RESEARCH INSTITUTE

DWS

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DWS LONG VIEW

Introduction

The return outlook for the next decade

After over two years of tight monetary policy, the Fed started cutting interest rates in September of 2024 in an effort to provide a more accommodative backdrop for the economy. According to Fed Chairman Jerome Powell, the focus of the Fed going forward would shift toward support a healthy labor market as inflationary fears appear to be mostly in the rearview. While services inflation remains above the Fed's 2% target inflation level, supply chain-related order backlog issues have eased since the pandemic. Inflation has slowed to where the Fed has begun cutting rates, but government bond yields in real terms remain at the higher end of the post-Global Financial Crisis ("GFC") range. The move higher in interest rates across the US Treasury curve continues to apply a higher real interest burden for longer-term borrowers, and the Fed continues to allow its balance sheet to gradually shrink through Quantitative Tightening ("QT") measures first enacted in May of 2022. Beyond economic borrowers, real interest expense for government debt is also higher than it has been in some time, reintroducing questions around the sustainability of ballooning sovereign debt balances across developed economies.

Despite this prolonged period of monetary tightening—with the highest real US Treasury yields in over a decade and an inverted 10yr-2yr yield curve, the US and global economies have been stubbornly resilient, avoiding any material slowdown in economic growth, and maintaining tight labor markets. The resilience in the macroeconomy over this period has raised questions about whether the effectiveness of monetary policy measures on the real economy has been fundamentally altered. Some economists and investors now believe that the composition of the global economy as well as the structure of borrowing has changed the reaction function of businesses and individuals to central bank policy. Should the transmission mechanism between monetary policy and financial conditions be "broken" in some form, traditional relationships between rates and growth or between rates and risk premia would require rethinking both by policy makers and by policy takers (both borrowers and investors).

Do we believe that monetary policy has lost its potency? In short, no. Shifting dynamics in fixed versus floating rate borrowing, marginally higher sensitivity of debt costs to liquidity and market conditions over interest rates, the increasing use of off-balance sheet private lending channels, and the gradual moderation from an overly tight labor market help to explain, in our view, the more gradual impact of elevated interest rates on the economy that we are seeing signs of in recent quarters.

Heading into the end of 2024, our return forecasts are modestly lower versus the beginning of the year. After three quarters of strongly positive risk-asset returns, valuations across equity and credit have continued to become even more demanding from already historically elevated levels, reflecting tremendous optimism around the potential for artificial intelligence to materially improve economic growth and productivity[1]. For higher quality and sovereign bonds, our 10-year return outlook appears modestly lower relative to the beginning of the year, reflecting slightly lower starting yield levels.

In aggregate, our nominal return forecasts across most asset classes are lower relative to the start of the year. Strong returns across risk assets and a modest rally in sovereign bond yields has manifested in a much flatter forward-looking efficient frontier and leaves the strategic return outlook across asset classes at much more modest levels relative to the end of 2023.

Table 1: Forecasted vs. realized returns, annualised (10 years)

	Forecasted returns (2025-2034)	*Change from last year's 10Y forecast	Realized returns (2015-2024)
Equity			
ACWI Equities	5.7%	-0.6%	10.3%
World Equities	5.6%	-0.6%	10.8%
EM Equities	5.9%	-1.0%	6.5%
US Equities	5.5%	-0.7%	12.7%
Europe Equities	6.2%	-0.2%	6.9%
Germany Equities	4.9%	-1.1%	6.0%
UK Equities	7.9%	-0.1%	6.1%
Japan Equities	4.4%	-0.1%	9.6%
Fixed Income			
EUR Treasury	2.4%	0.1%	0.5%
EUR Corporate	3.2%	-0.1%	1.2%
EUR High Yield	4.7%	-0.9%	3.7%
US Treasury	3.8%	-0.2%	1.3%
US Corporate	4.5%	-0.2%	2.9%
US High Yield	5.4%	-0.3%	5.0%
EM USD Sovereign	6.4%	-0.9%	3.0%
EM USD Corporate	5.6%	-0.8%	3.0%
Alternatives			
World REITS	4.0%	-0.9%	6.2%
United States REITS	4.5%	-0.9%	7.7%
Global Infra. Equity	7.0%	-0.5%	5.2%
US Infra. Equity	7.0%	-0.8%	2.9%
Private RE Equity US	4.8%	1.1%	6.4%
Private Infra (EDHEC Infra 300 Eq Wt)	13.3%	0.0%	9.8%
EUR Infrastructure IG	3.2%	0.0%	1.0%
Private EUR Infra. IG	4.4%	-0.6%	2.2%
Broad Commodities Fut.	4.7%	-1.2%	0.0%

Source: DWS Investments UK Limited. Data as of 30 September 2024. All returns (incl. forecasts) are in local currency. See appendix for the representative index corresponding to each asset class.

*Change in forecasts are from 31 December 2023 to 30 September 2024.

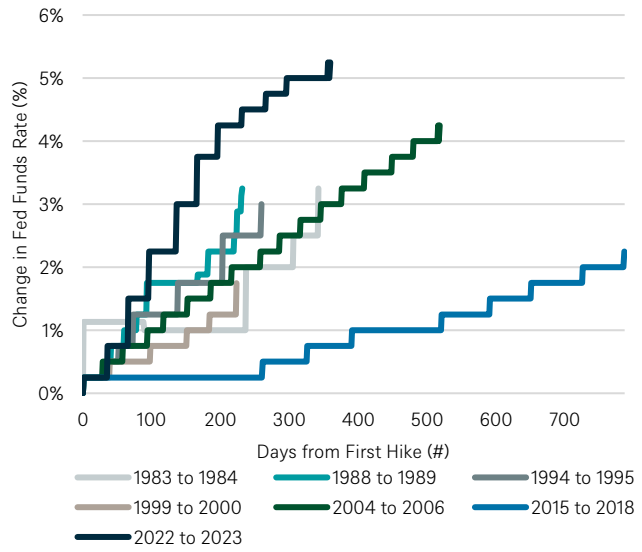
[1] Chen, Scherrman, Schlueter, Long View 2024.

Monetary policy and the economy: has the transmission mechanism changed?

The current monetary policy environment

In the immediate aftermath of the COVID-19 crisis, inflation took hold across the global economy, resulting in surging prices across goods and services. Combined with the backdrop of a robust labor market in the US, the Federal Reserve began to tighten monetary policy in an effort stem this high and persistent inflation that it had originally believed would be transitory in nature. Beginning in March of 2022, the Fed began aggressively raising the Federal Funds Rate from close to 0% to over 5% by the summer of 2024 (see Figure 1). At the same time, the Fed engaged in Quantitative Tightening ("QT") beginning in May of 2022, allowing its balance sheet of Treasuries and Mortgages to gradually decumulate, putting upward pressure on real yields in the medium-to-longer part of the US Treasury curve.

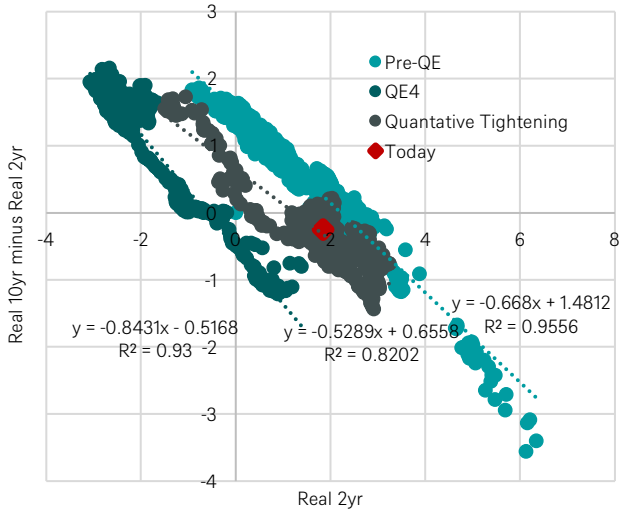
Figure 1: The rate of increases in the Fed Funds rate was historically fast



Source: Bloomberg L.P., DWS Calculations. Data as of 30 September 2024.

On the intermediate-to-longer end of the US Treasury curve, QT had a similarly significant impact on real interest rates. QT helped to drive a shift higher in the 10-year real yield as shown in Figure 2. Indicated by the change in the y-axis value for the respective regimes, QT resulted in a roughly 1.2% move higher in the 10-year real yield, all else equal (from -0.52% to 0.66%). This compares to a pre-QE y-axis value of 1.48%, indicating that the current QT regime results in roughly 80bps of 10-year real yield compression relative to a no-QE regime. This broad-based tightening of monetary policy was expected to impact financial conditions, helping to slow inflation and reduce potential overheating risk in the broad economy.

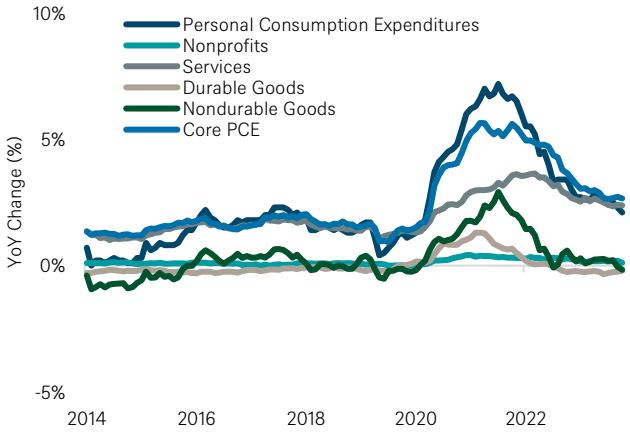
Figure 2: 10-year real Treasury yield also rose significantly



Source: Bloomberg L.P., DWS Calculations. Data as of 30 September 2024.

More than two years later, however, while inflation has trended back toward the Fed's 2% target, economic growth remains robust, labor conditions are still tight despite some modest softening, and lending markets are well subscribed despite significantly higher real risk-free interest rates. While headline inflation has fallen to levels where the Fed now feels comfortable cutting interest rates, services prices have remained stubbornly high as well (see Figure 3), with some investors fearing a potential resurgence in inflation should the US implement further deglobalization trade measures.

Figure 3: Services inflation has remained stubbornly high



Source: Bureau of Economic Analysis. Data as of 30 September 2024.

Why hasn't monetary tightening led to economic slowdown?

Despite years of research, the question of how monetary policy affects the economy remains one of the most contentious issues in economics. To date, there remains a paucity of precise understanding regarding the effects of adjustments to monetary policy stances by central banks on economic growth. In 1961, Milton Friedman introduced the concept of "long and variable lags" to describe the inconsistent manner in which monetary policy affects the economy. The most common belief currently is the rule of thumb that a period of approximately 12 to 24 months is required until, for example, the effects of increases in interest rates become visible in other economic data. Although there is a general consensus regarding the transmission channels, the precise timing therefore remains uncertain.

One reason for the lack of precision is the fact that the composition of the economy experiences changes over time, which makes it challenging to utilize historical data to predict forthcoming effects. Nevertheless, the most prominent method for analyzing the impact of various types of shocks on economic variables is through the use of so-called impulse response functions[2]. This technique involves examining a set of historical economic time series to identify their interdependent behavior and subsequently analyzing the variations in these variables resulting from a sudden change in one variable, such as the policy rate. In practice, however, changes in monetary policy are typically well anticipated by economic agents and reflected in market pricing, with changes in expectations and the corresponding reaction many times occurring before central bankers have decided to adjust monetary policy. The measurement of such expectations, while possible to some degree, remains a challenging endeavor due to the limited coverage of available statistics across the entire economy. For example, investors who are in closer proximity to the market tend to express their expectations relatively rapidly and effectively. In contrast, those who are more distant from the market, such as certain households and firms, may take longer to react, resulting in a delayed visibility of their subsequent change in behavior in reaction to changing monetary policy. Furthermore, statistical models are limited in their ability to account for the rigidities that may exist temporarily, which are excluded by assumptions inherent to theoretical frameworks. Such rigidities include instances where specific sectors of the economy may be temporarily insulated from the consequences of monetary policy shifts, potentially through the introduction of supplementary policy instruments such as subsidies. It is conceivable that high fiscal spending in the form of direct payments to households may have served to insulate consumers from the full impact of higher credit card interest rates, for example. In the absence of savings and this temporary fiscal stimulus, the impact of higher rates on consumption might have been larger and more immediate.

One approach to addressing the puzzle that extends beyond pure statistical analysis is to examine the various channels through which monetary policy is believed to operate. The principal channels of transmission are 1. the interest rate channel, 2. the credit channel, 3. the balance sheet channel, and 4. the exchange rate channel[3].

Figure 4: Transmission channels for monetary policy

Channel	Description
Interest rate channel	Directly impacts short-term and long-term market rates, influencing borrowing costs and savings returns, thereby affecting household and firm investment and consumption behaviors.
Credit channel	Is linked to the interest rate channel, affects the cost of funds for banks. Lower policy rates reduce borrowing costs for banks, allowing them to offer cheaper loans, which can boost consumer spending and business investment.
Balance sheet channel	Also known as the wealth channel, improves the financial health of borrowers by enhancing asset values and reducing debt burdens when interest rates drop, facilitating credit acquisition and stimulating economic activity. Changes in interest rates also affect asset valuations, with higher rates reducing the present value of future cash flows and current asset prices.
Exchange rate channel	Affects the value of the domestic currency through interest rate changes. Lower interest rates lead to currency depreciation, making exports cheaper and boosting demand for domestic goods, thus increasing net exports and aggregate demand.

Source: DWS Investments.

The interest rate channel is the most readily apparent of the four primary channels, as evidenced by the aforementioned credit card rates example. An increase in policy rates has an immediate effect on short-term market rates, which in turn affects longer-term rates. This ultimately affects the cost of borrowing and the return on savings. Households and firms are confronted with the prospect of higher or lower opportunity costs associated with investments and consumption, which typically prompts a response in their behavior.

The credit channel is closely linked to the interest rate channel. A modification of the policy rate exerts influence on the cost of funds for banking institutions. A reduction in policy rates results in a decline in the cost of borrowing for banking institutions, thereby enabling them to offer loans at lower interest rates. This increased availability of credit has the potential to stimulate consumer spending and business investment.

In contrast, the balance sheet channel is concerned with the financial health of borrowers. A reduction in interest rates has the potential to positively impact the balance sheets of both households and businesses. This is accomplished by enhancing

[2] Waller, Christopher J. 2023. Big Shocks Travel Fast: Why Policy Lags May Be Shorter Than You Think. Board of Governors of the Federal Reserve System.
[3] Mann, Catherine L. 2023. Expectations, lags, and the transmission of monetary policy. Bank of England.

the value of their assets and alleviating the burden of their debt. This improvement in financial health can facilitate the acquisition of credit, thereby further stimulating economic activity. Moreover, alterations in interest rates influence the valuation of assets. To illustrate, elevated interest rates diminish the present value of future cash-flows, which subsequently reduces the current price of an asset. This channel is also referred to as the "wealth channel," whereby an increase in wealth can result in an increase in consumption. It is essential to acknowledge that the impact of the wealth channel is contingent upon the absolute level of wealth, which presents a challenge in accurately predicting its effect.

Finally, the exchange rate channel is defined as the impact of monetary policy on the value of the FX-rate. A reduction in interest rates by a central bank results in a depreciation of the domestic currency, and this renders exports more affordable and competitive in international markets while making imports less competitive, benefiting demand for domestically produced goods and services. The net effect of a weaker currency is an increase in net exports, which contributes to positive growth in aggregate demand. Conversely, when the central bank raises interest rates, the domestic currency tends to appreciate, all else equal. This results in a higher cost for exports, which consequently become less competitive and experience a reduction in demand. A reduction in the cost of imported goods and services may result in an expansion of the trade deficit and a concomitant dampening of economic growth.

An alternative way of assessing the impact of monetary policy on economic performance is to examine changes in financial conditions. Financial conditions refer to the overall state of financial markets and their impact on economic activity. They encompass a range of factors, including interest rates, credit availability, asset prices, exchange rates and market volatility. The aim of these indicators is to quantify the immediate impact of policy rates as they are implemented through various transmission channels. Historically, such indicators have been relatively abstract, indicating whether financial conditions were more accommodative than the historical average. Recently, the Federal Reserve introduced a new index to provide a comprehensive measure of financial conditions and their relationship to future economic growth (3). The index uses weights derived from the Fed's economic models to ensure that it is consistent with how those models relate financial variables to economic activity. This approach helps summarize broad financial conditions in a single indicator, making it easier to assess their potential impact on the real economy.

Decomposing financial conditions: how much do interest rates really matter?

While the state of the economy can be sustained by strong secular forces for a period, the backdrop of financial conditions will eventually weigh on the economy through various channels such as consumers and the labor market. To measure the tightness or looseness of the current financial environment, economists have created numerous composite indices that aggregate financial variables to proxy the relative supportiveness of financial conditions to economic growth.

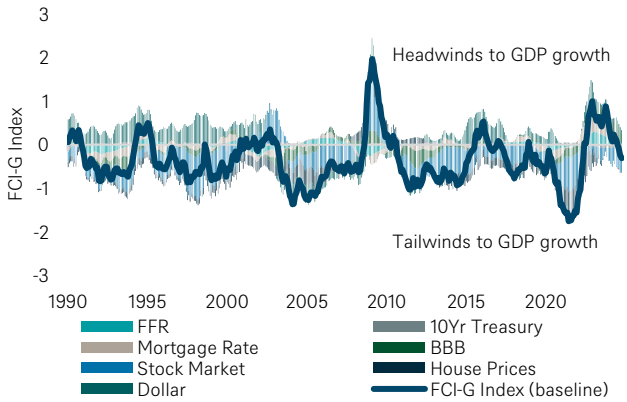
One of the most recent developments in financial conditions measures is the introduction of the Financial Conditions Impulse of Growth ("FCI-G")[4], which simplifies into seven financial variables:

- Federal funds rate
- 10-year Treasury yield
- 30-year fixed mortgage rate
- Triple-B corporate bond yield
- Dow Jones total stock market index
- Zillow house price index
- Nominal broad dollar index

Two differentiating features of the FCI-G versus other financial conditions indices are the simplicity of the methodology–which allows for a more straightforward economic interpretation–and the dynamic coefficients assigned to the variables based on impulse response on GDP[5].

Figure 5 and Figure 6 illustrate the historical changes in the FGI-C and their relative contributors both over the long term and over the past four years, the latter which represents the period of significant monetary tightening via increases in the Federal Funds rate and increases in real government bond yields via Quantitative Tightening.

Figure 5: Historical contribution to FCI-G index

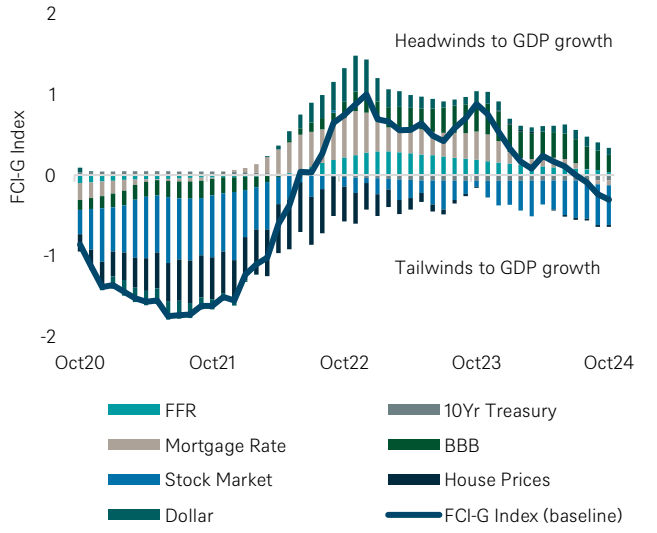


Source: Federal Reserve Bank of Chicago. Data as of 30 September 2024.

