

Long-term Outlook

Macroeconomic Scenarios and Expected Returns 2025-2028





Contents

Foreword	3
Economic outlook	4
AI & Automation	12
Sustainable Investing	15
Government bonds	18
Megatrends	21
Investment Grade Credits & High Yield	23
Private Credit / Alternative Fixed Income	27
Listed Equity	34
Impact of retail investors on markets	38
When baskets change... where to put your eggs?	41
Private Equity	46
Private and Listed Real Estate	49
Conclusion	52
Disclosures	54

Foreword

Writing this foreword gives me a nice opportunity to share an important reason why I joined Aegon Asset Management: the combination of a long-term strategic perspective with an amazing heritage. At Aegon Asset Management we are part of a company with over 180 years of history in building insurance and investment businesses. Navigating almost every kind of situation, from periods of economic expansion to deep crises and everything in between.

This long history and extensive experience in managing pension and insurance assets have taught Aegon Asset Management to navigate short-term fluctuations while maintaining a long-term perspective. I invite you to read our latest Long-Term Outlook with that in mind. Our experts paired our macroeconomic expectations with research into key global trends and financial assets. The outcome is a coherent and time-tested outlook for financial markets.

An important trend we focus on in this outlook is the potential of AI to boost productivity, welfare, and economic growth, as well as its impact on investment portfolios. We also explore the impact of “gamification” in financial markets and the growing importance of ESG and responsible investing.

Of course, we do not overlook short-term factors. Politics and fiscal policies are likely to affect both the macroeconomy and markets. Geopolitical risks will influence the global economic balance of power as economic blocs engage in an open contest for technological supremacy, resources, and influence. Simultaneously, the escalating costs of climate change and necessary adaptations are becoming a pressing concern as the earth warms at an unprecedented rate.

Inflation has been a significant topic in the recent period. Now that inflation pressures have eased, our strategists believe the focus will shift back to growth and economic activity. To summarize our key views, we expect US growth to cool down but not collapse, and in Europe, we anticipate the period of stagnation to end, but growth to remain relatively subdued.

Translating our macroeconomic outlook to financial markets results in a balanced perspective. Returns expectations in fixed income markets are relatively high on the back of high and declining sovereign yields. A significant pick-up is still available in some credit markets, specifically in alternative fixed income. Equities have run far in recent years and are vulnerable to a turn in sentiment, however due to megatrends in the rise of AI and the increasing concentration of technological capabilities we remain constructive on the medium term.

I hope this Long-Term Outlook provides you with valuable insights to support your asset allocation decisions.



Economic Outlook

Economy resilience

The world economy is entering a new phase, gradually shaking off the remnants of the Covid-19 pandemic and the commodity price shock triggered by the war in Ukraine. The worst-case scenarios that many feared did not come to pass, but the repercussions are still evident. Europe, in particular, has experienced sluggish growth due to the energy crisis.

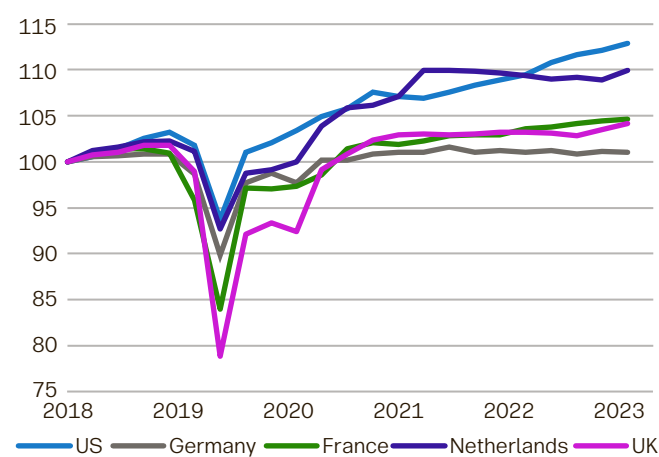
On a global scale, inflation is steadily retreating towards target levels. This positive development of falling inflation was far from certain a year ago, making it a significant achievement. However, the journey is far from over. The persistence of inflation in some key areas serves as a reminder that the task of central banks is not yet complete.

The economic landscape is fraught with challenges. Geopolitical risks have escalated dramatically as the US and China engage in an open contest for technological supremacy, resources, and influence. This competition has led to severed trade linkages and rerouted supply chains. Fiscal positions, already fragile, have deteriorated further in many countries. Coupled with declining workforces due to demographic shifts, this is likely to constrain future potential growth.

Furthermore, the escalating costs of climate change and the necessary adaptations are becoming a pressing concern as the earth warms at an unprecedented rate. The rise of populism also poses a risk for economic growth, given its often counterproductive policies on trade and international cooperation.

Despite these challenges, there are also opportunities. Technological advancements are progressing at a rapid pace. Artificial Intelligence (AI) is currently the main focus of investors. In addition, innovations in batteries, energy generation, and biotechnology also hold the potential to boost productivity and improve well-being. As we navigate this complex landscape, it is crucial to remain vigilant and adaptable, ready to seize the opportunities that arise even as we tackle the challenges head-on.

Figure 1: GDP index rebased on 100 at Q4 2018.



Source: Aegon Asset Management, Bloomberg. Data as of Q2-2024.

Recent developments

The global economic landscape has been undergoing significant changes recently. Inflation, which reached its peak in 2022, has been on a steady decline in both Europe and the US. This decline has been observed in both headline and core inflation for much of the period under review. Interestingly, there has been a noticeable rotation in the contribution to inflation from goods to services.

In particular, the growth of service prices, especially in the US, has proven to be more persistent. This is in stark contrast to China, where prices continue to hover near deflationary territory, highlighting the divergent economic conditions across the globe.

Employment has remained unusually strong relative to output, further supporting demand in the near term. However, more recent data suggests that the strong labor market may be softening, with the unemployment rate in the US rising and job vacancies declining.

Households have continued to dip into the savings they accumulated during the pandemic. The transmission of higher rates to households has been slow, as they have refinanced at longer rates and housing turnover is at historical lows.

The Inflation Reduction Act and the Chips Act have led to additional fiscal expansion, boosting economic activity. The stability of the financial market has ensured that financing conditions did not deteriorate despite the increase in base rates.

After a period of intense and synchronized monetary policy tightening, monetary policy has become restrictive. Central banks are now preparing for easing, with the European Central Bank (ECB) and the Bank of England (BoE) making their first cuts before the summer.

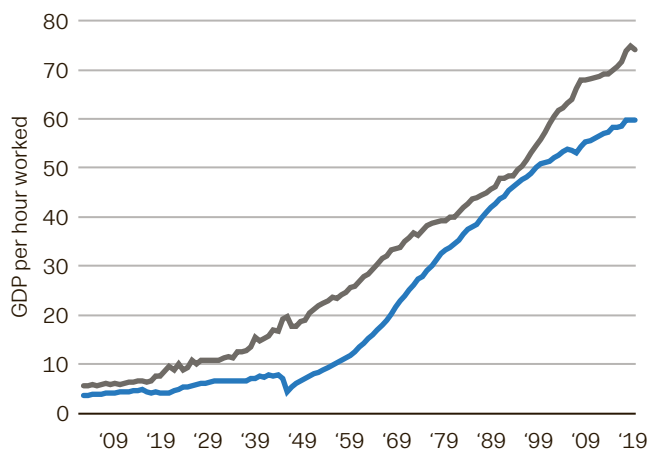
The People's Bank of China has further eased its policy in response to weak domestic conditions and subdued inflation. In contrast, the Bank of Japan (BoJ) has exited the negative interest rate policy era and abandoned yield curve control while retaining an accommodative stance. This divergent monetary policy has been causing volatility in the Japanese Yen and has increased uncertainty about the future path of monetary policy.

These recent developments highlight the dynamic and complex nature of the global economy, with different regions experiencing different economic conditions and responding with different policy measures. As we move forward, it will be interesting to see how these developments unfold and what their implications will be for the global economy.

Productivity growth the big unknown

Productivity growth, beyond cyclical fluctuations, is the ultimate driver of improved living standards. While the US has seen decent productivity growth, the rest of the world, particularly Europe, has lagged significantly, especially since the year 2000. The US's outperformance continued even in the post-pandemic period, possibly due to differing responses to the crisis.

Figure 2: Labor productivity per hour.



Source: Aegon Asset Management, Long Term Productivity Database. Data as of Aug-2024.

In the US, job losses were more substantial, leading to a significant reallocation of labor. In contrast, Europe implemented employment retention schemes. This difference in approach could be one factor behind the productivity growth disparity.

Another potential factor is the slower adoption and use of technology in regions outside the US. Additionally, the presence of large service sectors, which inherently have limited productivity growth potential, can also limit overall growth.

Post-pandemic labor hoarding might be another reason for the slow productivity growth. If this is the case, we might see a more forceful resumption of productivity growth going forward.

The ongoing wave of technological advances, notably in artificial intelligence, holds significant promise for improving productivity. However, it's important to note that previous technological advances have not always translated into higher growth.

If slow productivity growth continues, it could pose challenges to fiscal sustainability, especially in the face of an aging society. It could also lead to increased discontent as expectations of rising living standards fail to materialize.

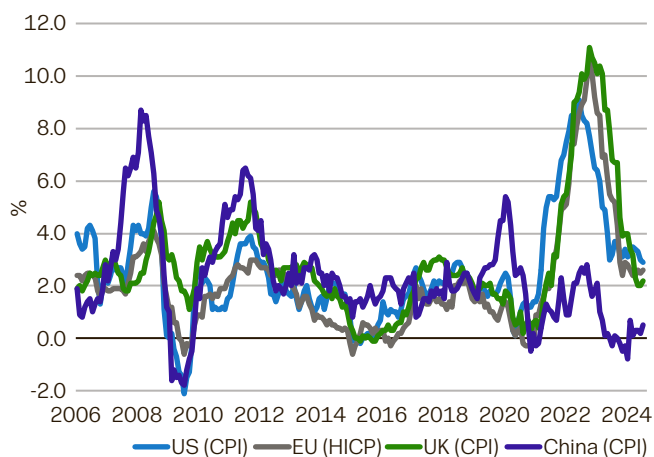
Overall, we anticipate a moderate productivity growth of around 0.5 to 1% in Europe and slightly higher in the US. These projections are based on current trends and assumptions, and actual outcomes may vary. As always, it's important to continue monitoring these trends and adjusting strategies as necessary.

Sticky inflation, but expected to decline further towards targets

The inflationary landscape has been evolving, with a growing disparity between the inflation rates of core goods and services. The stagnation of core goods prices reflects the disinflationary trend triggered by a slowdown in manufacturing and a drop in China's export prices. On the other hand, the robustness of core services inflation, which is consistent across various regions, is a testament to the tight labor markets.

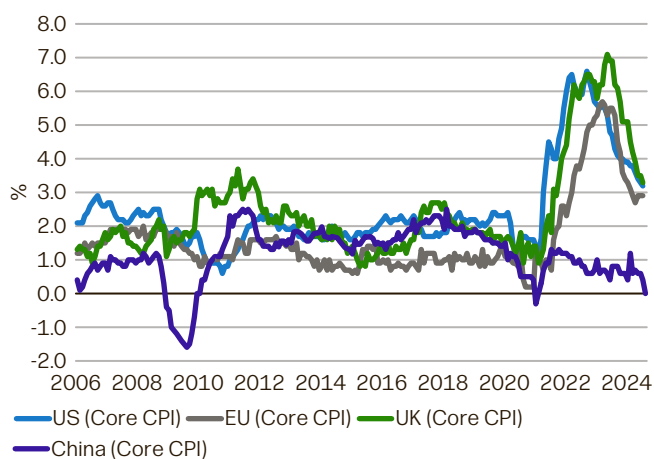
To see a more significant reduction in core services inflation, a slowdown in labor markets might be necessary. This makes the dynamics of the labor market a key factor in predicting future inflation trends and monetary policy directions. As a result, financial markets have reacted strongly to labor market data releases.

Figure 3: Headline inflation - US, eurozone, UK and China.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

Figure 4: Core inflation in US, eurozone, UK and China.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

In the United States, there's already a noticeable deceleration in wage inflation. As the economy is likely to be held back by high interest rates and fading fiscal support, it's expected that the labor market will gradually weaken. This should lead to a moderation in core services prices, bringing broader inflation measures closer to the target. While the focus of policymakers will likely be on core inflation measures, fluctuations in food and energy prices could also play a significant role. While food price inflation has now adopted a more moderate pace, energy price swings, often influenced by geopolitical events, could be impactful.

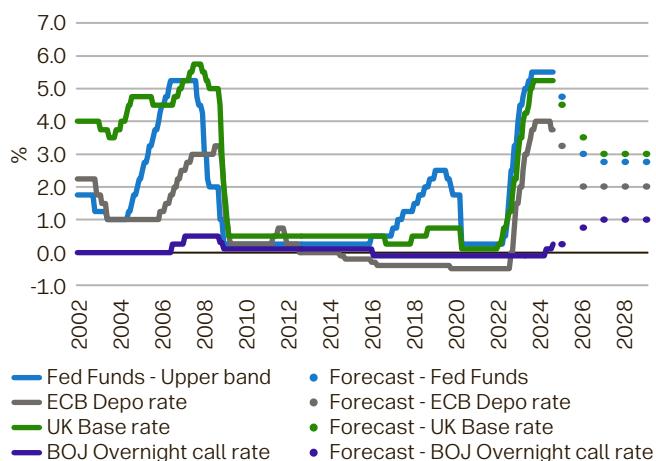
The situation in the eurozone is somewhat similar to that of the US. In Europe the energy crisis had a much more pronounced effect on the initial inflation shock and the subsequent economic underperformance. Also, in Europe a rise in corporate profit margins has boosted inflation. The pace of core is slowing, further improvements depend on the moderation of corporate pricing and wage growth.

Given the region's difficult growth prospects, achieving full disinflation back to the ECB's 2% target seems probable. Near-term contributions to disinflation could come from lower import prices. Overall, a gradual decline towards the target is anticipated by the end of 2025, although any economic risks materializing could potentially hasten this trajectory.

Overall, we expect the Fed, the ECB and the BoE to initiate an easing cycle until 2026. Clearly, the pace will depend on incoming economic data. However, we expect the cutting cycle to end far above the previous lows seen after the global financial crisis (GFC). The risk of deflation seems low, barring a new crisis. Also, there is no need to stimulate the economy as much as after the GFC. Negative rates therefore are expected to remain a quirk of the recent past.

The exception to this cutting cycle will be the Bank of Japan (BoJ), where higher wage inflation and sticky services inflation is likely to allow the BoJ to raise rates.

Figure 5: Central bank policy rate expectations.

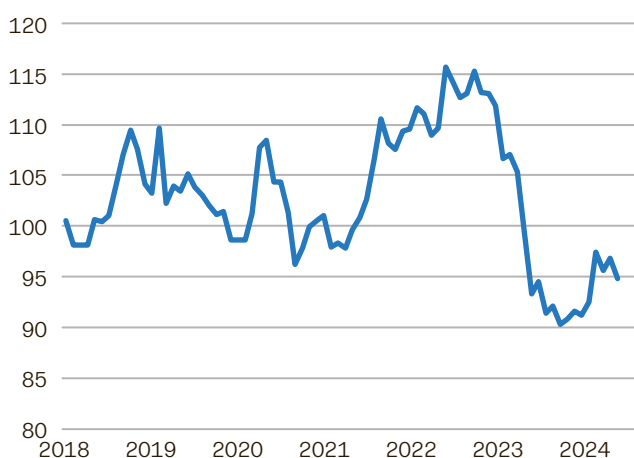


Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

China as exporter of disinflation

In recent years, China's economic landscape has been characterized by near-zero headline Consumer Price Index (CPI) inflation. This phenomenon can be attributed to a combination of factors, including declining food prices and weak core inflation, which remained stagnant in early 2024 compared to two years prior.

Figure 6: China export price index.



Source: Aegon Asset Management, Bloomberg, CGA. Data as of Aug-2024.

Furthermore, producer prices have experienced an even more significant decrease. This trend is largely due to a weaker domestic economy and industrial overcapacity. The impact of these developments extends beyond China's borders. Falling prices for Chinese exports have reduced import price increases in other major economies by an average of 5 percentage points over 2023, which was a welcome effect in a period with high inflation.

China's role as the main producer of many products has likely led to significant indirect effects on inflation. Competitors to Chinese firms from other countries are likely forced to reduce their prices in response.

Chinese export volumes have grown, likely partly in reaction to falling prices. A prime example of this dynamic can be seen in the automobile sector, where export volume increased, while prices fell. This sector exemplifies the effects of large overcapacity, especially in Electric Vehicles (EVs), which results in lower prices and strong competition.

Increased tariffs, such as those implemented by the US, are likely to blunt the impact of import price deflation. The tariffs charged in Europe, for example on EVs, are likely less material as they can be circumvented. Chinese and European EV brands are likely to instead import components like batteries from China and assemble the car in the EU. This will still lead to price competition and hence price deflation. For Europe, and specifically for Germany, the threat to the important automotive industry is far from over.

Studies¹ suggest that the sensitivity to import prices varies per country. It is generally lower for the US and higher for Europe, but the historical sensitivity for developed countries is around 25%. Therefore, the 5% decrease in import prices could eventually translate into a 1.25 percentage point lower CPI inflation rate. This illustrates the significant impact of China's economic policies and market conditions on global inflation rates.

US outlook: Engineering a soft landing

In recent years many letters of the alphabet were used to illustrate the potential shape of economic growth. Now, we argue that the long-term outlook for the US economy takes the path of a shallow 'U'. Near-term growth is below-trend as the tight monetary policy continues to weigh on growth. As policy is slowly normalized over the next 1-2 years, it will enable growth to move closer to trend. Inflation pressure is rapidly slowing as supply chains normalize and excess demand continues to moderate, on par with the slowing economy.

The fiscal outlook in the US is expected to face increasing challenges in the coming years from both fiscal and wealth perspectives. Elevated

¹Goldberg, Linda & Campa, José. (2010). The Sensitivity of the CPI to Exchange Rates: Distribution Margins, Imported Inputs, and Trade Exposure. The Review of Economics and Statistics.

deficits are likely to limit fiscal stimulus, as the US is currently running large deficits in a late-cycle environment. This situation makes it more difficult to implement fiscal expansion during periods of economic slowdown or recession. Additionally, savings accumulated during the pandemic have gradually been spent. While consumers have benefited from rising house and equity prices, which have boosted overall wealth, these effects have significantly contributed to the US' growth outperformance following the pandemic. As these benefits wane, the differential in growth between the US and other developed countries is expected to decrease. Consequently, the US may experience more headwinds, impacting its economic growth relative to other developed nations.

The outlook for the US labor market presents a mixed picture. On the one hand, the market remains relatively tight, characterized by low unemployment rates. Factors such as increased immigration and higher participation rates among women have bolstered the labor force. However, there are signs of cooling, with payroll growth slowing and unemployment rates edging up. Still, the starting point is strong, with high employment, but we expect the labor market to weaken further into 2025.

Longer term, we expect inflation trends to be moving from a 2%-minus towards 2%-plus. Prior to the pandemic we had inflation consistently running below 2%. Now, due to shifts in secular factors like reshoring, we expect core inflation trends to run 2%-plus. While still anchored at 2%, the balance around this base number will be on the higher side, and the risk of very low inflation or even deflation is expected to remain a quirk of the recent past.

After keeping monetary policy quite tight to slow down inflation, the Federal Reserve is now on a normalization mission to bring policy back towards neutral. This will take time, but if successful will engender the economy's return to mid-cycle dynamics. We don't see policy going below neutral (i.e., into supportive territory) as that risks overheating the economy and sparking the inflation embers.

Eurozone outlook: Risks to the downside

From the end of 2022 until the first quarter of 2024, Europe's economy found itself in a state of stagnation. Germany, the continent's industrial

powerhouse, bore the brunt of this downturn, with its manufacturing sector particularly hard-hit. The energy crisis exacerbated the situation, highlighting Europe's heavy reliance on energy imports. Energy-intensive industries faced soaring input costs, placing them at a competitive disadvantage on the global stage.

However, the energy landscape began to shift. New sources of imports and substitution efforts have started to alleviate the crisis. The outlook is set to improve further with the anticipated availability of new LNG supplies from 2026, promising a more stable energy future for Europe.

In the first half of 2024, growth resumed. This resurgence was underpinned by decent wage growth and falling inflation, which together bolstered household incomes in real terms. A still-tight labor market and rising employment levels further supported consumer spending, injecting much-needed vitality into the economy.

Southern European countries have fared relatively well during this period. The NextGenEU fund has provided significant stimulus, primarily benefiting these nations and leading to a fiscal boost. Furthermore, the sharp rebound in tourism post-pandemic has supported growth. Despite these positive developments, productivity growth remains lackluster, and the productivity gap relative to other Western countries is substantial.

Interestingly, unit labor costs in Southern Europe have been declining relative to Northern Europe, enhancing their competitiveness. This shift could lead to a more balanced economic environment across the continent. As a result, unemployment rates in Southern Europe have fallen below pre-GFC levels, marking a significant improvement.

Labor markets across Europe have remained surprisingly robust. Unemployment rates are at their lowest since the early 1990s, a remarkable feat given the weak growth and the severe impact of the energy crisis. Demographics play a role here, with large numbers of baby boomers retiring. Additionally, firms appear to be hoarding labor, having experienced significant shortages post-pandemic.

Looking ahead, the labor market is expected to soften. Vacancies are already on the rise, and firms report that labor is no longer the primary constraint on production. Wage growth is also declining, influenced by both the easing labor market and reduced automatic indexation based on trailing inflation.

