



Santander
Investment Services
A Division of Santander Securities LLC



Santander
Private Client

Extending
the investment
horizon

Market Outlook 2024



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The importance of ensuring returns beyond the short term

Dear Investor,

I am writing to thank you once again for placing your trust in Santander and to outline the main messages in this Market Outlook 2024.

Though economists love to produce very "mathematical" rules for the performance of macroeconomic variables, the fact is that the post-pandemic economy is departing from patterns observed in the past. In particular, the fastest interest rate increase in decades is only slowly moderating growth and inflation, raising doubts about the current macro dynamic.

Sir John Templeton said that "the four most dangerous words in investing are 'this time it's different.'" So, to avoid that error, we'll say that **"this time it's taking longer."** On that basis, our central scenario for 2024 is for **economic growth to slow down** (while avoiding a major global recession); **inflation to ease** (but remain high) and **interest rates to start falling** (gradually).

What to do in this environment? The lack of visibility so far on the end of the interest rate hiking cycle, coupled with a new episode of geopolitical risk in the Middle East, has led investors to **focus on short-term investment solutions**, as these have been the main beneficiaries of the increase in interest rates.

However, we believe it is necessary to **combine this approach with strategies that enable us to extend these returns over a longer period**. Specifically, we would like to propose three complementary lines of action:

1. In the past, an environment of slowing economic growth coupled with peak interest rates has been good for **long-term bonds**, so it would appear advisable to increase the duration of fixed-income portfolios.
2. In addition, besides government bonds and money markets, there are other assets with moderate credit risk and trading at **reasonable valuations** that represent attractive investment opportunities, such as investment grade corporate bonds. This makes it possible to construct balanced investment portfolios with a better risk-return profile than in recent years.
3. Finally, our report analyzes **four major strategic shifts for which it is advisable to be positioned**. The world is facing profound transformations in its **energy model**, in the **geopolitical outlook**, in the **use of technology**, and in the **access to financing**. These factors may result in significant investment opportunities (e.g. near-shoring, artificial intelligence, decarbonization, private markets) in the long term.

Please feel free to contact our bankers and investment teams to discuss **how to combine short-term security with these new investment opportunities over a longer investment horizon**. We hope that you find this report interesting and useful. We are available to discuss it or elaborate upon it.

Yours,



Víctor Matarranz
Global Head
Santander Wealth Management & Insurance Division



Key Messages 2024

Rates will fall in 2024

From “how high” to “how long”

The impact of the steepest interest rate hike cycle in decades is proving to be more muted than expected. **Consensus has shifted** from the inevitability of a recession to a soft landing. The market now gives a high probability to an economy that can sail through without a major crash despite high interest rates. In our view, the **economic slowdown has not abated; it is merely occurring with a significant delay compared to other cycles.** Ultimately, high interest rates will lead to a slowdown in growth, which in turn will lead to a fall in interest rates. This time is not different, it is just taking longer.

Growth is resilient but not immune to rates

Underpinned by a strong labor market and healthy balance sheets, the private sector is displaying a considerable capacity to absorb the shock of rate hikes. A recession similar to past cycles is unlikely, **but the environment will be one of low growth as long as financial conditions remain so restrictive.** The greatest risk to this scenario is the fragility of public finances. The public sector, which has been very supportive of the economy in recent years, will eventually have to undertake the effort of bringing the fiscal deficit back on track. The arithmetic of high deficits and elevated interest rates in a low growth scenario may be called into question in the not-too-distant future.

Focus on four global shifts

Broadening the view of the cycle

In our view, both the level of interest rate neutrality and the level of inflation are likely to be structurally higher than they have been in the past. Tensions between labor supply and demand appear to support a higher inflation rate. After a decade of relying on ultra-expansionary policies in both the fiscal and monetary realms, **we are now headed towards a period of greater moderation and orthodoxy in the implementation of economic incentives.**

Another factor that will impact economic growth in coming decades is the **low population growth** in most developed countries. This demographic trend is likely to result in a shortage of skilled labor.

Four major paradigm shifts

We believe the world is witnessing accelerating change as a result of the interaction of four major transitions.

The first upheaval is driven by the need for a **radical shift in the energy model** to meet the challenge of decarbonization by 2050. At the same time, we are witnessing the most disruptive technological breakthrough since the advent of the internet with the dizzying growth of **artificial intelligence solutions.** We are also facing a **shift in the geopolitical and economic balance** as a result of the difficult relationship between China and the United States. Finally, investors are witnessing a **structural shift in the sources of corporate financing**, with a greater role for private markets both (private equity and private debt).

Investing beyond the short term

Harnessing both the short and long term...

Investors currently have a wide range of investment options that offer returns above the average of recent decades. But none compares as favorably to recent historical benchmarks as the return on short-term government bonds. This combination of maximum safety and improving returns is likely to tempt many investors to seek excessive shelter in the short term. **From a broader investment perspective, we believe it makes sense to be positioned in more diversified portfolios** that can consolidate current high yields over longer horizons.

... and positioning portfolios for the next cycle

In this era of disruption, it makes sense to broaden the horizon of opportunities beyond traditional and conservative assets. With a long-term perspective, investors may want to consider the combined effects of inflation and innovation, and explore investments in equities and private markets. Investment opportunities are becoming less of a monopoly of listed markets, and it is important to evaluate positioning in alternative funds that invest in private markets in order to access a wider range of opportunities. Be ready to capitalize on the opportunities arising from changing trade flows (positioning in countries that benefit from nearshoring) and from the introduction of artificial intelligence solutions and more efficient energy.



Strategies to invest beyond the short term

1. Expand the opportunity of short-term rates

The peak in interest rates and the gradual decline in inflation have led to the highest real interest rates in recent decades. The market has discounted that this scenario is likely to continue for a longer period ("higher for longer") and this provides an opportunity to lock in the current high interest rate level for an extended period. **Investors who choose to flee to shorter-dated assets will probably not enjoy this level for long.** We believe there is value at the long end of the curve in the major geographies. It is worth positioning portfolios to capture this yield potential beyond the short term. Higher yields make government bonds attractive, and these securities provide additional benefits such as diversification in the event of a sharper economic slowdown.

2. Enhance returns with high-quality credit

The environment of below-potential economic growth calls for a cautious approach to credit risk management. However, the market is trading at risk premia that broadly reflect rising corporate bankruptcies in line with this low-growth scenario. We believe it makes sense to consider increasing the allocation to corporate bonds of companies with strong balance sheets and sound business models in order to capture the credit risk premium. **Current levels of investment-grade corporate bond yields are attractive by historical standards, and the quality of balance sheets in most sectors can withstand an economic slowdown.** For the first time in many years, investment-grade credit offers yields that are competitive with equities.

3. Maximize diversification in fixed income

The fixed income market is offering attractive yields relative to historical levels in virtually all segments and geographies. At present, lower volatility instruments (government and high-quality corporate bonds) offer the best risk/return trade-off. However, portfolios can be improved by adding instruments that combine higher volatility and potential return. **When you position yourself positively on the government bond curve and pair it with a risk premium on corporate bonds that have high geographic and sector diversification, you can get adequate risk and reward,** resulting in the highest yield since the Great Financial Crisis.

4. Search for optionality and valuation support in equities

One of the benefits of rising interest rates across all tenors of the yield curve is that it facilitates the structuring of investment solutions with different combinations of protection and underlying risks. The potential to invest in structured products is also supported by low levels of volatility in equity markets. In addition, there are opportunities to invest in sectors and regions where valuation levels already reflect an adverse economic growth scenario. **The risk-return profile of equities is less attractive than that of bonds in the short term (earnings may disappoint in 2024), but it improves as the investment horizon is extended.**

5. Explore the growing opportunity of private markets

Financial markets are undergoing a radical transformation in which public markets and the financial system are losing their monopoly on financing business projects. **Private markets are becoming increasingly important in providing access to capital and liquidity** for the creation, expansion and restructuring of companies. Investors wishing to participate in a broader set of global market opportunities and to achieve higher levels of profitability have access to a growing number of alternative investment solutions (private equity, infrastructure, private debt, venture capital, etc.). We see a strong backdrop for secondaries and opportunistic private investing in corporate credit. Lower availability of funding in private equity encourages more financial discipline in capital deployment.

6. Position your portfolios for new paradigms

The scale of investment required to address the energy transition, the artificial intelligence revolution, and supply chain realignment is of historic proportions. Investors should consider these strategic shifts and extend their investment horizons to capture the growth differential and productivity improvement potential. With a long-term perspective, our suggestion is to position ourselves in investment themes linked to electrification, machine learning, renewable energies, and nearshoring or robotics, to mention a few. It is very likely that in the next decade we will experience an acceleration in the development and implementation of these trends, so it is advisable to incorporate them into medium and long-term investment profiles.



In depth:

01 Rates will fall in 2024

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Growth is resilient but not immune to rates

Underpinned by a strong labor market and healthy balance sheets, the private sector is displaying a considerable capacity to absorb the shock of rate hikes. A recession similar to past cycles is unlikely, **but the environment will be one of low growth as long as financial conditions remain so restrictive.** The greatest risk to this scenario is the fragility of public finances. The public sector, which has been very supportive of the economy in recent years, will eventually have to undertake the effort of bringing the fiscal deficit back on track. The arithmetic of high deficits and elevated interest rates in a low growth scenario may be called into question in the not-too-distant future.

Interest rates will fall in 2024

The process of interest rate hikes by most central banks has been historically intense and prolonged given the persistency of the inflationary shock. Markets have had to digest a more forceful monetary tightening than initially expected and have been adjusting expectations to a "higher for longer" scenario throughout 2023. As can be seen in the bottom left chart – and using the U.S. interest rate curve as a reference – **the monetary adjustment process appears to have peaked**. The upward shift in rate expectations has occurred in two phases. The first stage was the adjustment in short-term ("higher") interest rates, which was briefly interrupted by questions following the intervention of some financial institutions (Credit Suisse in Europe and SVB, Signature and First Republic in the United States). Once the market got reassurance that the problems in the financial system were limited to a few institutions with idiosyncratic problems, **the tightening of monetary policy resumed in a second phase, in which the adjustment shifted to the longer end of the yield curve ("higher")**.

Central banks (with exceptions such as in Japan or China) have taken interest rates to levels that are very restrictive to economic growth, and monetary authorities are aware that **the intensity of the restriction should be sufficient to moderate inflationary pressures**. In the bottom right chart, we can see how the wave of interest rate hikes that peaked at the end of 2022 appears to be waning, and monetary authorities are moving from **wondering "how high" to raise rates to questioning "how long" to keep them high**. This shift is already well underway in some emerging economies, and central banks such as those of Chile and Brazil, which had started monetary tightening earlier, have already moved to lower interest rates. If it is confirmed that interest rates have indeed peaked, this would remove one of the main sources of uncertainty for investors. In particular, **the investment outlook for the most interest rate sensitive asset classes (mainly fixed income) appears clearer**. Ultimately, high interest rates will cause growth to slow which will bring interest rates down and provide relief to bond markets.

High probability that the rate hike cycle is over in major economies

The market is shifting its focus from "how high" to "how long"

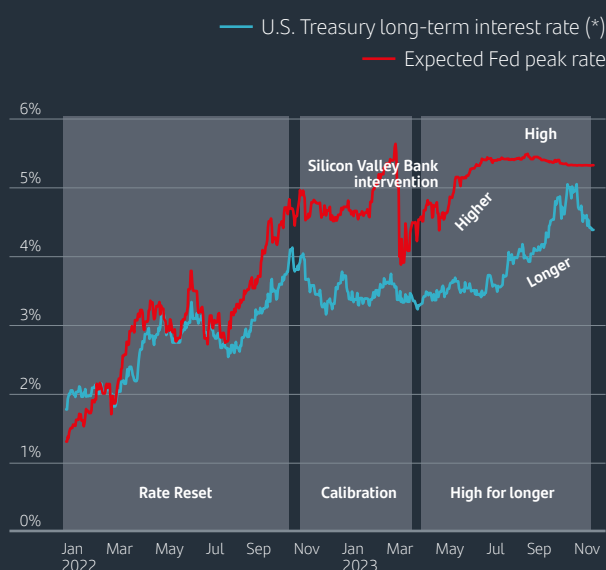
Rate cuts are not imminent (except in emerging economies) but will eventually occur in 2024

The cycle of interest rate hikes seems to have ended: next move should be lower rates

Source: Bloomberg. Data as of 11/22/2023.

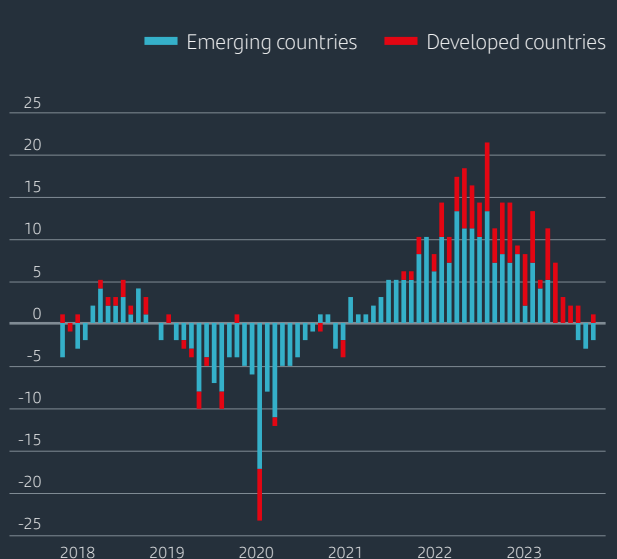
The market has already adjusted in both the short and long ends of the yield curve

End of monetary adjustment



(*) Rates in 5 years within 5 years (5Yr-5Yr forward).