[4] Andrea Ajello, Michele Cavallo, Giovanni Favara, William B. Peterman, John W. Schindler IV, and Nitish R. Sinha1A New Index to Measure U.S. Financial Conditions (2023).

[5] The dynamic multiplier quantifies the cumulative effects of unanticipated permanent changes in each financial variable on real GDP growth over the subsequent year. The index applies a lookback window of either one or three years and will drop out more distant financial variables from the computation of the index after either one or three years.

Figure 6: Recent contribution to FCI-G index



Source: Federal Reserve Bank of Chicago. Data as of 30 September 2024.

The shortcoming with some broad measures of financial conditions, is their inability to discern the relative importance of these variables across various sectors of the economy. Whereas some longer-tenured and more broadly used measures of financial conditions such as the National Financial Conditions Index ("NFCI") show looseness in the financial backdrop, the more recently developed FCI-G has showed the financial conditions impulse on growth to be a headwind, having moved into restrictive territory versus history as early as June of 2022. This shift into tight financial conditions was primarily driven by increasing mortgage rates and the US Dollar, with the Fed funds rate also experienced sizeable increases.

As FCI-G measures three-month changes in the seven financial variables, however, the monetary easing via cuts in the Fed Funds rate and falling mortgage rates sentiment have resulted in the index now showing a slight tailwind to GDP growth. Elevated corporate bond yields continue to be a modest headwind, but very strong risk sentiment as measured through stock market performance has been a significant tailwind for the economy.

The FCI-G and other financial conditions indices attempt to measure the economic environment holistically, providing a broad indication of the aggregate macroeconomic environment relative to history. To supplement these top-down views, we then dive into individual segments of lending across both corporations and individuals to better understand from the bottom up where the impact of higher interest rates has been or hasn't yet been felt or where it might be more or less meaningful for borrowers.

Segments of the credit market and their sensitivity to rates

While financial conditions indices seek to measure the extent of financial tightness or looseness across the whole economy, different types of borrowers have experienced varying sensitivity in their interest burden to risk-free rates. Broadly speaking, high-quality borrowers are likely to be charged interest rates on their debt that are relatively close to risk-free rates. The additional compensation required by lenders (or investors in those loans) is historically much smaller and potentially less volatile than the risk-free component of the cost of debt as it reflects a much lower likelihood of the borrower defaulting on the loan. Conversely, more speculative, lower-quality borrowers are likely to be subject to significant credit spreads, or additional risk compensation above an equivalent government bond yield, to warrant lending to a party that may have trouble repaying the loan and may be particularly sensitive to the risk of an economic downturn.

The duration of the loan will also affect the sensitivity of the borrower to changes in risk-free rates. Floating-rate borrowers may experience large fluctuations in their interest payments dependent on how the Fed increases or lowers interest rates but may benefit from easier Fed policy that might be implemented in a period of economic weakness while fixed-rate borrowers will not experience this volatility in the amount of their interest payments and have the opportunity, in many cases, to refinance should risk-free rates move materially lower, but they retain these benefits at typically higher rates of interest as government bond yield curves are typically positively sloped.

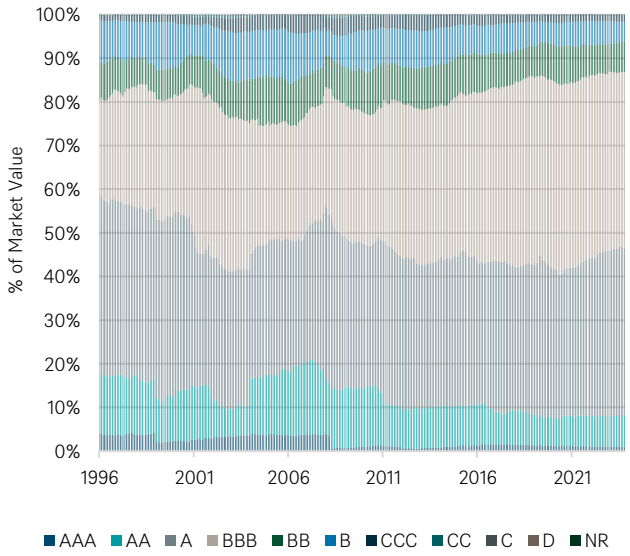
In general, we can group rate-sensitive borrowers into three main categories: 1. Corporates, 2. Housing, and 3. Consumers. Within each of these categories will exist both higher quality and lower quality borrowers, both floating rate and fixed rate, shorter and longer-term borrowers, but with varying proportions that may shift as debt markets have evolved over time. In aggregate, the composite of interest rate sensitivity across these segments has changed over time, but analysis does not indicate a breakdown of the transmission of higher government bond yields into debt financing headwinds.

Corporates are realizing higher costs of debt

Corporate borrowers will be subject to these dynamics, with high-quality, low-risk borrowers able to finance at longer-term fixed rates paying relatively credit spreads on top of government bond yields and more speculative, lower-quality corporations borrowing at much high spreads and generally shorter durations. The sensitivity of corporate borrowers in aggregate to interest rates is, as a result, quite dependent on the dynamics and composition within the universe of corporate borrowing.

The broad trend in within the corporate bond universe has been improving credit quality over the past decade, with BBB and higher rated issues now constituting nearly 87% of the combined market value of the ICE BofA US Corporate and the US High Yield indices (see Figure 7).

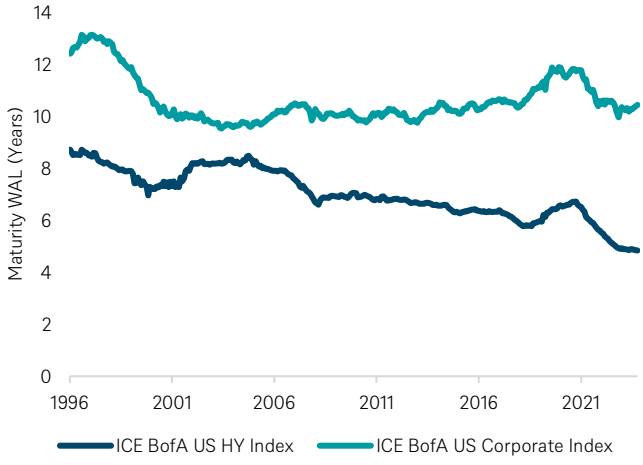
Figure 7: The quality of the corporate bond universe has improved over time



Source: ICE BAML Indices, DWS Calculations. Data as of 30 September 2024.

While credit quality has demonstrated long-term improvements across the US corporate bond market, weighted-average maturities have shorted in recent years particularly when looking at the high yield index, where weighted average life is now 4.84 years as of the end of September 2024 (see Figure 8).

Figure 8: Maturity weighted average life of US IG and HY



Source: ICE BAML Indices, DWS Calculations. Data as of 30 September 2024.

The interaction of these two dynamics–improving credit quality but shortening of maturities–has a somewhat mixed impact on the effect of monetary policy on corporate credit markets. On the one hand, higher quality issuers have incrementally reduced dependency on strong market sentiment (i.e. credit spreads), instead exhibiting more relative sensitivity to government bond yields across the curve. Shorter average maturity has

conversely increased refinancing risks for some companies in the high yield segment, which has been an ongoing fear for investors should the current historically tight corporate spreads (see Figure 9) experience any material widening in an adverse market event.

Most importantly, however, the structural improvement in credit quality across the US corporate bond universe has improved the resilience of the asset class against rising interest expenses. Ultimately, a strong labor market and healthy corporation balance sheets combined with strong investor sentiment expressed through tightening credit spreads has bolstered the health of US corporations through this period of higher interest rates.

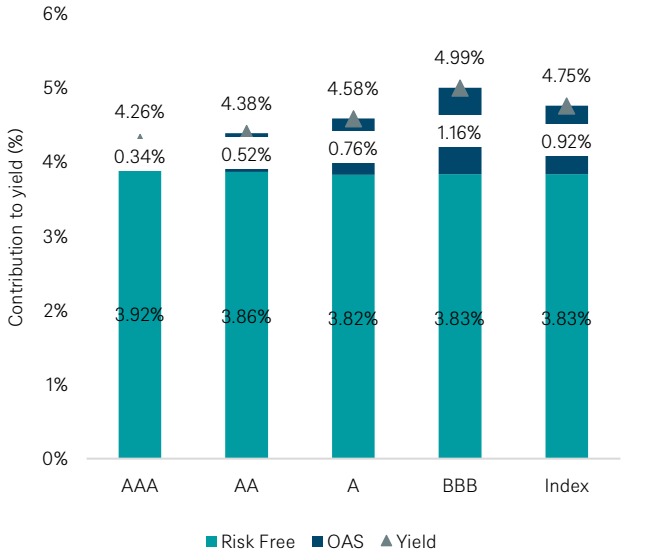
Dissecting the ratings cohorts of the US Investment Grade and High Yield corporate bond universes, however, does convey the message that government bond yields still matter and still matter quite a bit. While the health of the macroeconomy and of companies has helped, they will ultimately bear higher interest expense burdens on all newly issued bonds over the past two three years which will drag, again with "long and variable lags", on their net profitability and debt servicing.

Figure 9: US High Yield and Investment Grade spreads have remained historically tight

Source: Bloomberg L.P., DWS Calculations. Data as of 30 September 2024.

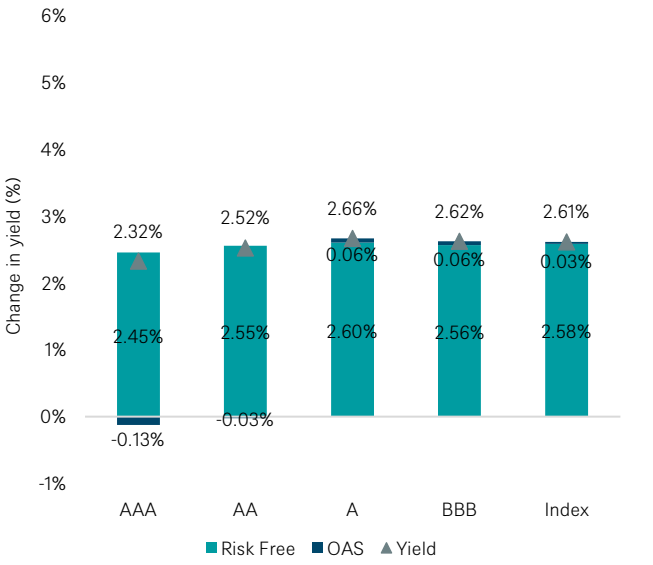
Over the past three years, cost of debt has increased considerably for both investment grade and high yield companies as a result of increases in government bond yields, although again with varying degrees of relative importance depending on the credit quality of a company. Figure 10 and Figure 11 show the contribution of risk-free rates and credit spreads across the ratings cohorts of the ICE BofA U.S. Corporate Index as well as the change in those two yield components over the past three years, indicating that the increase in yields was entirely explained by interest rates.

Figure 10: ICE BofA U.S. Corporate Index yield decomposition as of 30 September 2024



Source: ICE BAML Indices, DWS Calculations. Data as of 30 September 2024.

Figure 11: ICE BofA U.S. Corporate Index change in yield decomposition from 30 September 2021 to 30 September 2024

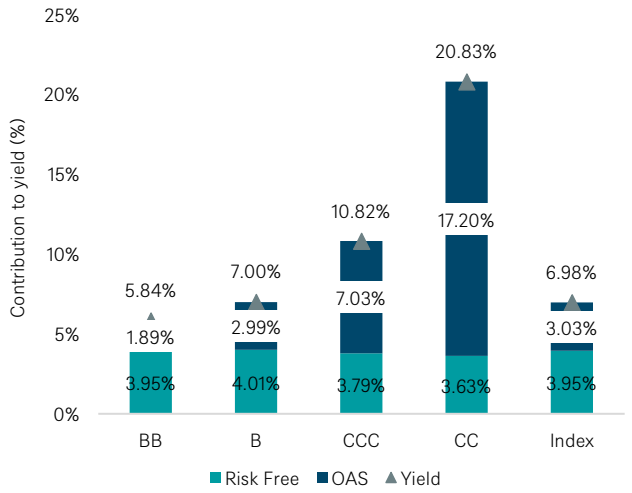


Source: ICE BAML Indices, DWS Calculations. Data as of 30 September 2024.

For the lower quality segment of corporate credit markets, the increase in borrowing costs was also driven mostly by increases in government bond yields as spreads were relatively sideways over that period. Figure 12 and Figure 13 show this contribution to the yield change, although the increase in the yields was not as large proportionate to the total yield as it is for investment grade-rated issuers. For high yield borrowers, credit availability and a strong macroeconomic environment (and

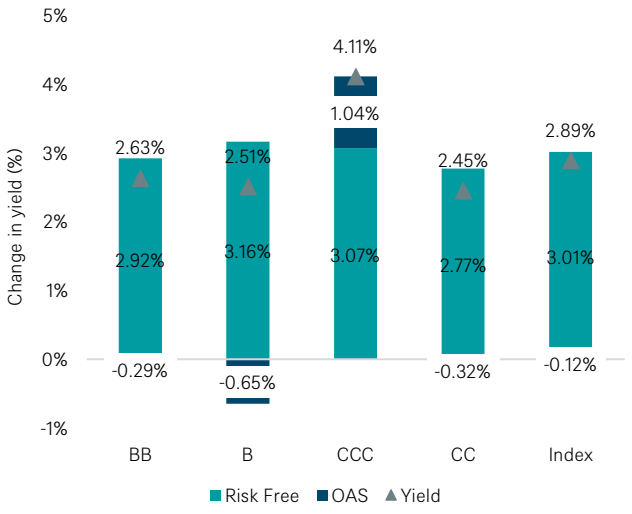
correspondingly positive market sentiment through relative spread tightness) will often dictate solvency often incremental moves in risk-free rates.

Figure 12: ICE BofA U.S. High Yield Index yield decomposition as of 30 September 2024



Source: ICE BAML Indices, DWS Calculations. Data as of 30 September 2024.

Figure 13: ICE BofA U.S. High Yield Index change in yield decomposition from 30 September 2021 to 30 September 2024



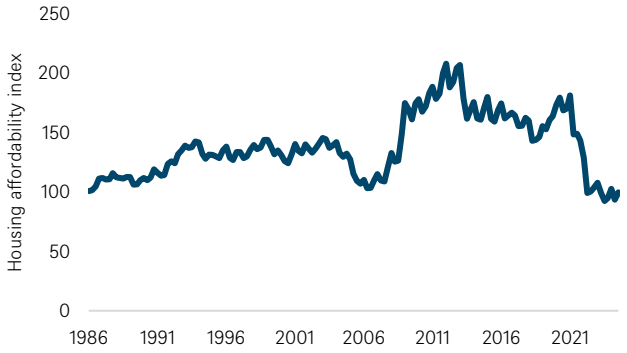
Source: ICE BAML Indices, DWS Calculations. Data as of 30 September 2024.

Significantly higher mortgage rates but more fixed rated borrowing

For mortgage borrowers, the increase in lending rates over the past two and a half years has been drastic, with low housing inventories keeping home prices elevated and putting significant pressure on affordability particularly for first-time homebuyers. Aggregate national housing affordability–which measures the ability of a family with the median income to qualify for a mortgage on a median-priced home–is at or near its lowest level since the index inception in 1986 (see Figure 14).

At the September composite HAI of 99.3, the median family income has less than 100% of the income necessary to qualify for a conventional loan covering 80 percent of a median-priced existing single-family home as defined by the National Association of Realtors ("NAR").

Figure 14: Housing affordability composite index

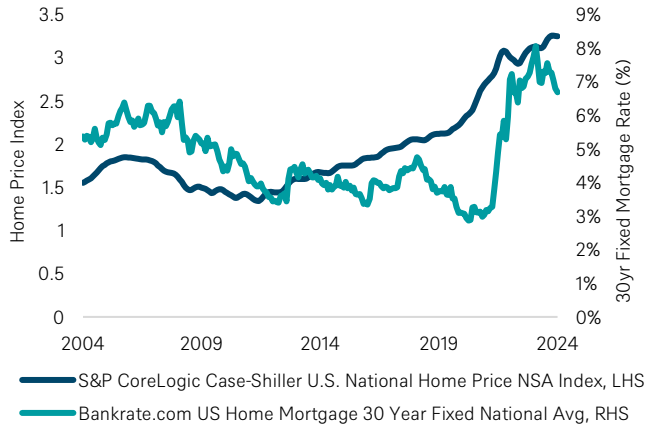


Source: National Association of Realtors. Data as of 30 September 2024.

The typical expectation around housing affordability is for increasing interest rates to gradually materialize into lower home prices and vice versa. As with most asset prices, an elevated real discount rate should be commensurate with a more modest asset valuation, and the eventual economic slowdown resulting from tighter financial conditions should also work to cool housing demand. Over this most recent monetary tightening cycle, however, post-COVID strong housing momentum has continued to drive prices higher as housing supply remains limited (see Figure 15).

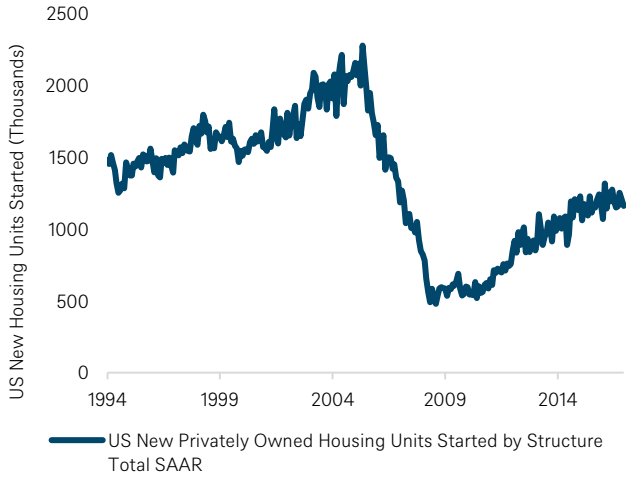
While we do seen signs of a modestly slowdown in some economic indicators including a small degree of softening in the labor market, housing prices remained supported by low inventories. The slow recovery in new construction post-GFC (see Figure 16) combined with less turnover of current housing stock as a result of homeowners being locked into significant below-market mortgage rates has perhaps lagged the effect of higher mortgage rates on home prices across the US.

Figure 15: Average home prices and mortgage rates have both risen



Source: National Association of Realtors. Data as of 30 September 2024.