Overall, we anticipate a return to just below-trend growth in Europe as the economy recovers from the inflationary impact. However, significant downside risks remain. The potential re-election of Donald Trump could lead to renewed trade restrictions with the US, posing a threat to European exports. The ongoing conflict in Ukraine also has the potential to escalate, potentially triggering a renewed flow of refugees and increasing support for populist parties.

Moreover, rising tensions between China and the US could slow global growth, impacting Europe's open economy, which has substantial trade linkages with both economic blocs. Finally, Europe's lack of independence in critical sectors such as technology, energy and commodities makes it particularly vulnerable to external shocks.

In conclusion, while Europe's economic recovery is underway, it is fraught with challenges and uncertainties. The continent must navigate these complexities carefully to ensure a sustainable and balanced growth trajectory.

UK outlook: Cautious optimism

The UK economy in 2024 presents a complex tapestry of challenges and opportunities, mirroring the broader economic landscape of the European Union. Despite a modest rebound, growth remains lackluster, with productivity growth virtually non-existent. The lingering effects of Brexit continue to cast a shadow, exacerbating structural weaknesses and creating uncertainty for businesses and investors.

However, the UK has managed to sidestep some of the more severe headwinds battering the manufacturing sectors of countries like Germany. Consumer confidence is gradually recovering, buoyed by a tight labor market and a notable decline in inflation. Household utility bills have also fallen, thanks to the lagged response to declining gas prices.

Inflation has edged closer to the Bank of England's 2% target, offering some respite to consumers. Yet, domestic inflationary pressures, particularly in the services sector, remain stubbornly high. Labor costs, a significant component of services firms' production expenses, have been slow to adjust, further complicating the inflation outlook.

The Bank of England's progress on inflation opens the door for potential rate cuts, which could

benefit interest rate-sensitive sectors. Given that households in the UK tend to finance on relatively short terms, this could have a swift impact on consumer spending and economic activity.

The recent election victory for the Labour Party is likely to foster a more constructive relationship with the EU, although the immediate economic effects are expected to be minimal. The UK's economic situation remains comparable to that of the EU, sharing similar risks such as dependency on energy imports and a lack of a sizable tech sector.

The UK faces significant fiscal challenges as it navigates a post-pandemic and post-Brexit landscape. High inflation and increased interest rates have driven up the government's debt servicing costs, exacerbating fiscal pressures. The Office for Budget Responsibility highlights that the UK is particularly vulnerable to these shocks due to a high proportion of debt linked to inflation. Despite historically high tax levels, sluggish economic growth and the need for substantial public service investment strain the fiscal outlook. Balancing the need for fiscal consolidation with the imperative to support economic growth and public services will be a formidable task for policymakers in the coming years.

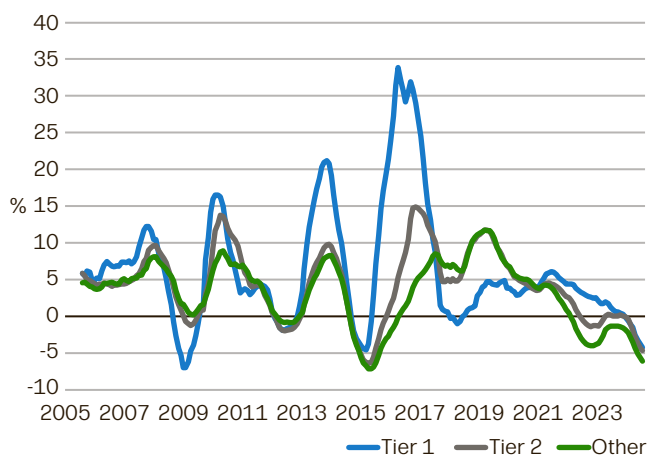
Looking ahead, there are reasons for cautious optimism. The easing of inflationary pressures and the potential for lower interest rates could provide a much-needed boost to the economy. However, the path to sustained recovery will require addressing deep-seated structural issues which have resulted in low productivity growth. The balancing act between fostering short-term growth and tackling long-term challenges will define the UK's economic trajectory in the coming years.

China outlook: Trying to offset property downturn with manufacturing investment

China's economic landscape has been undergoing significant changes as we moved into 2024. The country's domestic demand has been faltering under the weight of a prolonged housing downturn. The support for the housing market has been relatively limited, as policy makers are likely aiming to deflate the previously overheated housing market. Housing regulation and support, which used to be a prime policy tool to steer the

economy towards its growth targets, are now seen as having reached their limits. China has realized that the overheated housing market cannot sustain the country's economic growth in the long run. It can be clearly seen in Figure 7, that the Chinese housing market has had several cycle. Currently, house prices have been declining in both Tier 1 (very large cities), Tier 2 (large cities) and nationwide.

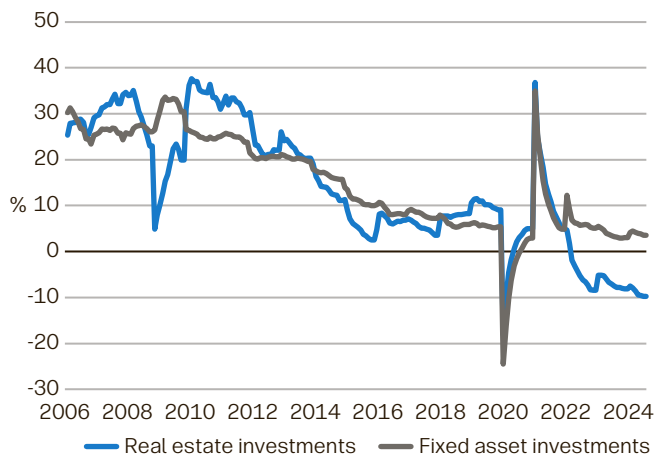
Figure 7: Chinese house price growth.



Source: Aegon Asset Management, Bloomberg, Data as of Aug-2024.

In this cycle, policymakers are therefore counting on two other growth drivers: higher value-added manufacturing and infrastructure investments. China's leaders are betting on high-tech manufacturing to propel the economy as they try to deflate a bubble in the real estate market. One key example is the production of Electric Vehicles (EVs), where they have built a highly competitive supply chain. Many Western carmakers will also increasingly rely on Chinese-made components. Due to tariffs in Europe, Chinese carmakers will set up local assembly plants but are expected to remain highly competitive with Western brands. US tariffs on EVs are too restrictive and hence that market is effectively closed for Chinese carmakers.

Figure 8: Investments in real estate and fixed assets.



Source: Aegon Asset Management, Bloomberg, NBS. Data as of Aug-2024.

Domestically, EVs have grown significantly. In July 2024, half of all vehicles sold in China were new pure electric vehicles or plug-in hybrids. China now accounts for nearly 60% of EV sales worldwide. The semiconductor sector is also a focus for China, where it's making significant investments. The sector is unlikely to be able to compete with the most advanced chips, but it is increasingly becoming competitive with the industrial and automotive chip suppliers. However, the negative consequences are also felt. China now has a large amount of overcapacity in various industries, which results in a margin squeeze and higher defaults.

Infrastructure investment has also been one of the other drivers of domestic demand. China is using infrastructure investments to support the economy and also to become less dependent on (energy) imports. One key focus is the build-out of the power sector, which includes enormous investment in renewable energy and grids. China's renewable energy sector has seen an unprecedented expansion in recent years, with the country pledging to reach 1,200 gigawatts of renewables capacity by 2030. This is more than double its capacity in 2020. In 2023, it doubled new solar installations, increased new wind capacity by 66 percent, and almost quadrupled additions of energy storage. This rapid expansion is equivalent to installing two to four nuclear power plants worth of renewables every week and reduced China's dependence on foreign energy imports.

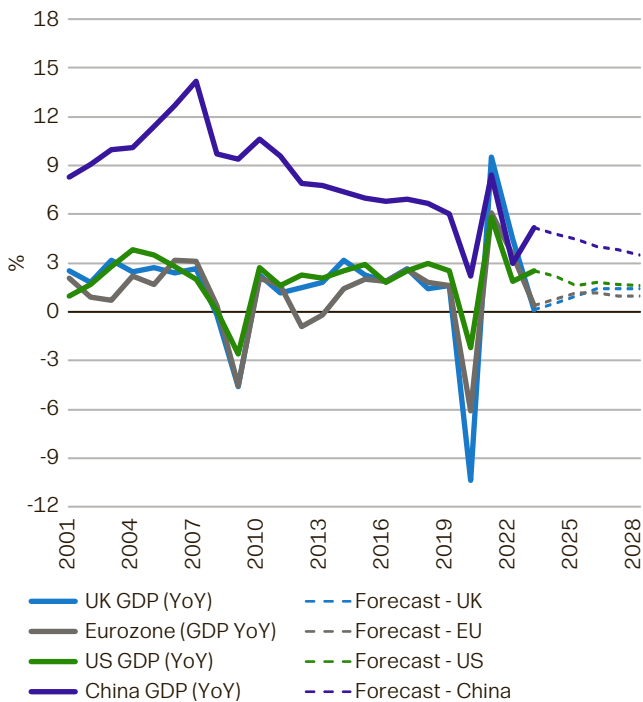
On the geopolitical front, the trade tensions between the US and China have resulted in supply chains rerouting, which has been a drag

on growth. Also, other countries, including Europe, have been reconsidering their position relative to China and are keen to reduce dependencies. On a net basis, this will remain a negative for Chinese export growth.

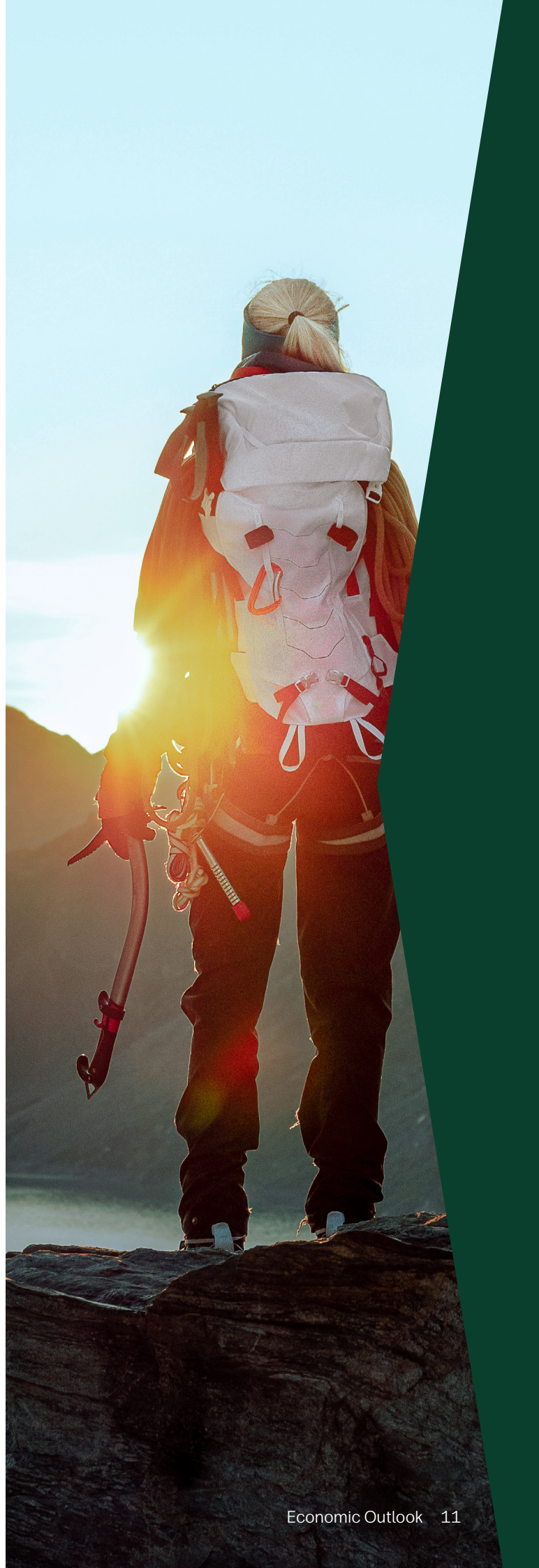
A more concerning development for future productivity growth are the frequent and restrictive interventions of the government in private enterprises. This has the potential to discourage entrepreneurship and innovation. Also, intellectual property rights don't always seem to be protected, which is one of the reasons contributing to a decline in foreign direct investment (FDI). More generally, investors should ask themselves whether property rights would be protected, also when geopolitical tensions would rise further.

All in all, we view the current pessimism on the Chinese growth outlook as too premature. We view the policy of deflating the housing market and instead tilting towards higher value-added manufacturing and building out the (renewable) energy sector as sensible goals. Our longer-term concern would be more focused on the governance side. An interventionist government can stem innovation. Western investors (either in listed assets or via direct investments) should ask themselves whether they think their property rights are sufficiently protected in all plausible scenarios.

Figure 9: GDP growth including forecasts.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

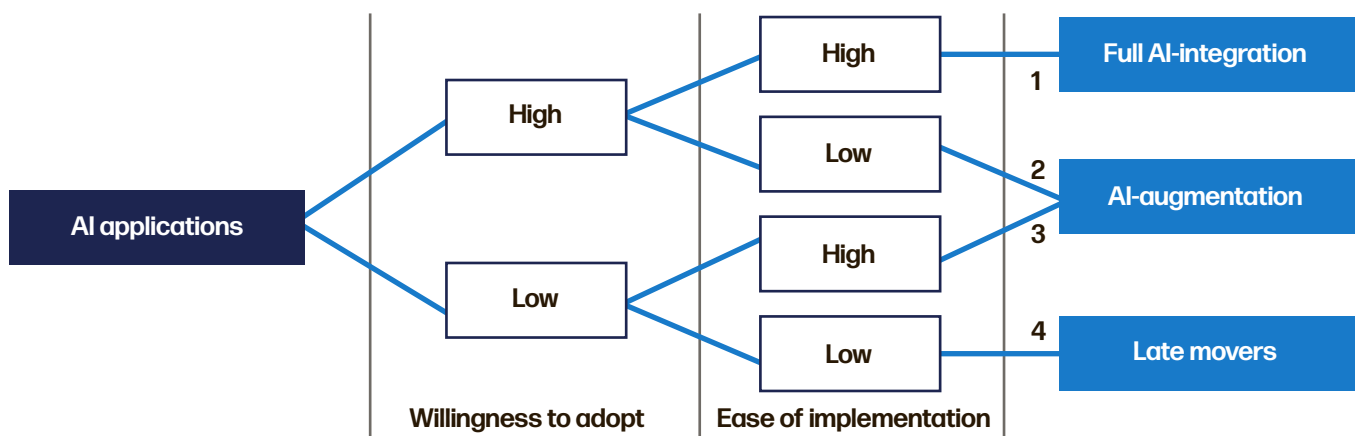


AI & Automation

Despite the rapid technical advancements in artificial intelligence (AI) and generative AI, their impacts on the global economy seem subtle at first sight. While companies operating in the AI sector – especially those in the semiconductor industry – play a substantial role in driving global market indices, the direct impact of the technology on global GDP, inflation and the job market seems limited so far. In this section we dive deeper into current trends and explore how these advanced technologies may shape the economy going forward.

In last year’s long-term outlook, we proposed a two-stage illustration (see figure below) that linked the influence of AI within firms to their willingness to adopt AI and the ease of model deployment. Our presumption was that in the short term, most firms would fall under the “AI-augmentation” scenario, where modern AI tools would enhance workers’ capabilities, thereby increasing productivity, reducing human error and improving quality.

Figure 1: Illustration of AI adoption pathways



Source: Aegon Asset Management

The “Full AI-integration” scenario would unfold when both the willingness to adopt and the ease of implementation for AI technologies were high. Factors such as novelty, lack of expertise and legislative uncertainty could deter most firms from adopting AI in the short run, while current technological capabilities and data safety and privacy concerns could impede implementation. This led us to the assumption that full AI integration (and its significant impact on the global economy) would only start to become widespread in the long term.

To evaluate the validity of this assumption against real-world developments one year ahead, let’s examine a few aspects in more detail. By assessing current legislative efforts, we can try to foresee whether they remove existing barriers or add to them. By determining the impact of current AI on the total productivity per worker, we can foresee whether AI will deliver on the expected GDP improvements. Lastly, through assessing current job markets, we can learn if and how AI is impacting the net number of occupations today.

Total labor productivity per worker

Research by Microsoft¹ indicates that the use of their large language model (LLM)-driven AI software saves surveyed users an average of 14 minutes daily due to productivity gains. Another study (Dell'Acqua et al., 2023)² found that among a sample of consultants, those with access to an LLM (GPT-4) completed more tasks on average (+12.2%), completed them in 25.1% less time, and had 40% higher quality results. Similarly, a study by the National Bureau of Economic Research (NBER)³ found that the implementation of LLM-based assistants in customer support increased worker productivity by 14%, with the most substantial gains observed among less experienced workers. Assuming these findings carry over to more sectors and effects may even be magnified with increased technological progress, total factor productivity (TFP) is bound to grow. In a classical Cobb-Douglas form production function, an increase in TFP leads to an increase in total output (GDP), given constant capital and labor input. As such, AI is likely to contribute positively to the GDP growth rate, with larger effects expected when technology progresses, and adoption becomes more widespread.

Legislation

New regulations around the use and development of safe and responsible AI are being established in most major markets (Christodorescu et al., 2024)⁴. Frontrunning these efforts is the European Union with their Artificial Intelligence Act, effective from August 1st, 2024. It imposes requirements on AI applications, including transparency for "General-purpose AI" like large language models (LLMs).

While there is a grace period before the law applies to existing models, the implications of the regulation seem substantial. AI systems, especially those that are complex and powerful, are mostly "black boxes". Considering the steep development costs, firms might hesitate to reveal their models and training weights fully, which could limit the presence of their models in the EU market. Consequently, the inability to access potent AI models could potentially impact the

competitiveness of firms based in the EU.

At the same time, the US is advancing in AI legislation, highlighted by a 2023 executive order. The US focuses on guiding government AI use and promoting AI R&D, with an emphasis on ethical use and data privacy. Some state-level efforts implement safeguards or bans on high-risk governmental AI applications. These legislative efforts could shape corporations' AI adoption and implementation in both regions. The EU's stringent regulations might deter AI adoption due to transparency requirements which could limit access to powerful AI models, while the US' focus on ethics and privacy could encourage adoption, despite potential state-level challenges. The rapidly evolving landscape requires ongoing observation to understand trends and impacts.

Job market: software developers

We previously argued that within the full AI-integration scenario (long term) we expect job redundancy to outpace newly created occupations, while the effects on the short term are likely not too pronounced. It is incredibly hard to quantify the current effects of artificial intelligence on job creation and replacement overall. To better understand the dynamics of AI in the workplace, let's consider the field of software development.

In a survey among 500 US-based software developers by code repository GitHub, 92% of participants are already using AI coding tools both in and outside of work. 70% of developers say they see AI offering them an advantage in terms of coding quality, completion time and resolving incidents (Github, 2024)⁵.

A 2024 study on developers' perceptions of the impact of ChatGPT in software development (Vaillant et al., 2024)⁶ provides insights into the expected impact of (generative) AI in the field of software development. Approximately 43% of the surveyed participants anticipate potential layoffs induced by the application of AI technologies in the workspace. 48% of participants are unsure or anticipate little impact, with just 8% of respondents not expecting any impact at all.

¹What can Copilot's earliest users teach us about AI at work? (n.d.).

²Dell'Acqua, F., McFowland, E., Mollick, E. R., Lifshitz-Assaf, H., Kellogg, K., Rajendran, S., ... & Lakhani, K. R. (2023). Navigating the jagged technological frontier: Field experimental evidence of the effects of AI on knowledge worker productivity and quality. Harvard Business School Technology & Operations Mgt. Unit Working Paper, (24-013).

³Brynjolfsson, E., Li, D., & Raymond, L. R. (2023). Generative AI at work (No. w31161). National Bureau of Economic Research.

⁴Christodorescu, M., Craven, R., Feizi, S., Gong, N., Hoffmann, M., Jha, S., ... & Turek, M. (2024). Securing the Future of GenAI: Policy and Technology. Cryptology ePrint Archive.

⁵Shani, I. (2024, February 8). Survey reveals AI's impact on the developer experience - The GitHub Blog. The GitHub Blog.

⁶Vaillant, T. S., de Almeida, F. D., Neto, P. A., Gao, C., Bosch, J., & de Almeida, E. S. (2024). Developers' Perceptions on the Impact of ChatGPT in Software Development: A Survey. arXiv preprint arXiv:2405.12195.

While advances in AI research and increasing implementation might (initially) involve a higher demand for developers and computer scientists, current evidence of this effect is absent. In fact, AI-related positions relative to total job listings decreased⁷ in 2023, a trend also attributed to broader layoffs in the tech sector. These larger layoffs have significantly reduced the number of software development listings in the US⁸, a phenomenon that has been present longer than the current entry of generative AI on the world stage. Yet, the advancements of generative AI are likely to threaten future job prospects⁹ in the software development sector, with a few clear examples already occurring¹⁰.

Current implications

The rapid advancements in AI technology present a complex picture for the global economy. While AI's direct impact on macroeconomic indicators like GDP, inflation and job markets is hard to gauge, its potential is undeniable. Legislative efforts in major markets, such as the EU's AI Act and the US' executive order, are gaining traction. These efforts may hinder AI adoption and competitiveness but also promote clarity by removing ambiguity. In the job market, particularly in software development, AI is already making its presence felt, though its broader implications are still unfolding. It's potential positive impact on economy-wide productivity will likely take years to fully materialize. In the short run, financial markets will remain focused on AI due to its massive impact on current and future corporate profitability in the semiconductor and tech sectors. It will also be interesting to see whether AI can disrupt business models within and beyond the tech sector.

As AI continues to evolve, we keep monitoring the space and remain alert to broader implications.

⁷Perrault, R., & Clark, J. (2024). Artificial Intelligence Index Report 2024.