Number of central banks increasing minus central banks cutting rates



A negative number means more banks are cutting interest rates than those increasing.

This change in monetary policy is made possible by the **confirmation that inflationary pressures are easing** in most economic sectors. As shown in the left-hand chart below, the spike in inflation was very significant due to the combined effect of the post-pandemic reopening and the invasion of Ukraine: more than 8% in headline inflation and around 5% in core inflation in both the United States and Europe. The types of price pressures have been diverse, **but important sources of inflation have gradually receded, especially those related to demand for goods, transport and energy.** Consumer demand has shifted from goods to services and the weakness in manufacturing activity is pushing down industrial prices (China is again exporting deflation through its production costs). The contribution of supply-side forces (supply shortages, market disruptions, etc.) to inflation seems to have subsided.

The most concerning aspect of the price stabilization process lies in the services component where inflation is being more persistent due to two factors: the tightness of the labor market and the shift in consumer demand from goods to services as a result of post-pandemic normalization. The strength of employment despite the deterioration in economic expectations and rate hikes is explained by the greater propensity of firms to retain workers in an environment of significant shortage of skilled labor due to demographic trends. In both the Eurozone and the United States, the unemployment rate is only a few tenths of a percent above its lowest levels in recent decades which is driving demand for wage increases (as recently seen in the automotive sector in the United States). This means that **the U.S. Federal Reserve, the ECB and the Bank of England will continue to favor a policy of high interest rates for longer, to allow the delayed impact of rate hikes to be reflected in the economy.**

Nevertheless, as the inflation projections in the charts below show, **we expect the disinflationary trend to continue through 2024.** In this environment, **we expect central banks to confirm market expectations that interest rates have peaked and that the next move will be downwards.**

Central banks are relieved by the confirmation of the downward trend in inflation indicators

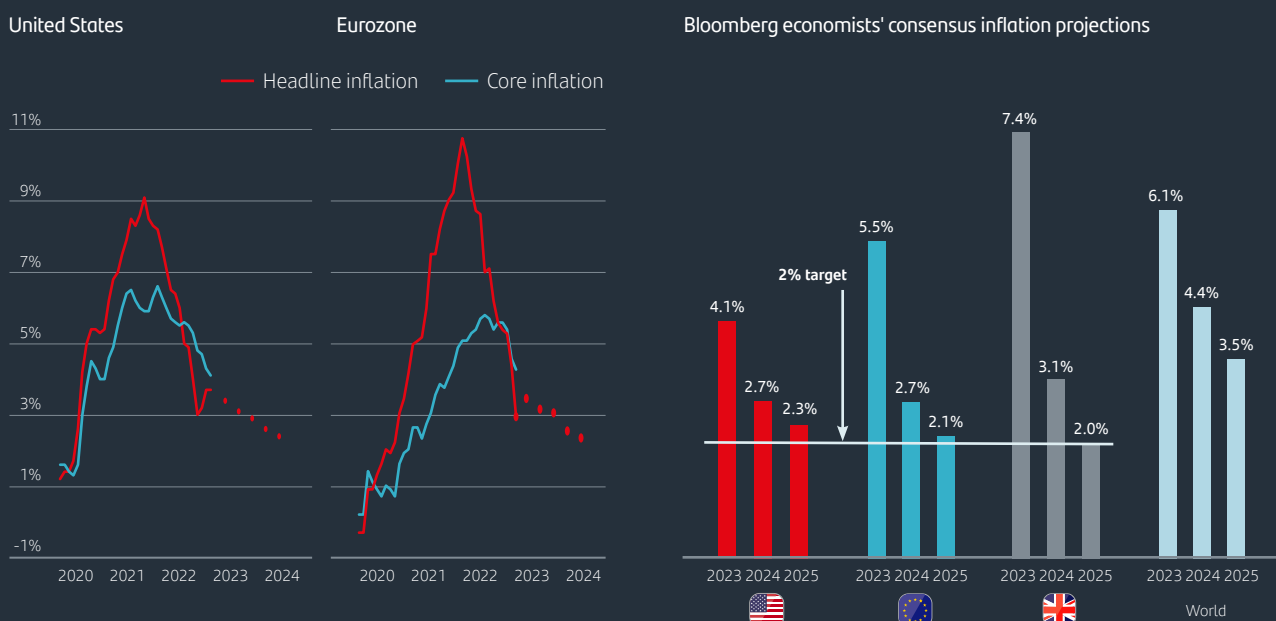
The fight against inflation cannot be won until there are drops in prices within the services sector

We expect the disinflationary trend to continue in 2024, but central banks will remain vigilant

The consensus of economists foresees a continuation of disinflation in 2024

Source: Bloomberg economic forecasts. Data is year average. Data as of October 2023.

Inflation will continue to decline in 2024, although it will remain above the 2% target



Another factor supporting our view that interest rates have peaked is our **scenario of a gradual slowdown in the economy over the coming quarters**. Data from the U.S. Bureau of Economic Analysis shows annualized growth was 4.1% in the second half of 2023. We believe that it cannot be extrapolated and that there will be signs of a slowdown in the coming quarters. In our view, the effects of monetary tightening will become more evident, and growth in 2024 will be lower than in 2023. The chart on the bottom right shows the expectations for GDP growth by the consensus of economists published in Bloomberg and shows a moderate slowdown in economic activity to levels below the average of the last decade. **While avoiding recession in a broad sense, the economy in 2024 will show that it is not immune to the effects of rising interest rates.**

There are differentiating aspects of this economic cycle that have caused a longer lag in the transmission of restrictive monetary policy to economic growth. In particular, the fiscal expansion programs approved during and after the pandemic (Inflation Reduction Act, Next Generation EU, etc.) have continued to support the economy. In the United States, the stimulus programs were particularly generous and the aid to families allowed for an enormous savings surplus that has served to cushion the loss of purchasing power resulting from the upturn in inflation. In addition, many households and businesses took advantage of extraordinarily low pre-2022 interest rates to refinance their mortgages at fixed rates over an extended period. **But quarter by quarter, the fiscal momentum is fading, accumulated savings are dwindling, subsidy programs are expiring (e.g. student loans in the U.S.) and more loans are being rolled over at much higher interest rates.**

We believe that a further weakening of growth in the coming quarters is inevitable as a side effect to the progress in controlling inflation. Higher interest rates have been slow to show their impact, but we will observe a greater effectiveness in the monetary transmission mechanism with a weakening of job creation, a restriction in investment plans and an increase in the number of companies and families struggling to meet their financial obligations. **This greater visibility of the loss of momentum in economic activity will shift the focus of central banks from inflation to growth, making rate cuts possible in the second half of 2024.**

The effects of monetary tightening are being felt with a longer lag, but will eventually affect growth in 2024

A number of differentiating factors have mitigated the impact of high interest rates in the post-lockdown economy

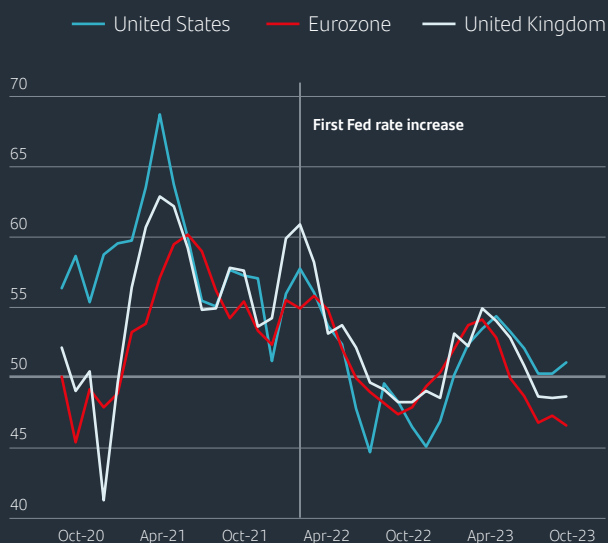
The economy will eventually become susceptible to monetary tightening, which would prompt a shift in monetary policy bias

Moderation in business confidence indicators foreshadows slower growth in 2024

Source: Bloomberg. Data as of October 2023.

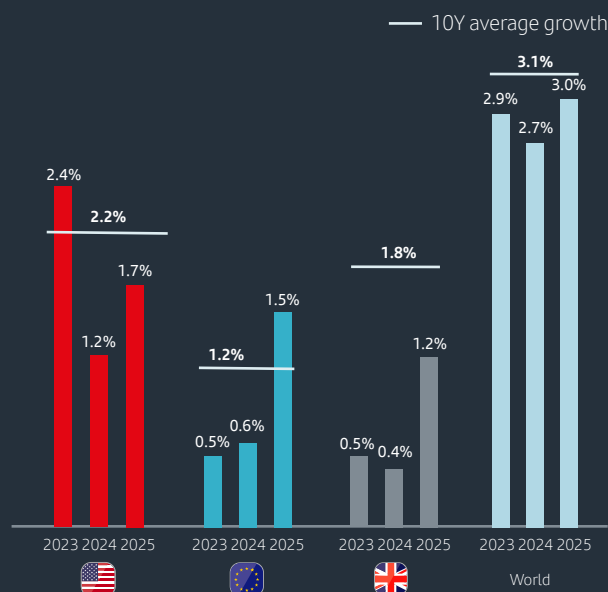
The economy is slowing but it is not falling into recession

Composite PMI (Business confidence)



Levels above 50 are indicative of expansion and below 50 indicate a contracting economy

GDP Growth



If the forecasts above are true, they would imply a slowdown, but a moderate one compared to previous periods of rising rates.

There is a lot of debate among economists about the nature of the economic slowdown we are facing and how it differs from previous cycles, with the current consensus using the term "soft landing". That term refers to a very moderate downturn cycle in which central banks' price stability objectives are achieved at a moderate cost in terms of job losses and below-average economic growth. **In our view, the more accurate term would be "long landing", as this slowdown is characterized by the fact that it is protracted and gradual,** which contributes to the impression of moderation.

In our view, **the differentiating factor that allows the adjustment to be moderate and protracted is the low level of private sector debt in the current cycle.** As shown in the charts below, households and, to a lesser extent, corporations have been very cautious in their financing and spending decisions over the past decade. The banking sector, under regulatory pressure in the aftermath of the Great Financial Crisis, has also played an important role in moderating leverage. Furthermore, many households and businesses have extended the maturity of their debts, resulting in a more gradual pass-through of rising interest rates. This financial discipline is one of the reasons why this slowdown is moderate. The private sector will not have to aggressively cut back on consumption and investment because it has avoided financial excesses in the recent past.

In summary, we predict that the economy in 2024 will continue to experience disinflation, with high interest rates impacting investment and spending. However, we anticipate a shift in monetary policy in the latter half of the year, with developed economies reducing interest rates following the lead of emerging economies. **We believe that we have reached the interest rate ceiling, and now need to find the growth floor.**

The adjustment of this cycle is happening over a period, which gives the impression of moderation

The private sector has not built up excessive leverage in this cycle and does not need to make extraordinary adjustments

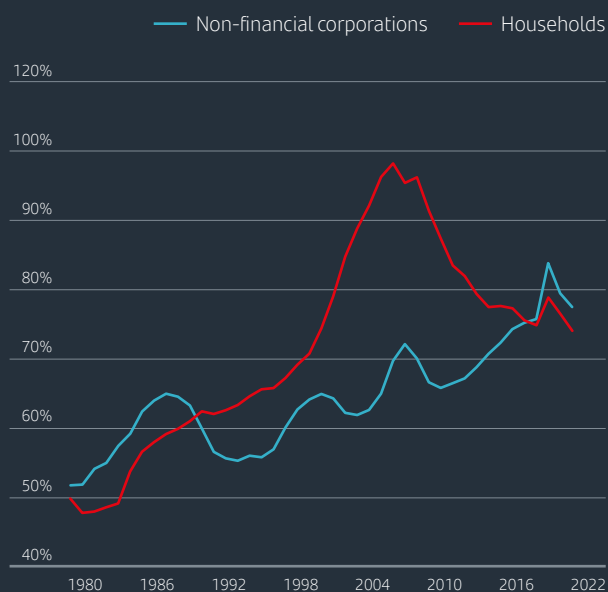
We do not see a slump in economic activity but rather a slowdown resulting from the delayed impact of rate hikes

Households and corporate debt (% of GDP)

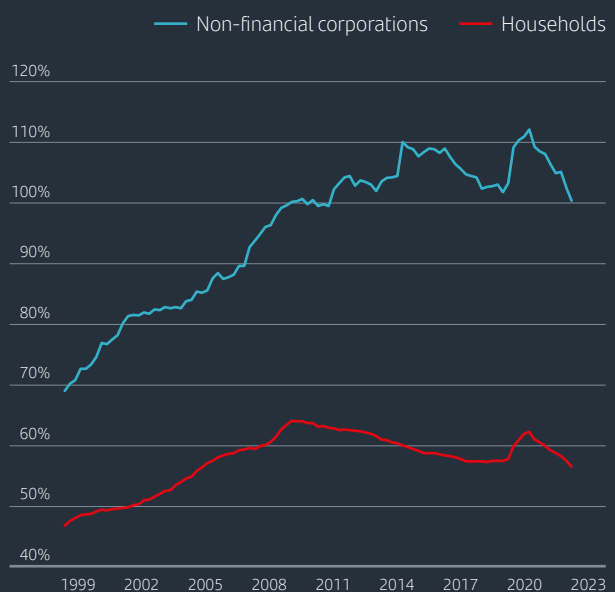
Source: Bloomberg. Data as of September 2023.

