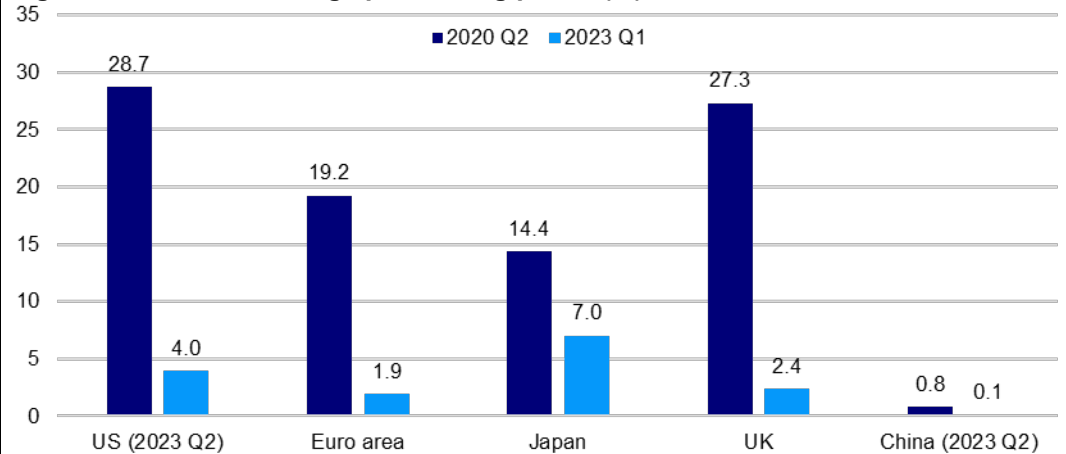
Notwithstanding this strong correlation, the “flow-through” of money creation into nominal spending has been uneven across these five economies, whether financing real economic growth or reflected in prices. In the US, real GDP is 6% higher than pre-COVID, whereas in the UK real GDP is roughly the same. In China, real GDP is almost 20% higher. Differences in recent real economic growth can be attributed to social restrictions and the war in Ukraine, which have also had a significant effect on inflation.

To understand the outlook for global inflation, investors need to consider three factors. First, the stock of excess savings (or excess purchasing power), which is defined as the difference between actual and trend values of broad money balances (all currency, all bank deposits, and all money market fund shares), has been on a general downtrend since the peak of social restrictions in 2020 Q2 (see **Figure 33**).

... and will soon be depleted

Excess purchasing power never materialised in China due to a contained monetary response in 2020 (money supply growth barely increased). It has fallen considerably in large, advanced economies and we think it will be fully depleted in early 2024.

Figure 33 – Excess savings/purchasing power (%)

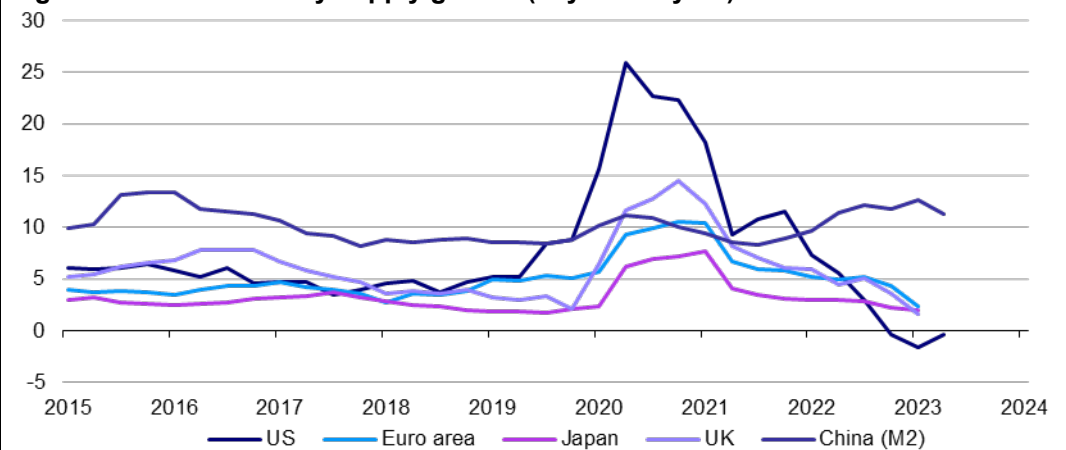


Note: excess savings/purchasing power (%) is the difference between actual and trend values of broad money balances (all currency, all bank deposits, and all money market fund shares) held by the private non-financial sector relative to nominal GDP. Sources: Federal Reserve, Bureau of Economic Analysis, European Central Bank, Eurostat, Bank of England, Office for National Statistics, Bank of Japan, Cabinet Office, People's Bank of China, National Bureau of Statistics of China and Invesco Global Market Strategy Office

Money supply growth is now much weaker, except in China

Second, the flow of monetary policy, defined as the year-on-year change in the broad money stock (all currency, all bank deposits, and all money market fund shares) held by the private non-financial sector, has been on a general downtrend since late 2020 (see **Figure 34**). China is the exception, with a central bank that continues to ease policy.

Figure 34 – Broad money supply growth (% year-on-year)



Note: quarterly data from 2015 Q1 to 2023 Q2. Data shows M3 money supply growth, except China which is M2. Sources: Federal Reserve, European Central Bank, Bank of England, Bank of Japan, People's Bank of China and Invesco Global Market Strategy Office.