⁸Schneider, M. (2024, April 2). Indeed's 2024 US Jobs & Hiring Trends report. Indeed Hiring Lab.

⁹Korducki, K. M. (2023, October 3). Computer science is no longer the safe major. The Atlantic.

¹⁰Thorbecke, C. (2023, July, 4). AI is already linked to layoffs in the industry that created it. CNN.



Sustainable Investing

Both institutional and retail investors rely on a variety of data, tools and analyses to make investment decisions. Over the past years, the role which sustainability plays in making such decisions has increased noticeably. We will discuss three trends that have contributed to the increased focus on sustainability by the investment industry. In the second part we discuss the results of a quantitative analysis aimed at determining to what extent a company's governance has an impact on its share price developments.

Changing Regulatory Environment

First, increased attention and awareness by the public regarding sustainability topics has caused lawmakers to further solidify the global regulatory environment concerning sustainability.

One key aspect for instance is the so-called Sustainable Finance Disclosure Regulation (SFDR), which came into effect in the eurozone in March 2021. This European regulation requires market participants to disclose how sustainability risks and factors have been incorporated into the investment process, helping investors to make more informed investment decisions. A similar trend towards better disclosures regarding sustainability is observed in the US, where the SEC has proposed new rules in 2022.

A final example is the EU taxonomy regulation that came into effect in 2020, which aims to create a classification system for environmentally sustainable economic activities. The objective of this regulation was to mobilize capital towards sustainable economic activities. Another consequence is that it assists in reducing the practice of "greenwashing": the marketing of products as environmentally friendly while in fact they are not.

Overall, it is expected that the regulatory environment will continue to change over the coming years and that the investment industry as a result will continue to adjust its products and processes to meet all the regulatory requirements.

An "influential" generation

Generation Z, born between 1997 and 2012, is a generation which grew up in a world that was already connected via the internet and this generation makes ample use of the plethora of social media platforms such as TikTok and Instagram to consume information and to spread it.

Generation Z is highly engaged in areas like sustainability and climate change for which they make use of the technology available and the beforementioned social media platforms. One key aspect is the rise of so-called "influencers": celebrities which have gained a large following on one or multiple of the social media platforms and who use their large following to influence the behavior or ideas of their audience.

Such influencers are seen in many areas, ranging from lifestyle to sustainability. One notable example is Greta Thunberg, A Swedish environmental activist with a large online following who has been very vocal and critical on the potential effects of human-induced climate changes. Such critiques are taken into consideration by the wider public, politics and lawmakers, and can therefore eventually trickle down to new developments with respect to sustainable investments.

Finally, generation Z has just started to enter the workforce. The consequential financial independence in combination with a high level of social engagement and connectivity will likely

continue to be an influencing factor regarding sustainable developments globally.

More and better data available

The increased focus of the public and investors on investing more sustainably in combination with more relevant legislation has resulted in more and better corporate disclosures. Historically, data providers collected data from companies and investments that were mostly focused on financial aspects, such as financial multiples, profit margins or information about a company's capital structure. However, better corporate disclosures and the increased focus on sustainability, in conjunction with a stricter regulatory environment, has led to the development of more and better-quality data aimed at capturing the different aspects of sustainability.

Nowadays, numerous sustainability parameters are provided by data providers to analyze and compare different investments with respect to sustainability. Together with the beforementioned regulatory developments that also help to curb greenwashing, this supports a more quantitative analysis of investments from a sustainability perspective. This in turn makes it easier for regulators to base legislation on and makes it more tangible for investors, both retail and especially institutional, to apply in a decision-making process.

Is governance relevant for a company's stock performance?

With sustainability becoming increasingly important in investment decisions, it's worthwhile to examine how it might affect equity returns. Quantitative sustainability data typically encompasses three domains: environmental, social, and governance, collectively known as ESG. In our analysis, we focused solely on governance, since the environmental metrics are highly sector-specific, varying significantly depending on the industry. Social metrics, which cover labor practices and community engagement, show limited direct correlation with financial performance across sectors. In contrast, governance metrics have a more universal, sector-agnostic impact on companies. Strong governance practices, such as effective board structures and shareholder rights might have a more direct impact on a company's stock price development.

Our analysis focused on two main equity indices: the S&P 500 and the Euro Stoxx 50. The sample period spans from January 2019 to June 2024, using daily stock returns that align with the daily updates of ESG scores.

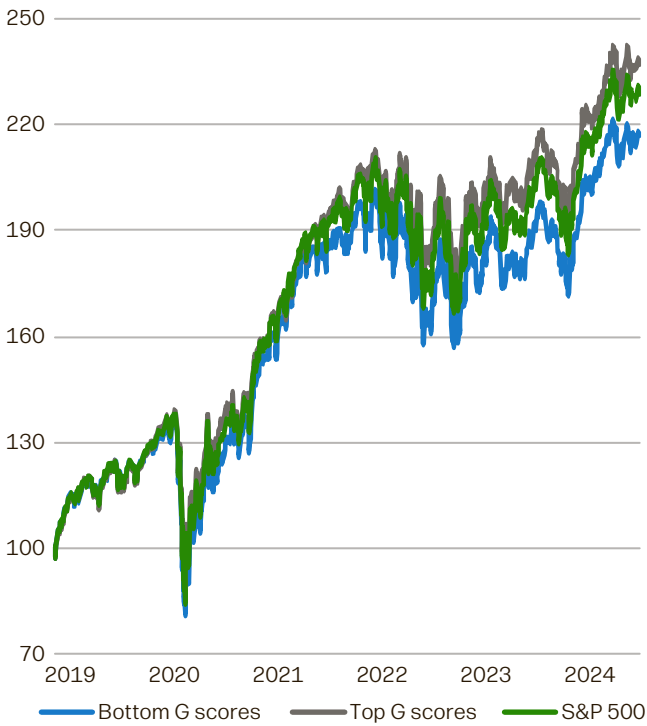
We ranked all S&P 500 and Euro Stoxx 50 companies on a daily basis over the selected period based on their G scores from MSCI¹. Subsequently, we calculated the performance of equally weighted portfolios consisting of the top 50% best and 50% worst companies in terms of their G scores. For comparison, we also calculated an equally weighted version of the S&P 500 and Euro Stoxx 50 indices.

Figures 1 and 2 show that the top-performing companies with respect to the G-score outperformed the bottom ones over the 5.5-year period for both indices. For the S&P 500, the portfolio with the top 50% G scores shows an annualized performance of 16.8% compared to 15.0% for the bottom 50%, translating to a difference of 1.8% per year. For the Euro Stoxx 50, the annualized return of the top 50% amounts to 14.3% and 10.6% for the bottom 50%, which implies a yearly difference of 3.7%. For both indices, the outperformance is complemented by lower volatility, less downside risk, and hence higher risk-adjusted returns.

It seems that governance metrics therefore potentially have a relevant impact on a stock's performance. A possible explanation for the positive outcome is that effective governance ensures transparency, accountability, and strategic decision-making, which boosts investor confidence and drives sustainable growth. Strong governance practices can mitigate risks and enhance operational efficiency, leading to robust financial performance and long-term shareholder value.

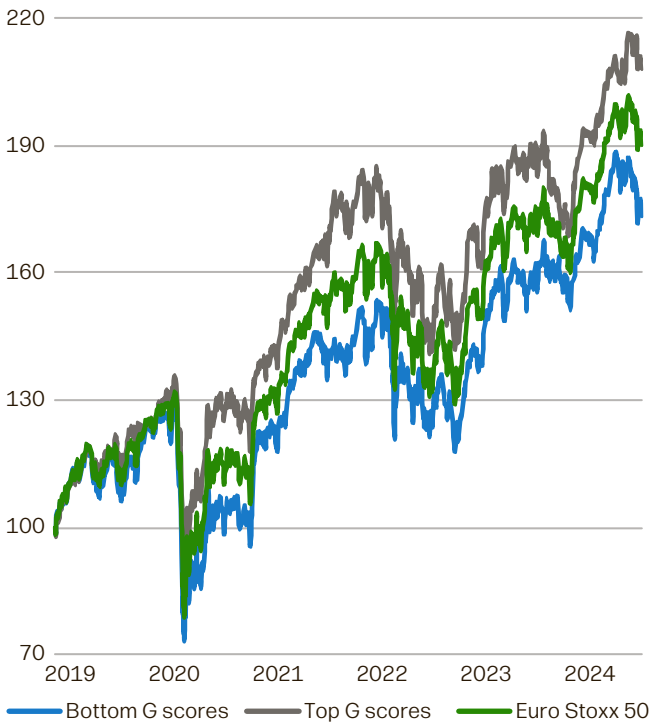
¹ MSCI ESG RESEARCH LLC. (2024). ESG Ratings Methodology. MSCI's governance scores are scored on a scale from 0-10, starting at 10 with deductions applied based on key metrics. These metrics evaluate aspects like board structure, ownership, executive pay, accounting practices, shareholder rights, and transparency. Controversies and events also influence scores. Data is standardized for comparability, and nondisclosure is treated as the absence of a policy.

Figure 1: Cumulative performance of S&P 500 companies in bottom-and-top half of G scores.



Source: MSCI, Bloomberg, Aegon Asset Management. Data as of Aug-2024.

Figure 2: Cumulative performance of Euro Stoxx 50 companies in bottom-and-top half of G scores.



Source: MSCI, Bloomberg, Aegon Asset Management. Data as of Aug-2024.

Conclusion

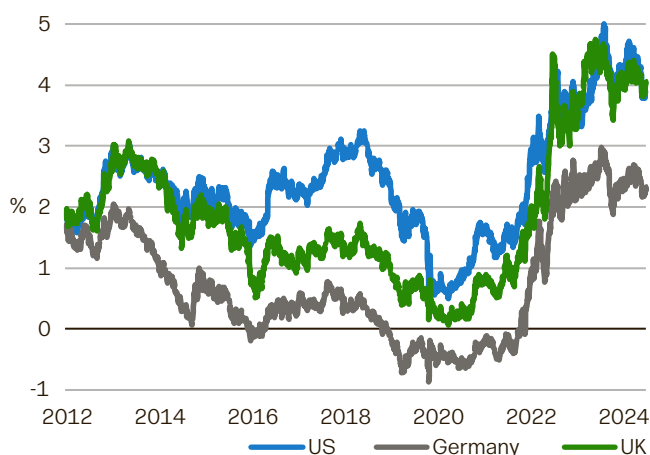
In recent years, the investment industry has seen a significant shift towards sustainability. This trend is driven by both a wider, engaged public and regulatory bodies aiming to address relevant aspects through legislation. The availability of more comprehensive sustainability data and the involvement of a well-connected, engaged younger generation are expected to further enhance the importance of sustainability in investments. A brief quantitative analysis suggests that strong corporate governance coincides with superior share price developments. However, the influence of sustainability metrics on asset pricing remains uncertain, highlighting the need for more comprehensive analysis to fully understand this dynamic.



Government bonds: Plenty of yield to go around

Government bond forecasts are largely driven by the macroeconomic expectations described in the chapter above. The front end of the yield curve is mostly set by central bank policy rates, while the longer end of the curve is influenced by expectations of future economic growth-and inflation.

Figure 1: Generic 10-year yields in the US, Germany and UK.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

United States

Now that the Fed has started to cut interest rates, it will likely continue doing so until 2026. It is unlikely that short-term rates will be reduced below 2%. Long-term rates are likely to react to better inflation reports and any economic slowdown by continuing to ease. Eventually, we expect that the yield curve will revert to upward sloping, with long-term rates above short-term rates, but the current inversion could continue for some time to come.

The Fed will likely continue reducing the size of its Treasury securities portfolio, even after

it starts cutting interest rates. Fed president Powell has emphasized that it is still the Fed's goal to lower the overall amount of Treasuries and mortgage-backed securities it holds, to get its portfolio back to a historically more normal level. From the perspective of the commercial banking sector, this is substituting interest-paying reserves for treasuries. No additional deposits are necessarily required to fund this, unlike what is often mentioned in the financial media. However, these actions will have an impact on the duration risk, which will need to be absorbed by markets. Overall, balance sheet reduction will provide upward pressure on longer-term rates.

At the same time, the US government will also need to fund its deficits, which will likely remain high regardless of who controls the White House.

Due to the combination of more sticky inflation and a large supply of treasuries, we expect longer-term rates to trade well above the pre-pandemic levels.

Eurozone

We expect the ECB to lower the deposit rate to around 2% in 2025. Also in Europe, the more sticky levels of inflation will likely keep central bank rates in positive territory. The risk of rates falling back towards zero is larger than in the US, as growth and inflation could disappoint if Europe's structural issues aren't resolved.

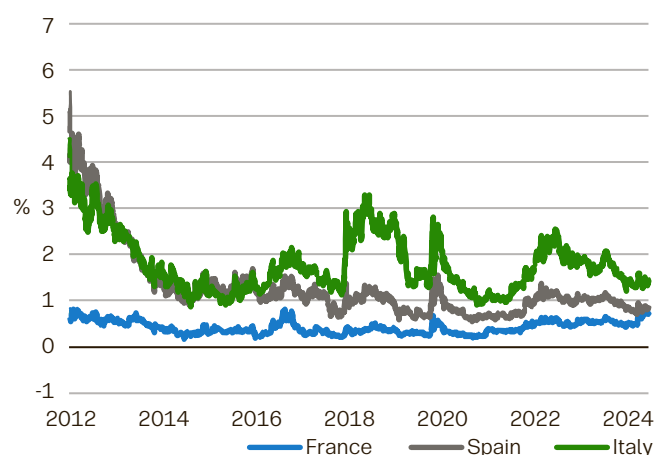
The European sovereign bond markets are influenced by a variety of economic, political, and fiscal factors. One key aspect to consider is the real neutral rate, which for Europe is estimated to be around 0.5%. This rate aligns with anticipated productivity growth. Assuming inflation will, in the long term, fluctuate around the ECB's target of 2%, this would imply neutral nominal rates of around 2.5%. In reality, interest rates tend to under- and overshoot this target for prolonged periods of time. However, in our baseline forecast of steady growth and inflation, we expect longer-term rates to fluctuate near this level, as they are doing at the moment .

A unique characteristic of the eurozone is the absence of a single, supranational issuer with full sovereignty. Instead, the eurozone comprises various national issuers and several European facilities, which are backed by taxes sourced at the EU level. This structure introduces credit risk based on the fiscal and economic positions of individual countries. Unlike other regions with a single sovereign issuer, the eurozone's diverse composition means that each country's fiscal health can impact the overall stability of the bond market.

Germany currently acts as the sovereign benchmark within the eurozone, largely due to its perceived low credit risk. This perception is supported by Germany's low debt-to-GDP ratio and fiscal discipline, which have resulted in relative scarcity of German bonds. Consequently, German bunds are expected to trade tighter compared to the economically sensible neutral rate. This scarcity and the high demand for German bonds underscore the country's role as a perceived safe haven within the eurozone.

The spreads of eurozone countries over Germany are driven primarily by two factors: fiscal prospects and political changes. For instance, the French parliamentary elections this year saw gains for both the far left and far right, which is likely to lead to higher deficits and a rollback of earlier reforms. French spreads had already been increasing due to persistently high deficits and waning support for reforms, rising from around 30 basis points (bps) before the pandemic to 50 bps at the start of the year. The elections added another 20 bps to these spreads.

Figure 2: Credit spreads over German bonds (10-yr maturity).



Source: Bloomberg. Data as of Aug-2024

Italian spreads, on the other hand, are currently around 140 bps. Italy faces structural challenges, including lower growth due to demographic headwinds. From a debt sustainability perspective, these spreads are considered too high, as maintaining a primary budget balance would require structural primary budget surpluses, which are unlikely. The best way to improve debt sustainability in Italy, and other similar economies, is to increase productivity growth. Given the productivity gap with the US and Northern Europe, this should theoretically be possible. But it will require significant reforms for which support seems to be minimal.

Without growth, Southern European countries face difficult choices: targeting and maintaining budget surpluses, seeking fiscal support from Northern Europe, or considering debt write-downs. Each of these options comes with significant challenges and potential economic pain, making productivity growth a pivotal factor for the future of Europe.

In our forecast for the next four years, we expect spreads to remain rangebound as we do not anticipate a resolution to these underlying issues within this timeframe. In the event of a crisis, Europe is likely again forced to take a step towards further fiscal and economic integration.

United Kingdom

The UK gilt market is currently reflecting expectations similar to those seen in the EU and US markets. The Bank of England (BoE) is anticipated to continue its rate-cutting cycle, which aligns with broader global trends. However,

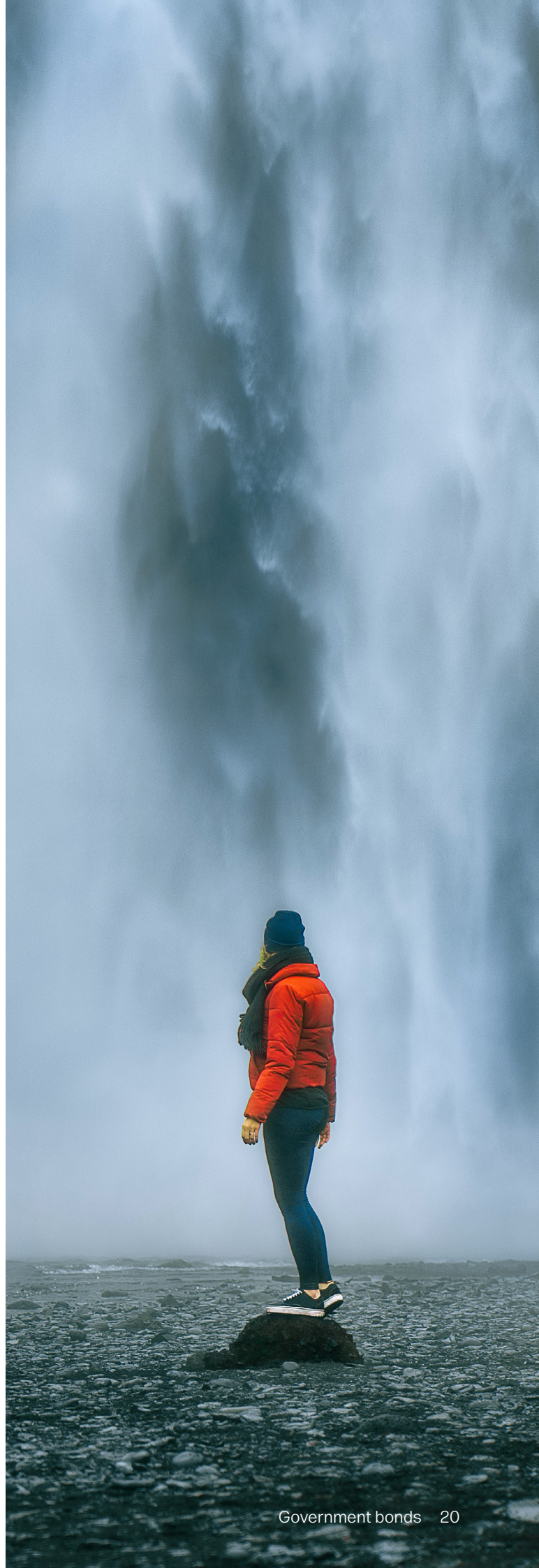
the UK is expected to experience higher inflation and slightly higher long-term growth compared to the EU. Consequently, 10-year gilts are forecasted to trade around 3.5%. Although higher than German bund yields, this is much lower than what current forward curves suggest. This discrepancy makes us relatively positive on UK duration.

Overall, the outlook for the UK gilt market remains cautiously optimistic due to persistently high rates being priced in.

Money Markets Have Their Moment in the Sun

Due to the restrictive policy rates aimed at combating inflation, money market strategies can benefit from high short-term yields and offer attractive returns. While we expect money market yields to decline in the coming period, the starting yield is attractive. Longer-term yields are significantly lower due to the inversion of the yield curve. As a result, the current yield on money markets is higher than on many (investment grade) credit assets.

We expect short-term interest rates to stay at “normal for longer” rather than “low for longer”. In such a scenario money market strategies remain attractive for a wide range of investors that seek positive-yielding, low-risk, and highly liquid investments.



Megatrends

As societies and living conditions evolve, individual preferences and consumer patterns change. This translates into economic impact. For investors, especially those with a long-term horizon, it is important to anticipate long-term trends that may induce these kinds of changes, as they might bring new risks and opportunities into play.

Changes to the living environment, deglobalization, technological advancements, immigration or aging are just few examples of long-term trends that shape the economies around the world right now and are expected to have an even more pronounced effect in the future. We believe that understanding how they affect different economic drivers can help inform investment decision-making and enhance risk management practices today.

Below, we take a closer look at four long-term trends:

- Climate change
- Demographics
- Increased risk of pandemics
- Artificial Intelligence & Automation

Climate change

Climate change has been a known phenomenon for long years but has been gaining traction in politics and societies only quite recently. Climate change has major implications for the global environment and economy. It also has strong linkages to biodiversity loss and water scarcity. The need and urgency to transition away from fossil fuels and carbon-intensive production and consumption towards zero-emission alternatives across the globe becomes more apparent every year, as global weather conditions and physical events break new records. At the same time science tells us that the current pledges to reduce emissions are not enough to keep the temperature rise at 1.5o C by 2050. This means that we will have to do more in a shorter period of time to reach the goal that was agreed upon in Paris in 2015, or accept the consequences of a higher temperature rise.

In our analysis, we distinguish two types of risks involved in climate change; transition risks and

physical risks. To meet the goals in the Paris Agreement there is a need for immediate policy commitment, technological change, carbon removal and a coordinated global approach. These are transition risks for the economy and financial markets. However, all of this might not be enough to stop current trends in weather changes. The physical risks caused by climate change arise due to real-world environmental hazards, such as an increase in extreme weather events. These physical risks have both real-world and financial implications due to, for example, supply chain disruptions, changes in commodity prices, and physical damage to assets.