The private sector is moderately leveraged

United States



Eurozone



Risks: Geopolitics and public deficits

Our base case scenario of a prolonged and moderate adjustment in growth and falling inflation is vulnerable to the interaction of several factors, among which we would highlight two: geopolitical turbulence and the increasing vulnerability of public finances.

The bottom left chart illustrates this last area of concern with public debt levels near 100% of GDP in both the United States and the Eurozone. Macro projections are based on continued high levels of public spending and deficits in an environment of high interest rates and therefore rising debt servicing costs. **Fiscal policy support for growth may be challenged in the not-too-distant future as the market - or the electorate - becomes more aware of the long-term risks to financial stability** (just as ultra-expansionary monetary policy had to be reversed as inflationary risks emerged). In this cycle, the economy has been highly resilient to the adverse effects of rising interest rates because the private sector had not built-up financial imbalances. The opposite has been the case with public finances, which is why **we consider the sustainability of public debt to be a source of potential economic and market vulnerability**. The dynamics of 2024 being an election year in the U.S. could add further uncertainty regarding public finances.

In terms of geopolitics, we will closely monitor the developments in the relationship between the United States and China, the Ukraine conflict, and the conflicts in the Middle East. The graph on the right depicts the **rise in geopolitical risk perception** and the likelihood of economic contagion through energy price hikes, which have exhibited significant reactions historically. The alterations in consumer and investor confidence will be contingent upon these factors. **A key area of interest, which will only gain in significance as 2024 unfolds, is the forthcoming U.S. presidential election.**

Risks of revisions to our central economic scenario have a negative bias

The main area of financial fragility in the global economy is the growing indebtedness of the public sector

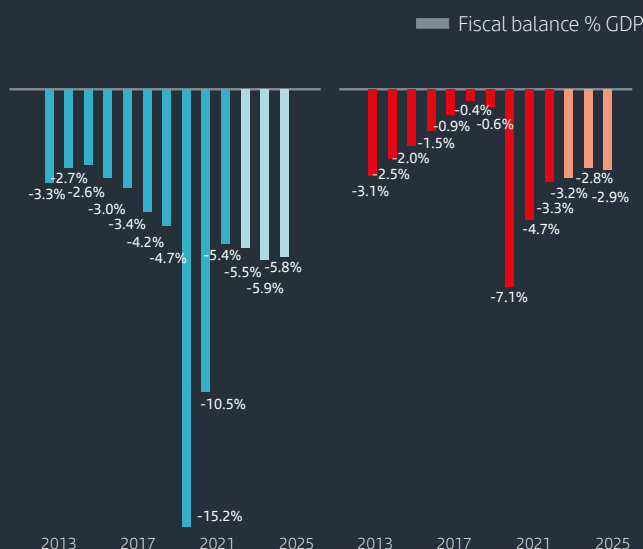
The 2024 United States presidential election and the subsequent developments in geopolitical affairs will take center stage

Key risks that may affect the base case scenario

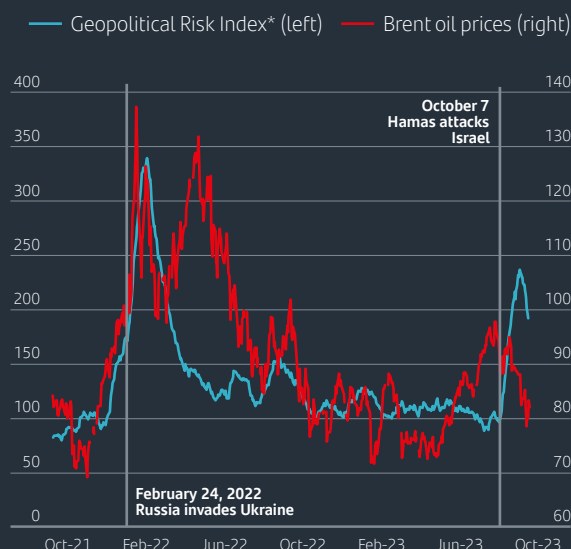
Source: Bloomberg, U.S. Congressional Budget Office (CBO) and European Central Bank (ECB) projections. Data as of 11/22/2023.

It's important to keep an eye on the trajectory of budget deficits and energy prices

United States



Geopolitical conflicts and oil prices



* Dario Caldara and Matteo Iacoviello construct a measure of adverse geopolitical events and associated risks based on a tally of newspaper articles covering geopolitical tensions, and examine its evolution and economic effects since 1900. Higher geopolitical risk foreshadows lower investment, stock prices, and employment. Higher geopolitical risk is also associated with higher probability of economic disasters and with larger downside risks to the global economy.



In depth:

02 Focus on four global shifts

Broadening the view of the cycle

In our view, both the level of interest rate neutrality and the level of inflation are likely to be structurally higher than they have been in the past. Tensions between labor supply and demand appear to support a higher inflation rate. After a decade of relying on ultra-expansionary policies in both the fiscal and monetary realms, **we are now headed towards a period of greater moderation and orthodoxy in the implementation of economic incentives.**

Another factor that will impact economic growth in coming decades is the **low population growth** in most developed countries. This demographic trend is likely to result in a shortage of skilled labor.

Four major paradigm shifts

We believe the world is witnessing an accelerating change as a result of the interaction of four major transitions.

The first upheaval is driven by the need for a **radical shift in the energy model** to meet the challenge of decarbonization by 2050. At the same time, we are witnessing the most disruptive technological breakthrough since the advent of the internet with the dizzying growth of **artificial intelligence solutions**. We are also facing a **shift in the geopolitical and economic balance** as a result of the difficult relationship between China and the United States. Finally, investors are witnessing a **structural shift in the sources of corporate financing**, with a greater role for private markets (private equity and private debt).

Focus on four global shifts

As we gain clarity around the new equilibrium in risk-free rates, it becomes more important to have a clear idea of the areas where we want to allocate capital to optimize returns in the long term. As we extend the investment horizon, **we identify four major transitions in which it will be key to position portfolios to generate differentiated returns:**

1) Energy transition and the challenge of decarbonization

The global energy landscape is undergoing a radical shift with investment in clean energy sources growing significantly faster than fossil fuel investment (see chart below). This shift marks a pivotal moment in the energy transition and reflects the growing recognition of the need to combat climate change and reduce carbon emissions. Moreover, commitments to decarbonization and energy security prompted by the invasion of Ukraine have driven clean energy policy in the world's largest economies. The U.S. Inflation Reduction Act (IRA) earmarks \$369 billion for green technology subsidies; the European Commission plans to award at least €250 billion (\$270 billion) to cleantech companies and has decided to bring forward the target of doubling installed solar capacity in the EU from 2030 to 2025. **Governments, businesses, and individuals worldwide are recognizing the immense potential of renewable energy** to provide sustainable, reliable, and environmentally friendly power sources for the future, further accelerating the transition away from fossil fuels.

The drive for investment in clean energy is leading to an accelerated shift in the energy production mix (see right graph). This accelerated change is generating enormous investment opportunities that are not free of volatility and uncertainty due to various factors (regulatory changes, shortage of materials, inflation of certain supplies, sensitivity to interest rates, etc.). The energy transition will involve the largest amount of investment in infrastructure in history, and the financial markets will be affected in multiple dimensions by this transformation.

Four global shifts will impact long-term growth and reallocate resources across economies and sectors

Public and private capital will continue to support the energy transition, creating investment opportunities

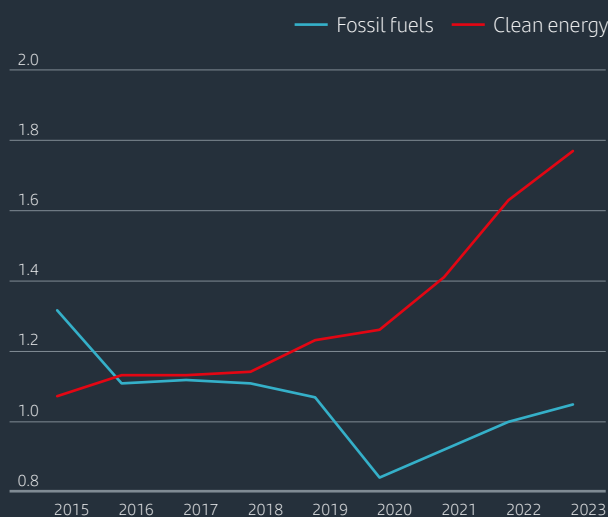
War and subsidies have accelerated investments in renewables, EVs and electrification

The drive towards decarbonization is boosting investments in renewables, energy storage and grid infrastructure

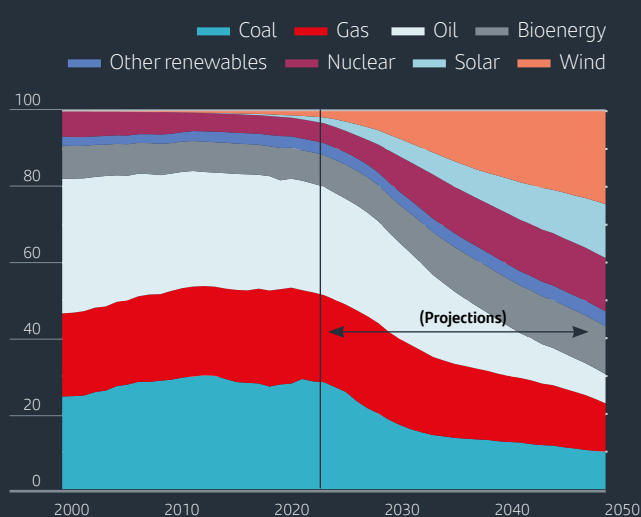
Source: AIE World Energy Investment 2023

Renewables, led by solar and EVs, are leading the increase in clean energy investment

Annual investment in fossil fuels and clean energy (Trillion US\$)



Primary energy by fuel (%)



2) AI revolution could boost productivity on a global scale

If energy transition is going to imply the biggest investment in infrastructure in the coming decades, artificial intelligence (AI) impact on productivity could add trillions of dollars in value to the global economy. Generative AI is bound to be the technological breakthrough of this generation and the impressive growth of ChatGPT (reaching 100 million users in just 2 months) could be marked as the event of 2023. **The implications of AI go beyond pure technology companies, transcending sectors and geographies as it has the potential to change the anatomy of work**, augmenting the capabilities of individual workers by automating some of their individual activities. The latest generative AI applications can perform a range of routine tasks, such as the reorganization and classification of data. But it is their ability to write text, compose music, and create digital art that has garnered headlines and persuaded consumers and households to experiment on their own. The buzz around AI is getting louder, tech stocks are hitting new highs, more than 2 million programmers are using it, and the big players are preparing to launch new AI tools.

The deployment of generative AI and other technologies could help accelerate productivity, partially compensating for declining workforce and boosting overall economic growth. The graph on the left illustrates how adverse demographic trends imply that, to maintain the level of growth, improvements in productivity are indispensable. Current challenges for corporations worldwide to fill vacancies in many critical areas highlight the fertile ground in which companies could increase technological investments to boost their AI capabilities and solutions.

Based on McKinsey estimates ("The economic potential of generative AI: the next productivity frontier"), the **automation of individual work activities enabled by these technologies could provide the global economy with an annual productivity boost of 0.2 to 3.3% from 2023 to 2040** depending on the rate of automation adoption. McKinsey analyzed multiple use cases across business functions in which the technology can address specific business challenges

Advances in generative AI could imply the dawn of an intelligence revolution – with exponential advances

AI-powered automation has the potential to boost worker productivity, offering competitive advantage to companies, sectors and economies that adopt this technology

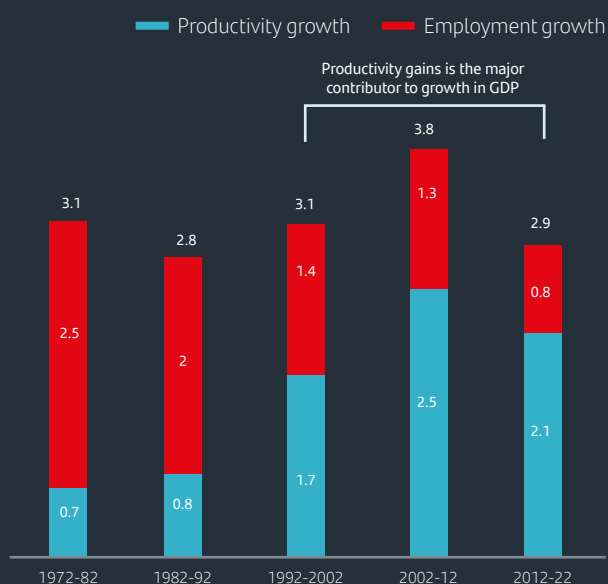
The pace of technological change in AI is breathtaking as the scope of use cases continues to expand at a staggering rate

Generative AI is poised to unleash the next wave of productivity boosting global economic growth

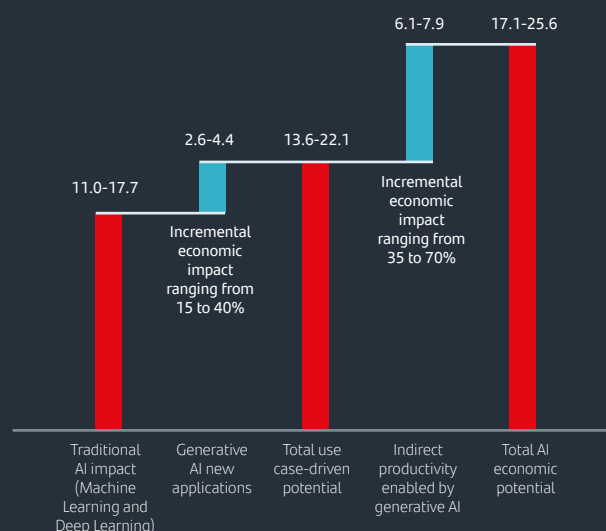
Source: McKinsey. "The economic potential of generative AI: The next productivity frontier". June 2023.