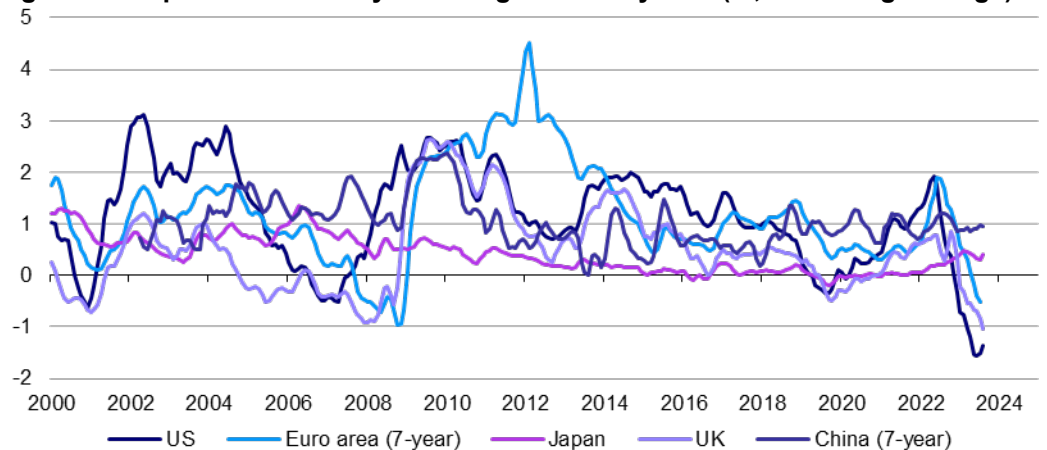
Some central banks are shrinking their balance sheets...

Third, the Federal Reserve, European Central Bank, and Bank of England are all reducing the size of their balance sheets to differing degrees and the incentive for private banks to create money is minimal, as evidenced by the spreads between mid-term and short-term interest rates (see **Figure 35**).

... and private banks have little incentive to expand theirs

Net interest margins for commercial bank lending reflect the interest rate spreads between their net assets (primarily loans) and deposits. If a blended maturity of around six years for bank loans and three months for bank deposits is assumed, with yield curves inverted in the US, the Euro area, and the UK, the incentive for private banks to increase their balance sheets is minimal, with bank lending surveys supporting this notion.

Figure 35 – Spread between 6y and 3m gov't. bond yields (% , 3m rolling average)



Past performance is no guarantee of future results. Based on monthly data from January 2000 to August 2023. Source: Macrobond and Invesco Global Market Strategy Office

Inflation won't be sticky for long and disinflation (or deflation) is a bigger threat than inflation over the medium term

In conclusion, following a period of above-target inflation that blindsided many investors and central banks, global inflationary pressures are cooling. I believe the "stickiness" of inflation will be genuinely short lived: after excess savings are fully depleted the effect of the negative flow of monetary policy will be felt, with disinflation/deflation rather than inflation more of a risk in the medium-term. Euro area and UK inflation at the index level is effectively over, and US and Japanese excess savings will likely fall to zero in early 2024. Any stimulus in China and the associated potential for a pick-up in inflation will likely be muted, with Beijing constrained by high debt ratios and a frail real estate sector.

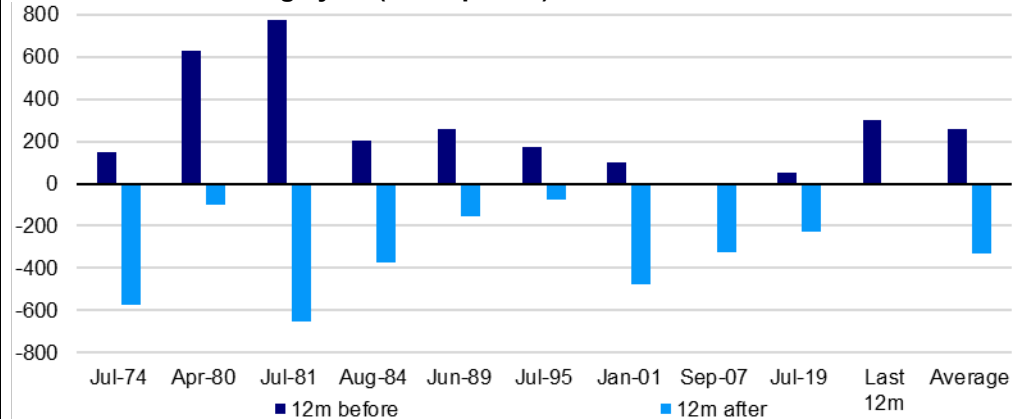
Adam Burton
Senior Macro Strategy Analyst

The Fed will be cutting rates within the next 12 months (we think)

Theme 2: What happens when the Fed starts easing?

We think the US Federal Reserve (Fed) is close to its “terminal rate” for this tightening cycle (it may have reached it already). Based on probabilities implied by rate futures on Refinitiv at the time of writing, the most likely date of the first cut will be in 2024 Q2 (since 1974 the average pause in rates before the first cut has been nearly five months or nine months if we focus on the last four easing cycles starting in 1995).

Figure 36 – Change in the US Federal Reserve target rate (middle rate) around the first cut in a loosening cycle (basis points)



Notes: **Past performance is no guarantee of future results.** “Last 12m” shows the change in Fed policy rates in the 12 months to 31 August 2023. “Average” shows the average across the periods shown in the chart (excluding “Last 12m”). Data as of 31 August 2023. See appendices for methodology and disclaimers. Source: Refinitiv Datastream and Invesco Global Market Strategy Office

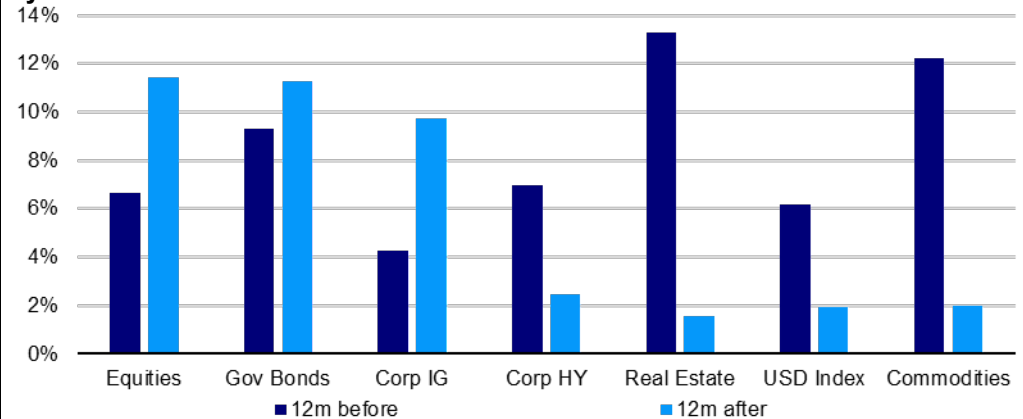
We analyse the nine easing cycles that started in 1974