There are many possible pathways along which the physical and transitional risks might develop, each driven by choices made by policymakers and individuals. The transition to a net-zero carbon economy depends to a large extent on policy measures. Most of these measures, market-based or not, can be monetized into a general 'price' for carbon emissions. In general, those companies emitting the most carbon to operate will face the biggest challenge, as they need to make a choice between paying a carbon tax, investing in transition technologies or changing their energy and production mix. The transition may have positive economic impacts by driving investment and spurring innovation. A key question is if government investment can stimulate technological change, and offset the potential negative impact of stranded assets and the crowding out of private investments.

Financial impacts from physical climate risk could arise from both an increase in the frequency and severity of extreme weather events, and gradually rising temperatures. The higher probability of damages acts as a drag on long-term growth. Higher average temperatures decrease the amount of labor that can be performed and depresses labor growth. This also results in

resources diverting away from e.g. R&D into adaptation and reconstruction, which lowers productivity growth.

Demographics

Advanced economies are undergoing an aging process. This process started in the developed world and has now spread towards middle- and low-income countries. In Japan more than a third of the population is 60 or older already. The World Health Organization expects that by 2050 the number of people aged above 60 will double worldwide and that two-thirds of these people will live in middle- and low- income countries.

Aging affects the economy through multiple channels. The life-cycle savings hypothesis states that people borrow when young, invest for retirement when middle-aged, and live off their investments once they are retired. Next to that, aging affects labor growth, labor productivity, national budget and reduces investment opportunities. Finally, it also affects demand patterns.

The focus of studies and of policy makers has been the population dynamics in the developed world, which has been undergoing a shift in population age distribution for quite some time. However, as many middle- and low-income countries have started their demographic transition, with a sharp decline in fertility rates and the pressure from a changing age structure, aging becomes a worldwide challenge. Therefore, dynamics induced by aging have a potential to lower the return expectations for bonds and equities not only for the developed but also emerging markets.

Increased risk of pandemics

Next to (economic) benefits it brings, the increased interconnectedness of regions, made possible by the explosion in air travel in the latter decades of the 20th century, raises concerns about the speed and ease at which new diseases can spread. Having experienced the Covid-19 pandemic, we are aware of the devastating and long-lasting consequences it can bear on human lives but also on economies. The effect is compounded by increasing evidence of anti-microbial resistance (AMR), whereby new strains of diseases mutate to become immune to antibiotics, which further increases the risk of future pandemics.

Recent research suggests that substantial shocks to the economy can require longer recovery and therefore lower GDP per capita. This can be explained by adjusted expectations and a 'memory' of the shock affecting individuals and investors' expectations beyond the short term, making them more pessimistic about the future. The theory of 'belief scarring' is a starting point for quantifying the potential impact of the increased risks of pandemics on investment portfolios.

Artificial Intelligence & Automation

With recent advances in the field of artificial intelligence (AI) and the increasing use of automation across many industries, there is potential to revolutionize the economy as we know it. Studies show that global GDP could be up to 14% higher in 2030 as a result of AI, as productivity increases^{1,2}. The general expectation and current experience are that the economic impact will emerge gradually and be visible only over time. The adoption of AI by firms is likely to follow an S-curve pattern—a slow start given the investment associated with learning and deploying the technology, and then acceleration driven by competition and improvements in complementary capabilities. As a result, AI's contribution to growth may be three or more times higher by 2030 than it is over the next five years. Initial investment, ongoing refinement of techniques and applications, and significant transition costs might limit adoption by smaller firms.

Historically, automation in the workplace has replaced workers in low-skilled jobs, by automating easy, repetitive tasks. Advances in AI, however, raise the possibility of ever-higher skill levels being automated, which could have more dramatic consequences on the labor market.

In a rapidly changing economy, with increased focus on cost competitiveness, sustainability and mental wellbeing, AI and advanced workplace automation may become an integral part of society. Despite valid concerns surrounding AI safety, regulation and risks, there is a general consensus that these technologies eventually have the ability to impact productivity and the economy in a positive way. Organizations and economies that are able to adapt smoothly and effectively are likely best positioned to reap a competitive advantage.

¹PwC. (2020). Sizing the Prize. What's the Real Value of AI for Your Business and How Can You Capitalise?

²PwC. (2017). The macroeconomic impact of artificial intelligence.

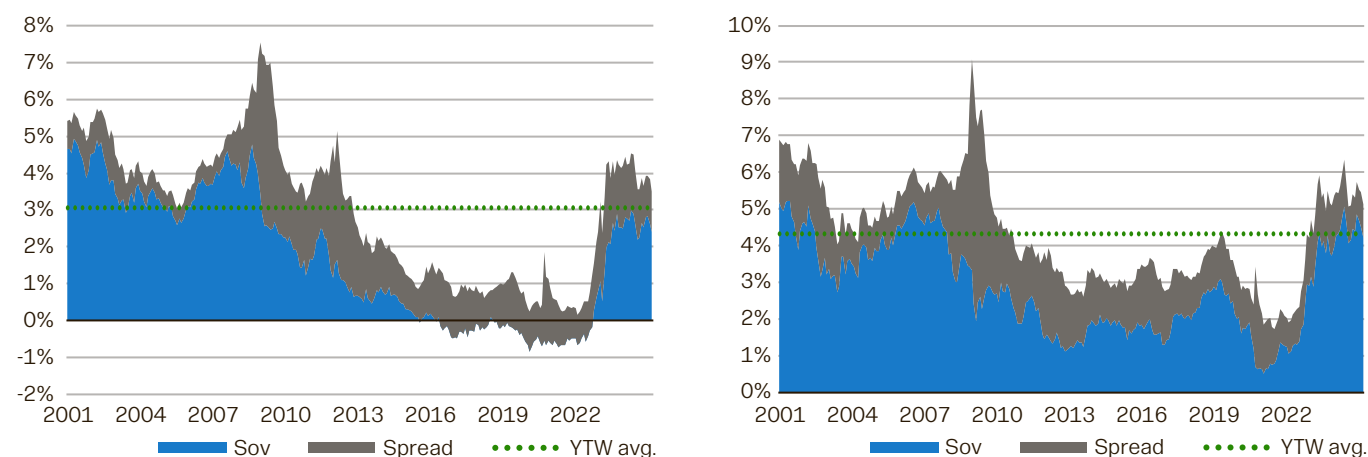
Investment Grade Credits & High Yield

Corporate credits, like most risk-bearing investments, have performed well in previous quarters. After a sell-off in 2022, market dynamics turned more positive and positive macro-economic developments pulled spreads to cycle lows. In line with our macroeconomic scenario, we expect relatively supportive markets for credits in the next years. However, given the relatively tight starting point, excess returns will likely be moderate.

Investment Grade

After a prolonged period of low interest rates, the inflation shock prompted most central banks to hike rates rapidly. In 2021, when sovereign rates had negative yields, European credit indices were flirting with yields around 0%. Now, the days of zero or negative interest rates are long gone, and credit yields are around long-term averages. This shift from near-zero to averages is primarily driven by higher sovereign rates rather than an increase in credit risk, as spreads remain close to cycle lows.

Figure 1 & 2: Euro (left) and USD (right) Investment Grade Yield to Worst and breakdown in sovereign yield and credit spread. Long-term average yield to worst based on 2001-2024.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

Beyond the normalization in yields, several other interesting developments have occurred in recent years. In Europe, the credit market continues to mature and grow. From a modest €<500 billion market in 2000, the universe has grown rapidly. In the past decade, the credit market has doubled in size and exceeds €2.5 trillion as of the end of 2023. Despite the ongoing importance of financing via the bank lending channel, the growing and broadening size of the credit market shows that corporate bonds remain vital as a financing tool for firms.

Although the credit market has grown in size, its composition has remained relatively stable. Financial services has consistently been the largest sector in the European index, currently accounting for more than 40%. Technology remains the smallest sector in the index, with a current weight of only 2%.

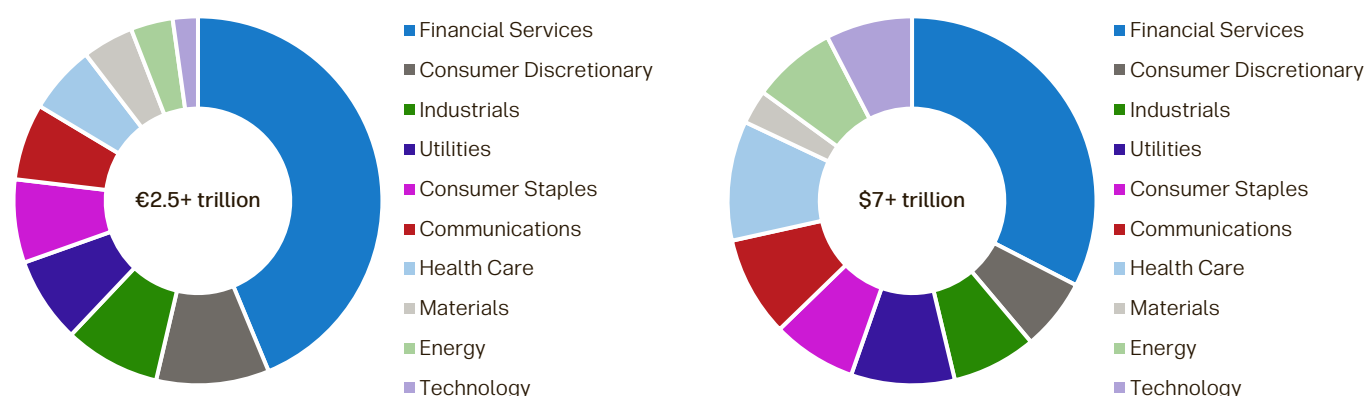
Megatrends are also making their mark on the credit markets. Utilities used to have high credit ratings but have recently moved down on the spectrum. One of the reasons is the high debt issuance from the substantial investment in grids and renewables. We expect heavy issuance to keep spreads in this sector elevated. The sector currently comprises around 10% of the credit market and is likely to grow.

The (fossil) energy sector is moving in the opposite direction. As the world aims to reduce dependence on fossil fuels and decarbonize, the amount outstanding for energy bonds has shrunk by almost 25% since 2020.

Figure 3 & 4: Sector weights Euro and USD Investment Grade corporate bonds

Euro Investment Grade

USD Investment Grade



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. (Used indices: Bloomberg Euro-Aggregate: Corporates Index and Bloomberg US Corporate Bond Index)

Even though the European credit market has grown, the US credit market remains much larger. With more than \$7 trillion and over 8,000 bonds in the current universe, the US credit market is more than double the European size. Interestingly, in the US, the technology sector has a 7.5% weight in the index, compared to a 2% weight in Europe, reflecting the stronger presence of technology companies in the US.

Looking ahead, company fundamentals in the US and Europe appear stable. As companies continue to reduce their debt and improve their balance sheets, they generally appear well-positioned for a potential economic slowdown. While positive ratings momentum is likely to slow, we believe there is an ample ratings cushion should we experience an economic slowdown.

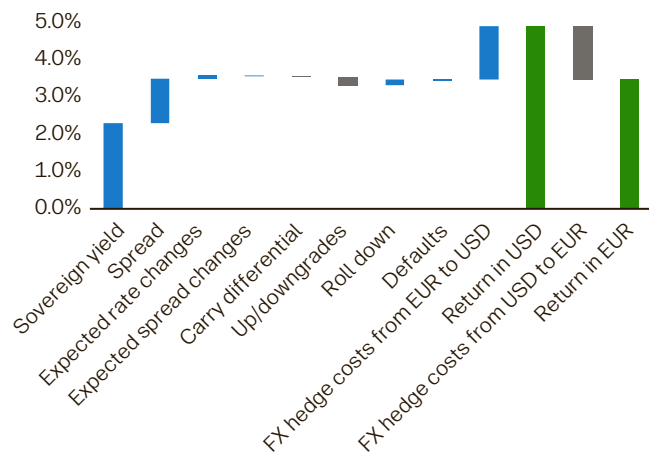
Our outlook on spreads in the EU and US investment grade credit market is supportive. There could, however, be some spread widening in the short run as the market might remain on edge until the extent of the potential economic slowdown in the US is known.

Our medium-term outlook for EUR and USD corporate credit is balanced. There is neither a major cause for concern nor a major cause for celebration. For credit investors, this is a comfortable environment to be in. We expect low to mid single-digit positive returns. The most important components driving these returns are risk-free yields and carry developments. Our macroeconomic scenario considers declining interest rates, approximately aligned with forward markets. At the same time, we do not anticipate a strong pickup in defaults. Altogether, this results in return expectations where excess returns are roughly in line with current spreads.

Other components, such as credit rating migration and roll-down effects, are considered but are estimated to have a marginal impact. Furthermore, assuming the asset class is FX hedged, we expect returns in the US dollar to be somewhat higher than returns in Euro due to higher interest rates in the US

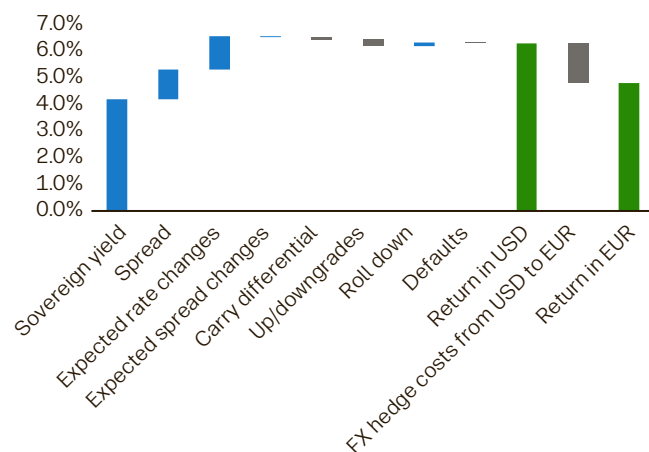
and cross-currency basis effects. Figures 5 and 6 show how our return expectations in Euro and US dollar investment-grade credits are derived from their various components.

Figure 5: Expected returns for EUR investment grade bonds.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. Hypothetical example for illustrative purposes only.

Figure 6: Expected returns for USD investment grade bonds.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. Hypothetical example for illustrative purposes only.

High Yield

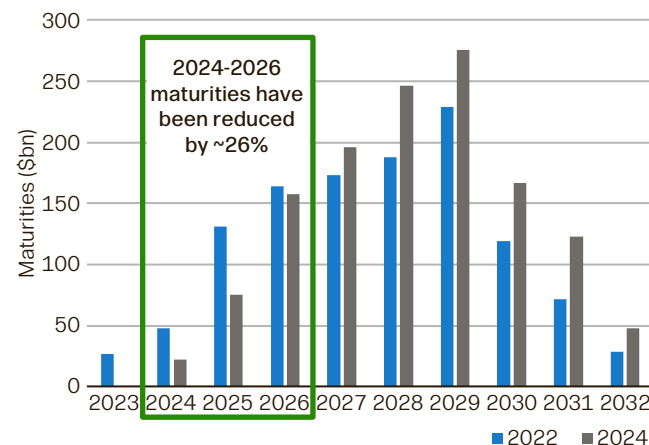
We believe that high yield corporate bonds offer a relatively attractive risk-return profile for the medium term.

Our macroeconomic scenario provides a supportive backdrop for high yield corporate bonds. While we anticipate an economic slowdown in the US, not a slump, and we foresee an easing cycle in the near future. On the back of our macroeconomic outlook and view on financing conditions, we believe most high yield companies are reasonably positioned to navigate a gradual economic slowdown.

Companies are currently facing higher interest costs, primarily due to increased risk-free rates. Tight spreads are juxtaposed by elevated risk-free yields. From current levels, spreads have little room for substantial tightening and idiosyncratic risks remain within lower-quality credit. As investment grade spreads, we foresee spreads could widen slightly during the initial phase of the (US) economic slowdown. If, like we anticipate, the slowdown is shallow, spreads are likely to tighten again.

In this economic cycle, balance sheets were relatively strong when the tightening cycle began, and issues with debt costs are so far only relevant for the lowest rating holdings. While the maturity wall is always a factor in the high yield market, many issuers have extended the maturity of their near-term debt, reducing immediate refinancing concerns, as can be seen in Figure 7. The sensitivity of balance sheets to interest rates remains relatively low. Looking ahead, we expect interest rates to decline as the easing cycle progresses.

Figure 7: High yield bond maturity wall. Reflects US dollar-denominated high yield corporate bond debt.



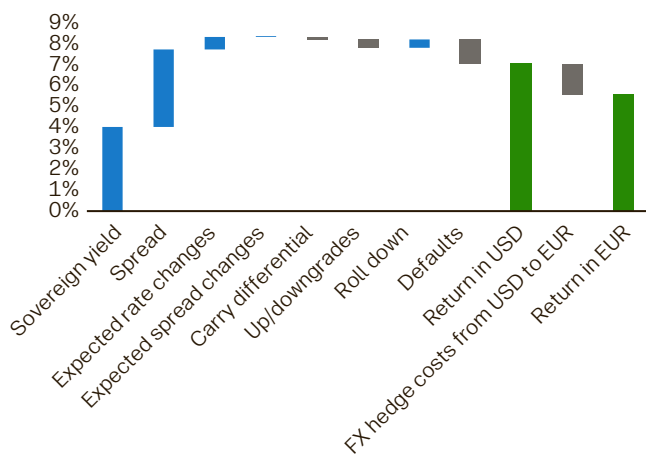
Source: Aegon Asset Management, BofA Research. Data as of Dec-2022 and Feb-2024.

In our macroeconomic scenario, we do not anticipate a significant increase in corporate defaults. Currently, no sector faces structural challenges that could evolve into a sector-specific default cycle. In the past, such situations were presented in the oil sector when prices collapsed. Also, increased regulation in the banking and insurance sector has resulted in higher capital ratios and less risk taking. In our view, the financial services sector should be much more resilient during slowdowns. We therefore believe defaults to remain mostly idiosyncratic and we account for

a steady but low default rate.

Demand for credit remains high as all-in yields stay elevated and are appealing relative to equity markets. Overall, as we do not foresee a strong pickup in default rates; we believe current yields can offer attractive long-term total return potential for high yield bonds, with spreads providing adequate cushion for credit losses. . Figure 8 illustrates our return expectations for USD high yield bonds.

Figure 8: Expected returns for USD high yield corporate bonds.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. Hypothetical example for illustrative purposes only.



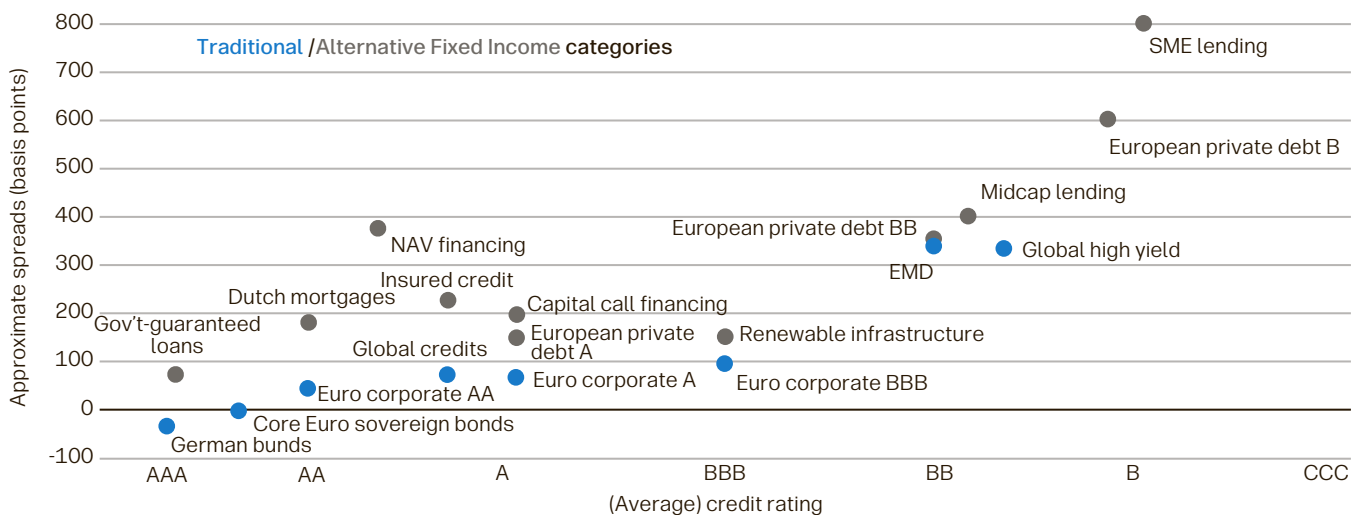
Private Credit / Alternative Fixed Income

Institutional investors continue to be drawn to alternative fixed income categories. Assets invested in private debt globally have more than doubled over the last five years and forecasted projections show continued strong growth. The yield premia available over comparable traditional fixed income categories are one of the main attractions but there are several other factors, such as improved data, investment governance and ESG opportunities & tailoring, which means demand is unlikely to ease soon.

Private Credit lending has increased considerably since the Global Financial Crisis as stricter regulations have led banks to reduce lending exposure and bank consolidation has reduced the supply pool. In this regard, the US is well ahead of Europe in seeing a reduction in bank lending relative to GDP size. This perhaps reflects the specific circumstances of the GFC (for example, the US housing market trigger and greater state support in Europe) but also the long tradition of European banks providing financing as part of their client relationship and a more regionalized banking market in Europe.

That said, private credit is growing strongly in Europe, and various lending models have started to take considerable market share from the banks. Much of this market is also not via direct competition with the banks but as complementary lending to private companies alongside their banking partners. There is therefore an argument that the European market may see higher growth in private lending than the US in the upcoming years.