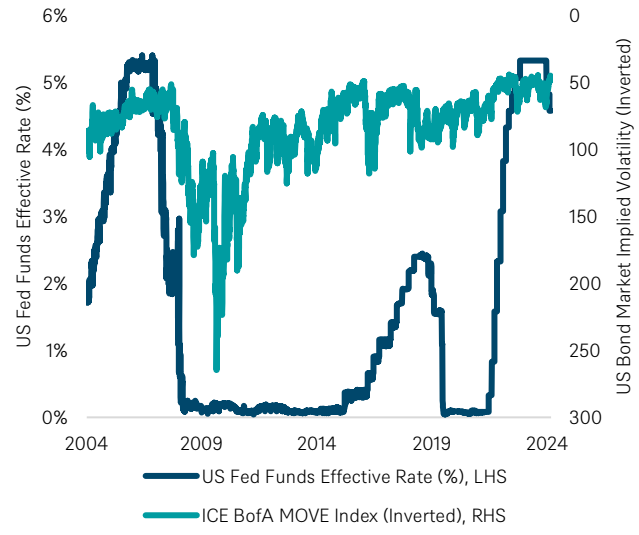
Figure 16: New housing starts remain well below 2008 levels



Source: National Association of Realtors. Data as of 30 September 2024.

While prices have remained elevated amid more structural housing market tightness, homebuyers have experienced significant increases in their cost of borrowing. For new homebuyers, the sizeable increase in Treasury yields was further compounded by the increase in mortgage spreads associated with greater uncertainty around the outlook for interest rates. Often periods of monetary easing may correspond to more certain and less volatile interest rates, as central bankers are clear on their intended direction for interest rates (see Figure 17).

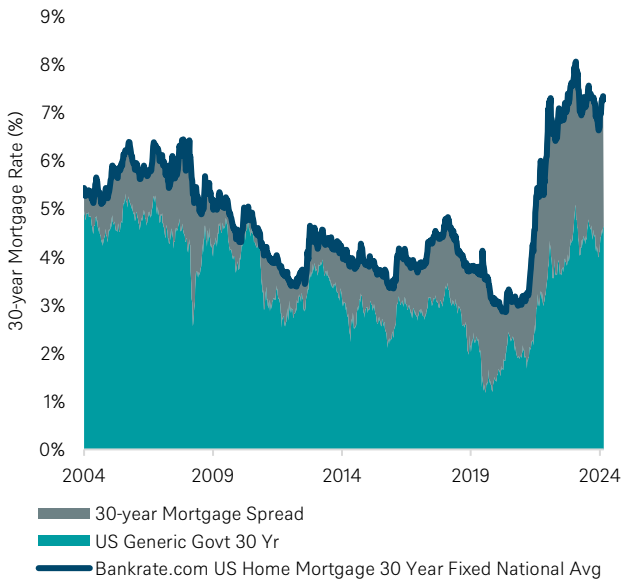
Figure 17: Monetary policy and interest rate volatility



Source: Bloomberg L.P., DWS Calculations Data as of 30 September 2024.

As a result of the simultaneous increase in government bonds yields and increase in the value of mortgage prepayment optionality, 30-year mortgage rates have increased by 4.15% over the past 3 years driven by an increase in the 30-year US Treasury yield of 2.59% and an increase in the 30-year Mortgage spread of 1.56% (see Figure 18).

Figure 18: Contribution to 30-year mortgage rate

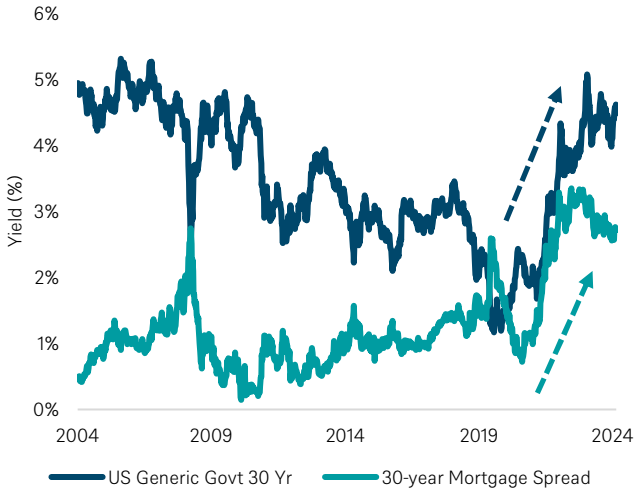


Source: Bankrate.com, Bloomberg L.P. Data as of 30 September 2024.

Where rates and spreads historically have a negative relationship, owing to stronger credit conditions that often coincide with increasing interest rates (stronger economic growth, higher risk of associated demand-driven inflation), this more recent move higher in US Treasury yields was atypical in that mortgage spreads did not diversify from the move in risk-free rates but instead exacerbated the impact on mortgage borrowers (see Figure 19).

Uncertainty around interest rates has remained elevated even following the Fed's initial round of interest rate cuts, driven by uncertainty around elections and their implications on the inflation outlook as well as monetary tightening in the longer end of the yield curve as a function of continued balance sheet tightening.

Figure 19: 30yr US Treasury yield versus 30-year mortgage spread

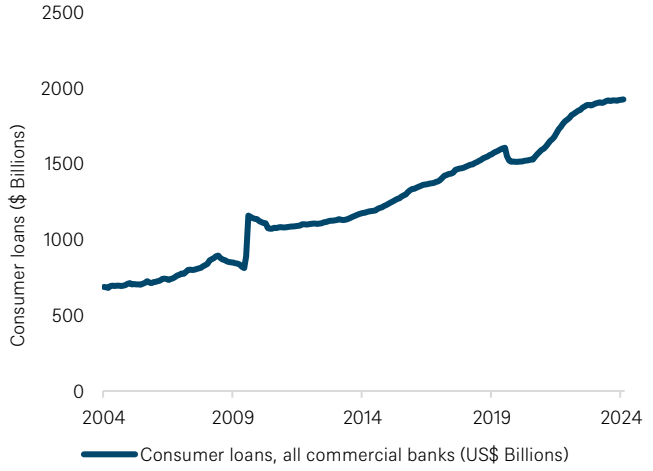


Source: National Association of Realtors. Data as of 30 September 2024.

The health of the consumer credit market

For US consumers, access to credit through the various spending segments remained relatively robust from 2022 well into 2023 despite the backdrop of monetary tightening. Coming out of the COVID-19 crisis, consumer conditions were very loose and accommodative, with significant loan volumes across both prime and sub-prime borrowing. Only in recent quarters has there been signs of more rigid loan originating standards in the consumer credit space. Figure 20 shows the volume of consumer loans has been quite resilient even over the past two years of significant monetary tightening.

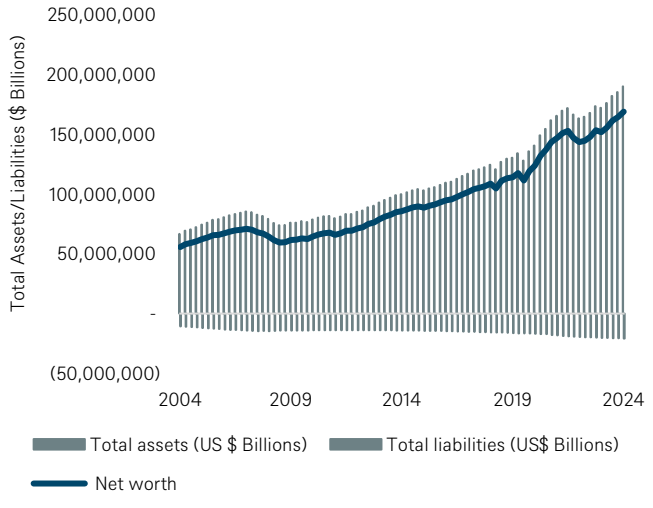
Figure 20: Consumer loan volumes have been robust



Source: Board of Governors of the Federal Reserve System (US). Data as of 30-September 2024.

Healthy household balance sheets have bolstered consumer credit as well. While household liabilities have grown by about 28% over the past five years, household assets have grown at a far faster pace, with net worth (assets minus liabilities) increased by over 48% over the same period (see Figure 21).

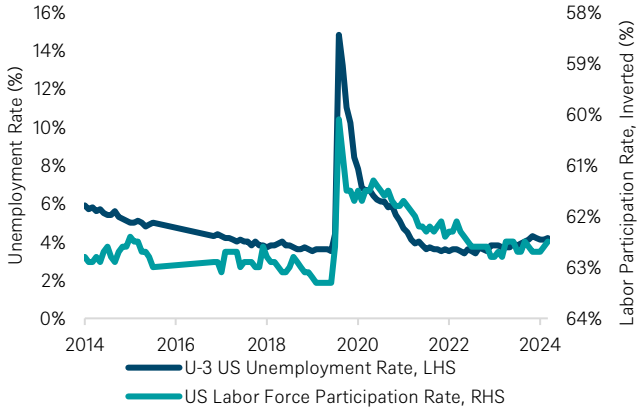
Figure 21: Household net worth has increased



Source: Board of Governors of the Federal Reserve System (US). Data as of 30-September 2024.

Over the past two years, underlying consumer dynamics haven't looked materially different from history. Broadly speaking, prime lending continues to have the greatest relative sensitivity to interest rates rather than market and business sentiment-related factors that influence borrowing spreads, but labor market resilience has helped to support the economic health of most prime borrowers, with unemployment remaining well below historical averages. While unemployment has risen from a low of 3.4% early in 2023 to 4.1% as of the end of Q3 2024, the headline figure remains below historical averages and labor participation is still above 62% (see Figure 22).

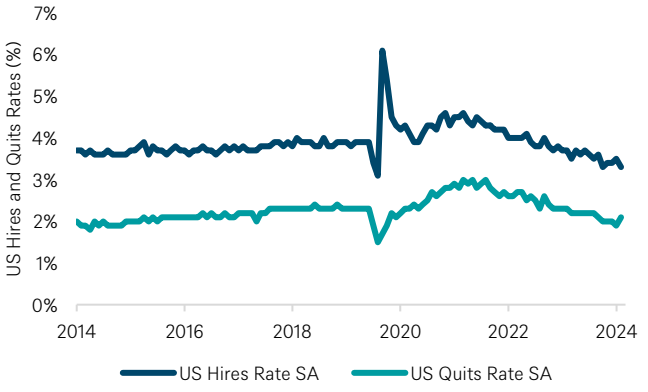
Figure 22: Labor market tightness has supported borrower health



Source: Bankrate.com, Bloomberg L.P. Data as of 30 September 2024.

Looking at labor market turnover, however, paired with anecdotal evidence regarding hiring freezes across many white-collar industries, there does appear to be some modest softening in the labor backdrop. Figure 23 shows that the US seasonally adjusted hire rate at a decade low (apart from the height of the COVID-19 crisis) and US Quit rates, which can indicate the confidence of workers to voluntarily leave their jobs for new opportunities, has also been trending lower since May of 2022, around the same time when the Fed started hiking interest rates and decumulating its balance sheet of assets.

Figure 23: New quits and hires show modest signs of softening



Source: Bureau of Labor Statistics. Data as of 30 September 2024.

Diving deeper into consumer credit, we can broadly separate consumer borrowing into three main categories: auto loans, credit cards, and student loans, each with varying relative degrees of sensitivity to changes in interest rates as shown in Figure 24 below.

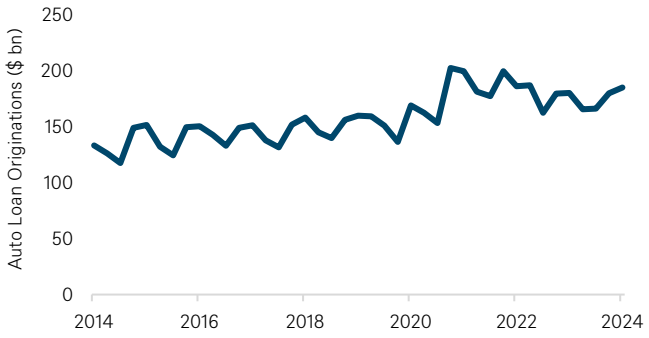
Figure 24: Different segments of consumer credit demonstrate varying degrees of interest rate sensitivity

Category	Rate Sensitivity	Description
Prime Auto Loans	Moderate/High	Prime auto loans are typically issued with relatively tight spreads to risk-free rates and are therefore highly sensitive to moves in interest rates. However, creditworthiness is usually quite strong absent significant labor market stress
Subprime Auto Loans	Low	More speculative auto loans rates are driven much more by spreads, where increases in interest rates, while a draw on borrowers, are incremental relative to the loan origination environment and individual credit quality
Credit Cards	Low	Credit card interest rates are usually multiples of the risk free rate and thus are proportionately less sensitive to moves in interest rates. Yields for the major bank card trusts have recently averaged between 20-27%.
Federal Student Loans	Moderate/High	Federal student loans tend to have a relatively low interest rates due to government backing and will follow policy rates closely.
Private Student Loans	Low	Private student loans can vary significantly based on credit quality but will come at a premium level to public loans and are slightly less interest rate sensitive.

Source: DWS Investments.

Auto loans, one of the historically more resilient segments of consumer credit, has continued to see strong origination volumes following a brief period of slowdown in 2H2022 into 1Q2023 (Figure 25).

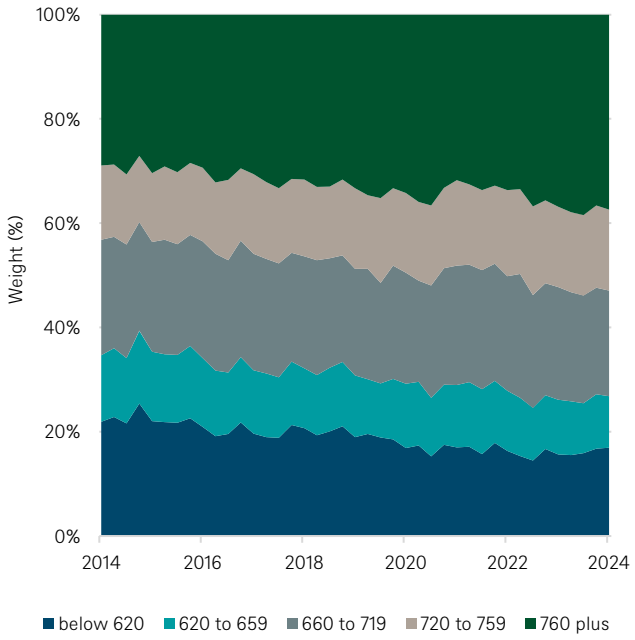
Figure 25: Auto loan originations ($ billions)



Source: FRBNY Consumer Credit Panel / Equifax. Data as of 30 September 2024.

Auto loan FICO scores have also remained quite healthy, continuing a trend toward higher quality that's been gradual over the past decade. While the proportion of poor credit borrowers has increased slightly over the past couple of quarters, "Good"-to-"Excellent" borrowers still make up nearly three-quarters of originations (see Figure 26).

Figure 26: Distribution of originations of Auto loan FICO score has been improving until recently



Source: FRBNY Consumer Credit Panel / Equifax. Data as of 30 September 2024.

Conversely, subprime consumers have much less stable household balance sheets, with wage income in many cases being outpaced by expenses funded through borrowing. For subprime lenders, risk-free rates are relatively de minimis as compared to credit spreads when determining interest rates on loans to more speculative consumers.

The same is generally true across credit cards, where borrowing rates even for high credit rating borrowers are significantly driven by spreads rather than risk-free rates.

Credit Cards

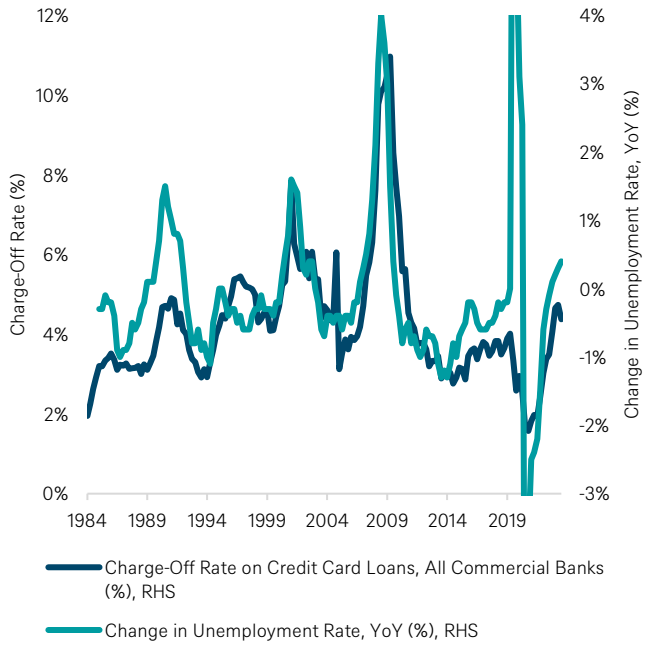
For credit card loans, borrowing rates tend to be far more spread-dependent than interest rate-dependent, with delinquency rates historically much higher than most other categories of consumer borrowing. Credit card borrowing is also primarily floating rate, with a spread charged on top of a prime rate. As a result, borrower interest burden is relatively immune to changes in interest rates and is instead subject to macroeconomic conditions that may impact a bank's willingness to lend. Figure 27 shows historical credit card interest rates which are much higher than prime rates.

Figure 27: Credit card rates are typically much higher than risk-free rates

Source: FRBNY Consumer Credit Panel / Equifax. Data as of 30 September 2024.

As a result, delinquencies and charge-offs are highly correlated to increases in unemployment, as shown in Figure 28.

Figure 28: Credit card charge-offs are historically very highly correlated to employment

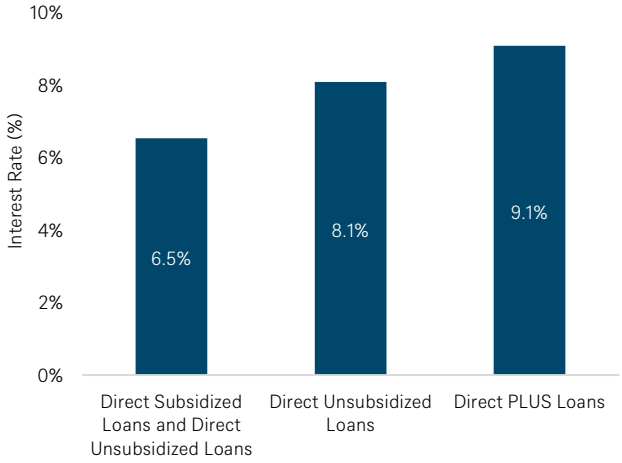


Source: Bloomberg L.P., Board of Governors of the Federal Reserve System (US), Fitch Ratings. Data as of 30 September 2024.

Student Loans

Student loans by and large can be divided into federal student loans and private student loans. Federal students, which are backed by the government, generally have interest rates that will follow policy rates quite closely and are therefore quite sensitive to changes in monetary policy. On the contrary, private student loans can vary significantly based on the borrower's credit quality and will typically trade at a sizeable premium yield to public loans. As a result, private student loans are generally far less sensitive to interest rates and far more dependent on broader macroeconomic health.