AI could unlock trillions of dollars in value across sectors from banking to life sciences

Real GDP growth contribution breakdown between employment and productivity, 1972-2022 (%)



AI's potential impact in the global economy (Bn USD)



that produce one or more measurable outcomes. **Those myriad increases in productivity that are likely to materialize when the technology is applied across knowledge workers' activities could range between US \$6.1 trillion and US \$7.9 trillion annually.** This is in the order of magnitude of the UK's gross domestic product in 2021 of around \$3.1 trillion. Generative AI is the most important technological development of the last several decades and investors cannot ignore its implications as they extend their investment horizon.

3) Geopolitical tensions and implications on global trade and investment flows

The simmering rivalry between the United States and China, exacerbated by trade disputes, technological competition and ideological differences, has created an environment of uncertainty and risk for companies operating on a global scale. **The disruption of supply chains in the wake of the pandemic highlighted the fragility of the global supply chain.** The war in Ukraine revealed Europe's energy vulnerability and overdependence on Russian gas. All this is leading to a gradual shift away from the traditional model of hyper-globalization, characterized by a deep integration of production networks across borders, towards a **more fragmented and regionalized approach to trade and a redirection of capital flows.**

In this regard, **friendshoring and nearshoring have emerged as alternatives to traditional global sourcing strategies.** For example, the United States has actively promoted a friendshoring strategy with its allies in the Indo-Pacific region, such as India, Vietnam and Japan, with the aim of **reducing dependence on China for critical goods and services.** Nearshoring, on the other hand, is attractive to companies seeking to reduce supply chain disruptions, as well as transportation and even labor costs, which is the case with the relocation of production to Mexico of U.S. companies. The graph on the right shows that **Mexico has taken over China as the largest source of U.S. imports** and that this trend looks set to continue in the future. This change is also evident in the evolution of foreign direct investment (FDI) flows as can be seen in the bottom left table. While it is true that

Hyper-globalization challenged by loss of confidence, disruption of trade flows and over-dependence

Nearshoring and reshoring refer to the regionalization or relocation of production centers

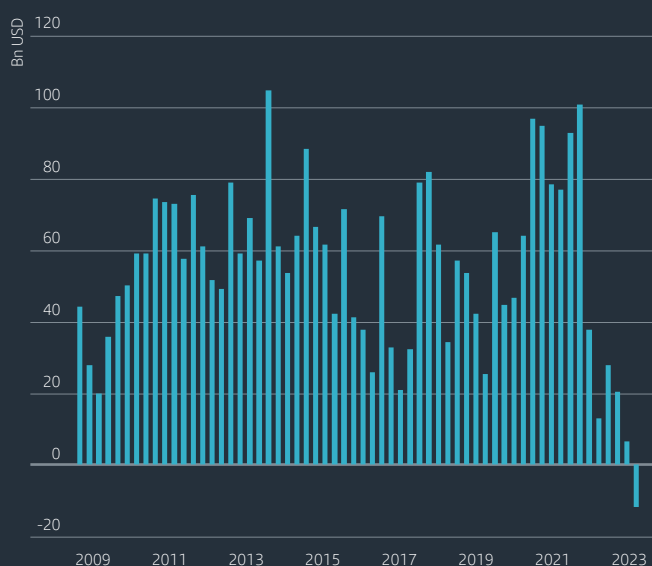
Foreign direct investment (FDI) flows have shifted in recent years, with China becoming less attractive to the rest of the world

Changing pattern of global trade and capital flows

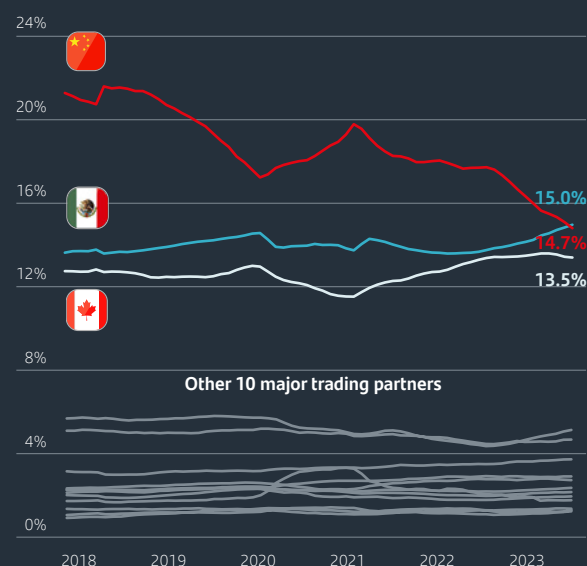
Source: IMF World Economic Outlook April 2023 and US Census Bureau. Data as of August 2023.

Geopolitical polarization has winners and losers

China's net FDI turns negative for first time since 1998



Breakdown of U.S. imports from different geographies (% monthly data)



FDI declined in absolute terms between 2020 and 2022 compared to the period 2015-2020, there are economies such as China that have seen an even greater drop (less direct investment was channeled to China from all regions of origin).

4) Financial markets in transition: the growth of private markets

The fourth paradigm shift we highlight is the capital access' change to finance technological innovation, the energy transition and all restructuring and growth projects that are creating value in the economy. It is not just energy, trade and technology which are facing major shifts: **financial markets are also entering a moment of fundamental transition.** Historically, stock exchanges and financial institutions were the main mechanisms for accessing new financing needs, but this role is increasingly shared with private markets. In the dynamic landscape of global finance, unlisted private markets – which encompass private debt, investment in infrastructure, natural resources, real estate and private equity – are increasingly key players in corporate growth and innovation (see chart below).

Private debt, characterized by loans made directly to companies by private investors, has been booming due to its flexibility in responding to the specific needs of companies at different stages of development. Private debt providers offer longer maturities, less stringent covenants and a more hands-on approach, encouraging long-term partnerships with investee companies. **Private equity**, on the other hand, consists of investing in unlisted companies, typically those with high growth potential but limited access to traditional financing channels. Private equity firms provide not only capital, but also expertise, operational support and a network of industry contacts, and play a crucial role in the success of their portfolio companies. While public markets remain essential to the global economy, many companies today have grown to dominant market positions without ever engaging with public financing.

A large part of the value creation of new companies takes place before their shares are listed on the stock exchange, which is why it is increasingly necessary to extend the scope of investment to the private markets.

Private markets have moved off the sidelines and into the spotlight for multiple industries and sectors

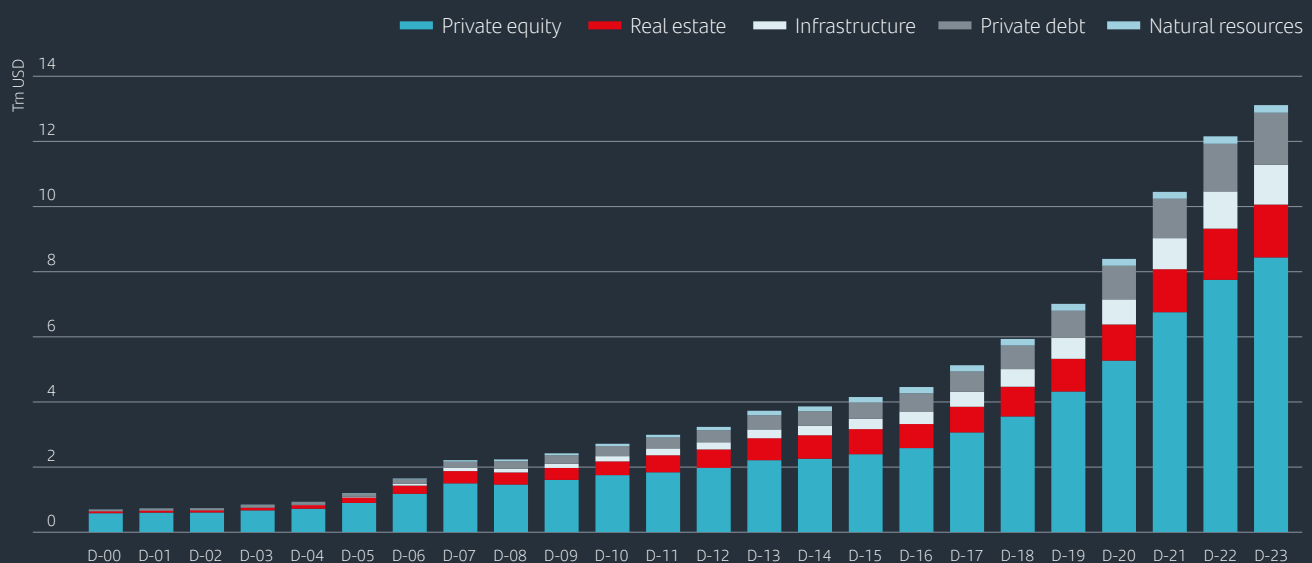
The opportunity cost of ignoring investing in private markets is increasing

These markets were initially restricted to institutional investors, but their access is increasingly open to other types of investors

Assets under management in the global private markets (Trn USD)

Source: Preqin. Data as of 11/22/2023.

The size of private markets has grown at an annual rate of 15% over the last decade





In depth:

03 Investing beyond the short term

Investing beyond the short term...

Investors currently have a wide range of investment options that offer returns above the average of recent decades. But none compares as favorably to recent historical benchmarks as the return on short-term government bonds. This combination of maximum safety and improving returns is likely to tempt many investors to seek excessive shelter in the short term. **From a broader investment perspective, we believe it makes sense to be positioned in more diversified portfolios** that can consolidate current high yields over longer horizons.

... and positioning portfolios for the next cycle

In this era of disruption, it makes sense to broaden the horizon of opportunities beyond traditional and conservative assets. With a long-term perspective, investors may want to consider the combined effects of inflation and innovation, and explore investments in equities and private markets. Investment opportunities are becoming less of a monopoly of listed markets, and it is important to evaluate positioning in alternative funds that invest in private markets in order to access a wider range of opportunities. Be ready to capitalize on the opportunities arising from changing trade flows (positioning in countries that benefit from nearshoring) and the beneficiaries of the introduction of artificial intelligence solutions and more efficient energy.

Opportunities beyond the short term

The attempt by central banks to control high inflation by normalizing monetary policy may soon be coming to an end. However, it has done considerable damage to the value of fixed income assets. Since benchmark interest rates began to rise around two years ago (from 4.5% in the eurozone to 13.75% in Brazil), investors have felt the pressure on valuations of various assets. Although some central banks are starting to cut rates, the recent experience has been negative for conservative investors, who are the most exposed to fixed income. **The bouts of instability and the negative change in bond values have affected investors**, especially those with greater concentration in fixed income securities. As a result, they are more likely to invest in risk-free assets.

The recent rise in yields on short-term investments is likely to encourage investors to prioritize stability over potential returns. The charts below illustrate a substantial increase in short-term investment yields for the two main benchmark currencies, both in nominal and real terms. This shift signals the end of a challenging period for risk-averse investors, who previously faced losses even in low-risk environments. While seeking short-term shelter after a volatile period is understandable, it is crucial to avoid sacrificing long-term opportunities. Cash yields do not provide lasting value over the long term. Investors' tendency to base future predictions on recent experiences can lead to ineffective financial decisions. This section outlines five strategies that can complement short-term investing and expand opportunities over a longer timeframe. By combining different types of risks, such as sensitivity to interest rates and cyclical of returns, investors can achieve a balanced portfolio with a safety cushion provided by short-term rates.