That, in theory could mean a regime change in asset returns. In preparation for this next phase in the monetary policy cycle, we have analysed returns on assets around the first rate cut by the Fed. We identified nine periods of Fed loosening since the beginning of 1974 (see **Appendix 6** for a full list of dates). On average, the first 12 months of Fed loosening – from the date of the first cut – tended to more than undo the tightening of the preceding 12 months (see **Figure 36**). However, this is not true of all individual periods, especially during the Volcker-era of the 1980s, when rate cuts were quickly reversed (1980) or loosening was not as sharp as the preceding tightening (1981). The mid-1990s was a period of relatively stable interest rates ended by the bursting of the “tech bubble” in 2000, which saw sharp loosening in an attempt to stabilise markets.

Positive US asset performance when the Fed eases (on average)

At first glance it does not seem to matter how quickly the Fed reduces its target rate, because total returns for all US assets are positive on average during the 12 months after the first cut (see **Figure 37** and **Appendix 6** for cycle by cycle performance data).

Figure 37 – US asset average total returns around the first cut in a Fed loosening cycle



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, Refinitiv Datastream and Invesco Global Market Strategy Office

Cyclical assets have underperformed, except equities

Using average returns over the nine periods since 1974, equities was the best performing asset class during the 12 months following the first cut (just), followed by government bonds and corporate IG (although we could include data for only seven of the nine periods for government bonds due to lack of data). Corporate HY, real estate (REITs) and commodities were relatively flat by comparison (with the caveat that we could include only five periods for HY and four for real estate). It is interesting that the best performing asset around the time of the first Fed rate cut has tended to be government bonds (when looking across the 12 months before and after that rate cut).

Which is no surprise given that the Fed usually eases when the economy is weak

Given that rate cuts tend to start when the economy is weakening, it is no surprise that cyclical assets such as HY, real estate and commodities have tended to underperform more “defensive” assets such as government bonds and IG when the Fed starts easing. We note also that these cyclical assets perform less well in the 12 months after the first rate cut than in the 12 months before, which again is not surprising.

Why do US equities do so well when the Fed eases?

The big surprise is that equities have tended to perform so well in the year after the first rate cut and have, on average, done better after that first easing than before it (though this is not true for every cycle, as can be seen in **Figures 44 and 45 in Appendix 6**). When it comes to the reaction to the peaking out of Fed policy rates, the US equity market appears to share many of the characteristics of government bonds and IG, which is odd given that we would not normally categorise equities as “defensive”. We think this is due to both rising valuations, driven by the reduction in the discount rate used to calculate the present value of future dividends, and the ability of equity markets to “look through” to the economic recovery ahead. Maybe the higher than average concentration of growth stocks in the US could also lead that market to perform well when the Fed eases (as long duration instruments benefit from falling yields).

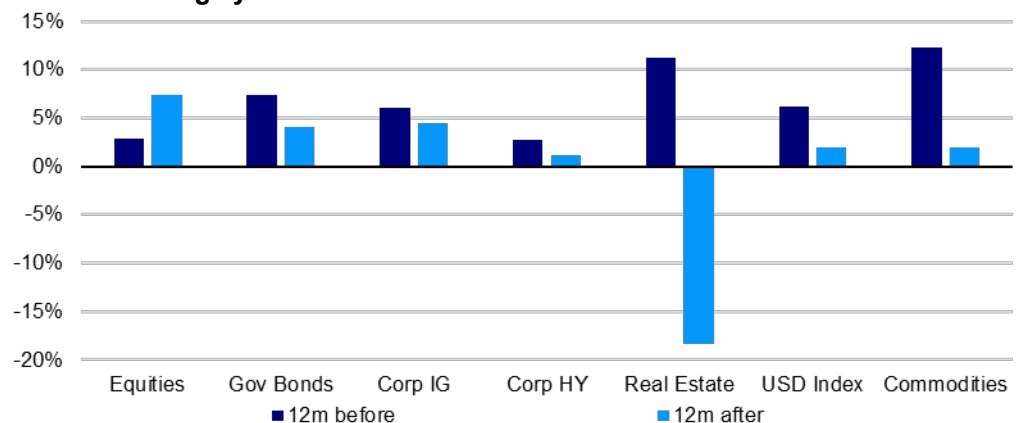
Only three instances of negative equity returns

In fact there were only three instances within our sample when US equities fell in the first year of Fed loosening: from April 1980 when the Fed quickly returned to tightening, from July 1995 when rates remained high for an extended period and after January 2001 when the “tech bubble” deflated.

Global equities also do well when the Fed eases but global gov bonds and IG do less well than US counterparts

The same is true of global equities (see **Figure 38 and Appendix 5**), though the returns are noticeably lower than for the US market alone. Whether we look at US or global equities, performance has tended to be better after the first Fed rate cut than before and has tended to be better than on other assets. However, the outcomes for global government bonds and IG are very different to those in the US, with performance worsening when the Fed starts to reduce rates. They therefore reflect what is seen on cyclical assets such as HY, real estate and commodities. However, it must be remembered that data availability means that less rate cutting cycles are available for many assets when analysing global markets (five for government bonds, three for IG).