Figure 1: Approximate spreads per credit rating.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. Note: Alternative Fixed Income category spreads based upon indicative available investment opportunities identified by Aegon Asset Management. For illustrative purposes only.

Sustainability and impact opportunities

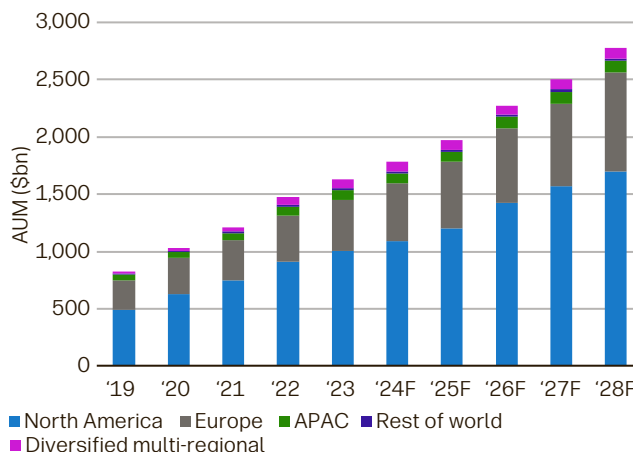
Just as for liquid fixed income, environmental, social & governance (ESG) screens and criteria can be applied to private credit mandates. This can include an exclusion approach and/or a minimum standards approach. One difference is that a minimum standards approach will usually have to be bespoke and implemented by the investor and/or their investment manager, since ESG data for private markets from the large data providers is more limited.

In addition to ESG screening, private credit offers many opportunities to invest specifically in sustainable and impact investments. For example, private finance projects can be focused on infrastructure which supports the climate transition, on helping emerging economies improve living standards, or on new technology expected to improve ESG-focused criteria.

Private debt

A large proportion of investors have not invested in these private asset classes historically, often due to difficulty accessing them. However, the private debt market has become increasingly popular in recent years. According to data provider Prequin, the private debt market currently has approximately \$1.5 trillion in assets under management (AuM) and will likely double to almost \$3 trillion by the end of 2028 (figure 2). This growth is partly due to the withdrawal of traditional financiers such as banks, which have been replaced by private debt fund managers. Private debt managers are able to offer financing that is flexible in terms of conditions and available at short notice. For the medium term, we expect the asset class to continue to grow. The attractive risk/return potential and the contributions that the category can make to challenges in the areas of climate, the environment, ageing and inequality are likely to support this growth.

Figure 2: Growth expectations private debt (Q2 2024).



Source: Prequin. Data as of Q2-2024.

Reduced spreads and lowering interest rates

Private debt returns have been stable since 2019 with an average return of 8.4% over the 5 years to the end of 2023¹. Following the corona pandemic and the subsequent higher inflation, central banks around the world raised interest rates. Borrowers who had to refinance have had to borrow at a higher interest rate than in the period before. This, combined with a decrease in banks entering private debt due to increasing regulatory pressure and capital requirements, helps provide good opportunities for transactions for private debt funds.

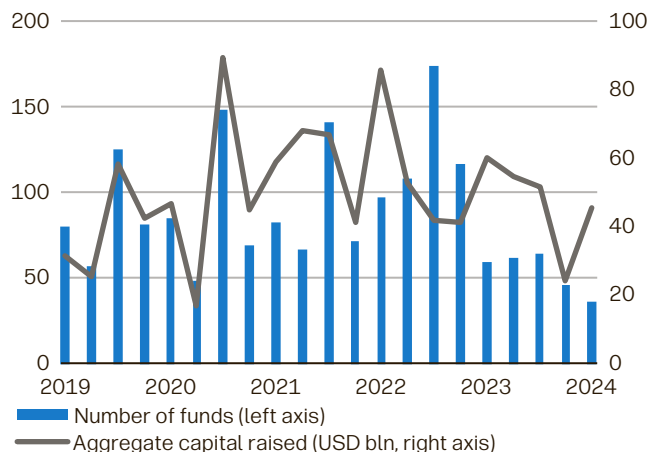
In 2024, central bank rates are expected to be reduced as higher inflation appears to have been curbed. There is a tentative return of banks to the private credit market. This is reflected in spreads that are cautiously starting to decline. We believe this trend will continue.

Growth in new funds

The change in interest rates has had an impact on fundraising activity in the global private debt market. Around 200 funds were launched in 2022 and 2023. In the second quarter of 2024, only 33 new funds were closed, which is the lowest in the past five years. Although some volatility is expected on a quarterly basis, this points to a continuation of the increased concentration of fundraising. The average size of a fund launched has increased to \$1.5 billion, the highest in more than five years.

¹Prequin (2024). Prequin Q2 2024 quarterly index

Figure 3: Worldwide fundraising private debt (Q2 2024).



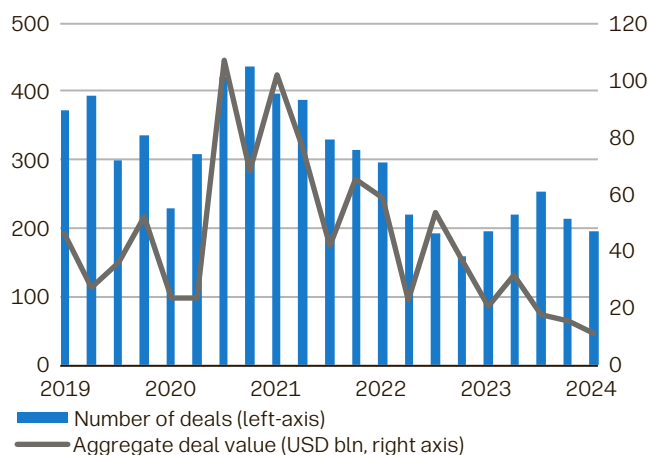
Source: Aegon Asset Management, Preqin. Data as of Q2-2024.

Number of deals and average deal value

In terms of the number of deals, the private debt market has shown a downward trend. Partly due to this reduction in the number of private equity deals, the private debt market has also decreased in terms of deal numbers. However, the decline is less strong because there remains a steady flow of refinancing. A trend in refinancing is the so-called 'amend and extend'. Companies in trouble ask the debt holders to agree to a postponement of refinancing and a temporary relief of some covenants.

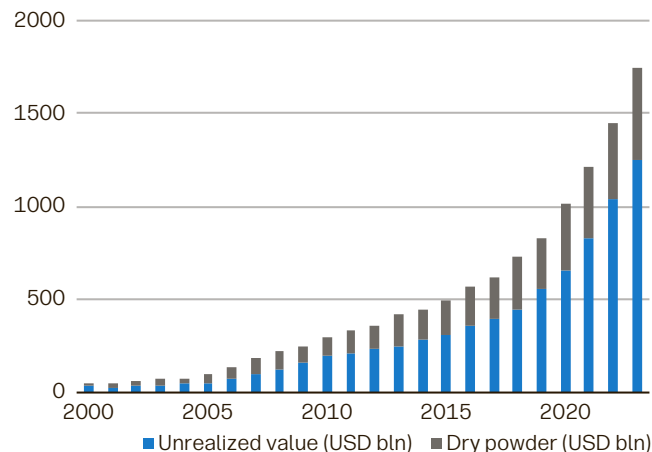
The outlook is positive because the private equity market has slowly started to recover in recent quarters. As a result, there are more deals on the market that need to be financed. In addition, there is a great need for investment from fund managers because they still have a lot of unused capital (dry powder), as can be seen in Figure 5.

Figure 4: Private Debt transactions (Q2 2024).



Source: Aegon Asset Management, Preqin. Data as of Q2-2024.

Figure 5: Private debt dry powder and unrealized value (Q2 2024).



Source: Aegon Asset Management, Preqin. Data as of Q2-2024.

European midcap lending

Midcap companies in Europe represent a growing opportunity set. The number of loan deals picked up considerably from the second half of 2023.

Loans to businesses are usually split between senior, junior and mezzanine. These tranches have reducing priority and collateral protection and also increasing yield and return potential. The level of leverage (EBITDA multiples) is one of the key factors used to determine the loan classification. These loans may be combined into senior stretch loans (single senior loan deals which "stretch" to include junior debt so that the borrower's needs are accommodated in a single loan deal) and unitranche deals (combining all lending in one loan).

European SME lending

In numbers, small and medium-sized enterprises (SMEs) represent over 99% of all businesses in the EU and US and employ half of private sector workers. For good reason, they are often referred to as the backbone of the local economy and are a good weathervane for the health of local economies in general.

SME lending is usually bank-mediated as SMEs will often have long-standing relationships with their banks. However, as part of the post-GFC evolution of private lending, non-banking institutional investors have increased their share of this lending market, providing alternatives and complements to traditional bank lending.

SME insolvencies, highly correlated with the strength of local economies, are the main concern for SME lenders. In Western Europe, many small

businesses were protected through the initial Covid period by government support and furlough schemes. However, as the economy opened and this support was removed, insolvencies have risen and have now reached pre-pandemic levels. However, this general increase masks considerable variation by country and sector.

France, in particular, has experienced a marked deterioration in SME insolvencies. Germany has also, but less marked. On the other hand, both Italy and the Netherlands have actually seen improvements. The construction and real estate sectors were both negatively impacted – these were sensitive to the inflation spike in 2022 which increased material and labor costs, and the resulting higher interest rates which have increased borrowing costs. On the other hand, the business services sector in the Netherlands has seen lower insolvency rates compared to pre-pandemic levels, as has the transportation services sector in Germany.

Insolvencies have also picked up in the US SME sector, with a Covid provision to allow more streamlined reorganization for larger businesses falling away in early 2024 potentially leading to insolvencies being made earlier than otherwise. As we anticipate a relatively soft scenario, we expect insolvencies to peak in 2025.

Investments in SME loans are often made alongside banks. This provides a supply of opportunities to investors and the strength of an experienced co-investor. For some loans government guarantees are also available, meaning credit risk is substantially reduced. In Europe for instance, this can be done via programs of the European Investment Fund (EIF).

Outlook for private debt

The outlook for private debt is relatively positive in the coming years. Higher interest rates tend to have a positive effect on returns as many loans will mature in the coming years, after which they will have to be refinanced at higher levels. Furthermore, the spread pick-up is still often significant compared to similarly rated public corporate debt.

Private debt may also be attractive because more and more investment is being sought and banks are limited in how much they can offer. In addition, private debt is an accessible asset class for investing in impact, which can be done in a broad and low-threshold way. Partly due to the growing

trend in impact investments, there are many opportunities for this market to grow capital.

We expect returns for the upcoming period to match the long-term averages. These may, however, be lower than the recent past – returns during the pandemic, 2021/2022 in particular, were at record highs.

Insured credit

Insured credit is a specialized private credit category that has, in recent years, generated interest from institutional investors.

The universe of potential underlying loans is broad, covering emerging market sovereign and development loans, company loans, ABS, infrastructure project lending, leveraged loans and private equity fund financing loans. Tenors can be up to 15 years, but a portfolio's average weighted lifetime might be around 5 years, with duration of 3-5 years and a mix of fixed and floating rate coupons.

The credit risk of these loans is transferred to AA or A-rated insurers via a Non-Payment Insurance (NPI) contract. The net yields (after insurance) tend to offer an attractive premium over comparable traditional bonds, mainly due to the lower liquidity of the investments.

The investment opportunities also include many Sustainable Development Goal-aligned loans, such as clean power projects, investments in clean water and sanitation, and new hospital and education projects, particularly via emerging market development loans.

Renewable infrastructure lending

Renewables cover an increasing share of the energy market. The International Energy Agency expects an increase from 29% of electricity production in 2023 to 42% in 2028. Most of this growth is expected to come from solar and wind. Various factors play into this continued expected growth, including government renewable policy and targets, deregulation in local markets (such as greater lenience for onshore wind and solar where costs are lower), but also continued political uncertainty affecting risk in fossil fuel producing markets.

Alongside renewable energy production, complementary projects to store this energy, create green fuels, and improve storage technology are a very important part of the energy

transition. However, with all these technological developments in renewables, scale is key. While wind and solar energy have reached a market share which brings a stable outlook and an ongoing future, other technologies are showing growth, but their relative size means their future is still uncertain.

Due to strong renewable infrastructure growth, we expect continued demand for renewable infrastructure loans in the upcoming years, particularly in the investment grade risk profile. These have a moderate yield premium over comparable corporate bonds. For investors who can accept the lower liquidity, they represent an opportunity to invest in the energy transition with potential for attractive return.

Fund financing

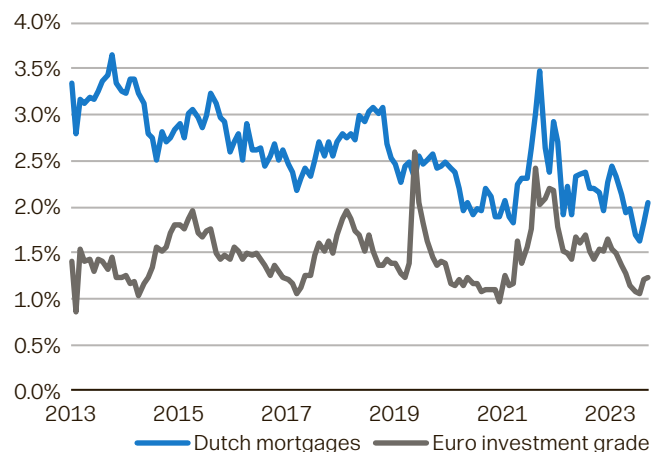
One developing private credit asset class is lending to private equity funds. This can either be in the form of bridging loans, providing interim financing before commitments can be drawn from investors, or by providing longer-term financing backed by the value of the underlying investments held within the funds.

Of particular importance when investing in this asset class is the quality of the funds and underlying assets, the levels of leverage within those funds, and the purpose of the debt financing. There are clearly risks in taking on general debt rather than borrowing at an individual underlying company level. This is particularly the case with more levered funds. Therefore, investors may wish to consider lower-leveraged opportunities (10-30% Loan-to-Value) and higher quality, where there is an attractive risk/return profile.

Dutch Mortgages

The Dutch mortgage market has proven to be a compelling asset class, characterized by elevated spreads and minimal impairments, and robust excess returns overall. Despite recent tightening, spreads remain attractive compared to many euro-denominated traditional credit markets, offering a yield premium of approximately 2% over highly rated euro government bonds. This yield pickup makes Dutch mortgages an appealing alternative for investors seeking higher return potential.

Figure 1: Dutch Mortgage spreads and Euro investment grade spreads



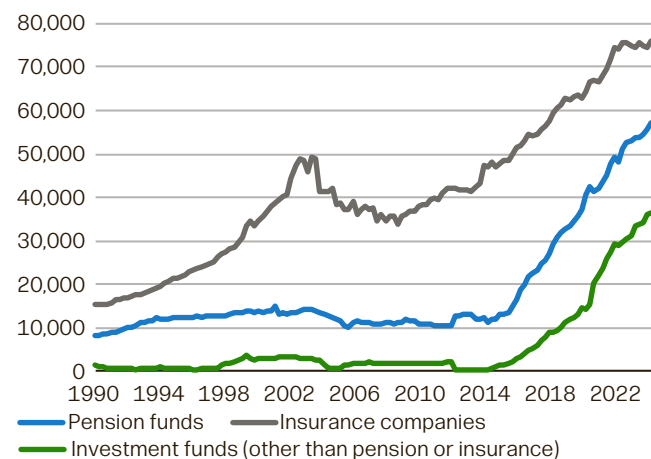
Source: Aegon Asset Management, Bloomberg. Data as of Jul-2024.

Market Dynamics

Following the Global Financial Crisis, banks faced significant constraints in expanding their mortgage books. This led to elevated spreads for several years. However, the landscape began to shift as other investors, including pension funds and insurance companies, started to participate more actively in the mortgage market. This increased participation helped to moderate spreads, although they remained attractive relative to other asset classes.

The chart below illustrates the growing involvement of pension funds and insurance companies in the Dutch residential mortgage market. These institutional investors have significantly expanded their holdings, while investment funds have sold mortgages to other sectors, including non-Dutch domiciled investors. This diversification of mortgage holders has contributed to the stability and attractiveness of the market.

Figure 2: Residential mortgage investments by pension funds, insurance companies and investment funds



Source: Aegon Asset Management, DNB. Data as of Q1-2024.

The Dutch Housing Market

The Dutch housing market, like many others globally, has demonstrated resilience despite the sharp rise in yields. Several factors have supported this strength:

- **Government Support:** During and after the pandemic, ample government support measures helped to sustain consumer confidence and spending power. This support played a crucial role in stabilizing the housing market.
- **Strong Labor Markets and Wage Gains:** Robust labor markets and rising wages have bolstered the housing market by enhancing the purchasing power of potential homebuyers.
- **Limited New Supply:** The supply of new housing has been constrained by several factors. Inflation in building costs and wages has pressured developers' margins, making new construction less attractive. Additionally, planning restrictions in many areas have limited the availability of new housing, further tightening supply.
- **Environmental Regulations:** Environmental regulations have added another layer of complexity to the housing market. Many building projects face legal challenges due to these regulations, delaying or halting new developments. The new Dutch government plans to request changes to these regulations from the EU, though success seems improbable.
- **Immigration Pressures:** The war in Ukraine has led to an increase in the number of refugees seeking asylum in the Netherlands. This influx has added pressure to the already tight housing market, increasing demand for available housing.

Outlook for Dutch Mortgages

Overall, Dutch mortgages remain an attractive asset class for investors. The spread between Dutch mortgages and other euro-denominated assets continues to be appealing, and we expect this spread to remain stable in the near term. The balance between demand and supply in the mortgage market supports this outlook.

We anticipate very low impairments in the Dutch mortgage market for several reasons:

- **Reduced Loan-To-Value (LTV) Ratios:** The rise in housing prices has led to lower LTV ratios, reducing the risk of losses for lenders.

- **Strong Labor Markets:** The strength of the labor market makes defaults less likely, as more individuals are employed and able to meet their mortgage obligations.
- **Low Loss-Given-Defaults (LGD):** In the event of a default, the low LTV ratios mean that lenders are likely to recover most, if not all, of the loan value, resulting in limited or no losses.
- **Low Interest Rates:** A significant portion of the mortgage market still benefits from low interest rates, which helps to keep monthly payments manageable for borrowers. The rise in interest rates will only slowly impact consumers due to the relatively long duration of existing mortgages.

European Asset Backed Securities

ABS market

Asset-Backed Securities (ABS) are financial instruments that allow issuers, such as banks and other financial institutions, to access large-scale funding in capital markets more cost-efficiently than selling underlying loans individually. By pooling various loans into an ABS, issuers can attract a broader range of investors, thereby helping to enhance liquidity and diversification. For investors, ABS offer exposure to risk factors not typically present in traditional fixed-income assets, such as consumer risk, while providing liquidity in secondary markets. The coupons on ABS bonds are tied to short-term interest rates, which periodically reset, thereby limiting interest rate risk.

In Europe, ABS are issued across various countries and backed by different types of collateral, including mortgages, credit card loans, and auto loans. This diversity can help investors minimize concentration risks. However, ABS are not without risks. They are prone to credit risk, which may be mitigated through credit enhancement techniques and the structured nature of ABS, such as tranches and cash flow waterfalls. Despite relatively low default rates for European ABS, losses can still occur, particularly for lower-rated bonds or equity tranches. Additionally, ABS are exposed to reinvestment risks due to prepayments, a risk more pronounced for senior tranches.

Overall, ABS provide a unique investment opportunity by offering a diversified, liquid, and relatively low-risk exposure to various underlying assets. They help issuers to efficiently raise

capital while offering investors the potential for a steady income stream and exposure to a variety of risk factors.

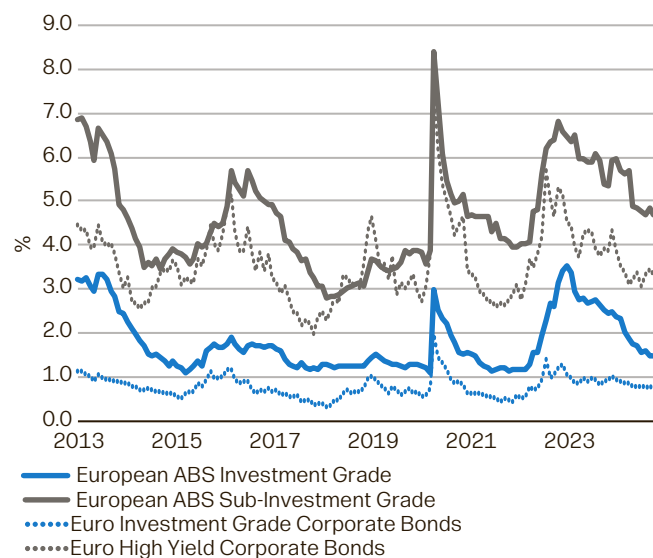
Recent developments

The European ABS market has shown remarkable resilience and adaptability in recent years. Despite the rise in interest rates from 2022, the short duration of ABS helped shield it from significant impact, unlike many longer duration fixed income assets. In 2022, and to a lesser extent 2023, fears of a recession kept spreads elevated but these have since tightened.

Contrary to many predictions, the increase in arrears has been minimal, with performance holding up well overall. Deterioration has been observed only in specific segments where loans required refinancing. However, arrears have increased somewhat in sectors with significant exposure to floating-rate collateral. The consumer sector has demonstrated strong performance, supported by tight labor markets and robust housing markets.

Housing is one of the main collateral sources in ABS. House prices have remained resilient and have even risen in many markets due to this supply constraint. Returns in 2024 have been strong due to high short-term rates, tightening spreads and low arrears overall. Non-senior tranches have outperformed senior ones due to higher carry. Overall, the European ABS market continues to offer attractive opportunities for investors, with strong fundamentals and a supportive economic backdrop.