A higher level of certainty regarding the peak rates provides greater visibility into the valuation of assets

For the first time in decades, the starting point for investors (the risk-free interest rate) provides value net of inflation

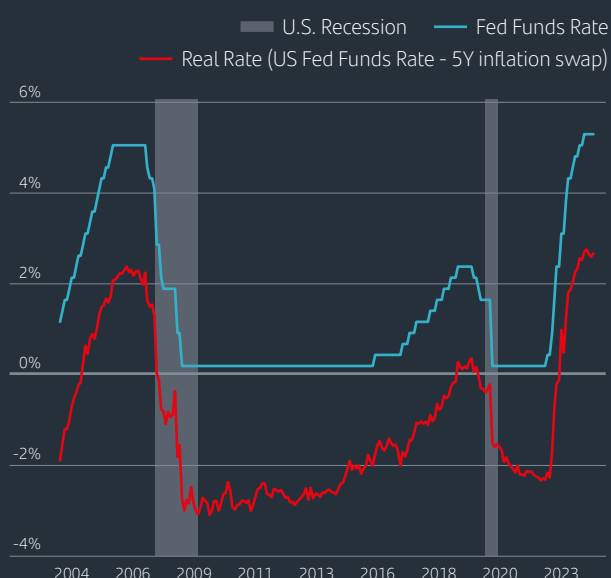
Favorable environment for combining short-term positioning with strategies that extend profitability over a longer period

Short-term rates in nominal and real terms

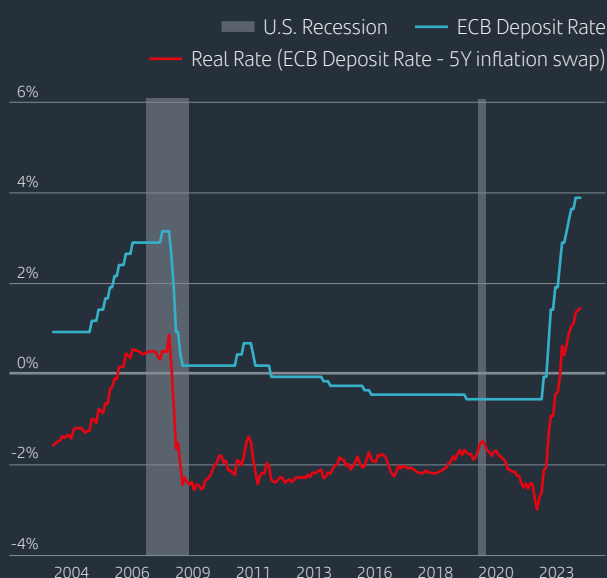
Source: Bloomberg. Data as of 11/22/2023.

15 years after the Great Financial Crisis, short-term rates finally provide value

United States



Eurozone



1) Extend duration in fixed income portfolios

The recent rise in inflation and central bank action to contain it has triggered a normalization of interest rates, leading to the largest correction in global bond markets on record (in nominal terms). This correction has been particularly severe for longer dated bonds, which are more sensitive to interest rate movements. **However, the ongoing disinflationary trend and the likelihood of a slowdown in economic indicators suggest that the attractiveness of positioning at the long end of the curve may be shifting.**

The chart below shows the advantages of extending the duration of fixed income portfolios when central banks are nearing the end of their tight monetary policies. The boxes in the chart represent the return on short-term investments (Fed Funds) compared to the return on long-term fixed income investments (10-year U.S. Treasuries) in the twelve months following the peak of interest rate hikes. As you can see, **the strategy of pivoting towards the long end of the curve has produced significant return differentials.** Only when inflation spikes sharply, forcing central banks to tighten monetary policy more aggressively (as in the early Volcker era of the 1980s), does staying in the short term become more profitable.

In addition, this strategy makes it possible to increase the defensive nature of investment portfolios because long-term bonds tend to perform well in negative economic growth environments. **The likelihood of a shortening of the "high for longer" period in interest rates is increasing, and we believe that the first strategy investors should consider is to increase the duration of their portfolios.** We believe that longer duration bonds provide greater resilience to portfolios, offering attractive yields today that can be locked in over a longer time horizon and the potential benefit of price appreciation in a recession. Long-term government bonds now offer an attractive asymmetric profile with significant upside potential and limited downside.

Interest rates are once again attractive, and the focus should now shift to extending these yields over a longer time horizon

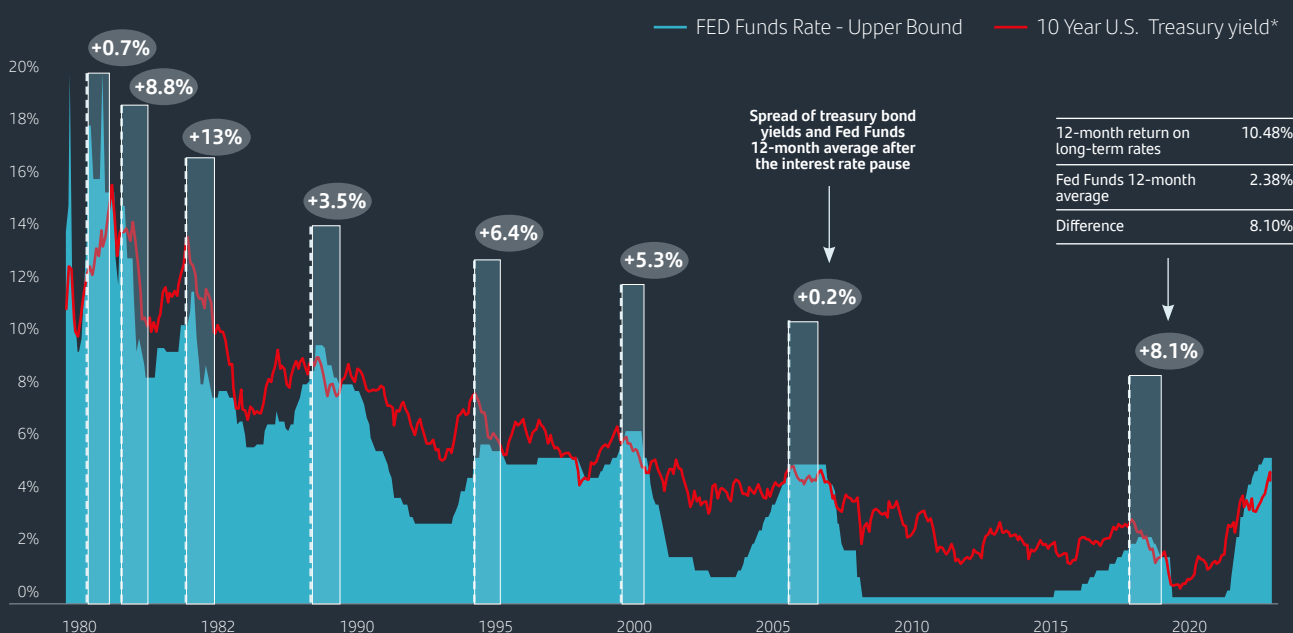
The traditional investment handbook would recommend increasing the maturity of fixed income investments with the goal of consolidating returns near the interest rate peak of this cycle

Extending duration in fixed income improves the defensive profile of investment portfolios in the face of economic slowdown

U.S. 10-year Treasury yields and short-term rates (Fed Funds)

Source: Santander and Bloomberg. Data as of 11/14/2023.

Extending duration has generated value in the period following the peak of rate hikes



*When the bond's IRR (the plotted line) falls the yield increases

2) Capturing the risk premium of high-quality corporate bonds

In an environment of below-average economic growth, it's crucial to exercise caution when selecting issuers to invest in, prioritizing companies with strong creditworthiness. At this stage of the economic cycle, it's advisable to overweight government bonds relative to corporate bonds to minimize the risk of negative credit events such as restructurings, bankruptcies, and defaults. This approach is supported by the negative experiences of previous cycles. However, as we discussed in the first section, corporate debt in the current environment carries less leverage risk than in the past. **This creates the opportunity to generate additional returns by investing in higher-quality segments of corporate bonds. Investment-grade corporate bonds** offer attractive risk premiums and compete favorably with equities on a yield basis, a situation that hasn't been seen in many years.

The prolonged period of low interest rates enabled many companies to extend the maturity of their debt financing on the capital markets. An analysis of the changes in financing costs for publicly traded companies suggests that the impact of restrictive monetary policy on the corporate sector was not immediate. Similarly, an analysis of the maturity structure of investment-grade fixed-income instruments and the average coupon that companies effectively pay indicates that a **significant portion of companies can navigate the current tight monetary and credit conditions without experiencing significant financial pressure.**

The graphs below show the remuneration of risk compared to the actual bankruptcy data in the highest credit quality segment (investment grade). We can observe the sensitivity of debt default statistics and credit spreads to economic downturns. However, we can see how the strategy of capturing credit risk premiums generates additional returns as it is almost the norm for default rates to be below the spread obtained by taking on credit risk. **We believe that incorporating high credit quality corporate bonds can add value to investment portfolios.**

The overall quality of balance sheets for companies is higher than in past economic cycles

In our view, credit risk is lower today than in other cycles, as many companies have been able to obtain long-term financing at very low rates

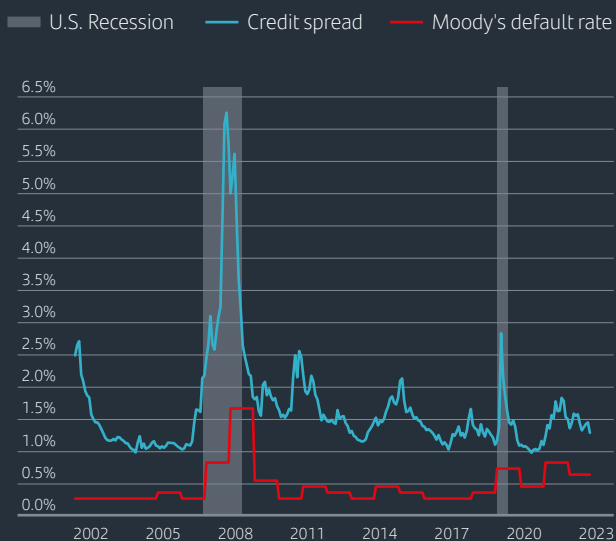
The current amount of compensation received from the risk premium surpasses the likelihood of experiencing bankruptcy

Credit risk spread to benchmark and historical default rates in investment grade corporate bonds

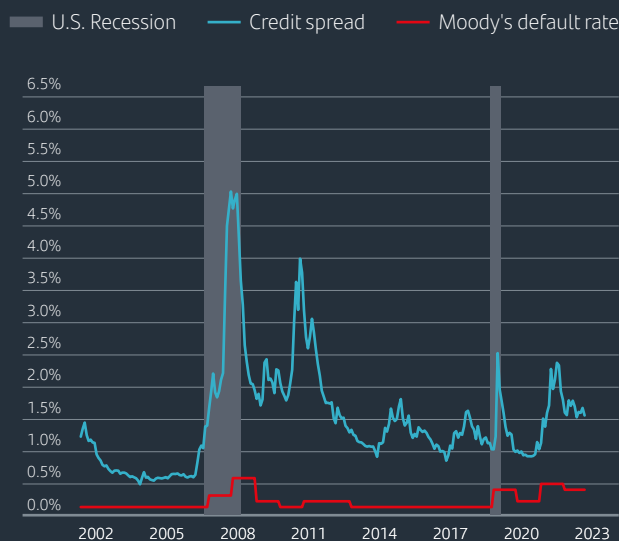
Source: Bloomberg and Moody's. Data as of 11/22/2023.

Credit risk premiums are attractive in a scenario of a moderate economic slowdown

United States



Eurozone



3) Maximizing diversification in fixed-income portfolios

The end of monetary policy normalization and the reduced perception of inflation risk have created various opportunities to add value and diversify portfolios. In addition to the previously mentioned strategies of extending maturities and capturing risk premiums in high-quality corporate bonds, other strategies with varying levels and types of risk can be employed. As the charts below illustrate, the improvement in yields has been widespread across all fixed income market segments. **With an abundance of attractive yielding bonds to choose from, this is an ideal time to enhance diversification in fixed income portfolios.** Mortgage securitization is one segment that we find particularly appealing given the current cycle's specifics. Mortgage underwriting standards were substantially tightened following the Financial Crisis due to increased banking regulation. This has resulted in historically low mortgage default rates.

Extending the duration of fixed income portfolios at today's higher yields offers a protective buffer that can be used to acquire moderate exposure to higher-risk instruments. Bonds from emerging economies where central banks have already begun lowering rates, specific high-yield issuers, AT1 instruments from stable financial institutions, and bonds with idiosyncratic risks such as catastrophe bonds all exemplify strategies that can provide value and diversification. Investing in these securities, which yield more than 8%, is unlikely to result in negative returns over a one-year horizon unless there is an extreme widening of credit spreads.

The primary challenge of introducing new combinations of fixed income instruments is the difficulty in assessing whether the outcome aligns with each investor's risk tolerance. Managed investment solutions, such as multi-strategy funds or managed portfolios, provide access to these opportunities while employing appropriate risk controls, offering the best approach to maximizing diversification solutions (multi-strategy funds or managed portfolios) that provide access to these opportunities with appropriate risk control.

Elevated yields provide resilience against increasing risks to the global economy and allow asset allocators to enhance diversification

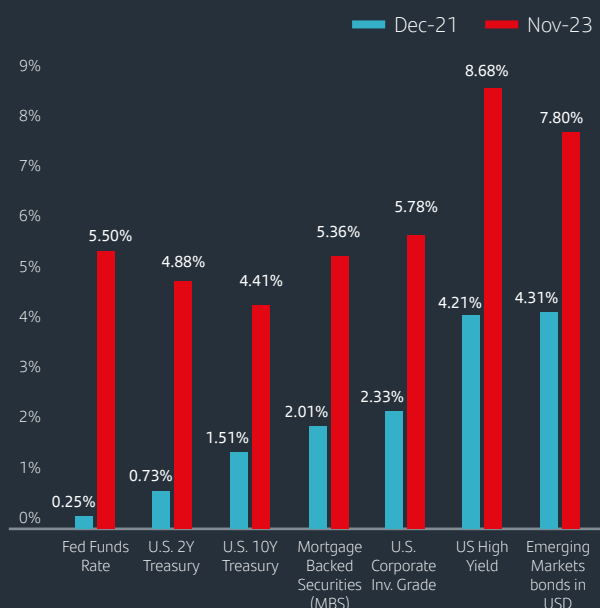
Investors may access the higher yielding segments of fixed income markets through managed investment solutions (portfolios and funds)

Wide range of opportunities to earn above-inflation returns

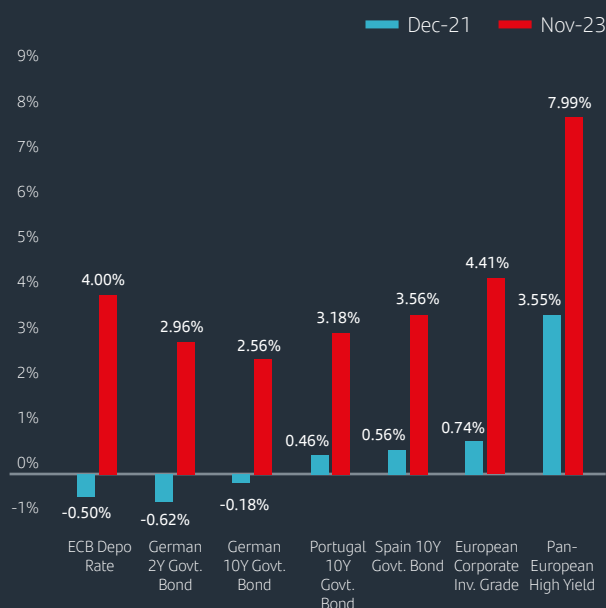
Source: Bloomberg. Data as of 11/14/2023.