Figure 38 – Global asset average total returns (in US dollar) around the first cut in a Fed loosening cycle



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, Refinitiv Datastream and Invesco Global Market Strategy Office

Divergent central bank policies may explain the difference in US and global asset reaction to Fed easing (as may varying data availability)

This lack of data and the fact that other central banks are not necessarily following the Fed may explain why the results are not the same for global asset categories as for the US. In particular, we note that the large negative performance of global real estate in the 12 months after the first rate cut is based on only two rate cutting cycles (from September 2007 and July 2019). Both were accompanied by steep recessions (GFC and pandemic) and difficult conditions for real estate and may not form a representative sample (the US real estate data is based on four cycles).

Closer inspection reveals that global govt bonds have tended to outperform global equities when the Fed eases (as in the US)...

Although global government bond returns were lower on average than for equities in the first 12 months after the first Fed cut, if we limit the analysis to the five cycles when government bond data is available, we find that government bonds outperformed stocks both before and after the first Fed rate cut (though government bond performance itself was on average worse after than before the rate cuts started, as was also true for IG).

... especially when equities slumped

Importantly, global (and US) government bonds outperformed equities in the two periods when equity returns were sharply negative (from July 1995 and January 2001), though government bond performance was even stronger before the Fed started easing.

The dollar shows no consistent trend when the Fed eases

Interestingly, the US dollar was strong in those two periods, perhaps driven by cautious investor sentiment. However, that did not happen consistently, as the US dollar fell in four easing periods out of nine since 1974 (although it strengthened slightly on average). Of course, movements in the dollar depend as much upon other central banks as upon the Fed, so it should come as no surprise that the dollar shows no consistent pattern.

Commodities tend to struggle when the Fed starts easing (which happens when the US economy is weak)

Finally, commodity returns may have been above zero on average across the nine Fed easing cycles, but that is skewed by the 48.4% return from the July 1995 Fed cut (one of only four episodes in which commodity returns were positive). Excluding that large gain in the 12 months from July 1995, the average return on commodities during the first year of rate cuts was slightly negative.

Market reaction likely to depend upon the speed and depth of easing in the early stages

In conclusion, we think the main determinant of the returns we can expect after the first Fed rate cut will be the speed and depth of monetary loosening. That, in turn, will likely depend on the economic environment. If inflation remains high and economic growth remains strong, the Fed is unlikely to cut significantly, implying only a small moderation in rates (similar to the mid-1990s). However, if inflation falls to around the Fed's 2% target, we would expect a significant reduction of the target rate, especially if the economy weakens materially at the same time (like the mid-1980s or early 2000s). Of course, there is a chance that inflation reaccelerates with another commodity price shock, for example, although the probability of that is low, in our view.

Shallow loosening cycle may be good for USD and commodities, bad for equities and govies

Based on historical precedent, we think a slow and shallow monetary loosening cycle would be positive for the US dollar and commodities (with the caveat that such historical periods may just have coincided with the early phase of the commodity super-cycle). However, we think this environment would be negative for equities and government bonds (yields may drift upwards driven by strong economic growth and sticky inflation).

Sharp loosening cycle may be good for equities and govies, bad for commodities

On the other hand, history suggests that sharp cuts in the Fed's target rate would be good for stocks and sovereign debt, but would likely mean negative returns for commodities (especially if there is global recession). The outcome for the dollar will also depend upon the actions of other central banks, though we note that the greenback has tended to strengthen in those periods when the Fed has cut rates aggressively.

We expect a shallow loosening cycle, which justifies our caution on equities

Our view of gently moderating economic growth and core inflation makes it more likely that the Fed and other central banks will not quickly reverse their tightening and that asset returns will be closer to the shallow cycle template, in our opinion. Our analysis suggests this could mean negative returns for equities and weak, but higher, returns for sovereign debt, a stronger US dollar and uncertain returns for commodities.

Andras Vig
Multi Asset Strategist

Theme 3: Artificial intelligence (AI) - what is it and what could it mean for us?

AI fever

Since the end-2022 launch of ChatGPT (a generative AI-driven chatbot capable of understanding and replying in natural language), commentators, financial media, and tech companies have hyped how generative AI may evolve. Developments in this space have reached fever-pitch, with a variety of new models released in the first half of 2023 from a slew of competitors. Today's generative AI lets users create text content, images, and sound with simple prompts, igniting optimism -- and pessimism -- about what a future filled with AI may look like.

But AI isn't new

However, AI isn't exactly new. For well over a decade before the launch of ChatGPT, AI has been deployed in commercial use cases across almost every sector and industry. AI is already used for content recommendation, navigation, virtual assistants, song recognition, image enhancement, signal generation, and more.

Though generative AI is a step forward

In essence, generative AI is a prediction model that works by learning the relationships between data points and creating similar data from it. For example: generative AI can be used to understand how words are used in sentences and then create new sentences based on that understanding. Using the example of text, if we ask the model a question, it will return to us the most likely series of words that follow based on its understanding of the data that was initially used to train the model. The latest models also understand and integrate context, topics, and cues.