Figure 29: Interest rates for direct loans first disbursed on or After July 1, 2024, and Before July 1, 2025



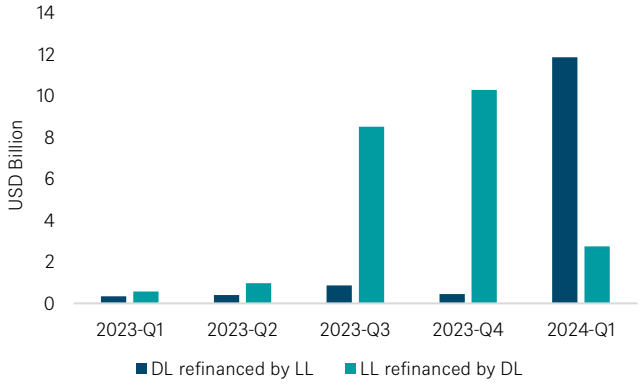
Source: Federal Student Aid: An Office of the U.S. Department of Education. Data as of 30 September 2024.

The growing role of private markets in monetary policy transmission

In the US, banks have traditionally been the primary facilitators of lending transactions, leveraging their balance sheet of deposits to provide loans to businesses and individuals. Securitization then allows banks to offload the credit risk of these loans to investors. In the decade following the GFC, however, bank lending facilities have been increasingly limited via regulations around balance sheet and capital requirements, pushing banks away from what have traditionally been viewed as more speculative segments of the lending market.

As the Fed has moved to increase nominal and real interest rates, first through interest rates hikes commenced in March of 2022 and then via Quantitative Tightening measures employed in May, investors were able to reposition into safer fixed income investments at far more attractive strategic yields. This modest reversal in Ben Bernanke's risk-taking channel combining some banking turmoil around SVB Financial Group and Credit Suisse Group AG in late 2022/early 2023 have increased scrutiny by bank lenders and increased collateral requirements from regulators for more speculative loans. A significant ramp up in direct lending coincided with this period of elevated credit spreads from mid-2022 to the Fall of 2023 (see Figure 30).

Figure 30: Direct lending took share from leveraged loans in 2023



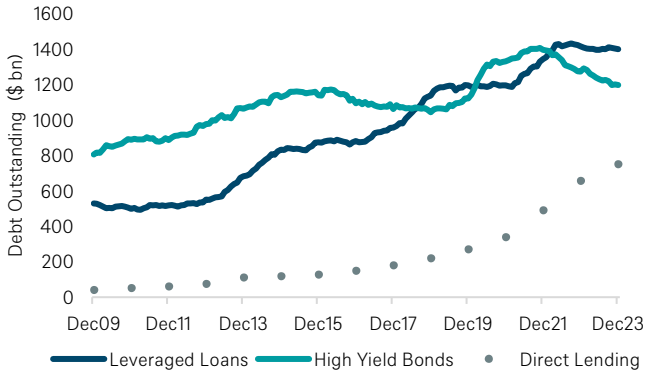
Source: Pitchbook LCD, Mergent's FISD, Thomson Reuters LPC, Preqin, S&P Capital IQ. Degerli, Monin (2024).

Generally, lack of access to capital might have led some of these lower-rated or non-rated companies to default. However, this more restrictive bank lending environment occurred at a time when these companies were able to access capital via the private markets. So as the lending of the public markets pulled back, the lending from the private markets stepped in.

In recent years, private credit and public credit markets (via Leveraged Loans and High Yield bonds) have competed for financing of deals. As a result of hung deals and increasing regulatory capital requirements, banks have become less willing to underwrite loans in the leveraged loan market. As bank-originated leveraged lending receded, private credit lenders stepped in--supported by investors with long-investment horizons looking for lesser correlated returns to public markets, a diversified investment opportunity set, and higher prospective returns which included illiquidity premium. With access to more institutional capital, the deal size of private credit increased and enabled them to finance larger deals. Consequently, Direct lending AUM grew substantially, while leveraged loans and high yield market stagnated.

As a result, even when the monetary policy was tightening in 2023 private debt managers also got access to a lot of investor capital as they were able to perform well during the difficult year of 2022 when both US broad market and US banks declined by about 20% each and US leveraged loan market declined by about 1%. As can be seen in Figure 31, the amount of leveraged loans being replaced by direct lending increased in every quarter of 2023.

Figure 31: Increase in direct lending while high yield and leveraged loans issuance has flattened

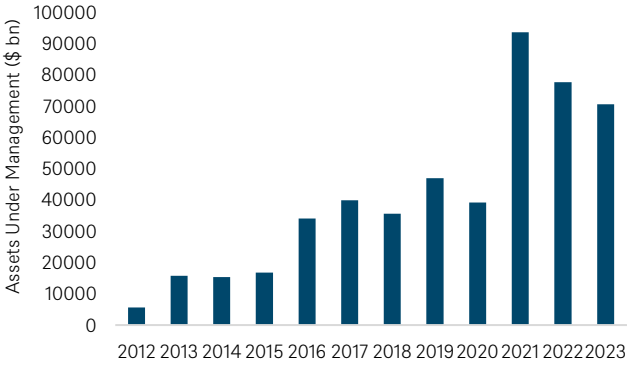


Source: Pitchbook LCD, Mergent's FISD, Thomson Reuters LPC, Preqin, S&P Capital IQ. Degerli, Monin (2024).

*Direct Lending assets under management (AUM) includes direct lending funds AUM and BDC AUM. For direct lending AUM, the data is as of June 2023

Higher rates have sometimes historically led to a risk off scenario and can led to a start of recession. This did not happen this time. In fact, the fund raising of private lenders from institutional investors remained resilient, with strong demand continuing from North American investors (see Figure 32).

Figure 32: Direct lending fundraising has been robust even amid higher rates

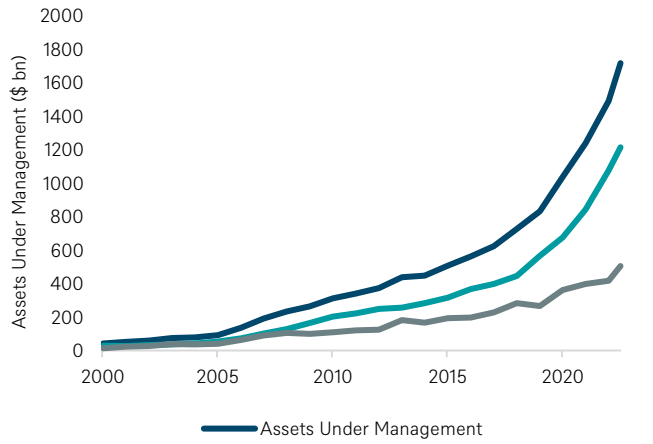


Source: Source: Preqin. Degerli,Monin (2024).

Of capital raised by private debt managers, not all of it was deployed. A large portion of investor cash has remained in the form of "dry powder" or uncalled capital commitments with long time horizon and it can be called and deployed at a short notice. This is another factor which provided resilience against the monetary policy shocks.

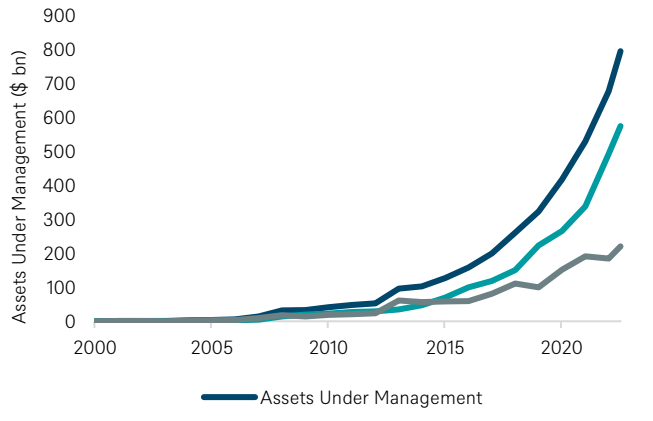
As also observed by Degerli and Monin (2024), even during periods of monetary policy shocks, the direct lending returns did not decline. This can be partly explained because most of the private lending happens on floating rate. As the lending the income from the higher rate far dominated the credit losses. One must keep in mind, that it is this is period under observation is very short and at the back of Covid related stimulus which helped bolster the balance sheet of corporates. Figure 34 and Figure 35 show the sizeable growth in private debt and direct

Figure 33: Growth in all Private Debt strategies



Source: Source: Preqin. Cai, Haque (2024).
*Dry Powder refers to committed but not invested capital. Invested capital is committed & invested capital (typically in the form of loans). Assets under management is the sum of invested capital and dry powder. Data as of June 2023. AUM data reported with 6-month lag.

Figure 34: Growth in Direct Lending

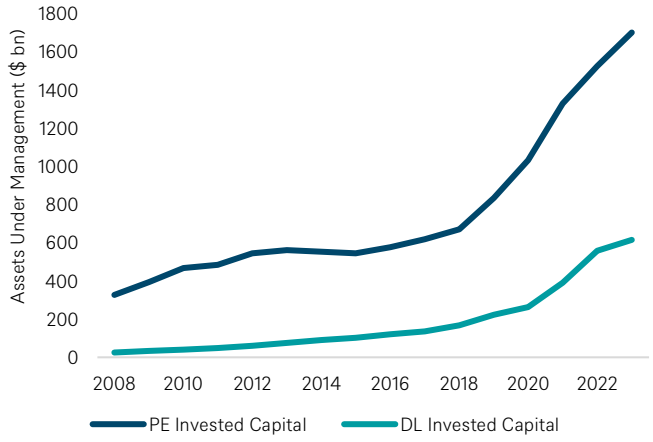


Source: Preqin. Cai, Haque (2024).
*Dry Powder refers to committed but not invested capital. Invested capital is committed & invested capital (typically in the form of loans). Assets under management is the sum of invested capital and dry powder. Data as of June 2023. AUM data reported with a 6-month lag.

At the same time, the role of private equity in financing the economy continues to grow.

One of the main activities of PE is leveraged buyouts. Given that these require a lot of debt financing the role of private credit increases in such a scenario. Another reason is that many established private equity firms later expanded into credit as well, which made the borrowers less willing to access traditional channels of debt financing. Figure 35 shows how Private Equity capital and Direct lending capital has been in-synch with each other.

Figure 35: Private Equity and Direct Lending buyout activity



Source: Preqin, Bain Annual PE Report, S&P Capital IQ. Degerli, Monin (2024).
*Invested capital figures are as of June 2023. Only the capital invested by funds with a focus on buyout strategy in North America is included. Direct lending figure includes invested capital by direct lending funds and BDC assets under management.

When analyzing these developments in asset growth in the private lending markets, one must be mindful that that the private credit market has not experienced a prolonged period of market stress as to dissuade fundraising efforts. During the Global Financial Crisis, for example, the size of the private credit market was quite small both in relative and absolute terms.

Return forecasts for ESG indices

For strategic investors, climate change and its negative impact on economic growth and, by consequence, stability and return on capital investments and potential for investment opportunities, remains as the one of the most significant mega-trends. In a previous Long View report, we explored potential impacts of climate risk scenarios on growth and inflation as well as on equity and credit risk premia, leveraging climate pathways previously establishing through the Bank of England's Climate Biennial Exploratory Scenarios ("CBES")[6].

DWS and broader industry research continues to explore the adverse effects of climate transition risk and physical climate risk on portfolio returns, with research findings demonstrating increasing breadth and depth in estimating the drivers of changes in potential returns associated with climate risk. At a glance, adverse climate scenarios resulted in higher risk premia, lower growth potential, and in some cases, the risk of higher structural inflation levels, although the long-term intensity of these impacts remains a hotly debated topic.

As part of our ongoing analysis of financial materiality related to sustainability, we present our set of return forecasts for 13 ESG equity and fixed income indices to help investors construct strategic long-term portfolios with consideration to both traditional financial metrics as well as ESG impact metrics. Table 2 shows our updated 10-year return forecasts across these ESG and traditional indices.

Table 2: 10Y return forecasts, annualised, in local currency

	ESG	Traditional
Equity		
ACWI Equities	5.3%	5.7%
World Equities	5.4%	5.6%
EM Equities	5.6%	5.9%
US Equities	5.9%	5.5%
Europe Equities	6.3%	6.2%
Japan Equities	4.1%	4.4%
Fixed Income		
EUR Treasury	2.4%	2.4%
EUR Corporate	3.2%	3.2%
EUR High Yield	4.0%	4.7%
US Corporate	4.6%	4.5%
US High Yield	5.6%	5.4%
EM USD Sovereign	5.4%	6.4%
EM USD Corporate	4.7%	5.6%

Source: DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

For the ESG index return forecasts, we utilize the same three-pillar approach that we use for traditional indices. These forecasted returns for these ESG indices do not therefore embed any ESG-specific factor risks, although it is reasonable to believe that the negative return implications of adverse climate scenarios we discuss in the next section may depend on the resilience of respective companies and industries to climate transition risk.

We continue to put significant emphasis on considering the financial impact of ESG policy, as evolution of sustainability policies across global economies is paramount to mitigating significant environment risks. As we discussed in considerable detail in the 2022 Long View, significant and early adoption of climate transition policy is tantamount to mitigating climate-related losses across both the real economy and corporate profits.

[6] Bank of England 2021.

The Long View

Coming into 2025, financial markets in many ways look similar to where we entered the year: technology dominance and optimism around artificial intelligence have bolstered returns and driven equity valuations to levels last seen before the 2000 tech bubble. The economy has been far more resilient than was the economic consensus, and labor markets continue to show tightness despite some signs of softening.

In contrast, many global central banks have pivoted away from tight monetary policy toward cutting interest rates to provide a more supportive economic backdrop. Inflation has become more manageable, and economic expansion is long in the tooth. However, investors remain puzzled as to the seemingly marginal impact two years of significant monetary tightening have had on global growth and are beginning to question the efficacy of monetary policy on financial conditions and on the broader economy, a topic we explore further in this edition of the Long View report.

Looking at the strategic outlook for investors, a higher long-term return outlook across core fixed income and more muted return potential for global equity markets reflects the realities of strong investor sentiment and compression in risk free in spite of monetary tightness. In our estimation, the monetary policy mechanism is not broken but is instead perhaps "longer and more variable". Nonetheless, investing is about patience, diversification and maintaining a long view. Our framework uses fundamental building blocks for establishing return forecasts of various asset classes. These can provide investors with a strategic baseline view. The following sections take the reader through our framework and findings.

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Executive summary

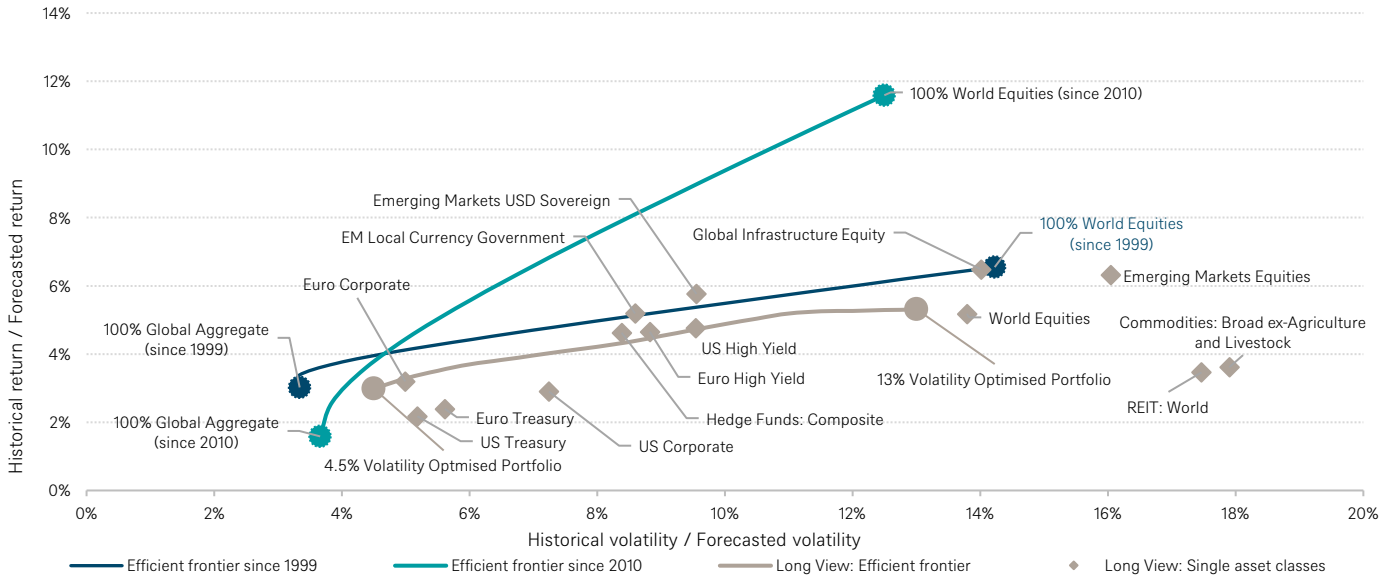
As we approach the end of the year, financial markets reflect renewed sense of optimism around economic growth and corporate profitability. Equity valuations and credit spreads are now near historical tights, and the magnitude of interest rate cuts being priced into the market over the next year is now less than 1%. Strong economic growth and a resilient labor market has persisted with the backdrop of more than two years of tight monetary policy, which naturally begs the question of why monetary tightening measures arguably did not achieve their intended effect. Our analysis indicates that the tightening impact should gradually flow into various segments of the lending markets, but time will tell as to whether investors view this policy regime as effective.

Entering 2025, return forecasts are modestly lower versus a year ago. Valuations across equity and credit are modestly more demanding, while government bond yields are somewhat higher than they were at the beginning of the year. The theme of a flat efficient frontier continues to overhang on multi-asset investors. Looking forward over the next decade, fixed income nominal return forecasts look robust versus the previous decade driven by higher yield levels as interest rates have largely normalized following over a decade of quantitative easing ("QE"). Despite some compression in equity return forecasts driven by more challenging valuations, growth and income return pillars still look constructive, and nominal returns provide some diversification against the risk of persistent inflation.

Interest rate policy remains top of mind, and the neutral level of real interest rates remains a key question that will ultimately impact fair value across asset classes. Over a strategic horizon, global growth prospects continue to trend lower, reflecting a shifting demographic landscape, with working-age populations in secular decline. Nonetheless, positive real interest rates across many developed economies and moderately modestly expensive valuations across equity and credit complexes leaves investors at a more constructive starting point relative to much of the past decade. Taking these factors into consideration, we present our long-term ten-year return forecasts across asset classes which we refer to as our "Long View".

In our Long View, we show our forecasted returns across asset classes and regions on the efficient frontier, which represents the trade-off investors must make between risk and returns. Figure 36 depicts the efficient frontier over the last fourteen years since the credit crisis and compares it to the efficient frontier over the past two decades. As seen, the post-financial crisis efficient frontier is steeper. What this suggests is on a relative basis, investors received far greater compensation for commensurate levels of risk in the decade following the financial crisis.