Optimal timing for portfolio diversification through a combination of different risk premia

United States



Eurozone



4) Buy equity optionality and seek valuation support

When **interest rates are reaching their peak and concerns are transitioning from the threat of high inflation to an economic slowdown, fixed income becomes a more appealing option than equities in terms of tactical asset allocation.** However, this does not imply the need for an excessively defensive stance or an extreme underweight position in equities, as they remain the primary driver of generating returns that exceed the risk-free rate over the long term. As the investment horizon lengthens, the cyclical dynamics of the economy become less significant, and the ability of equities to generate real inflation-adjusted returns becomes increasingly important.

In fixed income, the overweight is linked to the visibility on the peak of interest rate hikes; **in equities, the turning point in earnings estimate downgrades is the key to moving to a more constructive position.** Third quarter results were mixed (positive for the S&P 500 but negative for European equities) and we are still waiting to see the pace of the economic slowdown in the coming quarters. Volatility in global equity markets has remained moderate, providing an **opportunity to gain exposure to equities through options and structured products with varying degrees of capital protection.**

The **European and U.S. equity markets continue to have different dynamics in terms of the timing of earnings growth, but also in terms of valuation,** and this is very clear in the charts below. **The vertical axis measures valuation** based on the 12-month forward earnings multiple (12M Forward PE) and the horizontal axis shows the level of 10-year government bonds. For European equities, current valuation levels based on earnings multiples are in line with the historical norm in this interest rate environment. In contrast, U.S. equity market valuations are stretched relative to history at similar interest rate levels, as measured by forward earnings multiples. However, **much of this overvaluation is justified by the strategic positioning in AI and the growth differential of the seven technology giants (Microsoft, Meta, Alphabet, Nvidia, Tesla, Amazon and Apple).** If we analyze the S&P 500 without these seven companies, we arrive at valuation metrics that are more in line with historical norms. Much of the dislocation between current valuations and theoretical fair value, given bond yields, is therefore based on the market's perception of these seven companies.

Caution in cyclical positioning should not cause us to overlook equities' ability to produce distinct real returns over the long term

The end of downward estimates in earnings will signify the return to overweight equities

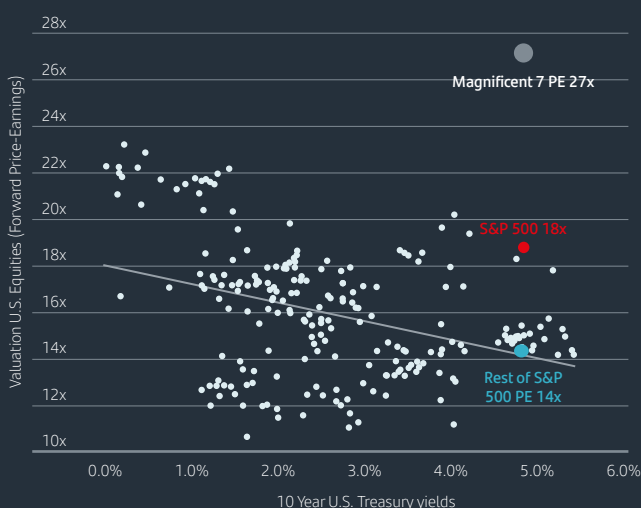
European equities trade at tighter multiples but have a lower growth profile heading into 2024 and less representation of leading companies in artificial intelligence

Correlation between stock market valuation multiples and long-term interest rate level (2005-2023)

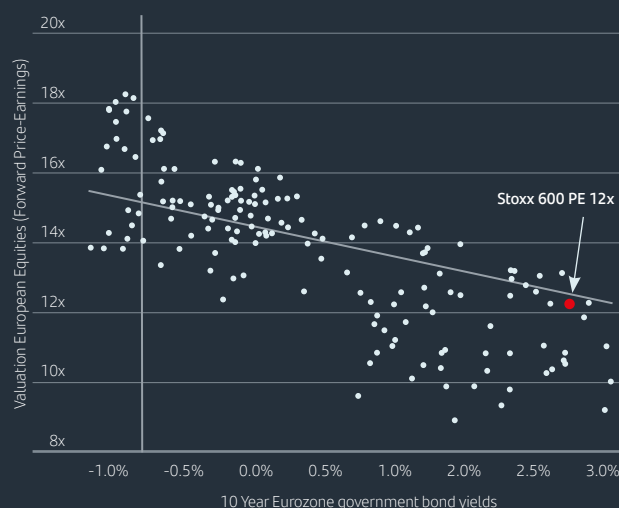
Source: Bloomberg. Data as of 11/20/2023.

The overvaluation of the S&P 500 is largely explained by the valuation of the "Magnificent 7"

U.S. Equities (S&P 500)



European Equities (Stoxx 600)



5) Access to the growing opportunity of private markets

Financial markets are experiencing a significant shift away from traditional public markets and financial systems as the sole means of financing business ventures. As highlighted in the paradigm shifts section, the growth of unlisted markets is a fundamental trend, and the cost of not considering this investment strategy in long-term portfolios is rising. While alternative investments were previously restricted to institutional investors, **private banks and asset managers are now launching vehicles to provide their more experienced clients with access to this type of investment.** These vehicles enable sophisticated investors to access new market segments and assets, such as leasing, infrastructure, renewables, and venture capital, in addition to traditional private equity and private debt.

Private market investments have delivered impressive returns in recent decades, as shown in the chart below. These investments should not be timed based on economic cycles due to liquidity restrictions and long-term vehicle profiles. While traditional fund returns may suffer from high interest rates and an economic slowdown, it may be an appropriate timing to enter private markets. **The best-performing private equity vintages were invested in weaker economic environments, benefiting from lower valuation multiples.** Private market investments can extend the investment horizon, enhance diversification, and capture illiquidity risk premiums.

With limited liquidity from new financing, IPOs, and divestitures, secondary funds offer attractive opportunities due to valuation discounts and shorter maturities. Private debt positions can also be increased as lenders gain stronger negotiation power. In real estate, focus on quality and resilience, favoring logistics, multifamily, and industrial sectors.

Private markets broaden the opportunity set with access to different segments and sectors of the economy

Both private equity and private debt offer differential returns over the long term and diversification with respect to investment in listed markets

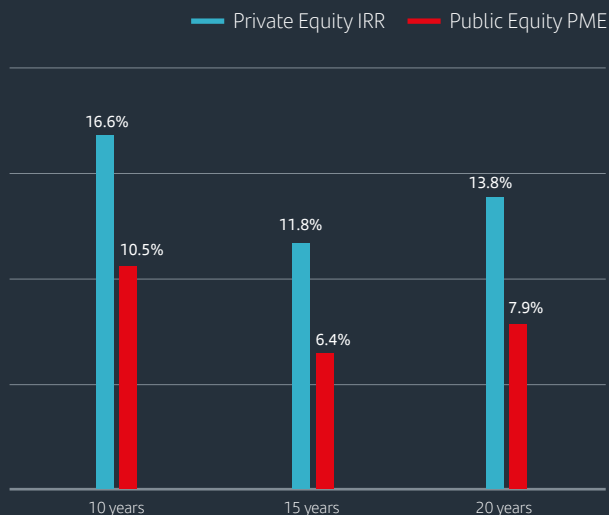
A period of economic downturn and decreased liquidity may present favorable opportunities to increase allocations in alternative assets and engage in secondary market transactions

Long-term return on investment in private markets vs. public markets

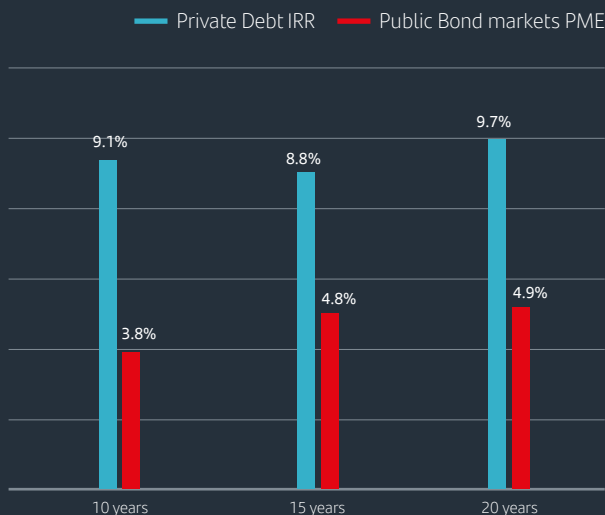
Source: Cambridge Associates. Data as of March 2023.

Extending the investment horizon to the private markets has generated high returns

Private Markets returns (IRR) / Public Markets Equivalent (PME)



Private Markets return (IRR) / Public Markets Equivalent (PME)



6) Positioning for paradigm shifts

To extend the investment horizon, investors may want to consider the four major transitions outlined in Section 2. Artificial intelligence (AI) is the most prominent disruptive force with immense potential to generate global value. **AI promises to enhance productivity, drive economic growth, and improve quality of life worldwide.** Long-term investment strategies must incorporate positioning that capitalizes on new business models enabled by these technological advancements.

At the forefront of decarbonization challenges lies a shift in the energy mix, prioritizing renewable energy sources and electrification. The table below highlights the unprecedented scale of investment required to transform energy production and consumption infrastructure by 2050. This transformation represents the largest investment humanity has ever undertaken. Companies leading this paradigm shift hold immense value creation potential, as exemplified by Tesla's success in the automotive sector. However, this transformation is not without its volatility, driven by uncertainties surrounding the efficiency of new technologies, evolving regulatory landscapes, and other factors. Therefore, a diversified approach encompassing various value chain segments, including critical minerals, energy storage, and network infrastructure, is crucial.

The business opportunities arising from shifts in trade and investment flows to reduce supply chain vulnerability to geopolitical disruptions are equally significant. **We identify substantial investment opportunities in regions like Mexico, Indonesia, and South Korea, which are poised to benefit from nearshoring trends.**

The greatest opportunity for value creation on a global scale is the use of artificial intelligence solutions across all sectors

Significant investment in decarbonization projects should translate into high growth potential for solution providers in the space

The search for security in supply chains (nearshoring) has enormous potential for value creation in some geographies

Long-term impacts of major paradigm shifts facing the global economy

Source: IEA, McKinsey, Moody's and Preqin.

Significant growth and value creation opportunities in these four transitions

Global transition in **ENERGY**

\$55 Tr



The IEA estimates that the total cost of decarbonizing energy production will be around \$55 Trn over the next three decades.

Global transition in **TECHNOLOGY**

\$16 Tr



A study by McKinsey & Company estimates that AI could boost global GDP by up to \$15.7 Trn by 2030, with productivity gains accounting for up to \$5.6 Trn of that total.

Global transition in **TRADE**

\$26 Tr



According to a 2022 report by Moody's Analytics, nearshoring could potentially impact up to 20% of global trade (\$25.5 trillion), with the most significant impact expected in manufacturing industries.

Global transition in **MARKETS**

\$23 Tr



Preqin estimates that global alternatives AUM will surpass \$23.3 trillion by end-2027, up from \$ 13.7 Trn as of the end of 2021.