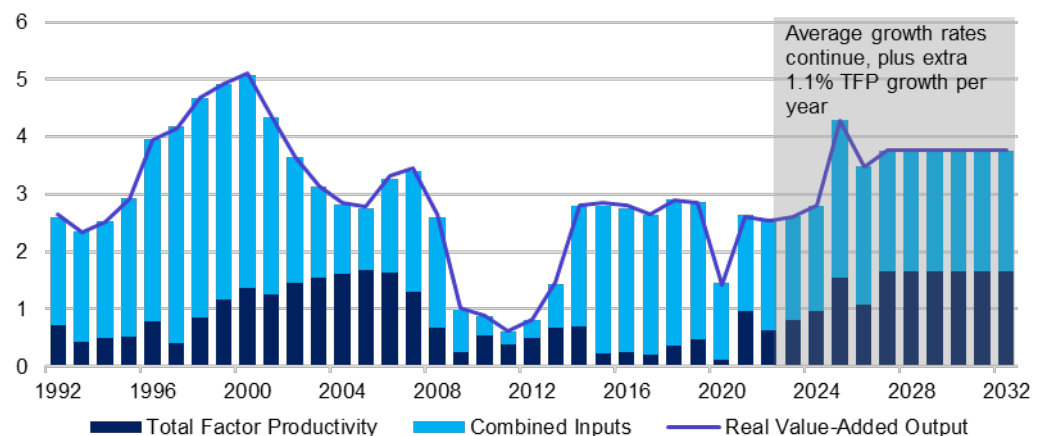
And is rapidly finding new applications

Generative AI can be applied to a range of modalities, including text, images, sound, and even videos. When working with text, generative AI can be used to summarize documents, produce scripts, write emails, and more. It may also be particularly useful in software engineering by helping to understand, document, and write code. Similarly, it is now seeing early use in everyday data analysis as well. When working with images, sound, and video, generative AI has also shown impressive capabilities in editing and manipulating content.

With the potential to boost productivity

If generative AI can be effectively implemented into existing workstreams, it may help boost worker productivity, which would likely have a deflationary effect as the economy could achieve greater output with constant inputs. Using US data from the information communication technology revolution of 1995-2005 as an example, US total factor productivity growth could 1.1% per annum higher than recent sub-par growth rates as a result of generative AI. This estimate falls in the middle of forecast ranges from a global management consulting firm and IT company. If we take the average post-global financial crisis rate of US total factor productivity growth of 0.55% and add this assumption, real value-added output may be able to break out of its post-GFC doldrums (see **Figure 39**).

Figure 39 – US 5-year annualised growth of real value-added by contribution (%)

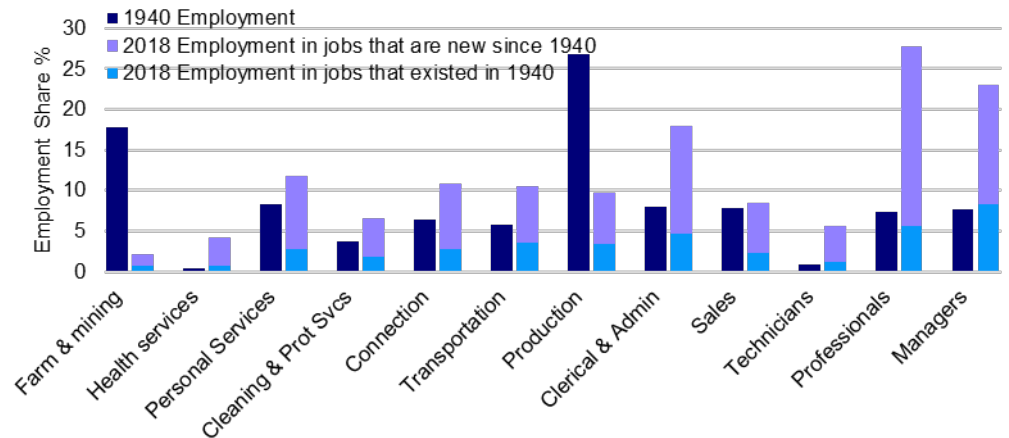


Notes: annual data from 1992 to 2032. Values from 2023 to 2032 are projections, where combined inputs grow at the average growth rate observed from 2010 to 2022 and total factor productivity grows at an annualised growth rate of 1.6% (the growth rate observed from 2010 to 2022 plus an additional 1.1% that is assumed to derive from the effect of artificial intelligence). As of 31 July 2023. Source: Macrobond, US Bureau of Labor Statistics Productivity Database and Invesco Global Market Strategy Office

New technology may destroy some jobs but it can create others

In the short-term, AI may have more of a wow factor than real impact. However, like major technological innovations that have come before it, we believe AI has significant scope for compounding improvement as economies adjust to accommodate this new technology. While some jobs may be destroyed over time, history suggests that new, higher value-added jobs tend to take their place (See **Figure 40**).

Figure 40 – US employment share by period and job type, 1940 versus 2018



Note: "Cleaning & Prot Svcs" is Cleaning and Protective Services.
Source: for illustrative purposes only, based on Autor, D. "The Labor Market Impacts of Technological Change; From unbridled enthusiasm to qualified optimism to vast uncertainty" NBER Working Paper

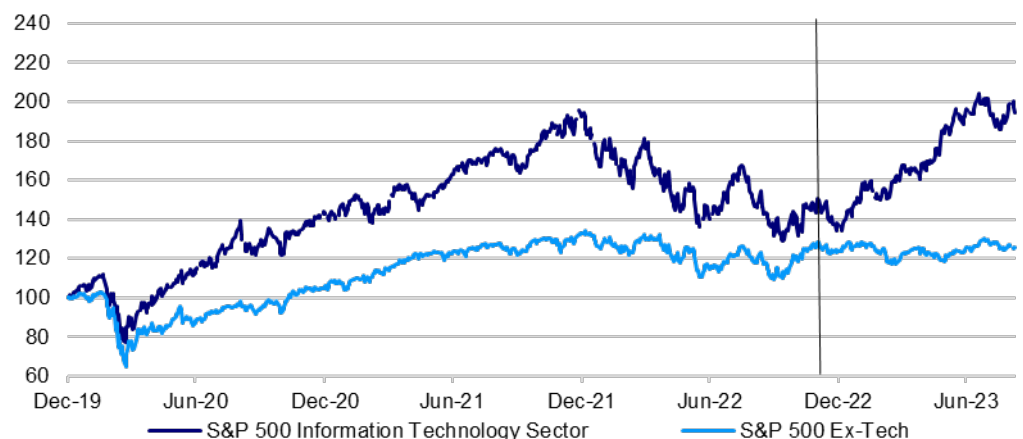
AI has been with us for 15 years and unemployment is at record lows

We think it is important to remember that AI has been an increasing part of our lives for the last 15 years. While some job tasks have been automated, few jobs have been entirely replaced and many new jobs have been created. Indeed, unemployment is at multi-decade lows across the US and Eurozone despite continued technological change. It is also important to note that whether AI will replace human labour is as much to do with whether AI can replace a job as it is to do with whether and how legislators, regulators, companies, and consumers embrace new technology.