Figure 36: Efficient frontiers: 10-year forecasted and historical returns and volatilities, annualised



Historical Efficient Frontiers are noted above as "Efficient Frontier" and are calculated using historical returns and volatilities over the time frame noted through 30 September 2024. Each historical efficient frontier represents the risk-return profile of a portfolio which consisted of two asset classes; World Equities (in euro, unhedged) and Global Aggregate Fixed Income (euro-hedged). The Long View Efficient Frontier represents a forecasted optimal portfolio (EUR) using the various asset classes represented in the figure, subject to certain weighting/concentration constraints that result in component asset classes being able to trade above the line in this instance (please see page 35 for more details on these optimization techniques). Source: DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

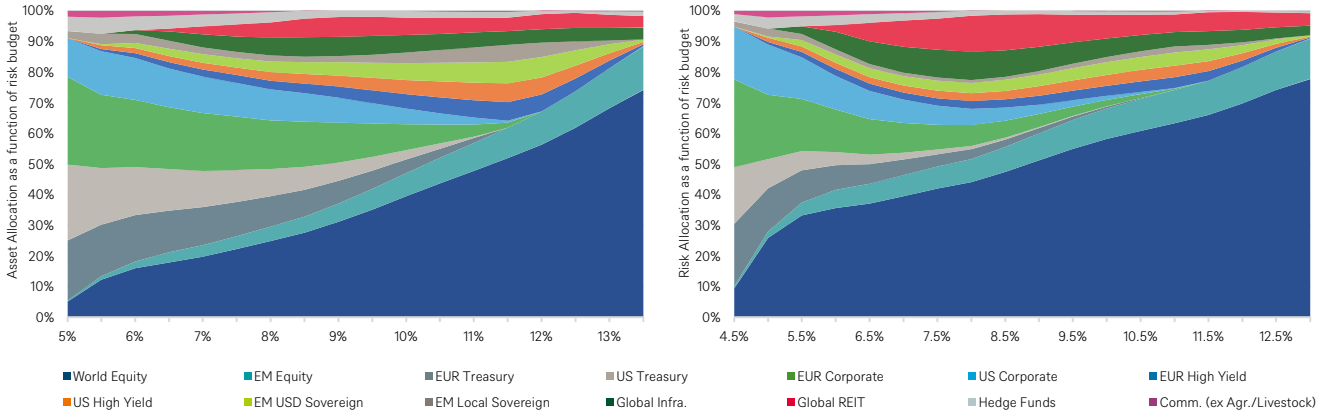
Past performance may not be indicative of future returns. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect. Any hypothetical results may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results.

This publication details the long-term capital market views that underpin the strategic allocations for DWS's multi-asset portfolios (see Figure 37). These estimates are based on 10-year models and should not be compared with the 12-month forecasts published in the DWS CIO View.

Central to this document is our belief that clients should consider a long-term perspective beyond 1-5 years when it comes to constructing investment portfolios. Perhaps, counterintuitively, extending the investment horizon has, in the past, produced less volatile, more precise forecasts, as shown in Figure 38: while risk still matters and there is still a distribution of investment outcomes around any central forecast, this distribution has tended to become narrower when investing for longer investment horizons. One consequence of this is that entry points become less relevant (even though of course by no means irrelevant) for longer investment horizons (because cyclical and tactical drivers are overtaken by fundamental, structural drivers of asset class returns). This is true even at times of extreme valuation: taking one of the biggest previous bubbles (the dot.com boom) as an example, the difference between buying US equities exactly at the peak of the dot.com boom in April 2000 vs. a year later (after valuations had collapsed) only amounts to one percent compounded annually when investing with a 15-year time horizon (as we show in Figure 42 on page 24). However, if an investor had had a shorter horizon of five years, the difference in returns generated from buying at the peak versus one year later was far greater, amounting to roughly six percent per annum. Thus, the longer the holding period for an investment, the stronger the case that its return is primarily driven by the underlying fundamental building blocks.

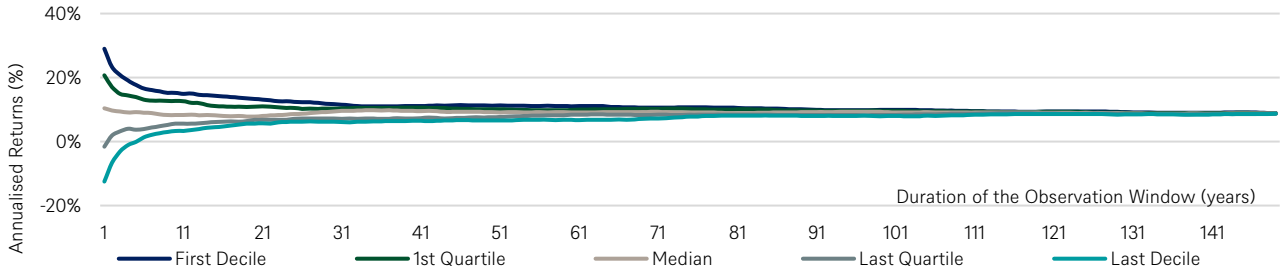
Looking at rolling one-year price returns of the S&P 500 from 1871 to 2023, a negative two-standard-deviation move equated to a 27 percent decline in prices (Table 3 on page 25). When calculating a negative two-standard-deviation move using rolling 10-year returns over this same time frame, the decline in prices is less than 1 percent per annum. More stable long-run returns can be helpful in establishing more stable strategic-asset-allocation targets. Hence, skeptics may be surprised to learn that the volatility of returns historically has been lower when using long-term horizons, although past performance may not be indicative of future results.

Figure 37: Asset allocation and risk allocation by target volatility



Source: DWS Investments UK Limited. Data as of 30 September 2024. For illustrative purposes only. See page 29 for details. See appendix for the representative index corresponding to each asset class.

Figure 38: Distribution of U.S. equities: Historical returns over different holding periods, annualised



Source: Robert J. Shiller, DWS Investments UK Limited. Data from 1871 to 2024.

This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect
Past performance, [actual or simulated], is not a reliable indication of future performance.

Framework

We use the same building-block approach to forecasting returns irrespective of asset class. We believe this approach brings consistency and transparency to our analysis and also may help clients to better understand the constituent sources of forecasted returns.

The Long View framework breaks down returns into three main pillars: income + growth + valuation, each with their own sub-components. The pillars and components for the traditional asset classes under our coverage (equities, fixed income and commodities) are show in Figure 39.

Meanwhile, alternative asset classes under our coverage (listed real estate, private real estate, real estate debt, listed infrastructure equity and private infrastructure debt) are forecasted using exactly the same approach, sometimes with an added premium to account for specific features, such as liquidity.

Figure 39: Long View for traditional asset classes: Pillar decomposition

Asset class	Income		Growth		Valuation		
Equity	Dividend yield	Buybacks & dilutions	Inflation	Earnings growth	Valuation adjustment		
Fixed income	Yield		Roll return		Valuation adjustment	Credit migration	Credit default
Commodities	Collateral return		Inflation	Roll return	Valuation adjustment		

Source: DWS Investments UK Limited.

Figure 40: Long View for alternative asset classes: Pillar decomposition

Asset Class	Income	Growth		Valuation			Premium
Hedge funds		Hedge funds' full exposure to each pillar are calculated by means of a multi-linear regression of hedge fund performance vs all liquid asset classes					Hedge-fund premium
Listed real estate equity	Dividend yield	Inflation		Valuation adjustment			
Private real estate equity	Dividend yield	Inflation		Valuation adjustment			
Private real estate debt	Yield	Roll Return		Valuation change	Credit migration	Credit default	Liquidity premium
Listed infrastructure	Dividend yield	Inflation	Earnings growth	Valuation adjustment			
Private infra-structure debt	Yield	Roll Return		Valuation change	Credit migration	Credit default	Liquidity premium

Source: DWS Investments UK Limited.

Return forecasts

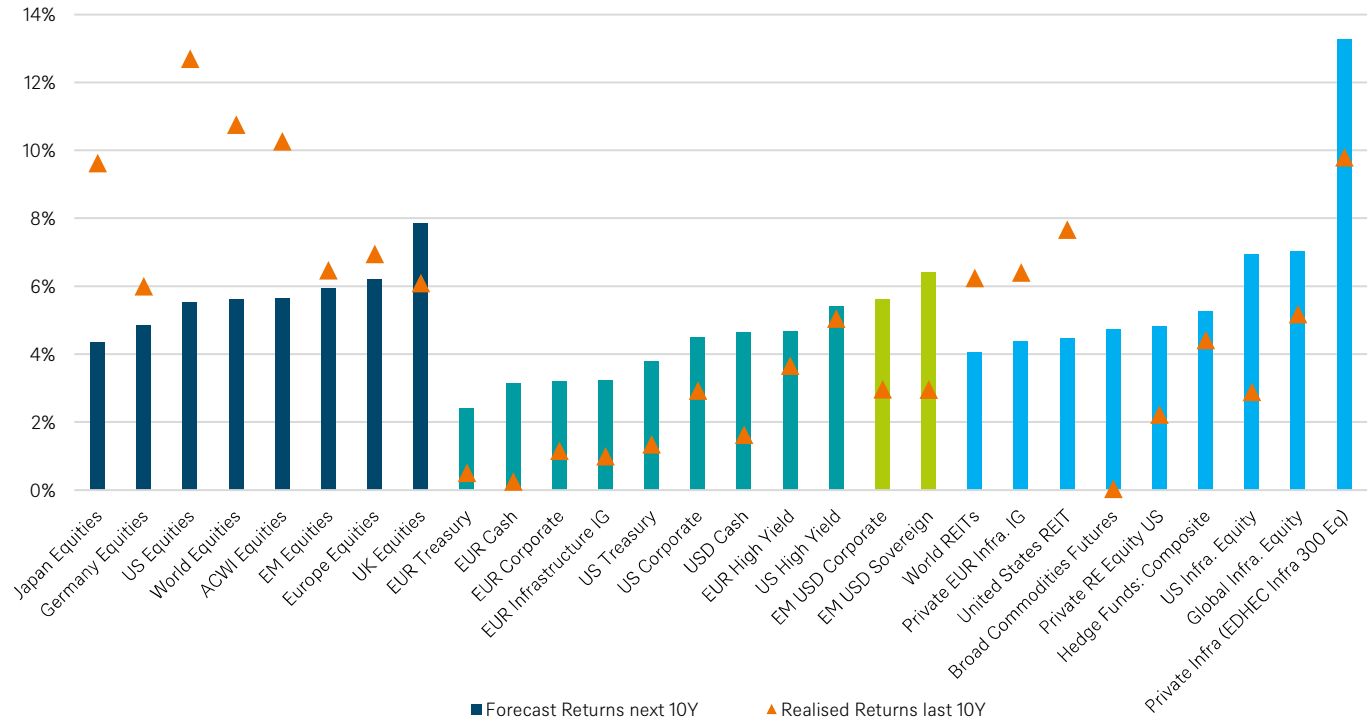
Our Long View forecasts for all asset classes can be seen below. The bars are ranked by ascending forecasted return within each asset class.

In summary, we make the following key observations from the results:

- Return forecasts across equities are lower versus the beginning of the year and generally below the strong realized returns over the past 10 years, reflecting the strong returns and heightened valuations across global equities coming into 2025.
- Across regional equity markets, the UK offers the highest forecasted returns, whereas Japan is at the lower end of regions but has the potential structural tailwind of reflationary policy measures. The US equity return outlook is similar to the rest of the world but is in stark contrast to the very strong previous 10-year returns.
- Fixed income return forecasts are relatively unchanged versus the beginning of the year but continue to look quite strong relative to the previous decade. Both core fixed income and credit offer higher nominal return outlooks relative to the history, reflecting higher current starting yield levels.
- Within credit, (across IG and HY corporates as well as sovereign and corporate EMD), return forecasts are above previous decade returns. EM USD sovereign and corporate debt in particular are the highest across credit asset classes.
- Alternative asset class return forecasts at in line with to modestly below traditional asset class forecasts. Within alternatives, infrastructure equity has the highest return outlook. Decline in private RE equity forecasts reflect both less attractive valuations relative to TIPS yields.
- Commodity future return forecasts are healthier now than the very poor realized returns of the previous decade and could provide useful diversification benefits and potential inflation protection.

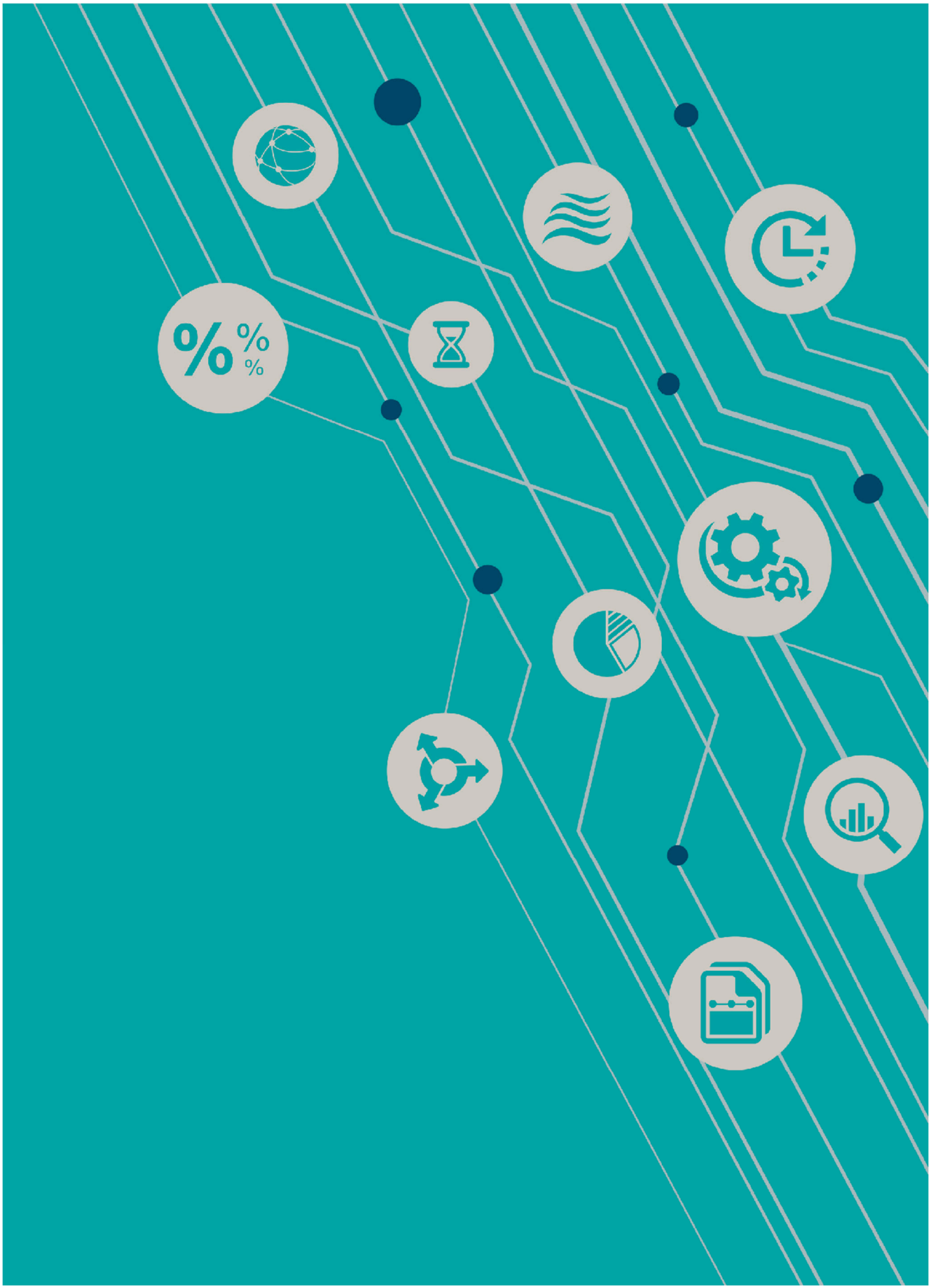
Investors should be conscious of the impact of foreign-exchange (forex) risk on base-currency returns and volatilities. Depending on risk appetite and return objectives, investors may want to consider hedging currency risk.

Figure 41: Forecast and realised returns for 10 years, annualised (local currency)



Source: DWS Investments UK Limited. As of 30 September 2024. See appendix for the representative index corresponding to each asset class.

Past performance, [actual or simulated], is not a reliable indication of future performance. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Any hypothetical results may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results.



The DWS Long View

Patience, diversification and forecasted returns

Long-term investors could enjoy less volatility

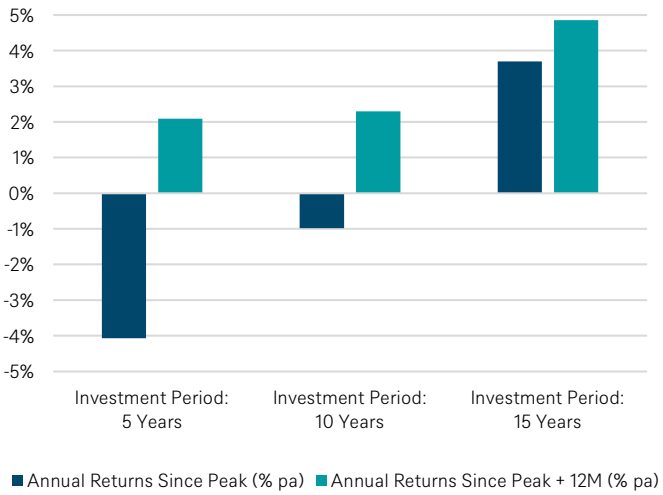
A long-term view reduces the problem of market timing

Why is it so important to have a long-run perspective? For us, the reason is simple. We believe that only over a market cycle can an investor potentially capture the risk premium[7] available for each asset class.

To illustrate this, Figure 42 compares the annual return for an investor buying U.S. stocks either in April 2000 or 12 months later. April 2000 was one of the most expensive valuation points for most equity indices and, as such, it represented a challenging period for investors. Surely, this was a terrible time to buy the market?

Indeed, it was. If we look at returns over the subsequent five years from the market peak on April 28, 2000, performance was significantly impacted by market timing. If an investor had waited and instead bought into the market 12 months after the peak, subsequent annual returns would have increased by 6 percent per annum, turning negative 4 percent return per annum into a more comfortable 2.1 percent annual return over the ensuing five-year period.

Figure 42: U.S. equity performance over various time periods, annualised



Performance based on the 5 worst equity months (for U.S. equities) from 1992-2024. Total return performance represented by S&P 500 TR
Source Bloomberg Finance L.P., DWS Investments UK Limited. Data as of 30 September 2024.
Past performance, [actual or simulated], is not a reliable indication of future performance.

However, if we take the same example over a 15-year investment horizon, Figure 42 shows that an investor's total return would have been much less sensitive to market timing as prices reverted to their long-run trend and fundamentals over time. What is more, it has been suggested that about 90 percent of portfolio returns come from asset allocation. In other words, taking a Long View means portfolio allocation decisions are usually far more critical than trying to time the market by picking the highs and lows. These portfolio allocation decisions are of course not time-independent: a strategic asset allocation crucially depends on long-term expectations for return and risk (and these evolve over time), but the key is that taking a long view enables investors to focus on how to invest rather than whether or when to invest (which may be the overriding concerns for short horizons). For many investors, not being invested in financial markets at all for long periods is not an option.

Under the assumption of past behavior of market cycles and the tendency for prices to revert to their long-term trend, returns measured over long periods of time (15 or more years) may establish a more reasonable expectation of future performance compared to shorter time frames (5 or fewer years). However, we recognize the real world is rarely so patient. Hence, our Long View forecasts are based on a ten-year horizon, which we believe is near term enough to be relevant, while still a reasonable timeframe for a full market cycle to occur.