Figure 3: ABS vs Corporate bonds (Investment Grade and High Yield)



Source: Bloomberg, Aegon Asset Management. Data as of Aug-2024.

Outlook

The outlook for the European ABS market is constructive. Central banks are expected to continue their rate-cutting cycle, leading to steadily decreasing short-term rates. However, uncertainty around the terminal rate and persistent inflation will likely cause volatility in longer-term rates. Given the floating rate nature of ABS, this asset class is expected to be less volatile compared to many fixed-rate securities.

In the short term, ABS spreads may experience some volatility as investors navigate an economic slowdown, similar to corporate bonds.

As borrowing costs approach a more neutral rate in Europe, credit availability is projected to improve. There has been an increase in supply from primary markets. Net supply has been slightly positive, and this trend is expected to continue throughout the year. On the demand side, the market has seen a resurgence of interest from various investor groups, contributing to a healthy demand for ABS.

With valuations tighter, there is limited upside for spreads to tighten further on a standalone basis. Consequently, carry is likely to be the primary driver of returns, helping to provide a downside cushion in case of increased volatility. The consumer sector is expected to remain relatively strong, with unemployment rates rising marginally but staying low overall. Market bifurcation due to idiosyncratic issues is leading to more distressed situations and defaults. However, defaults are anticipated to stay below long-term averages.

Potential losses in the ABS market are often absorbed by structural features such as excess spread and reserve funds, which will help support resilience in the face of market stresses. The relatively high carry value, supported by high short term rates and stable spreads, helps support the attractive performance potential of ABS in this environment.

Overall, the European ABS market is expected to be well positioned to navigate the complexities of the current economic landscape with resilience, supported by structural features and a favorable interest rate environment.

Listed Equity

After the strong performance of equities during 2023, driven particularly by tech companies involved in artificial intelligence (AI), the equity markets have continued to perform well into the first half of 2024.

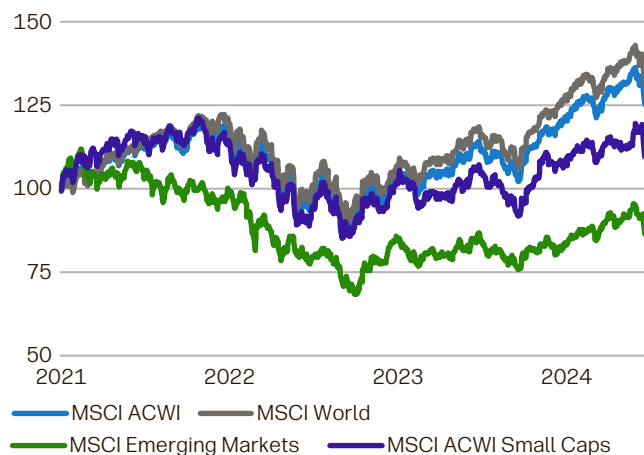
In 2023, many investors were concerned about the impact of tight monetary policy and rising labor costs on margins. However, corporate profits have been strong and rising. Companies across various sectors managed to maintain or even improve their margins and earnings, with IT, Consumer Discretionary, and Communications standing out.

Despite the persistence of the “higher for longer” narrative by the Fed well into 2024, recent developments have seen a shift in the Fed’s narrative and interest rate cuts are being priced in. The probability on a soft landing has increased but is far from a certainty.

In 2023, equity markets were driven by technology companies but many other sectors also performed reasonably well. In the first half of 2024 the market has been even more extreme. The technology and communications sectors have excelled, while several other sectors have declined. Additionally, the gap between growth stocks and value stocks has widened throughout 2024, with overall market performance becoming increasingly concentrated among growth companies. The emergence of powerful AI models has caused a seismic repricing of companies involved in AI applications and their infrastructure.

On a regional level, the US market has vastly outperformed other markets due to its large share of technology companies. Emerging markets have underperformed developed markets in 2024 so far, with economic issues in China contributing to its underperformance.

Figure 1: Strong continuing performance across equity markets.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

Tech and the rest

From a valuation perspective, there has been a continuing uptrend in equity valuations, as evidenced by the elevated price-to-earnings (P/E) ratios in the US. This trend is particularly noticeable among the Magnificent 7 companies and the broader technology sector. Investors are willing to pay a premium for these stocks, anticipating significant future earnings growth, especially from developments in AI. The market’s confidence in these technology companies’ ability to generate substantial future profits underpins this trend.

Given the tech sector’s substantial weight, its performance will be significant for global equity markets. Currently, the IT sector represents approximately 25% of global market capitalization, which doesn’t even include companies like Amazon, classified as consumer discretionary. In the US, the IT sector represents more than 30% of market capitalization.

Despite its high valuation, we expect that the technology sector will be able to generate above-average returns going forward for various reasons. Most importantly, several businesses

have effective monopolies or duopolies in their markets. Coupled with high switching costs for consumers and difficult-to-replicate products, this has resulted in very high barriers to entry in these markets. Hence, these companies are able to generate high margins and growing earnings.

Innovation has also been a continuous factor. Most recently, the AI-chip sector has shown the ability to generate very attractive earnings. Additionally, the large streaming services, semiconductor sector, and social platforms have been able to grow earnings. Due to the operational leverage in their business models, they can increase margins while growing.

Structurally, these trends have led to higher margins in listed equities. There are certainly some risks, as competition authorities and regulators have been trying to limit excessive market power. So far, these efforts haven't resulted in significant changes in their future prospects but could become more significant in the future.

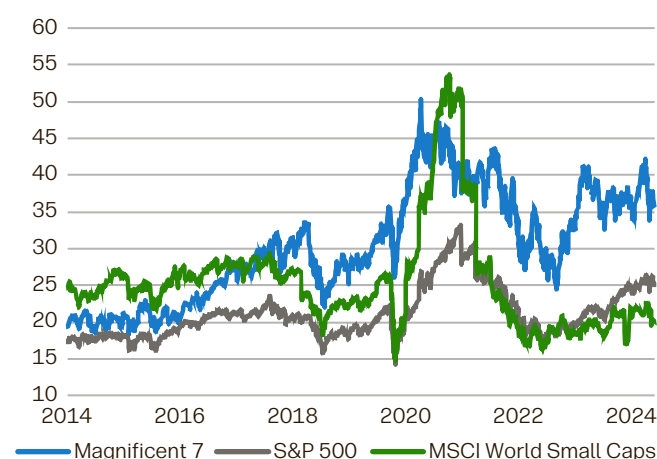
Another risk is the changing capital intensity in the technology sector. Historically, several IT business models were relatively capital-light as they were primarily focused on software. This resulted in high operating leverage. The new era of AI investments might be different. The sector's heavy capital expenditure (CapEx) will eventually need to prove its worth. Many IT companies are making immense investments in datacenters and their infrastructure. These investments are essential for maintaining competitive advantage and driving innovation, particularly in areas like AI. However, high CapEx will result in lower operating leverage. And this time, it is less clear for many technology companies whether their AI offering is sufficiently differentiating from others to charge premium prices.

Despite these concerns, the outlook for technology equities remains relatively positive as the ability to innovate and grow earnings is significant, which justifies higher multiples. On the US market as a whole, we expect it to be able to generate high single-digit returns going forward.

An often overlooked part of the market are small-cap equities. Historically, small-cap equities have often experienced higher valuations compared to their large-cap counterparts, driven by their potential for rapid growth and innovation. However, this trend has recently reversed, with large-cap equities now having higher valuations.

This shift is partly attributed to the dominance of the "Magnificent 7" – a group of mega-cap tech giants that have significantly boosted the overall valuation of large-cap stocks. Going forward we expect a reasonably favorable environment for small-cap equities. Undemanding valuations combined with lower interest rates should act as a tailwind going forward.

Figure 2: P/E ratio of mega cap, large cap and small cap equities.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

European Equities: Challenges remain

European equities are currently trading at a discount compared to US stocks, as seen in their lower P/E ratios. This valuation difference is largely driven by the tech sector exposure in the US markets. In contrast, European markets are more heavily weighted towards traditional sectors like financials, industrials, and utilities, which typically offer slower growth. Although European equity valuations seem more attractive compared to the US, we do not believe that European valuations will close the gap in the coming years. Moreover, this gap is expected to widen as Europe lacks the innovative, high-growth tech companies prevalent in the US. The absence of such dynamic sectors means European equities will likely continue to have lower growth expectations and, consequently, lower P/E ratios.

A risk for Europe's economy and equity markets is an increase or escalation of geopolitical tensions. Europe has significant exposure via its industry, technology, and luxury sectors to both the US and China. More trade friction could therefore have a significant impact. Additionally, a further slowdown in China's economic growth poses challenges for European exporting companies.

Japan: The Rising Sun

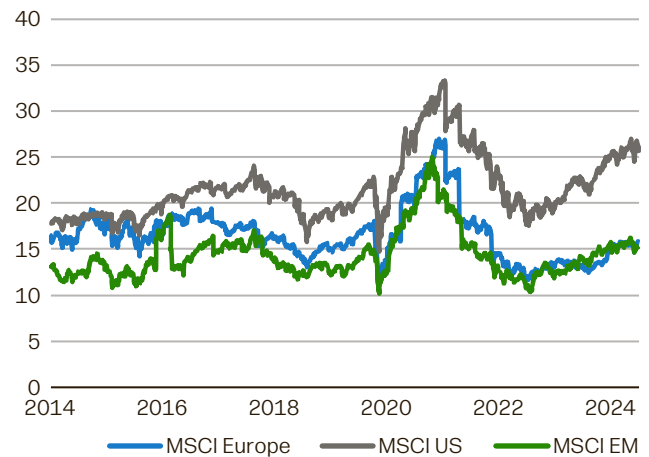
Over the past decade, Japanese equities have experienced relatively subdued performance compared to other major developed markets. However, this trend is now shifting due to a combination of corporate reforms and a return of inflation. Corporate governance improvements and shareholder-friendly policies are driving renewed investor interest. Additionally, Japan's potential exit from its prolonged deflation period might lead to more economic dynamism. These factors are contributing to a more optimistic outlook for Japanese equities, signaling a potential turnaround in their performance.

Emerging Markets

Emerging markets consist of a diverse set of countries with their own threats and opportunities, making it particularly hard to generalize about this asset class. The performance of equities from these markets has been significantly impacted by the underperformance of the Chinese market, where valuations are at historic lows. In contrast, the Indian equity market has demonstrated strong performance, with valuations reaching historical highs. The market capitalization of Indian equity markets has now surpassed that of Hong Kong. This trend is expected to continue, driven by favorable demographics and India's strategic positioning amid potential US-China tensions. Conversely, China's growth is stalling and is unlikely to recover soon, with historically low valuations due to a struggling real estate sector and government regulation. The recently announced fiscal and monetary stimulus has boosted sentiment and market returns, however it remains to be seen if the interventions will have a sizable impact on economic growth and a lasting positive impact on financial markets. More structurally, due to the uncertainty about potential changes in investor and corporate regulations, we think it is justified that the Chinese market would trade at a discount.

Taiwanese and Korean markets are in a league of their own given their substantial exposure to the semiconductor sector. They are expected to benefit from growing demand for semiconductors due to AI advancements. One of the key risks for emerging markets is escalating US-China tensions. This has already resulted in underperformance of emerging markets and could further escalate if other Asian countries or companies are dragged into the conflict.

Figure 3: P/E ratio for various regions.



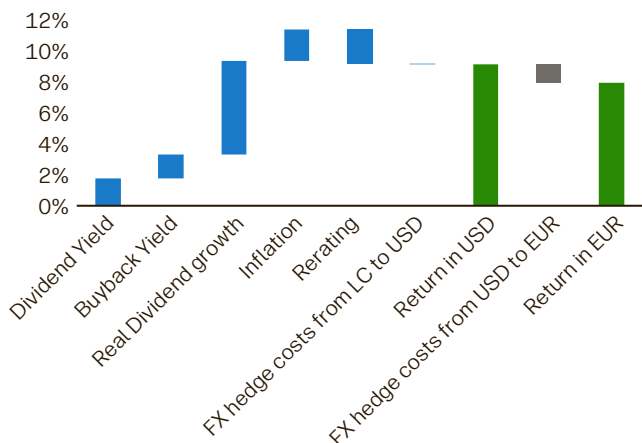
Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.

Outlook

For developed markets, we expect a high single-digit return over the coming years. Our return assumptions are based on several factors affecting the returns on equities. The dividend yield and (net) return from share repurchases should provide a relatively steady stream of income. We expect a combined dividend- and buyback yield of just over 3%. An important component of long-term equity returns is earnings growth. For the coming years, we expect corporate earnings to initially increase, supported by our macroeconomic outlook and driven by the expansion of earnings in the tech sector. In later years we expect this trend to flatten and earnings to increase modestly. We therefore assume earnings growth to contribute to equity returns substantially. This translates into moderate single-digit percentage real dividend growth and roughly 2% inflation. In addition, we expect a mild negative rerating component as the P/E multiple will come down from elevated levels.

Hedging the return on equities to the U.S. dollar currently shows a small positive benefit, as non-US short-term interest rates are on average lower compared to short-term interest rates in the US. When hedging the return on equities to the euro, there is a negative effect, as euro interest rates are significantly lower at the moment, but we forecast spread tightening versus the US interest rates in the next couple of years.

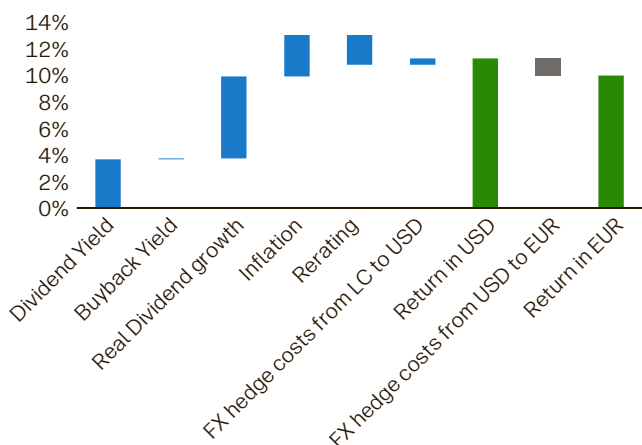
Figure 4: Expected returns - World Equities.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. Hypothetical example for illustrative purposes only. See disclosures for additional information.

For emerging markets equities, we expect returns to be slightly higher than for developed markets. In emerging markets, the dividend yield is higher, partially due to the more favorable valuations, and expected nominal profit growth is in line with developed markets, particularly driven by growth expectations in markets such as India, Taiwan and Korea. In line with the current elevated valuations in these markets, we expect a mild negative rerating component. Hedging equity returns has a negative impact, because short-term interest rates in emerging markets are higher than in the US and Europe.

Figure 5 Expected returns - Emerging Markets Equities.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024. Hypothetical example for illustrative purposes only. See disclosures for additional information.



Impact of retail investors on markets

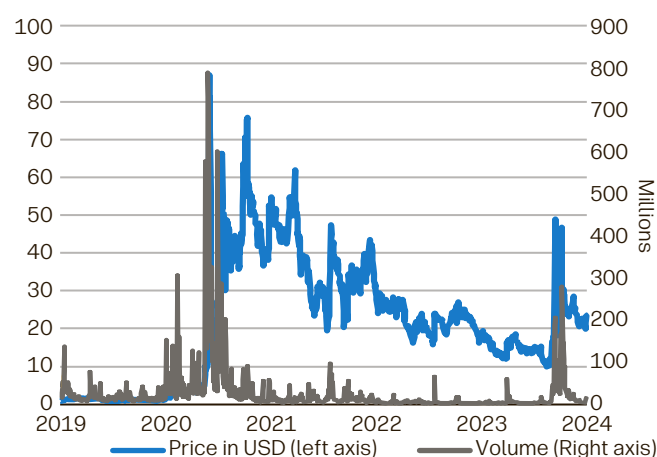
Social media

The advent of social media platforms and trading apps has significantly altered the landscape of financial markets. These platforms have democratized access to market information and trading capabilities, enabling an increase in retail investor participation. Social media forums have become discussion platforms, influencing individual investment decisions and, by extension, stock prices.

The phenomenon of meme stocks, where retail investors congregate on platforms like Reddit's WallStreetBets, has led to unprecedented volatility in certain stocks. For instance, GameStop (GME) saw its stock price soar twentyfold from its level at the end of 2020 to its peak in January 2021, driven largely by a coordinated effort from retail investors. The chart below clearly illustrates that this has been accompanied by a spike in trading volume.

What has also been interesting, is that the price of Gamestop has been elevated above any reasonable estimate of fundamental value for years. That does raise the question how efficient markets are.

Figure 1: Gamestop price and volume.



Source: Aegon Asset Management, Bloomberg. Data as of Jul-2024. For illustrative purposes only. Specific sectors or issuers mentioned are not intended and do not represent a recommendation to buy or sell such securities and it should not be assumed that investments of securities in these issuers or sectors were or will be profitable.

This new era of retail investing has brought both opportunities and challenges. On the one hand, it has increased market participation. On the other hand, it has raised concerns about market stability and the influence of collective retail investor actions on stock prices.

Moreover, the influence of social media on financial markets is expected to persist as younger generations begin investing. This carries the risk of disinformation and market manipulation, necessitating a collaborative effort from financial authorities, governments, and stakeholders to counter potential threats.

Trading apps and “gamification”

During the pandemic several popular trading platforms became very popular. This had several reasons including their ease of use as mobile apps. Several platforms offered low trading costs

but this was partly due to the proliferation of the PFOF (Payment for Order Flow) model. Market makers pay these platforms to send their trades to their pools. In this model part of the costs is hidden in the execution price.

The combination of social media and trading apps has indeed created a new dynamic in financial markets, one where the collective power of retail investors can lead to significant stock price movements, challenging traditional market theories and practices.

The advent of retail investors has led to new products, which have a questionable added value. For instance, one-day options and even one-day funds have gained in popularity. This trend towards fast and short-term focused trading is also called the “gamification” of financial markets.

Impact on equity markets

On a single stock level, the “gamification” of financial markets can lead to mispricings. An interesting question is whether increased retail participation could have a notable impact on (equity) markets overall.

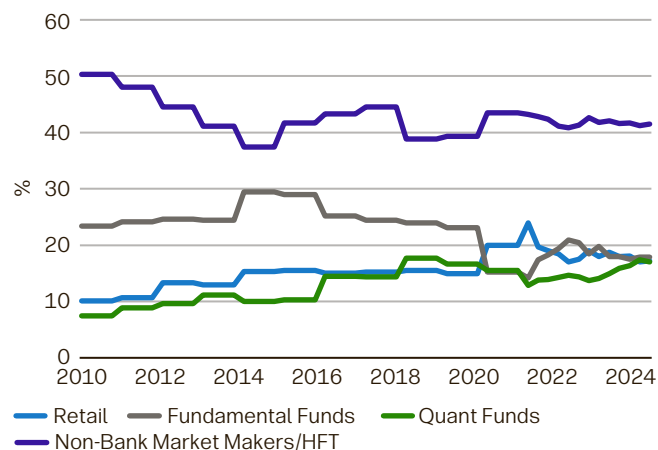
Recently, a well-known investor, Clifford Asness, wrote a paper called the “Less-efficient Market Hypothesis”¹ where he described his view that markets have become less efficient due to social media, the increase in passive investment and the increased participation of retail investors.

The impact on general markets is impossible to prove though, as market pricing is not extreme enough to definitively argue that it is irrational.

We do, however, have trading data, which shows the size of retail investors relative to professional investors. Still, this split doesn’t show which one would be less rational, but we could assume that retail investors are on average more susceptible to social media hypes.

Looking at trading volumes per type of participant, it shows that retail investor volumes have increased from around 10% to just below 20%. They briefly spiked around the start of the Covid pandemic.

Figure 2: Trading volumes on S&P 500.



Source: Aegon Asset Management, Bloomberg. Data as of Q1-2024.

It’s interesting to distinguish between two types of trading volumes: those who trade based on a view or expectations of securities and those who trade to benefit from arbitrage opportunities. This distinction is crucial because only the first category contributes to price formation of securities and markets as they attempt to profit from securities’ over- or undervaluation. For simplicity we call this the “absolute” trading activity. The latter category is interested solely in spread and arbitrage trading, which contributes to the relative price formation of similar or near similar financial securities. We could call this “relative” trading activity.

Market makers fall into this latter category (“relative” trading activity), focusing on arbitrage opportunities. They could account for a bit more than 40% of stock trading.

The majority of retail investors (20% of market volume) won’t be able to participate in market making or arbitrage trading due to limitations of their trading platforms. Therefore, it’s safe to assume that most retail trading will fall into the “absolute” trading activity.

Institutional investors are in this categorization split between “quant funds” and “fundamental funds” and constitute the remaining 40% of trading volume. Which part of this trading falls in either “absolute” or “relative” trading is impossible to know. However, it is likely that at least a significant part will be purely driven by passive funds as the Assets under Management (AuM) of passive funds have surpassed those of actively managed portfolios.

¹Asness, C. S. (2024, August 30). The Less-Efficient market hypothesis.

These figures show that retail investors likely are a significant part, and possibly a majority, of the “absolute” trading activity and hence could be, as a collective, responsible for price formation on general markets.

Conclusion

The advent of social media in combination with the “gamification” of (retail) investment has often led to mispricing in single stock securities. Whether it also leads to mispricing in financial markets overall is impossible to prove. However, trading volumes suggest that retail investors could have a more significant impact on general equity markets than typically assumed.



When baskets change... where to put your eggs?

One of the foundational principles in Investing 101 is diversification. By spreading investments across a variety of asset classes, sectors, and geographies, an investor can achieve a balanced exposure and a more resilient portfolio, capable of weathering market fluctuations and idiosyncratic risks. Ultimately, this should result in an enhanced risk-return profile aiming to achieve optimal long-term investment performance.