Markets (meaning technology stocks) have embraced AI

Nevertheless, markets have embraced the excitement around AI through investment in large technology firms (see **Figure 41**). This effect is most notable in the US, where 28% of the S&P 500 is comprised of technology stocks, which are up 41.3% year-to-date (as of 8 September 2023). If we remove technology stocks, the S&P 500 is up just 1.3% year-to-date. This is impressive given the broader macro backdrop which has seen 10-year Treasury yields climb as high as 4.3%.

Figure 41 – US stock market net total return indices (31 December 2019 = 100)

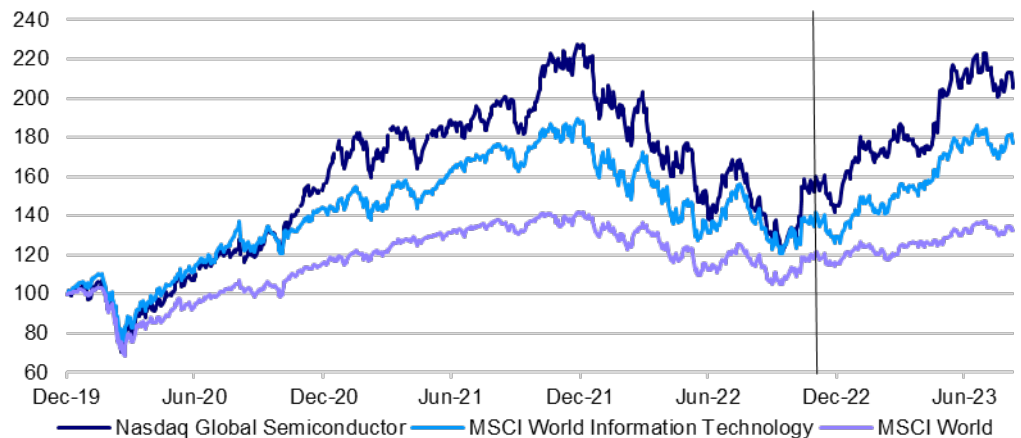


Past performance is no guarantee of future results. Based on daily data from 31 December 2019 to 8 September 2023. Indices are rebased to 100 on 31 December 2019. The vertical line is set at 30 November 2023, the launch date of ChatGPT. Source: Bloomberg and Invesco Global Market Strategy Office

AI requires massive computing power

Semiconductor stocks in particular have led the charge. Training ChatGPT involved a custom-built supercomputer costing at least \$100 million in advanced processing hardware. Every prompt entered into ChatGPT is run through a pretrained model that uses considerable resources -- each word entered and generated uses computing power. Across the ChatGPT platform, daily estimated running costs range from \$100-\$700 million. Moreover, additional AI models are under active development with ever greater computational needs. This has translated into exceptional demand for processors, helping to push global semiconductor stocks 41.7% higher year-to-date, as of 8 September 2023 (See Figure 42).

Figure 42 – Global net total return equity indices in USD (31 December 2019 =100)



Past performance is no guarantee of future results. Based on daily data from 31 December 2019 to 8 September 2023. All indices are rebased to 100 as of 31 December 2019. The vertical line is set at 30 November 2022, the launch date of ChatGPT.

Source: MSCI, Nasdaq, Bloomberg and Invesco Global Market Strategy Office

The beneficiaries so far have been the enablers of AI; users may eventually benefit

Indeed, the bulk of price action to date has occurred across enablers of AI -- companies that are building and powering AI systems. These include semiconductor manufacturers, deep-pocketed large tech companies and those companies that have large amounts of proprietary data that may help train and refine purpose-built AI systems. As AI becomes more efficient and scalable, adopters of generative AI may benefit from the technology through improved product offerings or new efficiencies in internal processes.

We fear the initial stock market boost may be drawing to a close. Benefitting from broader AI-related stock market gains may require patience

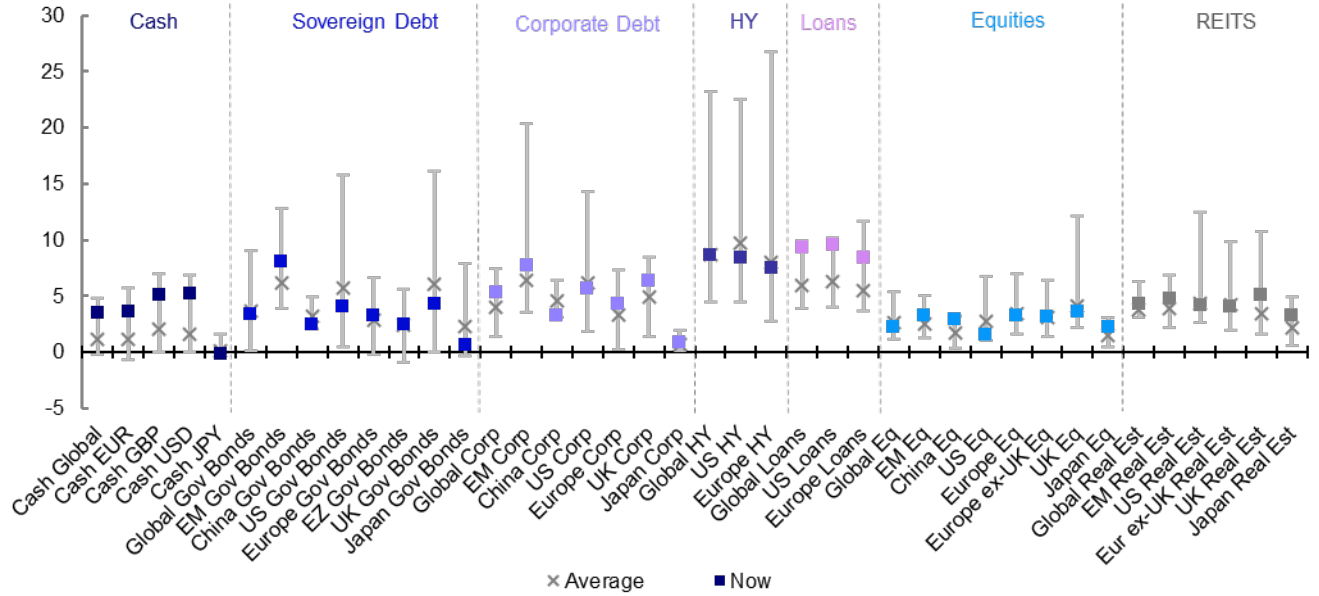
However, considering the broader market environment, we are concerned that the recent run-up in technology stocks is looking overdone. Valuations, both on a trailing and forward basis, have climbed markedly even as forward earnings estimates have pushed substantially higher. We suspect that if monetary policy and credit conditions were looser, valuations may be even more stretched and bubble-like. We note that it is possible to be right about the impact of a new technology and yet invest long-before its effects are realised.