[7] We often use the term risk premium in this publication. We define risk premium as the excess return an asset class is expected to deliver compared to other asset classes, usually carrying a low or null risk, like cash or government bonds. "Equity risk premium" usually refers to the past or expected excess returns of equities compared to risk-free money markets, and "Bond risk premium" refers to the same concept applied to bonds, usually referring to the incremental returns expected for a higher level of duration risk borne by the investor.

Measuring returns over longer timeframes (five or more years) can reduce volatility

Consider the performance of U.S. equities since 1871 (Figure 43) based on Robert Shiller data.[8] This equity composite has delivered a 9.2 percent annualised nominal return, which translates into 6.9 percent real return – outperforming real output growth in the U.S. by 3.7 percent.

Figure 43 makes clear that over most of the time periods covered in this chart, equities have historically produced steady above-inflation returns, despite some nasty short-term[9] losses.

To quantify historical return versus short-term risk, Figure 44 shows the distribution of annualised U.S. equity returns across different time horizons. It illustrates that with a longer investment horizon, realised returns converged towards their long-run average.

We continue to believe that a longer time horizon reduces the range of volatility of U.S. equities

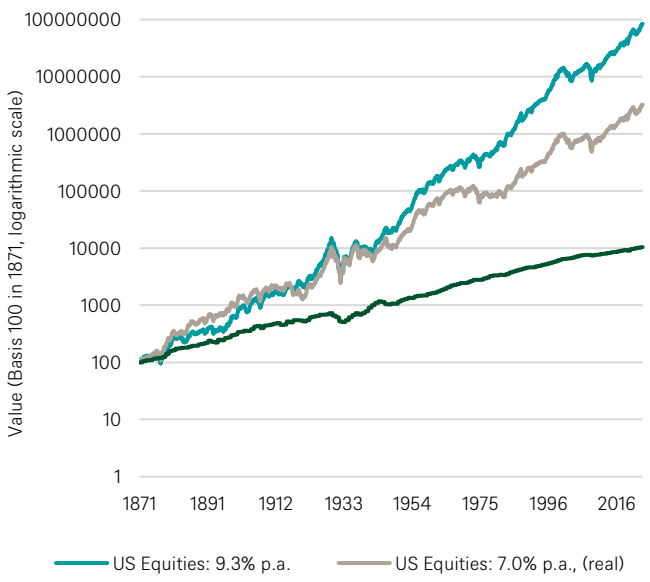
How does the Long View's ten-year time frame look in terms of return stability? Table 3 provides average and various standard deviation levels for annualised returns across different time periods for U.S. equity investors. As can be seen, the range of returns becomes narrower as the time horizon increases.

Table 3: Average and standard deviation of realised U.S. equity returns over different time periods, annualised

Maturity (year)	1	5	10
Average (IRR) – 2 St Dev	-27.1%	-5.8%	-0.3%
Average (IRR) – 1 St Dev	-9.2%	1.5%	4.3%
Average (IRR)	8.8%	8.8%	8.8%
Average (IRR) + 1 St Dev	26.8%	16.1%	13.4%
Average (IRR) + 2 St Dev	44.8%	23.4%	18.0%

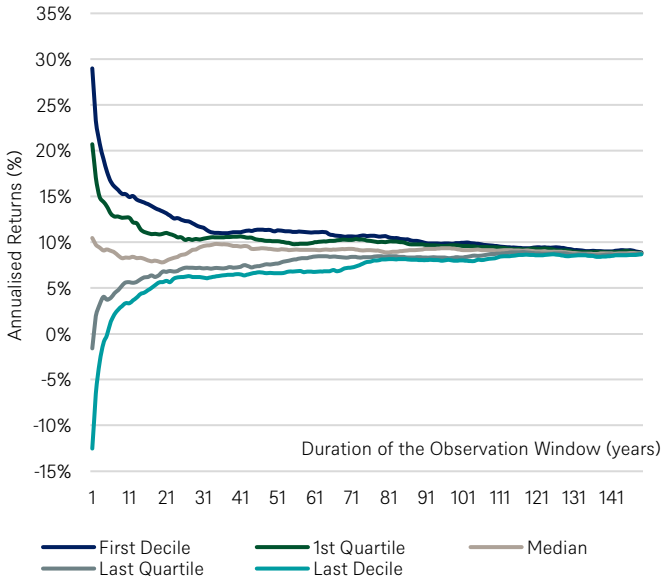
Source: Robert J. Shiller, DWS Investments UK Limited. U.S. equity returns for respective time periods between 1871 and 2024 Data as of 30 September 2024.

Figure 43: U.S. equity returns and U.S. GDP growth (1871–2024)



Total-return performance represented by S&P 500 TR
Source: Robert J. Shiller, Maddison Project Database 2024, DWS Investments UK Limited as of 30 September 2024.

Figure 44: The longer the holding period, the more consistent the average return of U.S. equities (January 1871 to September 2024)



Total-return performance represented by S&P 500 TR
Source: Robert J. Shiller, DWS Investments UK Limited as of 30 September 2024.

[8] Long-term U.S. equities data is available at (Shiller, Online Data Robert Shiller 2024) and long-term macro-economic data is sourced from (Maddison 2024).
[9] "Short term" for the purpose of this publication refers to a time frame of up to five years, while "long term" refers to a time frame of at least ten years.
Past performance, [actual or simulated], is not a reliable indication of future performance.

A longer time frame leads to more consistent equity-return forecasts

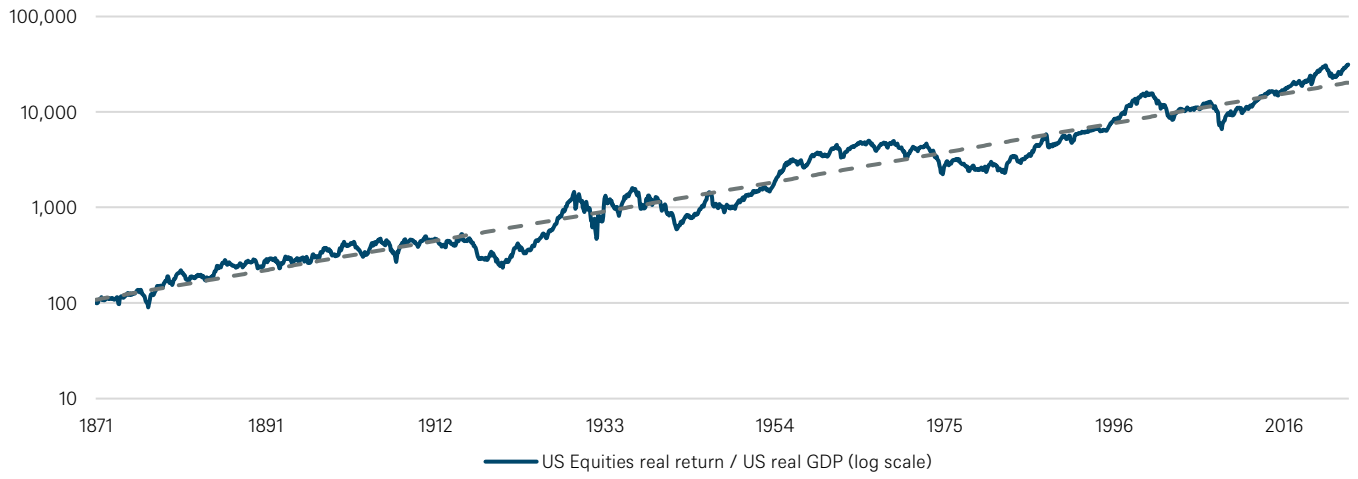
Equity returns as a function of economic growth

Many believe forecasting market returns is a fool's errand, but over extended time horizons it has been shown that returns have historically tended to revert to their average. As a result, when examining long-term relationships with various economic variables, such as economic growth (GDP) and inflation, trends can be identified. Take the ratio between real total returns for U.S. equities and real output.,

Figure 45 suggests that U.S. equities outperform economic growth over the long run by 3.7 percent per annum as reported by Robert Shiller. This relationship does not guarantee future outperformance, but it does provide some long-term evidence of the behaviour of equities over time relative to these variables.

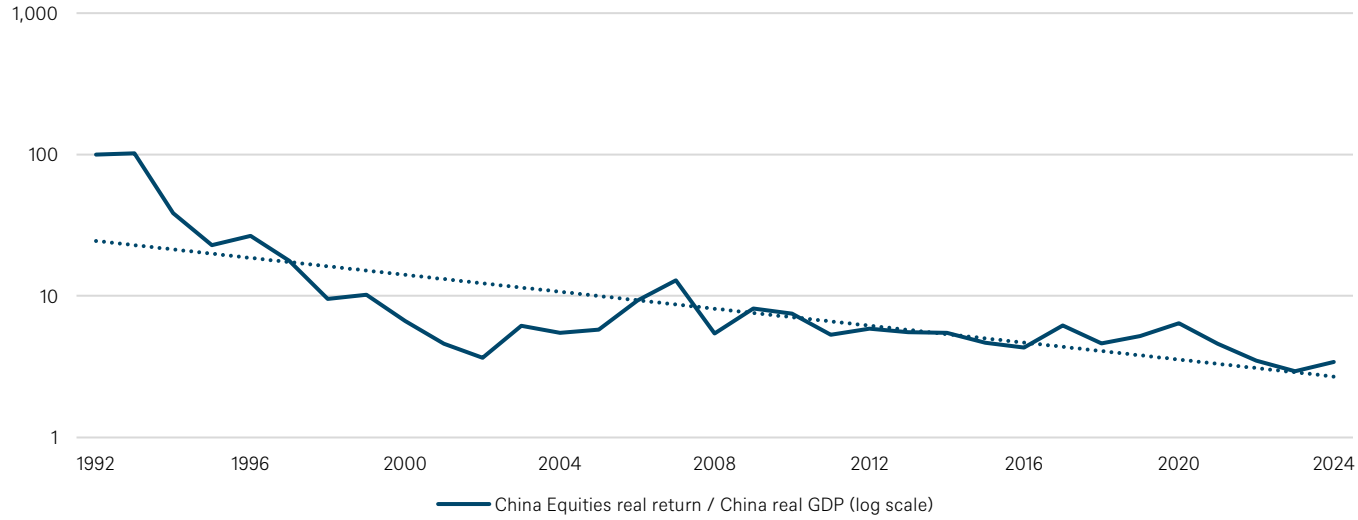
In emerging markets, however, our analysis suggests that for certain countries, GDP growth has not translated proportionately into earnings growth for broader equity indices (see the ratio for the MSCI China in Figure 46 as an example). One potential reason for this divergence, in our view, is the difference in the structure of the economy and the composition of equity benchmarks.

Figure 45: The ratio between the real total return of U.S. equities and U.S. real GDP has grown at 3.9% (1871-2024), log scaled and indexed: 01/1871 = 100



Source: Robert J. Shiller, Maddison Project Database 2020, DWS Investments UK Limited. Data from 1871 to 2024. Past performance, [actual or simulated], is not a reliable indication of future performance.

Figure 46: The ratio between the real total return of MSCI China and China real GDP growth (1992-2024), log scaled, indexed: 01/1992 = 100

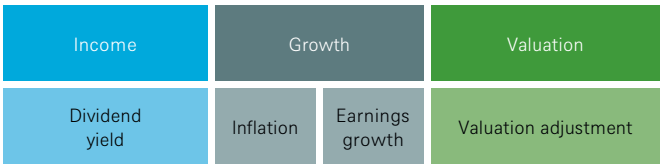


Source: Bloomberg Finance L.P., IMF World Economic Database, DWS data as of 1992 to 2024.

Equity forecasts

To support the claim above, we back-tested our own Long View equity forecast methodology to test its reasonableness over the long run. We utilised long-term return and fundamental data (Shiller, Online Data Robert Shiller 2019) and decomposed performance into the building blocks as described in Figure 47.

Figure 47: Pillar decomposition: Equities



Source: DWS Investments UK Limited.

For this exercise, we made two adjustments and applied the following assumptions, described below:

- For historical expectations of future ten-year inflation expectations (a so-called backcast) we followed the methodology developed by (Groen and Middeldorp 2009).
- This gives a theoretical estimate for breakeven inflation based on all inflation forecast data that has been made available since 1971. We use this backcast until the respective dates where Treasury Inflation-Protected Securities (TIPS) prices and then inflation swaps quotes are available.
- In the absence of robust historical data, earnings growth is estimated from its long-term trend observed during the testing period.

Subject to these adjustments and assumptions, we created a data set that we used to examine the necessary data to provide forecasted return backcasts from 1971 to 1981 and rolled this ten-year forecast forward each year thereafter. This is long enough to cover at least one market cycle.

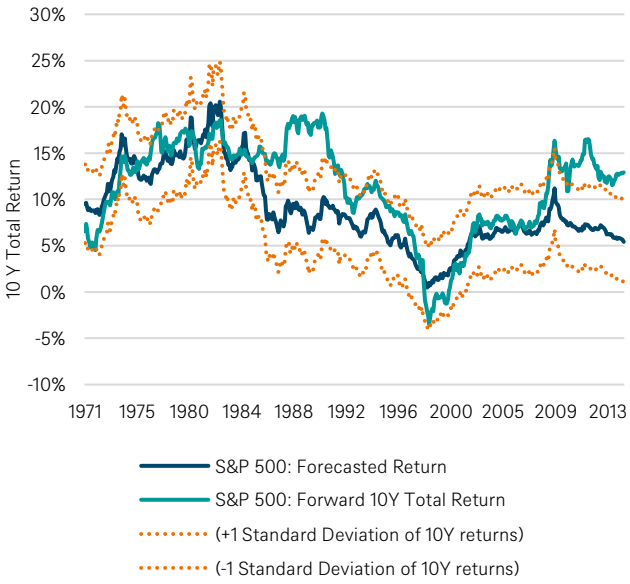
The results suggest the return forecast of our Long View equity methodology appears to provide a reasonable estimate of future performance. Figure 48 shows the return forecasts versus realised returns. While there are periods where divergence exceeds one standard deviation, we would highlight two statistics in support of the methodology.

The first is that in 85 percent of the observations the forecasted return has been within one standard deviation of the subsequent actual ten-year realised return.

Second, the gap between the return forecasts and subsequent realised return has been less than half of one standard deviation 60 percent of the time.

To conclude, we believe Figure 48 illustrates what investors may observe from our ten-year forecast methodology: a reasonable indicator of long-run market trends.

Figure 48: Our forecast would have provided estimates for U.S. equity returns within one standard deviation (1971 through 2014)



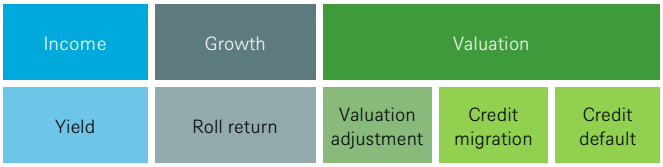
Total return performance represented by S&P 500 TR. Source: Robert J. Shiller, Maddison Project Database 2024, DWS Investments UK Limited. Data from 1971 to 2024. The forward 10Y return show the realised return over the subsequent 10 years. The first 10-year forecast and actual results represent the compound annual return from September 1971–September 1983. A simplified forecast would have provided estimates for S&P 500 returns within a standard deviation interval with an 85 percent probability. [f]

Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect. Past performance, actual or simulated, is not a reliable indicator of future results. Any hypothetical results may have inherent limitations. Among them are the sharp differences which may exist between hypothetical and actual results which may be achieved through investment in a particular product or strategy. Hypothetical results are generally prepared with the benefit of hindsight and typically do not account for financial risk and other factors which may adversely affect actual results.
Back-tested performance is NOT an indicator of future actual results. The results reflect performance of a strategy not [historically] offered to investors and do NOT represent returns that any investor actually attained. Back-tested results are calculated by the retroactive application of a model constructed on the basis of historical data and based on assumptions integral to the model which may or may not be testable and are subject to losses. General assumptions include: Firm would have been able to purchase the securities recommended by the model and the markets were sufficiently liquid to permit all trading. Changes in these assumptions may have a material impact on the back-tested returns presented. Certain assumptions have been made for modelling purposes and are unlikely to be realized. No representations and warranties are made as to the reasonableness of the assumptions. This information is provided for illustrative purposes only. Back-tested performance is developed with the benefit of hindsight and has inherent limitations. Specifically, back-tested results do not reflect actual trading or the effect of material economic and market factors on the decision-making process. Since trades have not actually been executed, results may have under or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity, and may not reflect the impact that certain economic or market factors may have had on the decision-making process. Further, back-testing allows the security selection methodology to be adjusted until past returns are maximized. Actual performance may differ significantly from back-tested performance.

Fixed income forecasts

As with other asset classes in our framework, we split the forecasting of fixed income returns into three fundamental pillars: income, growth and valuation. Each is then decomposed into one or several components, as shown in Figure 49.

Figure 49: Pillar decomposition: Fixed Income



Source: DWS Investments UK Limited.

Various types of fixed income instruments may feature different levels of return, and this drives our methodology. Whereas the equity method presented earlier makes use of both financial and economic data, our approach to fixed income assets focuses on calculating and discounting potential cash flows. In particular, we mimic the development over time of debt securities.

Our starting point is the average current yield of the portfolio. Comparing the historical yield of a government bond index and its subsequent total return gives us an interesting perspective as shown in Figure 50.

However, we show below that the reality is more complicated. Other components demonstrate a significant role in forecasting fixed income returns. This is already apparent when looking at corporate bonds (Figure 51) which can be riskier than government bonds (Figure 50). In this graph, yield and future performance vary more over time, and on some occasions, the difference has been material.

Figure 50: Historical yield to maturity and subsequent five-year total-return of 5-Year U.S. Treasury bonds, annualised (1/31/73-9/30/24)

Source: Bloomberg Finance L.P., DWS Investments UK Limited, data from 31 January 1973 to 30 September 2024. See appendix for the representative index corresponding to each asset class.

Figure 51: Historical yield to maturity and subsequent five-year total-return of 5-Year U.S. Corporate bonds, annualised (1/31/73-9/30/24)

Source: Bloomberg Finance L.P., DWS Investments UK Limited, data from 31 January 1973 to 30 September 2024. See appendix for the representative index corresponding to each asset class. Past performance, [actual or simulated], is not a reliable indication of future performance..