For equity investors, a typical way to ensure diversification is to track a diversified benchmark. Benchmarks exist in many shapes and forms. Commonly followed ones include the MSCI ACWI Index (tracking global equity markets), the Eurostoxx 50 (tracking eurozone equities), and country-specific indices such as the S&P 500, NASDAQ, and Dow Jones (USA), or the Nikkei (Japan). Passive investors often track such benchmarks, while active investors compare their investments against them. Thus, benchmarks are a cornerstone of many investment portfolios.

The composition of benchmarks changes with shifting market conditions. Constituents are added when new stocks are listed and removed when they exit the publicly traded markets. Many equity indices apply a market-capitalized weighted methodology. This means the weight of the stock depends on the market-capitalization. Companies with a larger capitalization have a higher weight in the index, and vice versa. With the rise of trillion-dollar megacap companies from the technology industry, these companies have not only gained a dominant position in their industries but have also significantly influenced the composition of major benchmarks.

The Megacap effect

The rise of these megacap companies has led to increased concentration within equity benchmarks. This concentration can have both positive and negative implications for investors. On one hand, the strong performance of these companies can drive overall index returns, benefiting investors who track these benchmarks. On the other hand, increased concentration can lead to reduced diversification. As a few large companies begin to dominate the index, it can expose investors to idiosyncratic risks if these companies face significant challenges or market downturns. This begs the question: are we putting our eggs in the right baskets?

Methodology

In this article, we present a quantitative overview of the diversification presence in equity benchmarks. To do this, we introduce the Equity Diversification Index or ED-Index¹. A higher index level implies more diversification, whereas a lower index value means less diversification. In the absence of diversification, i.e. a single stock holding, the ED-Index provides a value of 1. We state:

¹The Equity Diversification Index is an adjusted version of the Herfindahl-Hirschman-index. The Herfindahl-Hirschman-index is often used in micro-economic analysis related to competition and concentration in a corporate setting. The Equity Diversification Index is adjusted version of the Herfindahl-Hirschman-index to make the results more intuitive but follows the same principles.

$$ED - Index = 1 / \left(\sum_{x=0}^n w_x^2 \right)$$

In this formula, n is the number of constituents in the index, and w_x^2 is the weight of constituent x.

Our analysis adopts historical data of constituents and weights from various well-known equity indices as of end of 2023.

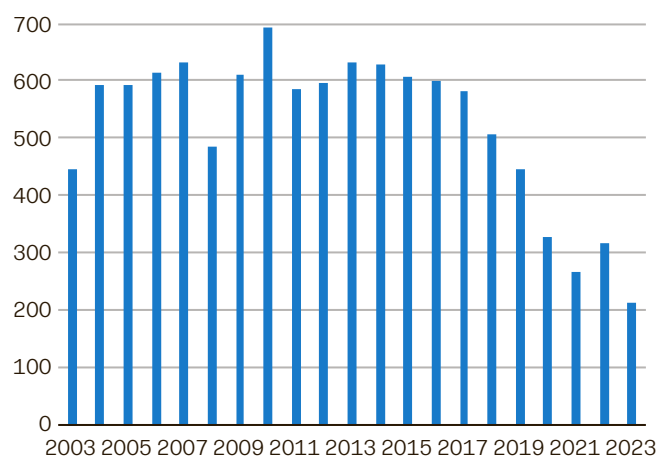
Results and discussion

Our analysis reveals three important findings:

- Global equity markets have become less diversified.
- For optimal diversification, indices with a global universe are superior to regional and local indices.
- Some country indices have a very strong concentration and may no longer serve as a diversified index for investors.

Equity investors have a wide selection of stocks to choose from. The global market comprises over 10,000 equities. A historical analysis of the global equity markets (using data since 2003) reveals an interesting trend. In 2010, the ED-Index reached the highest level of diversification (ED-index of 692). Since the high in 2010, the ED-Index has trended lower from 692 to 215 in 2023, the lowest value on record. This means that the global equity market today is much less diversified than 2010. We attribute this may have been resulted from the emergence of multi-trillion megacap companies. The high market capitalization of a number of stocks results in a disproportionate increase in their index weights, leading to lower diversification in global equity markets.

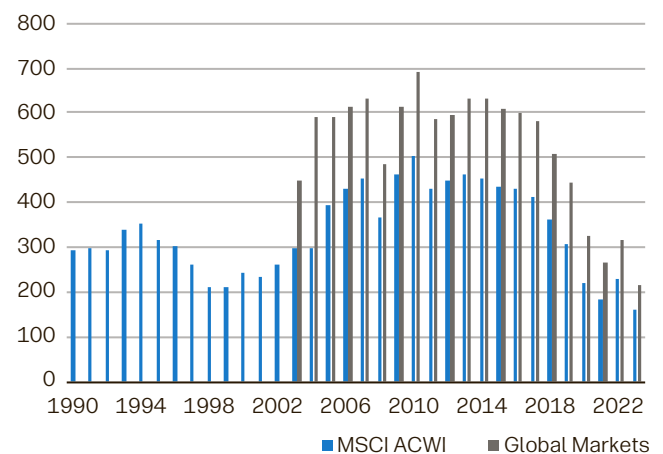
Figure 1: ED-Index Global Markets.



Source: Aegon Asset Management, Bloomberg. Data as of Aug-2024.
Note: Data based on constituent level per end of year.

Almost no investor invests in all global equities, as this would result in many practical difficulties. Therefore, many investors follow a globally-oriented benchmark that encompasses a wide range of investable stocks, while excluding certain holdings such as small-cap and illiquid equities. The MSCI ACWI is a one example of such a benchmark. The index has a global universe of almost 3,000 constituents and a market cap of more than \$75 trillion. It is one of the broadest and most diversified benchmarks used by investors. The ED-Index of the MSCI ACWI is 159. This implies that the index is less diversified than the full global equity market (ED-Index 215). Still, the high value implies that the benchmark is well diversified.

Figure 2: ED-Index.



Source: Aegon Asset Management, Bloomberg, MSCI. Data as of Aug-2024. Note: The dashed orange line shows the historical maximum diversification of the global equity markets (total period: 1990 - 2023). The bars per year present the annual maximum diversification of the global equity markets (annual data for 2004-2023). Data based on constituent level per end of year.

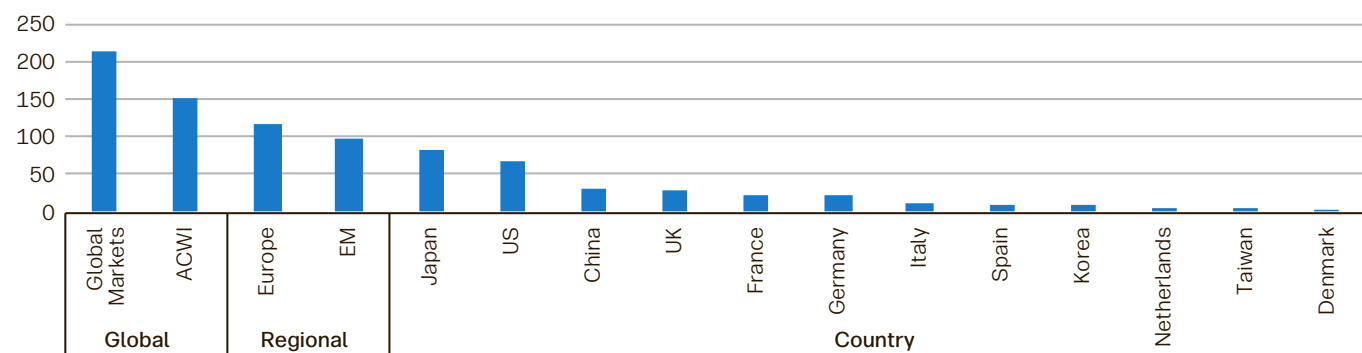
Regional or country indices naturally have lower diversification compared to global indices. Still, many investors choose such more stringent indices, e.g. due to regional preferences, or currency impacts.

Table 1: Descriptive statistics and ED-Indices of equity benchmarks.

Universe	Benchmark	Market Cap (USD)	Const	Top	ED-Index	ED-Index 2010	ED-change
Global	Global Markets	86,860	10418	4%	215	692	-69%
Global	MSCI ACWI Index	74,627	2920	4%	159	506	-68%
Regional	MSCI Europe Index	11,159	425	3%	116	131	-11%
Regional	MSCI Emerging Markets Index	7,605	1440	7%	98	197	-50%
Country	MSCI USA Price Return USD Index	47,959	609	7%	67	148	-55%
Country	MSCI Japan Index	3,862	225	5%	82	106	-23%
Country	MSCI China Index	1,818	765	13%	30	31	-3%
Country	MSCI United Kingdom Index	2,544	82	9%	28	33	-16%
Country	MSCI Germany Index	1,505	58	12%	21	20	4%
Country	MSCI France Index	1,923	61	11%	22	28	-21%
Country	MSCI Italy Index	474	24	14%	12	12	3%
Country	MSCI Spain Index	464	19	18%	10	6	49%
Country	MSCI Netherlands Index	812	26	40%	5	11	-52%
Country	MSCI Taiwan Index	1,361	90	42%	5	28	-80%
Country	MSCI Korea Index	853	102	32%	9	22	-61%
Country	MSCI Denmark Index	629	16	62%	2	4	-43%

Source: Aegon Asset Management, Bloomberg, MSCI. Market cap data as of Aug-2024, other data as of Dec-2023.

Figure 3: ED-Index as per 12/2023.



Source: Aegon Asset Management, Bloomberg, MSCI. Data as of Dec-2023. Note: Data based on MSCI Indices.

In the US, the MSCI USA ED-Index is 67. For a country index, this is relatively high. But logically, the diversification is lower in comparison to a global index, e.g. the MSCI ACWI with a DE-index of 159. That said, with a market capitalization of almost \$50 trillion, US is - by far - the largest equity market. In line with the wider global developments, the ED-Index has lowered since 2010, implying the market is less diversified. This is logical, because the megacap companies with large market capitalizations and large index weights are mostly listed in the US.

In Europe, the regional MSCI Europe Index offers more diversification than US indices with an ED-Index of 116, but European indices with a single-nation universe offer less diversification.

Two European countries stand out in terms low diversification:

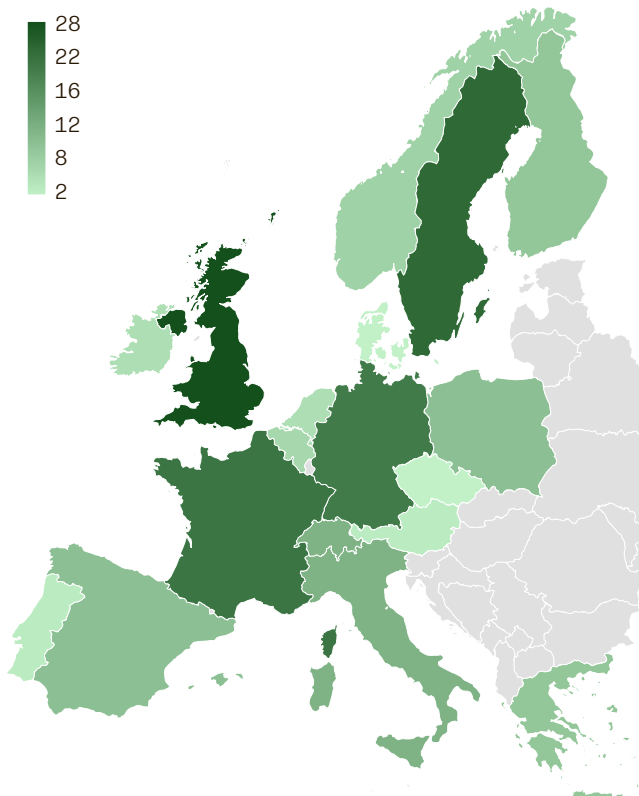
- The Netherlands: The ED-Index is only 5, primarily due to the large weight of a few stocks, most notably ASML.
- Denmark: The equity markets are dominated by Novo Nordisk, resulting in an ED-Index of just 2, the lowest value in our dataset. Such low diversification implies a very strong concentration in the index, rendering it less useful as a diversified index for investors.

Another interesting observation is that in contrast to most other indices, the degree of diversification within the German and Italian indices has remained stable from 2010 to 2023. Over that same period, diversification in the Spanish market increased, which is against the global trend.

In Asia, Japan stands out in the dataset with the highest ED-Index level of 82. China is also noticeable for their stability from 2010 to 2023 with a relatively ED-Index of 30. This implies the Chinese market is less diversified than its counterparts in Japan and the US, but more diversified than national European markets. Taiwan and Korea stand out for their low ED-Index value. Despite having mature equity markets, these indices are not well-diversified:

- Korea: With a market capitalization of over \$900 billion and more than 100 constituents, the ED-Index remains low due to the dominant weight of Samsung.
- Taiwan: Despite a market capitalization of over \$1,440 billion and more than 1,400 constituents, the ED-Index is only 5. This is because the semiconductor company TSMC holds over 40% of the index weight, and the IT sector accounts for almost 80% of the total index.

Figure 3: Heatmap of ED-Indices in Europe.



Source: Aegon Asset Management, Bloomberg, MSCI. Data as of Dec-2023. Data based on MSCI Indices.

Other popular benchmarks

So far, the analysis is based on MSCI data as MSCI indices are widely used by institutional investors; therefore, this provides a standardized methodology for many regions. However, other popular benchmarks with different methodology may result in different diversification values.

For instance, the S&P 500 tracks the stock performance of 500 of the largest companies in the United States. The broad presence in the market results the benchmark with an ED-Index value of 62, similar to MSCI US. However, Dow Jones, also a well-known index in the USA, with its more restricted investment universe and price-weighting scheme, has a much lower ED-Index of 22.

The MSCI Europe has an ED-Index of 116. The widely followed Eurostoxx 50 Index has an ED-Index of 33, much lower than the MSCI Europe Index. This raises questions about whether the Eurostoxx 50 is a suitable index for investors aiming to maximize diversification.

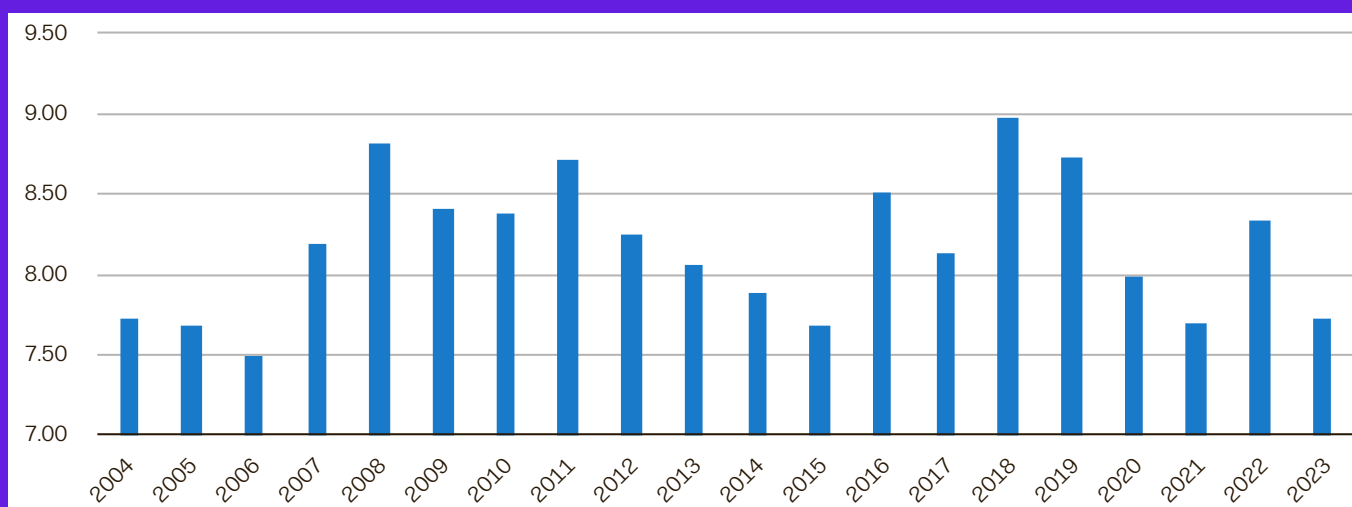
For popular national indices in Europe, the differences are less pronounced. The DAX Index, a favored benchmark for local investors in Germany, has an ED-Index of 21 (similar to the MSCI Germany). The CAC 40 Index, popular among local investors in France, also has an ED-Index of 21 (the MSCI France has an ED-Index of 22). Lastly, the AEX Index, a common benchmark for local investors in the Netherlands, has an ED-Index of 11 (vs 5 for MSCI Netherlands).

Sectors

We extend our analysis by aggregating the data to the sector level. Instead of diversification across individual stocks, we focus on diversification across sectors in the MSCI ACWI index. After all, a global index that consists of 100 stocks spread across various sectors is likely to have less idiosyncratic risk than a global index of 100 stocks all related to a single industry.

This extended sector-focused analysis adds more interesting perspectives. The current MSCI ACWI sector diversification is not at its historic lows. Compared to the sector composition in 2006, 2017 and 2021, the index is more diversified now. This is remarkable because diversification on a constituent level is currently at record lows. This discrepancy can be explained by the sector classification of some of the megacaps. Today's megacaps are not only IT companies (e.g. Apple and Nvidia), but are also classified as Consumer Discretionary (Amazon, Tesla) and Communication Services (Meta, Alphabet). In 2006, the moment where global markets had least sector diversification, financial companies dominated the index.

Figure 4: ED-Index (Sector) for MSCI ACWI.



Source: Aegon Asset Management, Bloomberg, MSCI. Data as of Dec-2023.

Conclusion

The rise of megacap companies has significantly impacted the diversification of equity benchmarks. While global indices like the MSCI ACWI still offer substantial diversification, regional and country-specific indices are increasingly concentrated, which likely exposes investors to higher idiosyncratic risks.

Investors must be aware of the potential benefits and risks associated with increased concentration in their portfolios. By understanding these dynamics, investors can make more informed decisions and continue to strive for a balanced and resilient investment strategy. While diversification does not ensure profit nor guarantee against loss, investors must critically assess the diversification of their chosen benchmarks to ensure they align with their risk management and investment objectives.

Private Equity

Most companies are private as only a small part of the companies globally is publicly traded. Private equity is a channel providing access to this significant part of the economy. According to data provider Preqin, the private equity market currently has around \$6 trillion in assets under management (AuM) and will be growing at a rate of more than 10% per year to \$8.5 trillion by the end of 2028¹. This growth is partly due to the growing supply and demand of impact funds.

Higher interest rates and fewer M&A transactions have been a headwind to the sector in recent years and will likely remain so in the medium term. Nevertheless, private equity remains an attractive asset class for the long term, given its attractive risk/reward potential.

Rising returns despite higher inflation and interest rates

After the double-digit returns in corona years 2020 and 2021, private equity (according to Preqin's Quarterly Index) showed a return of -2% in 2022. The sharp rise in interest rates and its impact on the availability and cost of financing was an important factor behind this. According to the same benchmark, 2023 was another positive year with a return of around 8%.

Venture and growth sectors lagged, while buyouts showed a more stable picture. This is mainly due to the continued strong profitability of most companies and high valuations of comparable, publicly traded companies. Private companies are generally well positioned in times of high inflation: they are more flexible to adjust pricing strategies and can often quickly cut costs.

On the other hand, higher interest rates have been a headwind. Companies that finance themselves with debt capital are especially sensitive to this, and so are the (buyout) funds that invest in these companies. Free cash flows may decrease due to higher interest charges. However, with most debt financing tied up for several years, higher interest rates are more of a medium-term concern. In the coming years, fund managers will need to demonstrate their added value and expertise with operational improvements,

scaling through organic growth and optimizing the capital structure. Negative scenarios arise if interest rates continue to rise or if profitability deteriorates. That would put pressure on sellers to transact at lower prices, reducing returns.

Growth in expected investment and exit activity

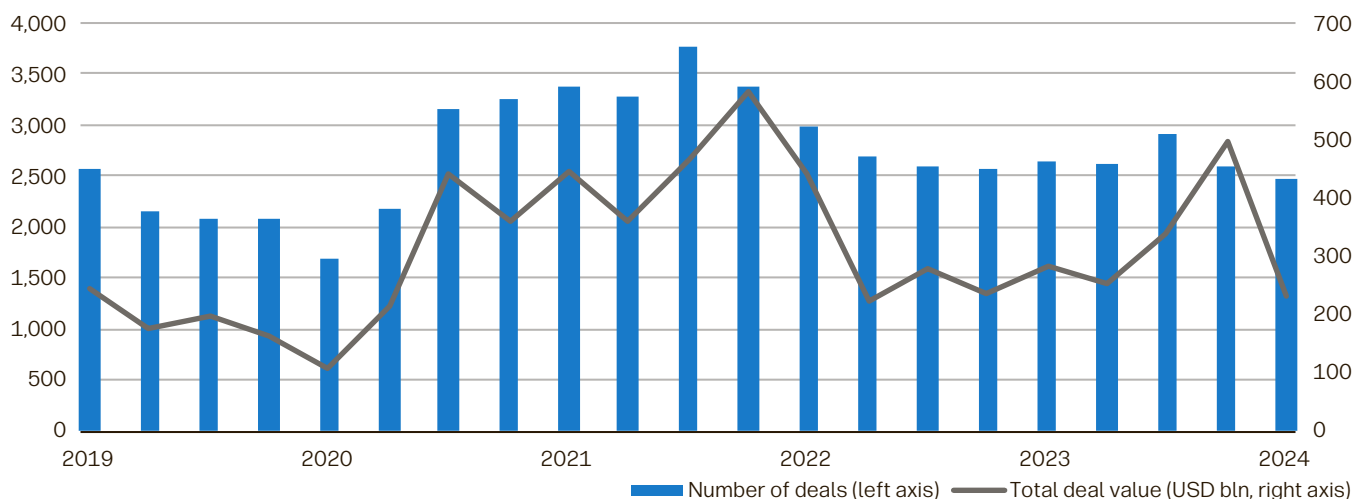
Total deal activity fell due to more expensive financing and poorer availability of, for example, bank financing. The changing focus from growth to stable cash flows and profitability contributed to the lower number of deals. Also, some investors who had allocated to private equity opportunistically due to low interest rates withdrew from the market. As a result, underlying deal activity in venture capital is lower than in buyouts. Start-ups and scale-ups struggle to attract new funding, although companies involved in artificial intelligence are an exception.