Ashley Oerth, CFA
Senior Investment Strategy Analyst

Appendices

Appendix 1: Global valuations vs history

Regional yields within historical ranges (%)



Notes: **Past performance is no guarantee of future results.** As of 31 August 2023. "Corporate Debt" is investment grade credit and "Loans" are bank loans. See appendices for definitions, methodology and disclaimers. Source: Bloomberg, Credit Suisse, FTSE Russell, ICE BofA, Refinitiv Datastream and Invesco Global Market Strategy office

Appendix 2: Asset class total returns

Data as at 31/08/2023	Index	Current Level/Ry	Total Return (USD, %)				Total Return (Local Currency, %)			
			3m	YTD	12m	5y*	3m	YTD	12m	5y*
Equities										
World	MSCI	686	6.7	15.2	14.5	8.0	6.7	15.6	13.8	8.7
Emerging Markets	MSCI	980	3.7	4.9	1.7	1.4	4.0	6.3	2.8	3.2
China	MSCI	60	5.0	-4.5	-7.4	-3.8	5.5	-3.4	-6.6	-3.5
US	MSCI	4289	8.5	19.1	15.8	11.0	8.5	19.1	15.8	11.0
Europe	MSCI	1902	3.8	13.1	23.3	5.5	1.7	10.3	14.5	6.4
Europe ex-UK	MSCI	2361	4.0	14.7	26.0	6.2	1.9	12.8	17.3	7.2
UK	MSCI	1119	3.1	7.7	14.8	3.4	0.9	2.2	5.4	3.9
Japan	MSCI	3523	4.7	13.8	15.8	3.5	9.1	25.6	21.6	9.3
Government Bonds										
World	BofA-ML	3.32	-1.6	-0.8	-2.0	-2.5	-1.3	0.8	-3.0	-0.9
Emerging Markets (USD)	BBloom	8.13	3.7	5.9	7.8	0.4	3.7	5.9	7.8	0.4
China	BofA-ML	2.43	-0.7	-0.8	-1.8	3.4	1.8	4.1	3.8	4.8
US (10y)	Datastream	4.10	-2.9	0.5	-4.2	0.6	-2.9	0.5	-4.2	0.6
Europe	Bofa-ML	3.18	1.7	3.9	4.2	-2.9	-0.1	2.2	-3.5	-1.5
Europe ex-UK (EMU, 10y)	Datastream	2.44	0.9	4.8	2.3	-4.1	-0.8	3.1	-5.3	-2.7
UK (10y)	Datastream	4.36	1.9	3.0	-1.4	-3.8	-0.3	-2.2	-9.5	-3.3
Japan (10y)	Datastream	0.64	-5.7	-8.2	-5.1	-5.2	-1.7	1.3	-0.4	0.1
IG Corporate Bonds										
Global	BofA-ML	5.32	0.8	3.5	3.0	0.3	0.2	2.9	0.9	0.8
Emerging Markets (USD)	BBloom	7.71	0.5	3.4	4.3	1.3	0.5	3.4	4.3	1.3
China	BofA-ML	3.25	-1.3	-1.2	-2.9	3.0	1.2	3.6	2.7	4.4
US	BofA-ML	5.70	0.0	3.0	0.9	1.5	0.0	3.0	0.9	1.5
Europe	BofA-ML	4.28	2.6	5.0	9.0	-2.4	0.7	3.2	1.0	-1.0
UK	BofA-ML	6.28	3.2	6.6	7.0	-1.7	0.9	1.2	-1.8	-1.2
Japan	BofA-ML	0.84	-4.4	-8.4	-5.2	-5.2	-0.3	1.1	-0.4	0.1
HY Corporate Bonds										
Global	BofA-ML	8.61	3.4	6.7	8.6	2.3	2.9	6.2	6.8	2.6
US	BofA-ML	8.52	3.4	7.2	7.0	3.2	3.4	7.2	7.0	3.2
Europe	BofA-ML	7.45	3.7	7.6	14.7	0.0	1.9	5.8	6.3	1.4
Cash (Overnight LIBOR)										
US		5.06	1.3	3.3	4.4	1.6	1.3	3.3	4.4	1.6
Euro Area		3.65	2.3	3.3	10.2	-1.3	0.9	1.9	2.3	0.0
UK		5.19	3.2	7.8	13.2	0.6	1.2	2.9	3.8	1.1
Japan		-0.06	-4.3	-9.9	-4.6	-5.3	0.0	0.0	0.0	-0.1
Real Estate (REITs)										
Global	FTSE	1533	3.6	1.4	-4.2	-0.1	1.8	-0.3	-11.2	1.3
Emerging Markets	FTSE	1241	4.5	-5.6	-3.5	-6.1	2.6	-7.2	-10.6	-4.8
US	FTSE	2893	4.6	4.8	-3.1	3.0	4.6	4.8	-3.1	3.0
Europe ex-UK	FTSE	2128	14.3	2.3	-3.4	-6.9	12.3	0.6	-10.5	-5.6
UK	FTSE	740	-0.8	0.9	-10.0	-4.4	-3.0	-4.2	-17.4	-3.9
Japan	FTSE	2104	1.8	-0.3	-2.9	-0.4	6.1	10.0	1.9	5.1
Commodities										
All	GSCI	3601	16.3	3.0	-1.8	5.5	-	-	-	-
Energy	GSCI	645	26.6	5.6	-4.1	3.4	-	-	-	-
Industrial Metals	GSCI	1564	2.4	-6.7	0.3	4.4	-	-	-	-
Precious Metals	GSCI	2199	-0.9	5.9	15.0	9.0	-	-	-	-
Agricultural Goods	GSCI	534	1.0	-4.5	-5.4	8.2	-	-	-	-
Currencies (vs USD)**										
EUR		1.08	1.4	1.3	7.8	-1.3	-	-	-	-
JPY		145.55	-4.3	-9.9	-4.5	-5.3	-	-	-	-
GBP		1.27	2.2	5.3	8.9	-0.5	-	-	-	-
CHF		1.13	3.1	4.7	10.7	1.9	-	-	-	-
CNY		7.26	-2.0	-5.0	-5.1	-1.2	-	-	-	-