Forecasted returns and long-term insights

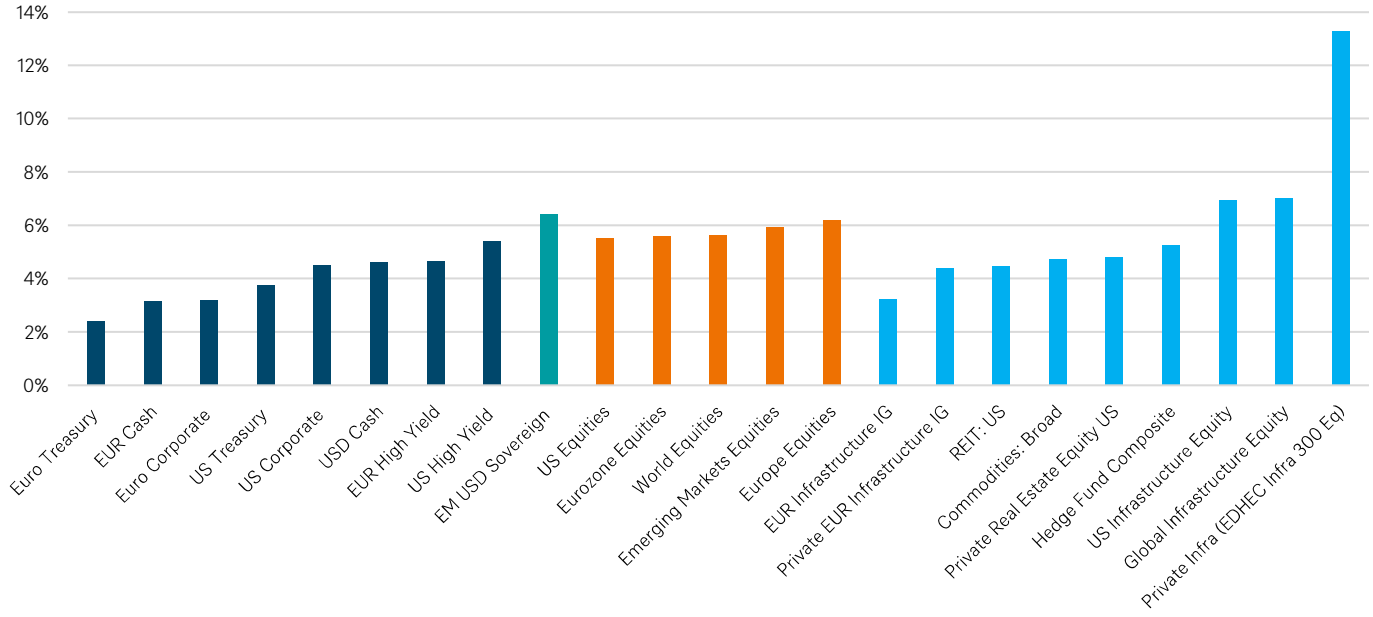
Our forecasted returns for the next decade

In this section, we summarize our Long View forecasts. Figure 52 shows the total-return forecasts for each asset class.

Across asset classes, return forecasts are noticeably higher versus previous years both in absolute and real terms. Our return forecast for global equities in local currency is 6.6 percent per annum, with local currency emerging markets equities modestly higher at 7.1 percent. Fixed income returns look significantly more constructive versus previous years, reflecting significant increases in starting yield levels across both sovereign and credit asset classes. US Treasury forecasted returns now exceed 4.0 percent, and US high yield and emerging markets sovereign bond forecasts are now 6.8 percent and 7.6 percent, respectively. For historical context, these return forecasts now exceed the previous decade realized returns across all fixed income asset classes.

Across the alternative asset classes, returns are still constructive, although less so on a relative basis versus traditional assets as compared to previous years. Among the listed segments of alternative assets, US REITs and US Infrastructure equity are 6.8 percent and 6.9 percent, respectively, largely in line with broad equity market return forecasts. US Private RE equity is somewhat more muted, at 3.8 percent, where valuations have become more challenging. The commodities return outlook, while still below equities, reflects a much more constructive view at 4.1 percent.

Figure 52: Long-term (10-year) forecasted returns for the next decade, annualised (local currency)



Source DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

Comparing our current return forecasts to the downward trend in our nominal return forecasts over the previous couple of years illustrates a significant change in the strategic outlook for asset class returns across both global equities and global bond markets (see Figure 53).

As compared to the previous year, in equities, the valuation adjustment has become less prohibitive reflecting equity price decline in 2022. Dividend yield contribution is also modestly higher, increasing from 1.6 percent to 2.3 percent from the previous year.

Across fixed income markets, starting yield levels embed a much more comfortable income buffer for investors. Particular across core fixed income asset classes, nominal return forecasts imply both higher income contribution and also, to a lesser degree, more modest valuations (in this case, yields) relative to history.

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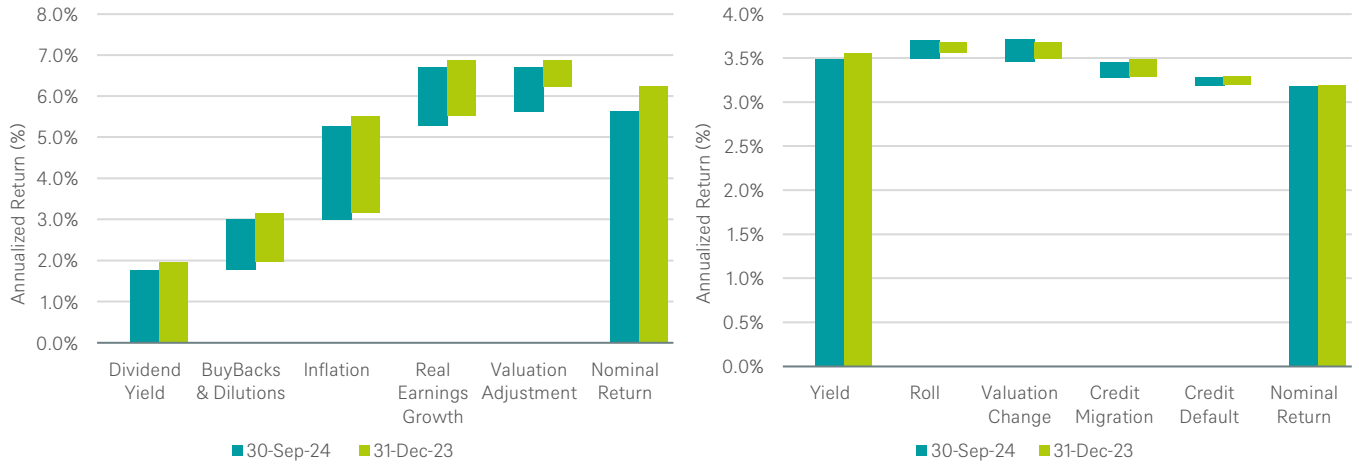
Figure 53: 10 year forecasted total returns for MSCI World (Left) and Global Aggregate Bond Index (Right) now vs two years ago, annualised and in local currency, with the contributions from individual pillars



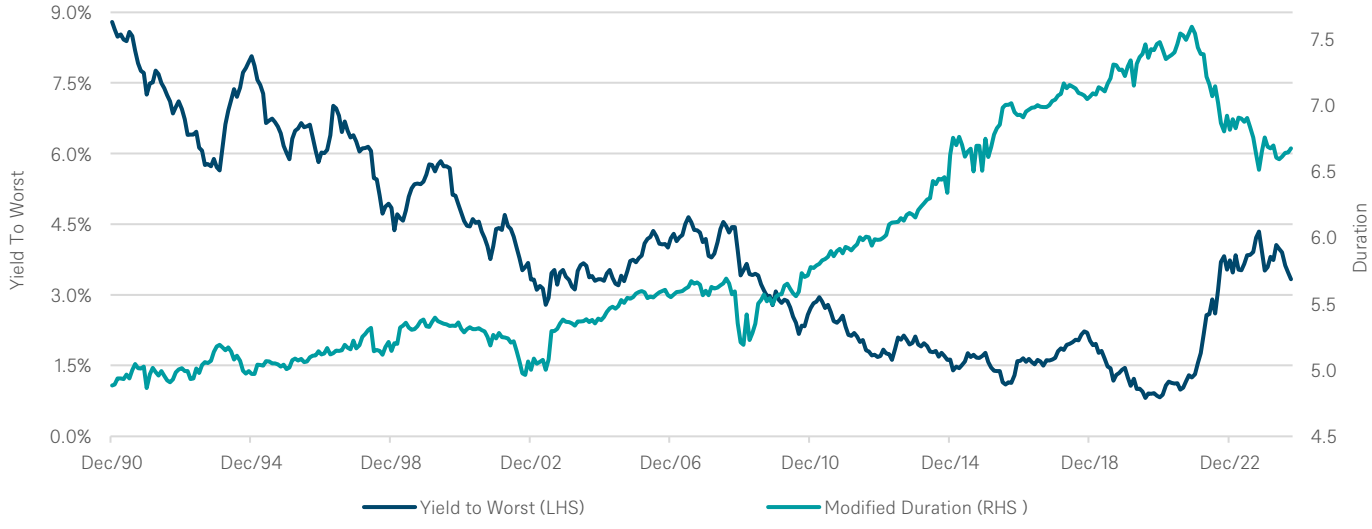
Source DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

After years of secular decline in our strategic return forecasts across asset classes, driven increasing valuations and declining interest rates, market repricing over the course of 2022 has, to some extent, normalized financial markets. The sharp reversal in accommodative central bank policy brings some semblance of normality back to investors and savers, at least for the time being. Figure 54 shows the sharp reversal in the multi-decade downtrend in interest rates across global fixed income in 2022.

Still, there remain secular trends toward lower potential growth rates globally, but particularly across many developed countries where ageing populations not only affect long-term economic growth prospects, but also likely mean increasing savings requirements and increasing retiree demand for fixed income assets.

Whether the shift in central bank policy away from compressing real interest rates is temporary or permanent will depend on the pace and extent to which inflationary pressures moderate. For the time being, both nominal and real interest rates are materially higher versus recent history, reflecting a more sanguine environment for savers and fixed income investors.

Figure 54: Global Aggregate Bond Index, Yield to Worst (left-hand side) and modified duration (right-hand side), 31 December 1990 to 30 September 2024.



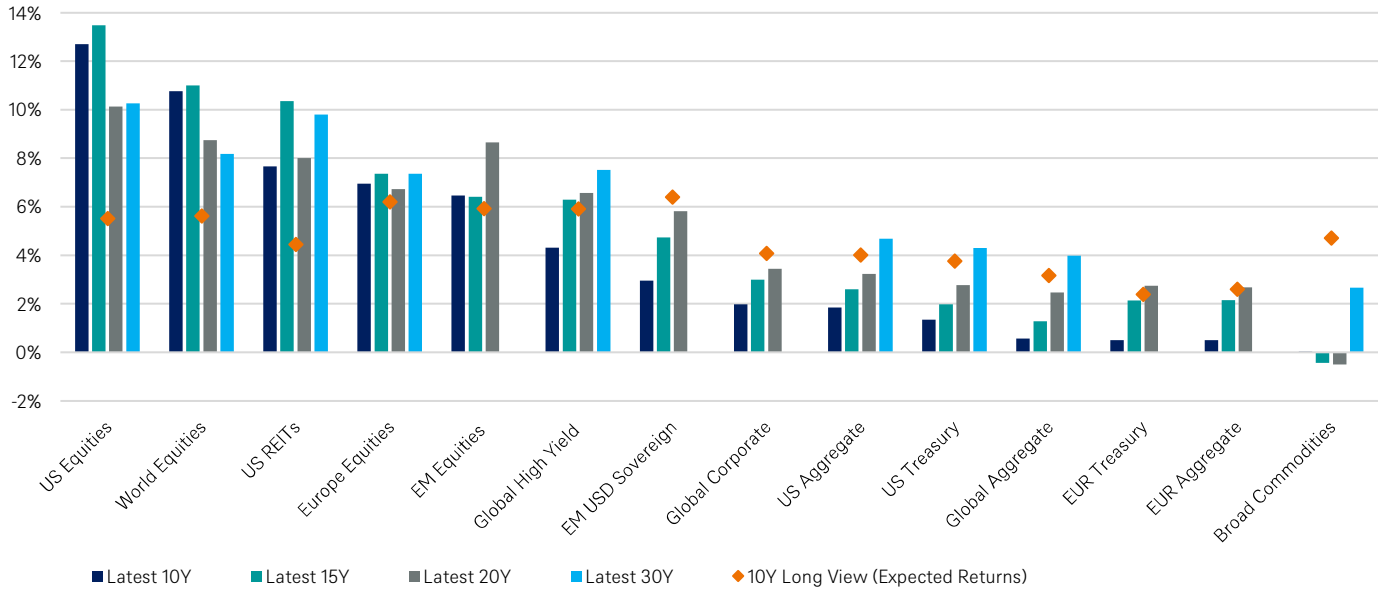
Source DWS Investments UK Limited. Data as of 30 September 2024.[f]

This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect.

Forecasted returns vs. the past

We find it useful to compare the forecasted returns of our main asset classes with their realised performance, which is shown in Figure 55. Again, it can be seen that the past 10 years have been positive for equities and higher-risk fixed-income investments, such as emerging-market and high-yield debt. For most risk assets, our forecasts are moderately below historical returns, whereas forecasts for core fixed income are moderately higher than realized returns of recent long-term periods.

Figure 55: Forecasted and historical returns by asset class, annualised (over 10-, 15-, 20- and 30-year time periods ending 9/30/24)



Source Bloomberg Finance L.P., DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

Where is the most attractive risk compensation across asset classes?

Financial theory tells us riskier asset classes are likely to compensate the investors via higher forecasted returns. This well-known trade-off between risk and return is the main conclusion from Figure 56. We observe that the usual relationship is presented over our 10-year horizon, with a compensated risk premium for most asset classes.

Using the same data, we can calculate and compare forecasted Sharpe ratios (Figure 57), taking into account our forecasts for money-market instruments. Regarding both of these charts, we would make the following comments:

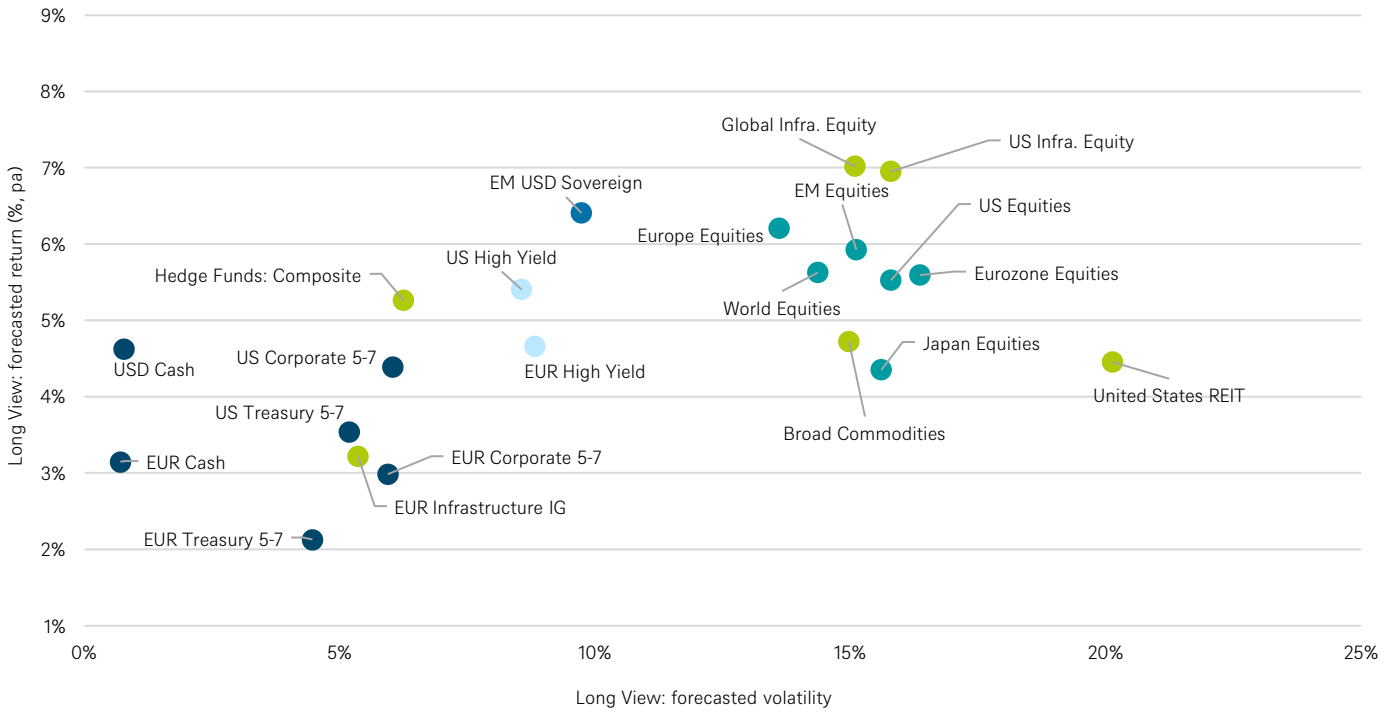
- Based on our research, we believe risk in equities may be compensated reasonably well on a relative basis – only infrastructure equity and, to some extent, High Yield and EM USD Sovereigns offer higher or comparable Sharpe ratios.
- We forecast corporate bonds to realize higher Sharpe ratios than equities going forward, reflecting much higher return expectations in IG and HY corporates.

In the alternative space, it appears that risk is still compensated in REITS and particularly infrastructure equity at a level comparable to equities, offering important investment alternatives in a low-return environment across traditional asset classes.

When translating local currency returns, investors should be conscious of the impact of foreign-exchange (forex) risk on base-currency returns and volatilities: the forecasted returns and volatility metrics underlying Figure 56 and Figure 57 are all based on local currency at the individual security level. Depending on risk appetite and return objectives, investors may want to consider hedging currency risk.

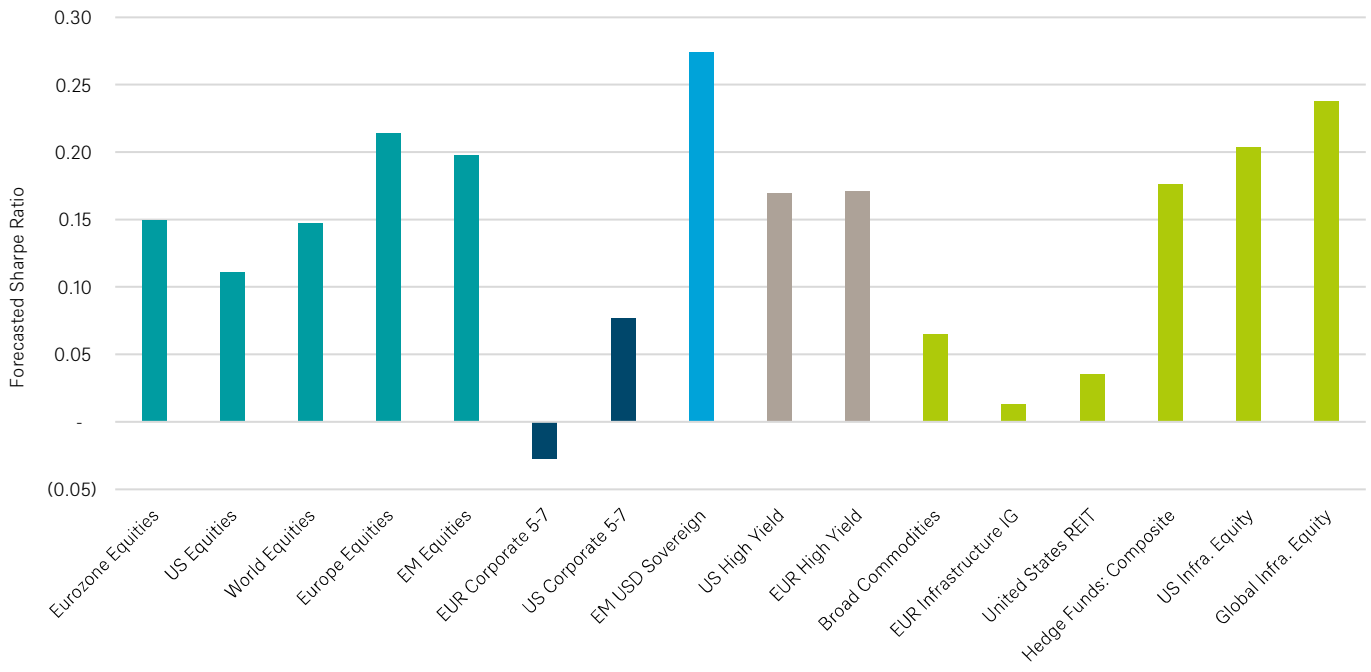
This chart utilises our approach, a macro-level forecasting method, for calculating the forecasted returns and the approach we developed for forecasted volatilities and correlations. Past performance, [actual or simulated], is not a reliable indication of future performance.
This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect.