Preqin's numbers in Figure 1 currently show a cautious increase in total deal value (Q2 numbers are not yet complete). This implies that in particular large transactions go ahead again. Transaction prices seem to be stabilizing around a long-term average of 9x EBITDA, based on figures from fund manager Argos Wityu². We expect the number of transactions and exits to increase again in the coming years, driven by investors' liquidity needs and because the gap between desired buy and sell prices continues to narrow. In the meantime, fund managers will continue to look for alternative forms of liquidity, such as holding companies in the portfolio for longer, setting up separate continuation funds or attract NAV financing.

¹Preqin (2024). Preqin Global Report: Private Equity 2024.

²Argos Wityu (2024). Argos Index® 2nd Quarter 2024.

Figure 1: Number of deals and deal value.



Source: Aegon Asset Management, Prequin. Data as of Q2-2024.

The amount of capital raised by fund managers fell in 2023 to its lowest point since 2014. Also, according to Prequin, the average time a fund is 'open' has risen to a record 25 months. This generally has to do with the (too) high allocation to private equity of many investors. However, there is a strong divide between the large, successful fund managers who raise capital above target and the often smaller, newer or less strong fund managers who have more difficulty raising capital. Investors prefer managers who are likely to raise sufficient capital so that they can continue to successfully execute their intended investment strategy, while also better safeguarding the continuity of the firm and investment team.

Supply of impact funds is rising rapidly

A subcategory of funds with growing interest from investors are funds that seek a clear social and/or environmental contribution in addition to a financial return. Private companies are well suited to realize impact, especially younger companies in the growth and venture capital segment: they often focus on new, disruptive technologies, are flexible to change their business model and can scale up quickly. Fund managers can use their (often) majority stake to help drive impact. Examples include making heavy industrial processes more sustainable, innovative ways to reuse waste and scarce raw materials, and the use of AI in healthcare and education.



Although the investable universe for impact funds is more limited due to the additional impact requirements, we believe that their risk/return potential will be in line with the average private equity fund as the strategies to create value are very similar and due to the expected future megatrends such as a decarbonisation, the energy transition and the desire to live healthier for longer. As the available impact funds differ significantly in their impact objectives, experience, strategy, and measurement, the selection of the right impact managers is even more important compared to non-impact funds.

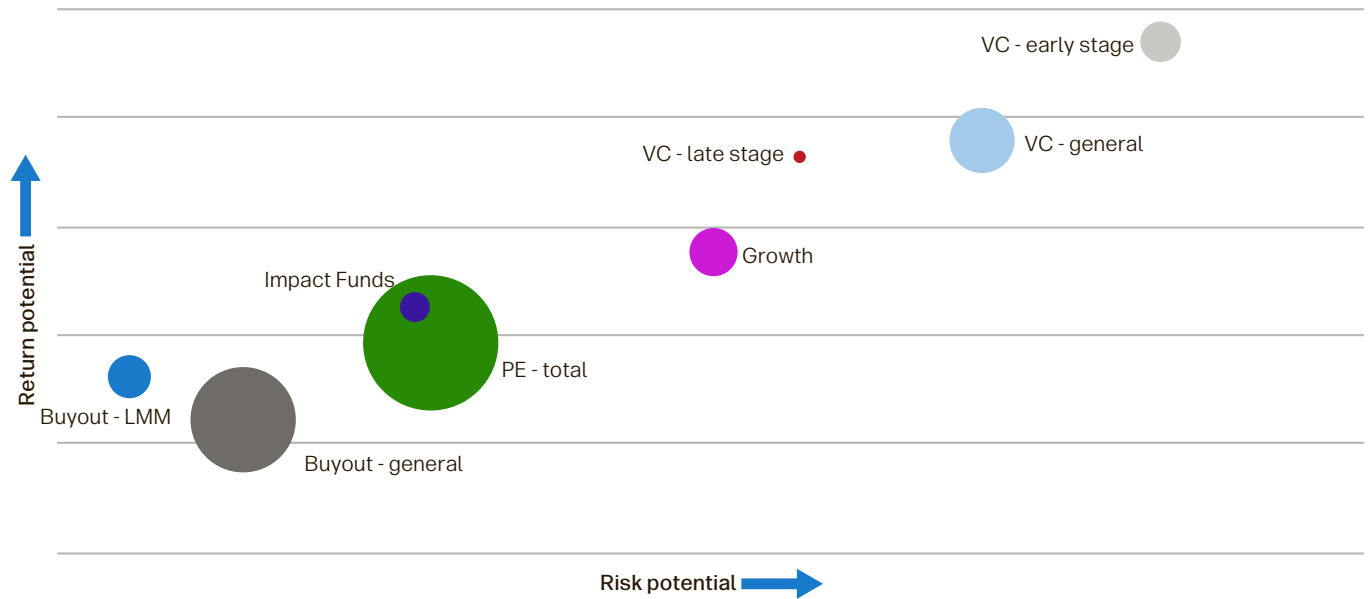
Private equity outlook

The outlook for private equity in the coming years is moderately positive. On the one hand, higher interest rates are likely to have a negative impact on returns; many loans will mature in the coming years, after which they will have to be refinanced at presumably higher levels. On the other hand, fund managers understand the complexities of private companies and have many opportunities to add value over several years. Instead of relying on borrowed money to make returns, managers are focusing more on increasing operational efficiencies, expanding into new markets and products, and leveraging ESG initiatives.

Inflation is less of an issue, given the great pricing power and flexibility of many private companies.

Figure 2 below shows how we position different subclasses of private equity in the risk/return spectrum for the coming years. The size of the dot is indicative of the AuM at the end of 2023. For the next four years, we expect returns to be slightly above that of listed equities. As mentioned earlier in this outlook, the return for listed stocks is 7% to 8% in euro, which equals 9% to 10% in US dollar. We expect an additional return of 1 to 2% on top of that for private equity. The expected private equity return for the coming years is therefore lower than the historical annual returns of 13% (US) and 14% (developed markets ex US) over the past 25 years³.

Figure 2: Return and risk potential of private equity subclasses.



Source: Aegon Asset Management, GIIN, Prequin. Data as of Q2-2024. Hypothetical example for illustrative purposes only. See disclosures for additional information.

Historically, funds in the lower mid-market of the buyout market (LMM) have offered an attractive risk/return profile. These companies tend to have less exposure to global macroeconomic risks, better opportunities for value creation, and are more flexible in adapting their business model or reducing costs. They also tend to have lower leverage levels than larger buyout companies, making them more resilient to rising interest rates.

Over the longer term, the risk-return profile of private equity as an asset class remains attractive due to the wide range of opportunities for private equity managers to add value. We also see many opportunities for investments in technological solutions that can make an important contribution to the fight against current and future risks (climate change, food production, aging). Funds that anticipate this are likely to be better positioned for higher future returns, for example VC funds that invest in artificial intelligence or impact funds that invest in climate technology or new food sources. However, future returns depend heavily on the selection of managers: the difference between the best and worst performing managers tends to be greater in private equity (and even greater in VC and impact funds) than in many other asset classes. Therefore, selection is typically a more important factor for future returns than timing, also given the long-term nature of the investments.

³Cambridge Associates. (2024, 11 september). Private Investment Benchmarks - Cambridge Associates

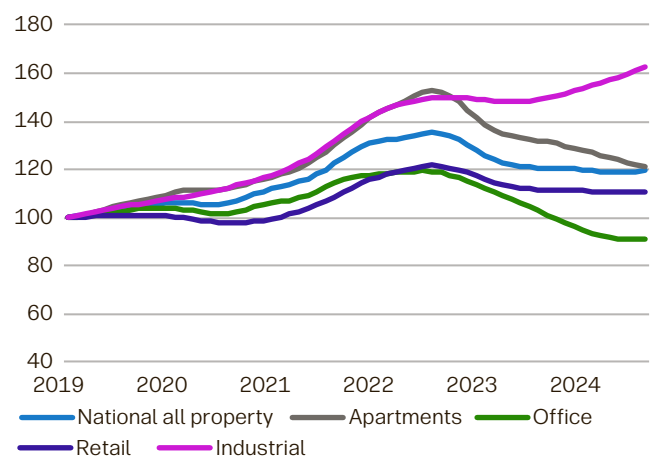
Private and Listed Real Estate

Private real estate valuations have fallen by approximately 20% in Europe and the US over the past two years due to cap rate expansion. In Asia, values adjusted by a smaller amount as they did not appreciate as much before 2022. European value depreciation typically lags the US, but this cycle saw synchronous central bank actions leading to similar timing and magnitude of value falls. Appraised values in the US remain elevated relative to transaction values, but Europe appears closer to bottoming out with slowing cap rate increases. Some green shoots are emerging, with property prices increasing in the US and Europe in the first half of 2024 and appraisal-based returns turning positive in the US and UK in May.

Heightened bidding activity is observed, particularly in logistics and residential sectors. Liquidity seems to be improving with more active bidders and a narrowing bid-ask gap, especially with motivated sellers seeking liquidity to meet redemption requests. However, statistics do not yet support this improvement. Global transaction volumes declined by 30% annually in Q1 2024, with US and European activity falling sharply by 20% and 22%, respectively, compared to Q1 2023. Volumes in Asia-Pacific held up better, showing a 14% decline.

The listed real estate market, or REIT market, reacted quickly to the changing financing environment during 2022. By Q4 2023, the listed sector saw steady improvement, with discounts to underlying asset values reducing and being replaced by premiums in some large markets. The sector is expected to gradually turn to growth as rates come down and financing availability improves. The listed sector in the US trades at a premium to appraised value, signaling that real estate prices are no longer expected to fall. The sector will need to show it can restart growth strategies and drive additional value above passive rent collection and value appreciation.

Figure 1: US Real Estate property price index (Feb 2019 = 100).



Source: Aegon Asset Management, Real Capital Analytics. Data as of Aug-2024.

Long-Term Trends

There are various long-term trends that shape the real estate market of the future. These trends will shift aggregate demand across and within sectors and markets.

- **Supply Chain Diversification**

The rise in e-commerce has driven a sharp increase in industrial demand over the last decade. Supply chain diversification, driven by deglobalization and Covid-19 supply shocks, is impacting the type and location of

industrial demand. Companies are shifting manufacturing and shipping models to include onshoring, near-shoring, and friend-shoring. This shift is expected to drive demand for smaller scale, heavier power use, light manufacturing facilities, and mid-sized and larger distribution centers.

- **Housing Shortage**

The residential sector is supported by long-term trends such as housing shortages, strong liquidity, and unaffordability in the for-sale segment. The shortage is most pronounced in Europe due to regulatory environments and unfavorable development economics. In the US, record deliveries in Sunbelt markets have added to multifamily stock, pressuring near-term fundamentals. Japan is experiencing a rare wage growth cycle, fuelling rent growth in major cities. Demographic changes, particularly among millennials, are also shifting demand towards more space and affordable rental options.

- **Aging Populations**

The global population is increasingly skewed towards the elderly, impacting workforce growth, spending patterns, and residential needs. Aging populations will drive demand for senior living facilities and healthcare services, although some seniors are opting to age at home due to high interest rates. Long-term demand for life science facilities remains strong, but the pullback in venture capital has challenged leasing for early-stage biotech companies.

- **Office Market Challenges**

Office fundamentals remain challenged, especially in the US, where vacancy rates are high. Occupiers are trading up in quality and down in size, consolidating demand to the highest-quality assets in vibrant locations. The magnitude of office debt maturities and high capex needs will likely result in distress and significant price declines for more challenged assets.

- **Increasing Tourism**

Post-Covid-19 travel has fuelled hotel fundamentals in the US and Europe, but cyclical economic slowdowns and geopolitical tensions are expected to normalize demand. The recovery of corporate and international travel, growing middle class, and millennials' preference for experiences over goods will likely offset macro and geopolitical risks.

- **Green Discount**

Global climate goals are leading to discounts for buildings that do not comply with sustainability measures. Investment strategies that seek to add value by transforming underperforming buildings in terms of sustainability are gaining popularity.

- **Artificial Intelligence will fuel datacenter growth**

One of the most discussed trends recently is the rise of Artificial Intelligence (AI).

While it is too early to determine all its real estate implications, the manipulation and storage of data associated with AI has already led to higher aggregate demand for data centers. Additionally, severely constrained supply underpinned by the shortage of power will likely lead to very robust fundamentals over the medium term.

Sector view

Several long-standing secular trends continue to shape the market, such as housing shortages in Europe, Canada, and Australia, and the evolving definition of core real estate to include niche sectors like single-family rentals (SFR) and industrial outdoor storage (IOS).

Favored sectors are:

- **Logistics**

Logistics fundamentals have softened as Covid-19 demand dissipates and supply materializes. Vacancy rates and rent growth have cooled, but this is temporary. Investors should consider supply-constrained markets and onshoring trends, especially in e-commerce and key ports.

- **Residential real estate**

Homebuilding lags population growth globally, intensifying housing shortages. Home prices and rents rose sharply. Suburban housing and student accommodations are promising. In Asia-Pacific, Australian build-to-rent benefits from population growth, affordable rents, and tax concessions.

We have a balanced view on:

- **Retail**

The retail sector is recovering from e-commerce disruptions, with the US leading due to population growth. The UK and Spain show promise, while Asia lags. Post-pandemic demand and reduced uncompetitive inventory have strengthened retail globally. Investment opportunities exist in European outlets, Canadian malls, and US open-air centers.

And have a low conviction on:

- **Offices**

The office sector outlook is mixed: US markets struggle due to remote work, Asia sees low vacancy rates with employees returning, and Europe has a shortage of prime offices. Asia-Pacific markets have the best outlook, US the worst, and Europe is intermediate.

Listed versus direct real estate

The short term 'noise' or 'equity beta' of owning listed real estate versus owning direct real estate is the result of financial market liquidity and has discouraged some investors from investing in the sector despite inherent pricing and tax efficient diversification opportunities. In contrast to these shorter-term moves assuming longer-term holding periods akin to owning real estate directly, performance of listed real estate corresponds with the underlying real estate performance.

For listed real estate, we see some remaining value in companies that still have repricing potential given the quality or improvement potential of their assets, or improvements in balance sheet ratios that are not being fully reflected in the price yet. In addition, we see potential in companies that we believe will benefit from the ability to realize growth as investment markets open.

We believe much of the performance potential of the listed real estate sector will be front-ended given listed real estate's positive relative performance vs other equity sectors around rate cutting cycles as well as the resumption of company growth models. Investor positioning is also very low and as debt financing risks move to the background, we expect the sector to increasingly benefit from its defensive earnings characteristics. Already the sector showed its defensive quality in recent market volatility.

Conclusion

In summary, while not all metrics are signaling an all-clear, the broader real estate market as well as listed real estate are heading in the right direction. We believe the period of transition to a new market regime that has yet to fully take shape will provide sound investment opportunities. Such period is inherently defined by uncertainty and vulnerability. When central banks continue to cut interest rates, however, this should provide some stimulus for improved confidence and greater deal activity. Moreover, fundamentals in many markets, perhaps cooler than they were a year ago, are still quite healthy.



Conclusion

As outlined in this outlook, the world economy is entering a new phase, gradually overcoming the remnants of the Covid-19 pandemic and the inflation shock. While the worst-case scenarios many feared did not materialize, the repercussions remain evident.

Global economic growth has been reasonable in the last quarters. The US economy in particular has fared positively despite restrictive monetary policies, underpinned by strong consumer spending and fiscal support. In contrast, the European economy has lagged behind the US, experiencing only marginal growth. The energy crisis and lack of technological innovation has constrained Europe in the last few years. In China, growth has been below pre-pandemic levels, primarily due the sharp slowdown in the real estate market. Also, a more interventionist government might have stifled private sector innovation. China has been investing heavily in energy infrastructure and in more advanced manufacturing. These investments have led to overcapacity but might prove to be growth drivers in the longer term.

On a global scale, inflation is steadily retreating towards target levels. This positive development was far from certain a year ago, making it a significant achievement. Although the journey is far from over, central banks have begun to ease restrictive monetary policies, shifting their focus from controlling inflation towards economic growth.

In the long run, the economic landscape will be shaped by various themes presented in this outlook. Technological advancements are progressing rapidly, with Artificial Intelligence (AI) currently the main focus of investors. Additionally, innovations in batteries, energy generation, and biotechnology hold the potential to boost productivity and improve well-being.

In the near term, politics and fiscal policies are likely to impact both the macro economy and financial markets. Geopolitical risks will influence the global economic balance of power as economic blocs engage in an open contest for technological supremacy, resources, and influence. Fiscal positions, already fragile, have deteriorated further in many countries.

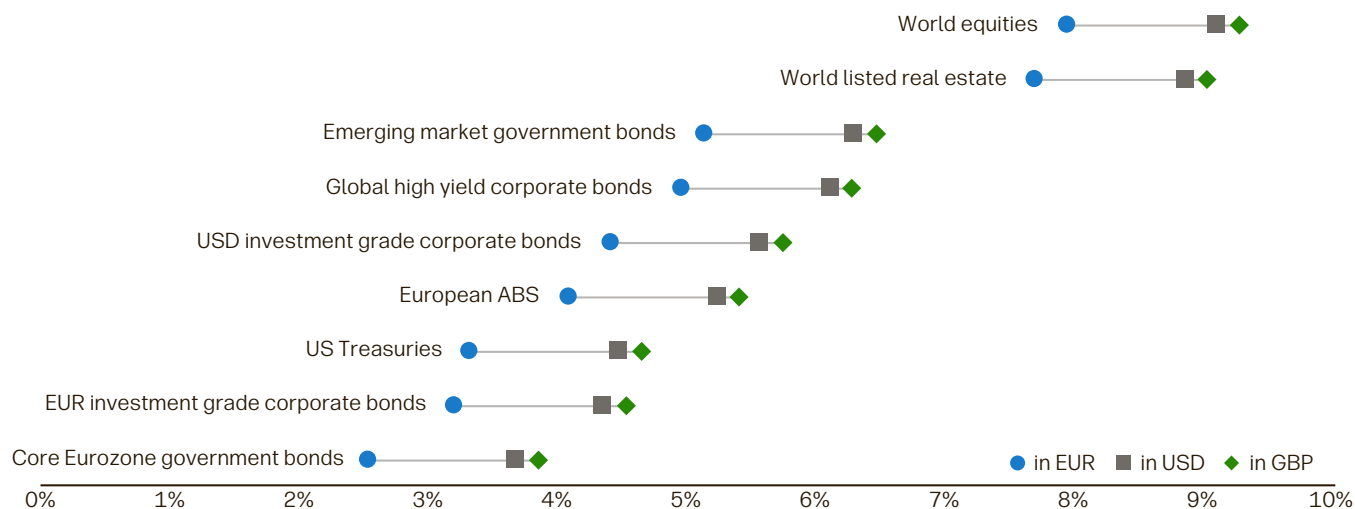
Coupled with declining workforces due to demographic shifts, this is likely to constrain potential growth. The rise of populism also poses a risk to economic growth, given its often counterproductive policies on trade and international cooperation. Simultaneously, the escalating costs of climate change and necessary adaptations are becoming a pressing concern as the earth warms at an unprecedented rate.

Combining the current economic stance and the factors that will shape the economy in the coming years, our macroeconomic and market outlook is on balance mildly positive. We expect US growth to cool down but not collapse, and in Europe, we anticipate the period of stagnation to end, but growth to remain relatively subdued. Our inflation outlook is based on further normalization, with inflation rates converging to central bank targets. Consequently, we expect monetary policy to be eased in the coming period, moving towards more neutral rates.

Translating our macroeconomic outlook to financial markets results in a balanced outlook. Return expectations in fixed income markets are relatively high on the back of high and declining sovereign yields. A significant pick-up is still available in some credit markets, specifically in alternative fixed income. We expect credit spreads to have periods of volatility in the short run as the extent and depth of any slowdown and the lagged effect of monetary policy remains uncertain. Altogether, we argue the credit spreads are likely to be sufficient to compensate for defaults. Companies, in general, have limited leverage and have been able to roll forward their debt profile. Specifically alternative fixed income categories are well-positioned. Spreads remain elevated and the consumer and housing market dynamics have been strong. These are well-positioned to perform in various economic circumstances. We prefer an overweight to these categories. Equities have run

far in the recent years and are vulnerable to a turn in sentiment, however due to megatrends in the rise of AI and the increasing concentration of technological capabilities we remain constructive on equities on the medium term. Current valuations for listed real estate are reasonably attractive, and the asset class can act as a more defensive anchor in portfolios.

Figure 1: Expected returns for USD, EUR and GBP for major asset classes.



Source: Projections provided by Aegon Asset Management¹. Data as of Sept-2024. For illustrative purposes only. See disclosures for additional information.

¹Return and volatility estimates are based on economic and market outlook, which combines quantitative and qualitative factors. Inputs are amongst others expected fiscal and monetary policy, economic growth, central bank policy, interest rates, spread, default expectations, recoveries, rating migrations, dividends, buybacks, earnings growth, multiple changes, interest rate differentials, basis spread, supply and demand factors and curve shapes. These estimates are inherently highly uncertain and should not be directly relied upon



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