Appendix

Infographic No. 1: Fixed income markets valuation relative to historical average

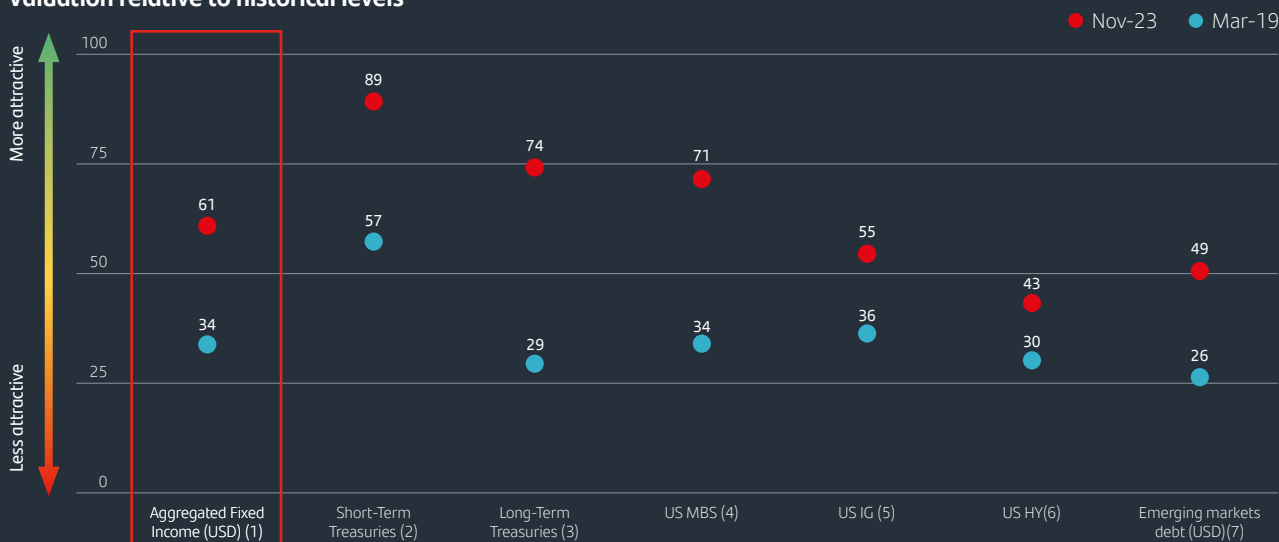
Are fixed income markets fairly valued?

Valuation of an asset in percentiles is based on its historical levels of 25 years. For fixed income, the nominal and real levels of interest rates and the spread against the risk-free asset are considered. The closest the percentile is to 0, the less attractive the asset is. On the opposite, the closest the percentile is to 100, the more attractive the asset is.

A) Fixed income valuation in USD

Source: Bloomberg. Data as of 11/24/2023

Valuation relative to historical levels

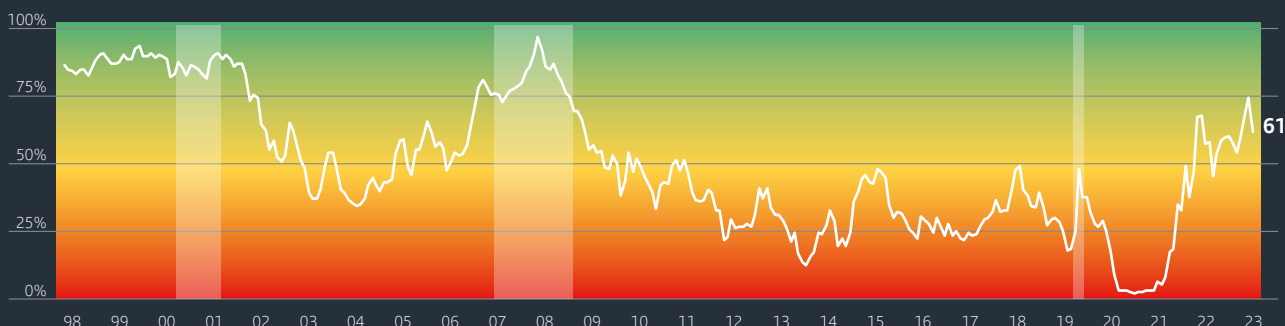


(1) Bloomberg US Agg Total Return Value Unhedged USD (2) US 2Y Treasury (3) US 10Y Treasury (4) Bloomberg US MBS Index Total Return Value Unhedged USD (5) Bloomberg US Corporate Total Return Value Unhedged USD (6) Bloomberg US Corporate High Yield Total Return Index Value Unhedged USD (7) Bloomberg EM USD Aggregate Total Return Index Value Unhedged

US Aggregate Fixed Income-Historical yield

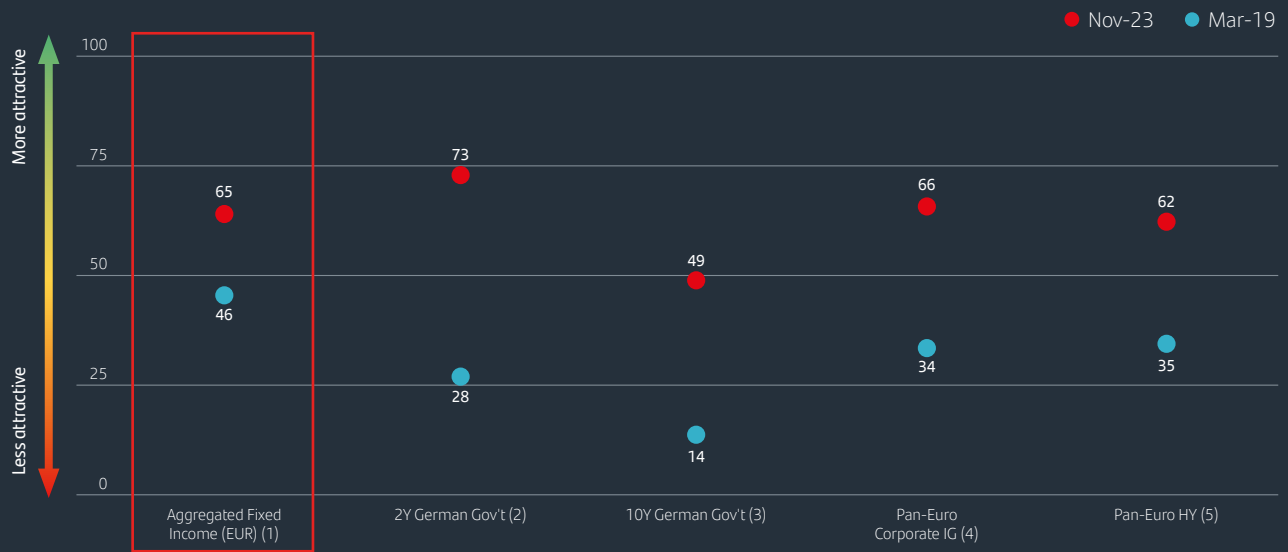


U.S. aggregate fixed income index - Percentiles of valuation relative to historical average



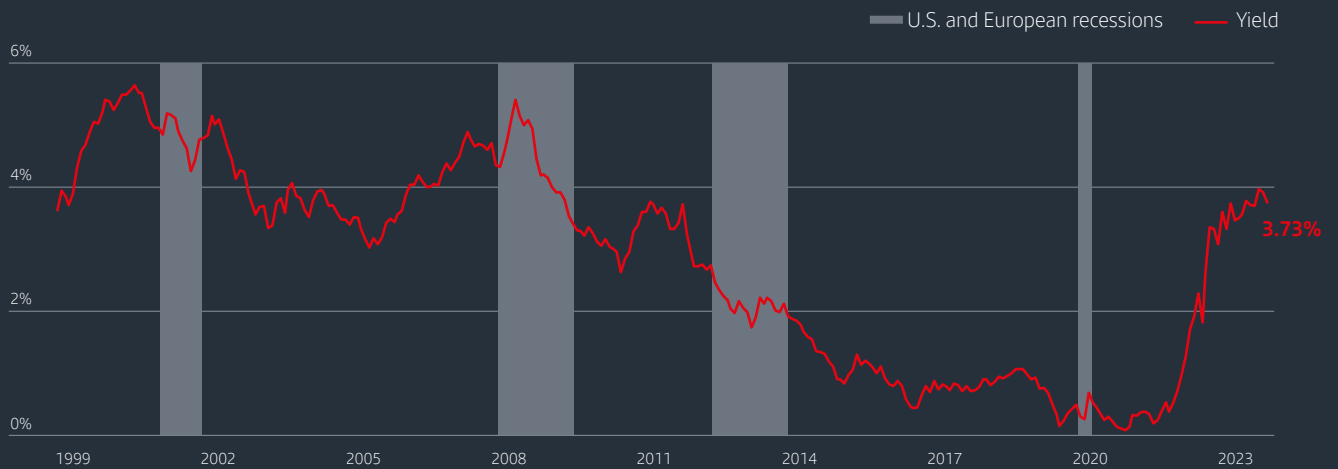
B) Fixed income valuation in EUR

Valuation relative to historical levels

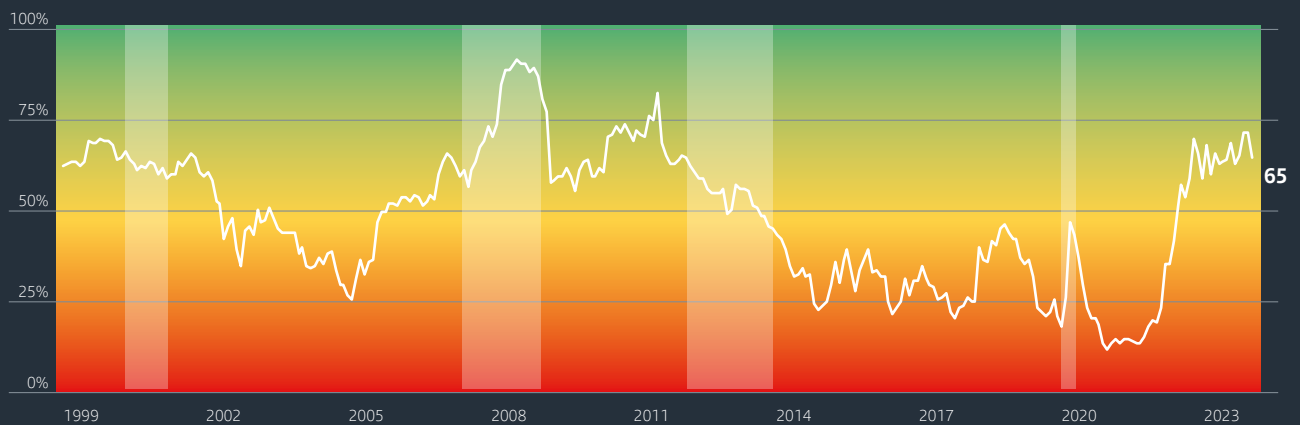


(1) Bloomberg Pan-European Aggregate Total Return Index (2) GERMANY GOVT BND 2 YR (3) GERMANY GOVT BND 10 YR (4) Bloomberg Pan European Aggregate Corporate TR Index (5) Bloomberg Pan-European High Yield Total Return Index

EUR Aggregate Fixed Income-Historical yield



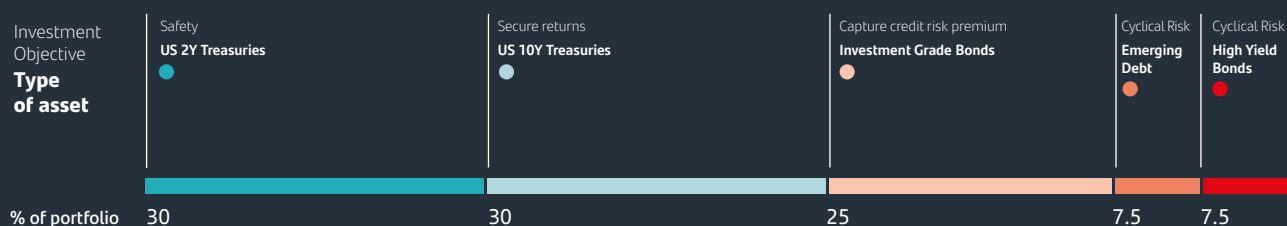
Pan European aggregate fixed income index - Percentiles of valuation relative to historical average



Infographic No. 2: Diversified fixed income portfolios yields

Moderate-risk fixed income portfolio (USD)

Source: Bloomberg. Data as of 11/24/2023



Yield to maturity in nominal terms

Yield to maturity (%)

4.9% 4.4% 5.7% 7.8% 8.6%

Weighted contribution (%)

1.5% 1.3% 1.4% 0.6% 0.6%

Total 5.45%

Yield to maturity in real terms*

Yield to maturity (%)

1.46% 1.32% 1.43% 0.58% 0.65%

Weighted contribution (%)

0.56% 0.42% 0.68% 0.36% 0.42%

Total 2.45%

* Real yields = Nominal yields – 5 to 10 years inflation expectations

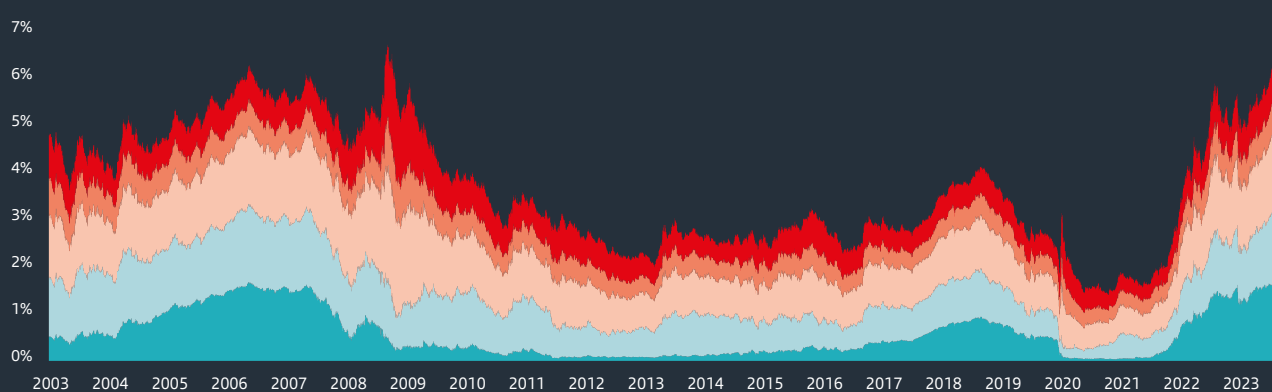
Contribution to real returns by asset type