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

Appendix 3: Key assumptions

Key assumptions for 1-year projected returns

	US	Eurozone/ Europe ex-UK	UK	Japan	EM	China
Central bank rates (%)	4.75	3.50	5.25	0.10	-	3.50
Sovereign spreads vs rates (bps)	-40	0	-50	70	-	-
Corporate IG spread vs sovereign (bps)	140	90	200	25	-	-
Corporate HY spread vs sovereign (bps)	500	450	-	-	-	-
Bank Loan spread vs 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	5.0	5.0
Equities dividend yield (%)*	1.6	3.1	3.6	2.4	3.3	2.7
Real estate (REITS) dividend growth (%)*	5.0	-2.0	2.0	8.0	-5.0	-
Real estate (REITS) dividend yield (%)*	4.2	4.0	4.8	3.3	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 4: 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 5: Definitions of data and benchmarks

Sources: we source data from Refinitiv 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 26**) 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, 2, 4, 5, 14, 26, 27**) 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 14** 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, 2, 27 & 28**). Equity index valuations (**Figures 4, 5, 14, 22 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.

Sector classifications and sector name abbreviations (Figures 29 and 31)

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
Con & Mat = Construction & Materials
Cons P&S = Consumer Products & Services
Drug/Groc Stores = Drug and Grocery Stores
Fin Serv = Financial Services
Food, Bev, Tob = Food, Beverage & Tobacco
Ind. G&S = Industrial Goods & Services
Real Est = Real Estate
Tech = Technology
Telecom = Telecommunications
Trav & Leis = Travel & Leisure

Equity factor index definitions (Figures 30 and 31)

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.

Definitions of data and benchmarks for Appendix 2

Sources: we source data from Datastream unless otherwise indicated.

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

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 6: Dates, data, definitions and source information for Fed rate cut section

Figure 43 – 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

Figure 44 – 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 Figure 43 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

Figure 45 – 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 Figure 43 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

Figure 46 – Global 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	-20.9%					8.4%	34.9%
Apr-80	625	1.8%					0.4%	6.9%
Jul-81	775	13.6%					30.2%	-9.7%
Aug-84	206.25	-1.7%					6.8%	4.2%
Jun-89	256.25	14.2%	0.8%				13.2%	29.9%
Jul-95	175	11.2%	19.2%				-8.9%	-5.1%
Jan-01	100	-14.3%	2.6%	3.8%	-5.4%		8.3%	46.8%
Sep-07	0	17.1%	8.3%	6.9%	7.3%	14.0%	-7.1%	9.1%
Aug-19	50	4.4%	6.1%	7.6%	6.3%	8.4%	4.1%	-7.0%
Last 12m	300	16.2%	-2.0%	3.0%	8.6%	-4.2%	-4.7%	-1.8%
Average	259.72	2.8%	7.4%	6.1%	2.7%	11.2%	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 **Figure 43** 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 World, government bonds = ICE BofA Global Government Index, corporate investment grade = ICE BofA Global Corporate Index, corporate high yield = ICE BofA Global High Yield Index, real estate = FTSE EPRA NAREIT Global 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

Figure 47 – Global 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	36.0%					0.2%	-1.1%
Apr-80	-100	-14.0%					10.7%	8.2%
Jul-81	-650	35.1%					9.2%	-1.6%
Aug-84	-375	7.2%					-2.2%	-5.3%
Jun-89	-156.25	19.0%	6.9%				-9.7%	15.1%
Jul-95	-75	-15.2%	-0.9%				7.8%	48.4%
Jan-01	-475	-18.3%	-1.3%	3.8%	2.9%		7.3%	-29.8%
Sep-07	-325	8.5%	7.3%	0.1%	-3.2%	-23.9%	-1.0%	14.3%
Aug-19	-225	7.9%	8.1%	9.6%	3.7%	-12.8%	-5.1%	-30.5%
Average	-328.47	7.4%	4.0%	4.5%	1.1%	-18.3%	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 **Figure 43** 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 World, government bonds = ICE BofA Global Government Index, corporate investment grade = ICE BofA Global Corporate Index, corporate high yield = ICE BofA Global High Yield Index, real estate = FTSE EPRA NAREIT Global 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

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

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