Figure 56: 10-year forecasted return and risk by asset class, annualised (local currency) (2025–2034)



Source DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

Figure 57: 10-year forecasted Sharpe ratio by asset class in euro (EUR), annualised (2025–2034)



Source: DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect.

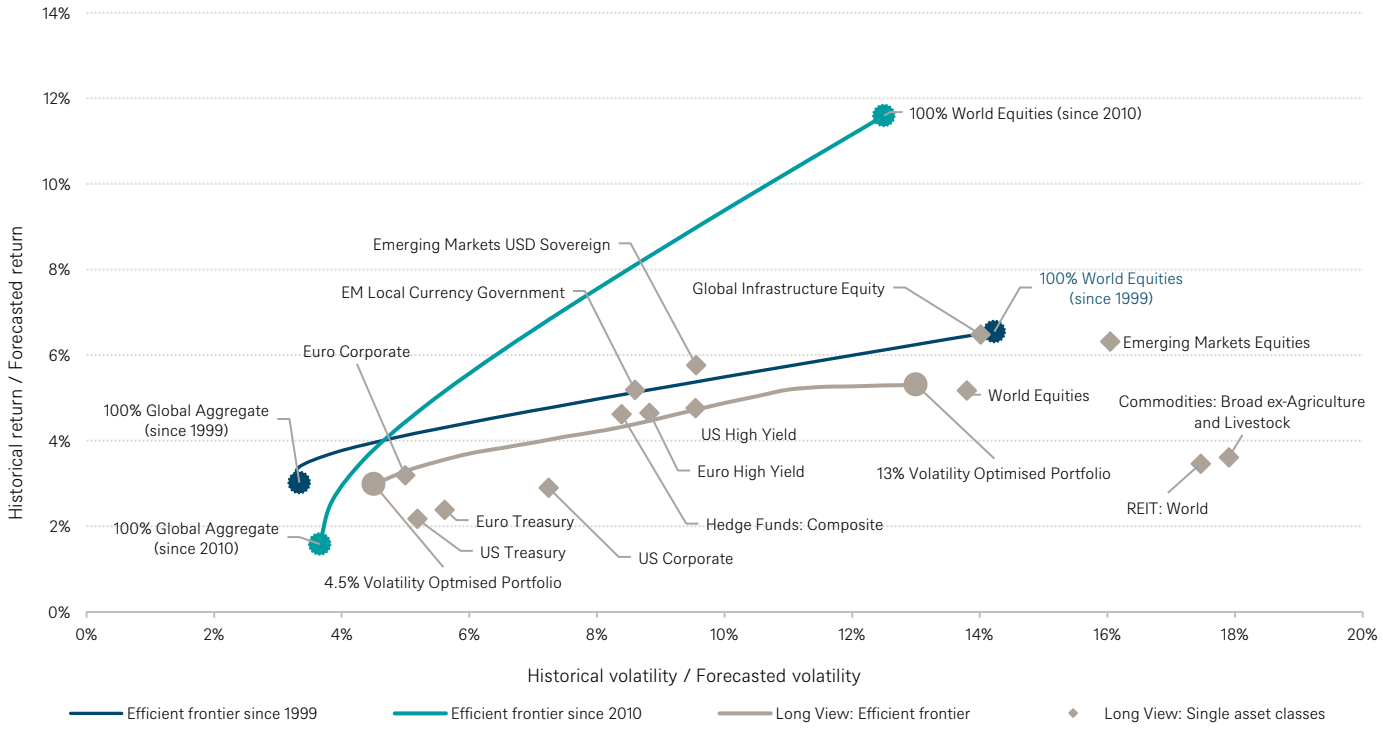
Strategic allocation

Connecting our Long View to investing in practice

Since the turn of the century, nominal returns across the efficient frontier have been quite robust, with a steep relationship between realized volatility and realized returns. (Figure 58). Outsized global equity returns combined with low starting nominal yield levels resulted in quite a steep trade-off between historical return and historical realized volatility, particularly in contrast to the long-term efficient frontier, which is notably flatter.

Using our Long View forecasts to construct a hypothetical efficient frontier, forecasted multi-asset returns over the next ten years are above the longer-term efficient frontier but below returns over the previous decade[12]. For investors wanting to pursue robust returns, the higher risk required may be concerning. Therefore, in order to keep risk at reasonable levels, dynamic overlays and tactical adjustments may be useful in managing risk.

Figure 58: Efficient frontiers: 10 year forecasted and historical returns and volatilities, annualised



Historical Efficient Frontiers are noted above as "Efficient Frontier" and are calculated using historical returns and volatilities over the time frame noted through 30 September 2024. Each historical efficient frontier represents the risk-return profile of a portfolio which consisted of two asset classes: World Equities (in euro, unhedged) and Global Aggregate Fixed Income (euro-hedged). The Long View Efficient Frontier represents a forecasted optimal portfolio (EUR) using the various asset classes represented in the figure, subject to certain weighting/concentration constraints that result in component asset classes being able to trade above the line in this instance. Source: DWS Investments UK Limited. Data as of 30 September 2024. See appendix for the representative index corresponding to each asset class.

[12] Hypothetical performance results have many inherent limitations, some of which are described herein. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. In fact, there are frequently sharp differences between hypothetical performance results and the actual results subsequently achieved by any particular trading program. One of the limitations of hypothetical performance results is that they are generally prepared with the benefit of hindsight. In addition, hypothetical trading does not involve financial risk, and no hypothetical trading record can completely account for the impact of financial risk in actual trading. For example, the ability to withstand losses or adhere to a particular trading program in spite of trading losses are material points which can also adversely affect actual trading results. There are numerous other factors related to the markets in general or to the implementation of any specific trading program which cannot be fully accounted for in the preparation of hypothetical performance results and all of which can adversely affect actual trading results.
This information is subject to change at any time, based upon economic, market and other considerations and should not be construed as a recommendation. Past performance is not indicative of future returns. Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, opinions and hypothetical models that may prove to be incorrect.

In this section we reiterate our strong belief in strategic asset allocation (SAA). This process endeavours to examine investment strategies in an ongoing effort to assist investors in pursuit of their investment objectives.

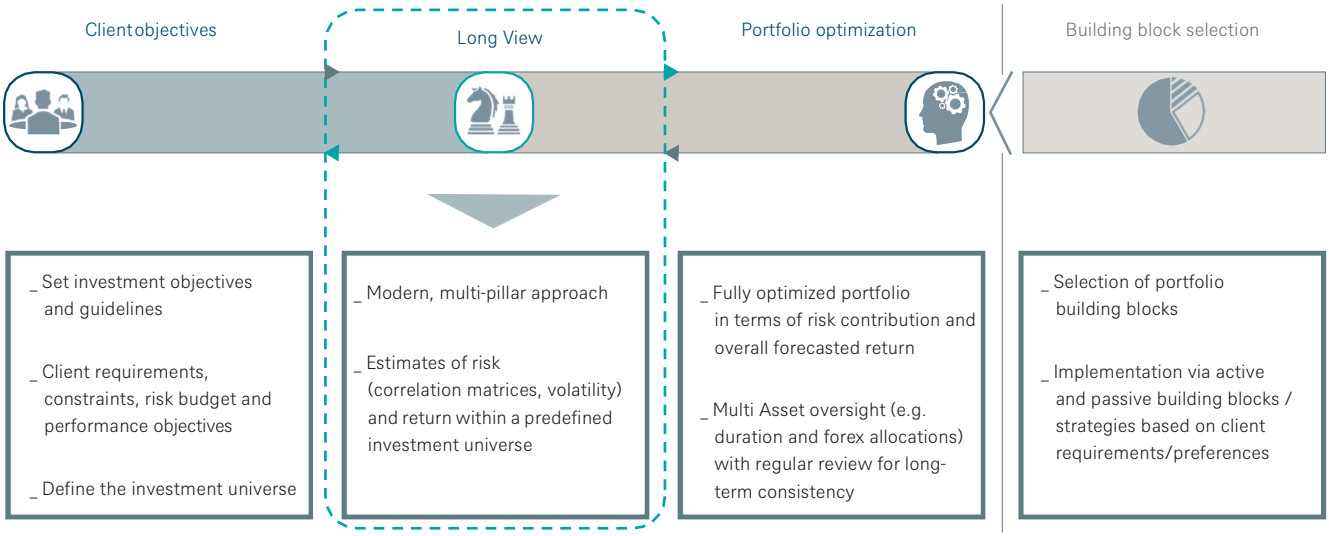
A SAA framework is based on:

- The risk and return objectives of the investor
- The historical and/or forecasted risk and return profiles of available asset classes

The allocation process

One such risk-based investment approach to strategic asset allocation is further described in Figure 59. We believe this multi-pillar approach provides additional insights versus other forecasted return-based approaches and aims to provide stability across parameter changes.

Figure 59: Decomposition of a Strategic Asset Allocation process



Source: DWS Investments UK Limited. For illustrative purposes only.

Appendix 1

Representative indices and their historical returns

Table 4: Each asset class in this publication is forecasted as per its corresponding representative index*

Broad Asset Class	Asset Class	Representative Index	2024	2023	2022	2021	2020
Fixed Income	EM USD High Yield	Bbg Barclays EM USD Aggregate High Yield	17.61%	13.11%	-12.36%	-3.18%	4.25%
Fixed Income	EM USD Sovereign	Bbg Barclays Emerging Markets USD Sovereign	11.66%	10.96%	-17.43%	-2.32%	5.17%
Fixed Income	EUR Aggregate	Bbg Barclays Euro Aggregate	3.33%	7.19%	-17.17%	-2.85%	4.05%
Fixed Income	EUR Cash	EUR 3M Libor TR	3.98%	2.96%	-0.27%	-0.57%	-0.55%
Fixed Income	EUR Corporate	Bbg Barclays Euro Aggregate Corporate	5.14%	8.19%	-13.65%	-0.97%	2.77%
Fixed Income	EUR Corporate 1-3	Bbg Barclays Euro Aggregate Corporate 1-3 Years	5.03%	5.11%	-4.77%	0.02%	0.69%
Fixed Income	EUR Corporate 3-5	Bbg Barclays Euro Aggregate Corporate 3-5 Years	5.39%	7.77%	-11.10%	-0.18%	1.56%
Fixed Income	EUR Corporate 5-7	Bbg Barclays Euro Aggregate Corporate 5-7 Years	5.64%	9.91%	-15.89%	-0.78%	2.97%
Fixed Income	EUR Corporate 7-10	Bbg Barclays Euro Aggregate Corporate 7-10 Years	5.26%	11.12%	-21.18%	-1.96%	4.38%
Fixed Income	EUR High Yield	Bbg Barclays Pan-European High Yield (Euro)	8.44%	12.12%	-10.64%	3.43%	2.29%
Fixed Income	EUR Treasury	Bbg Barclays Euro Treasury	2.64%	7.13%	-18.46%	-3.46%	4.99%
Fixed Income	EUR Treasury 1-3	Bbg Barclays Euro Aggregate -Treasury 1-3 Years	3.34%	3.48%	-4.82%	-0.70%	0.02%
Fixed Income	EUR Treasury 3-5	Bbg Barclays Euro Aggregate - Treasury 3-5 Years	3.03%	5.39%	-9.95%	-1.18%	1.29%
Fixed Income	EUR Treasury 5-7	Bbg Barclays Euro Aggregate Treasury 5-7 Years	3.17%	7.15%	-14.34%	-1.81%	2.83%
Fixed Income	EUR Treasury 7-10	Bbg Barclays Euro Aggregate Treasury 7-10 Years	3.18%	8.88%	-19.36%	-2.87%	4.52%
Fixed Income	Global Aggregate	Bbg Barclays Global Aggregate	4.82%	5.71%	-16.25%	-4.71%	9.20%
Fixed Income	Global Corporate	Bbg Barclays Global Aggregate Corporate	7.16%	9.61%	-16.72%	-2.89%	10.37%
Fixed Income	Global Government	Bbg Barclays Global Aggregate Treasuries	3.44%	4.18%	-17.47%	-6.60%	9.50%
Fixed Income	Global High Yield	Bbg Barclays Global High Yield	12.98%	14.04%	-12.71%	0.99%	7.03%
Fixed Income	US Agg Intermediate	Bbg Barclays US Aggregate Intermediate	6.23%	5.18%	-9.51%	-1.29%	5.60%
Fixed Income	US Aggregate	Bbg Barclays US Aggregate	5.97%	5.53%	-13.01%	-1.54%	7.51%
Fixed Income	US Corporate	Bbg Barclays US Corporate	7.15%	8.52%	-15.76%	-1.04%	9.89%
Fixed Income	US Corporate 5-7	Bbg Barclays US Corporate 5-7 Years	8.11%	8.31%	-11.17%	-1.24%	9.45%
Fixed Income	US High Yield	Bbg Barclays US High Yield	10.80%	13.45%	-11.19%	5.28%	7.11%
Fixed Income	US Treasury	Bbg Barclays US Treasury	5.14%	4.05%	-12.46%	-2.32%	8.00%
Fixed Income	US Treasury 5-7	Bbg Barclays US Treasury: 5-7 Years	6.01%	4.53%	-11.23%	-2.87%	8.48%
Fixed Income	USD Cash	USD 3M Libor TR	5.56%	5.01%	1.18%	0.04%	0.58%
Fixed Income	USD IL Treasuries	Bbg Barclays US Govt Inflation Linked Bonds	6.53%	3.84%	-12.60%	6.00%	11.55%
Equities	AC Equities	MSCI ACWI	25.67%	21.61%	-15.98%	20.89%	14.21%
Equities	EM Equities	MSCI EM	25.16%	9.85%	-15.54%	-0.19%	19.12%
Equities	EMU Small Cap Equities	MSCI EMU Small Cap	15.82%	18.78%	-12.47%	22.16%	-1.02%

*Realised Returns referenced in this table represent the last five years 2019-2024. It is intended to represent a snapshot in time and not exhaustive for all time periods.
Source: Bloomberg Finance L.P., DWS Investments UK Limited. As of 30 September 2024. Past performance, actual or simulated, is not a reliable indicator of future results.

Table 5: Each asset class in this publication is forecasted as per its corresponding representative index*

Broad Asset Class	Asset Class	Representative Index	2024	2023	2022	2021	2020
Equities	Europe Equities	MSCI Europe	14.83%	14.30%	-8.54%	22.61%	-2.21%
Equities	Europe Small Cap Equities	MSCI Europe SmallCap	11.94%	11.67%	-20.64%	20.97%	5.88%
Equities	Eurozone Equities	MSCI EMU	15.83%	18.80%	-12.49%	22.14%	-1.00%
Equities	Japan Equities	MSCI Japan	19.56%	29.04%	-4.10%	13.81%	9.17%
Equities	Switzerland	MSCI Switzerland	14.46%	5.26%	-17.06%	22.97%	1.91%
Equities	US Equities	MSCI USA	29.36%	26.49%	-19.85%	26.45%	20.73%
Equities	US Small Cap Equities	MSCI USA Small Cap	14.48%	17.86%	-17.55%	19.11%	18.32%
Equities	World Equities	MSCI World	25.72%	23.12%	-16.04%	24.17%	13.48%
Alternative	Australia REIT	S&P AUSTR REIT	33.83%	15.32%	-21.11%	26.08%	-3.88%
Alternative	Broad Commodities	Bbg Commodity	7.88%	-7.91%	16.10%	27.11%	-3.12%
Alternative	Crude Oil	Bbg Composite Crude Oil	5.28%	-1.43%	32.53%	63.34%	-41.92%
Alternative	Energy	Bbg Energy	-5.41%	-21.65%	36.22%	52.12%	-42.71%
Alternative	EUR Infrastructure IG	Markit iBoxx EUR Infrastructure Index	4.32%	9.03%	-15.91%	-1.55%	3.15%
Alternative	Global Infra. Equity	DJ Brookfield Global	18.30%	4.51%	-6.62%	19.87%	-6.97%
Alternative	Gold	Gold Futures	37.54%	12.33%	-0.70%	-3.58%	23.97%
Alternative	HF - Event Driven	BBG Event Driven Hedge Fund Index	9.90%	7.33%	-4.72%	16.00%	7.61%
Alternative	HF - Merger Arbitrage	BBG Merger Arbitrage Hedge Fund Index	4.36%	4.68%	2.54%	10.74%	6.61%
Alternative	HF - Equity Hedge	BBG Equity Hedge Fund Index	16.26%	9.07%	-12.43%	12.22%	13.03%
Alternative	HF - Equity Market Neutral	BBG Quantitative Equity Market Neutral Hedge Fund Index	11.56%	7.76%	-1.96%	7.46%	5.30%
Alternative	HF - Macro	BBG Macro Total Hedge Fund Index	9.64%	1.58%	1.28%	6.35%	6.99%
Alternative	HF - Macro: Systematic	BBG Macro Systematic Hedge Fund Index	8.16%	2.40%	-1.27%	-0.40%	9.18%
Alternative	HF - Relative Value	BBG Relative Value Hedge Fund Index	11.04%	7.98%	0.13%	7.34%	6.18%
Alternative	Hedge Funds: Composite	BBG Global Hedge Funds Index	12.73%	7.76%	-6.88%	9.72%	9.53%
Alternative	Japan REIT	S&P Japan	-2.18%	-1.33%	-5.72%	19.37%	-13.66%
Alternative	Private EUR Infra. IG	Private (Markit iBoxx EUR Infrastructure)					
Alternative	Private RE Equity Asia Pac	Private real Estate Equity Asia Pac					
Alternative	Private RE Equity UK	Private real Estate Equity UK					
Alternative	Private RE Equity US	Private real Estate Equity US					
Alternative	Private USD Infra. IG	Private (Markit iBoxx USD Infrastructure Index)					
Alternative	United States REIT	S&P USA REIT	21.42%	13.77%	-24.36%	43.05%	-7.52%
Alternative	US Infra. Equity	DJ Brookfield US	19.57%	-2.24%	-5.45%	23.69%	-12.30%
Alternative	USD Infrastructure IG	Markit iBoxx USD Infrastructure Index	7.84%	8.85%	-16.64%	-0.47%	10.30%

*Realised Returns referenced in this table represent the last five years 2019-2024. It is intended to represent a snapshot in time and not exhaustive for all time periods. Source: Bloomberg Finance L.P., DWS Investments UK Limited. As of 30 September 2024. Past performance, actual or simulated, is not a reliable indicator of future results.

Appendix 2

Table of figures

Appendix 3

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