Weighted contribution (%)

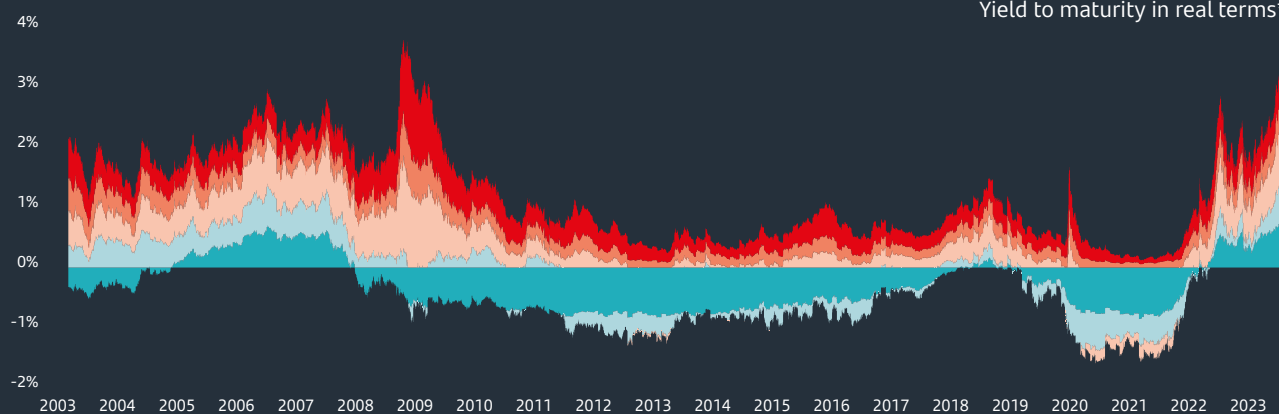
23% 17% 28% 15% 17%

● Euro Sovereign 1-3 Years
 ● Euro Sovereign 7-10 years
 ● Bloomberg Pan European Aggregate Corporate IG
 ● Bloomberg EM Pan Euro
 ● Bloomberg Pan European High Yield

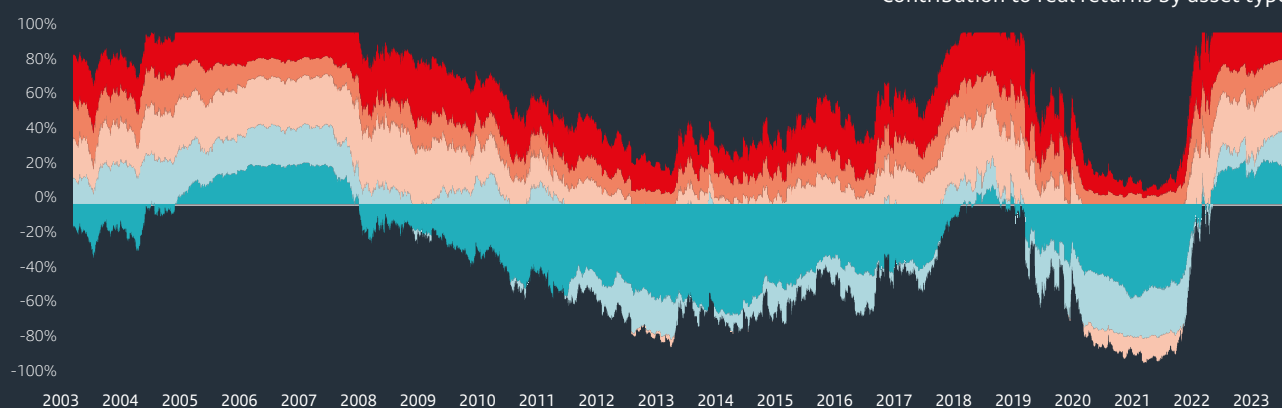
Yield to maturity in nominal terms



Yield to maturity in real terms*



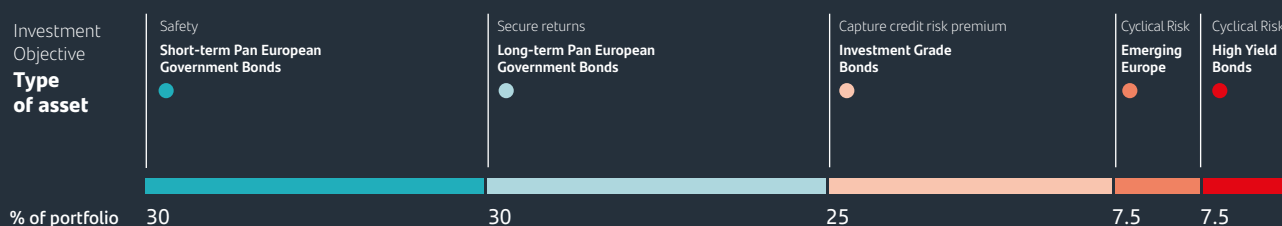
Contribution to real returns by asset type



Infographic No. 2: Diversified fixed income portfolios yields

Moderate-risk fixed income portfolio (EUR)

Source: Bloomberg. Data as of 11/24/2023



Yield to maturity in nominal terms

Yield to maturity (%)

3.52% 3.43% 4.47% 9.11% 8.41%

Weighted contribution (%)

1.1% 1.0% 1.1% 0.7% 0.6%

Total **4.52%**

Yield to maturity in real terms*

Yield to maturity (%)

1.0% 0.9% 2.0% 6.6% 5.9%

Weighted contribution (%)

0.3% 0.3% 0.5% 0.5% 0.4%

Total **2.01%**

* Real yields = Nominal yields – 5 to 10 years inflation expectations

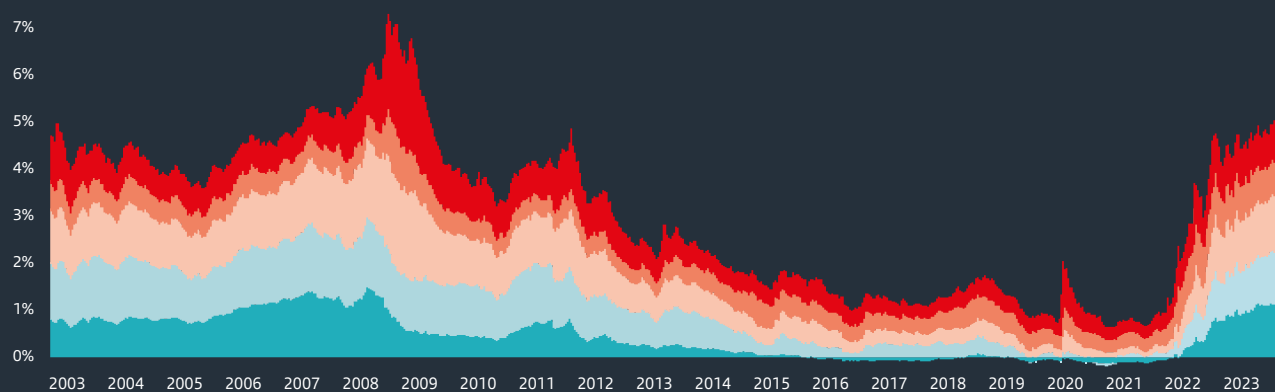
Contribution to real returns by asset type

Weighted contribution (%)

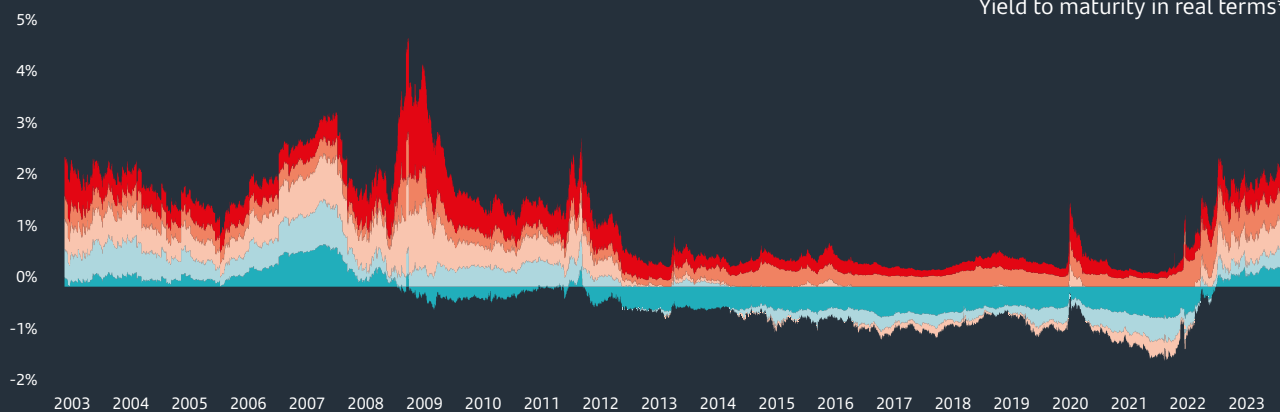
15% 14% 24% 25% 22%

● Euro Sovereign 1-3 Years
 ● Euro Sovereign 7-10 years
 ● Bloomberg Pan European Aggregate Corporate IG
 ● Bloomberg EM Pan Euro
 ● Bloomberg Pan European High Yield

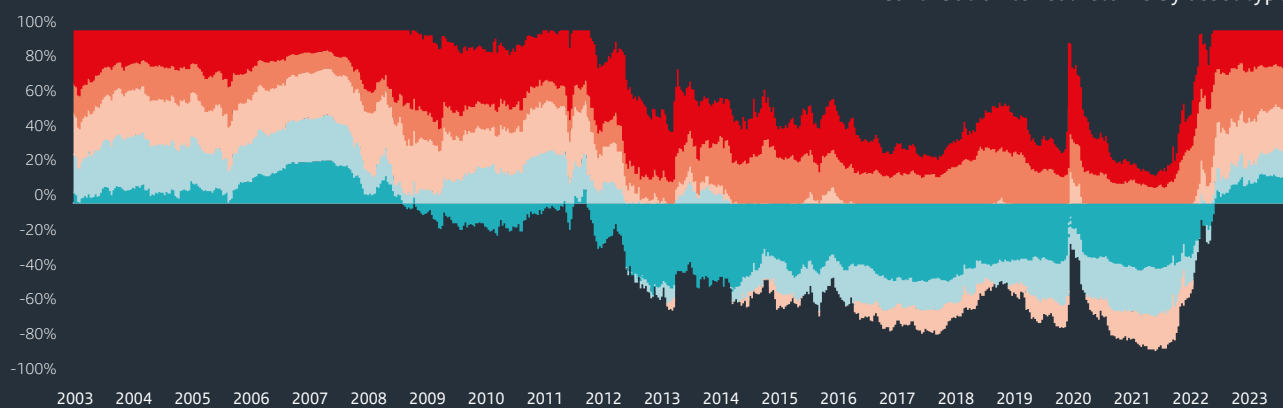
Yield to maturity in nominal terms



Yield to maturity in real terms*



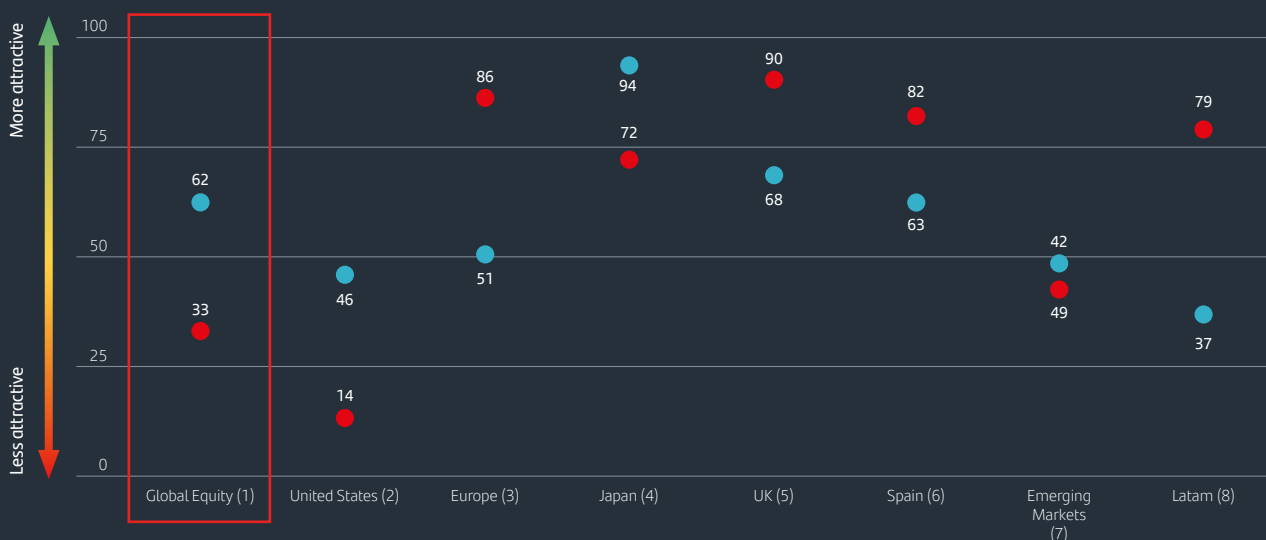
Contribution to real returns by asset type



Infographic No. 3: Equity markets valuation relative to historical average

Valuation* of equities relative to historical levels

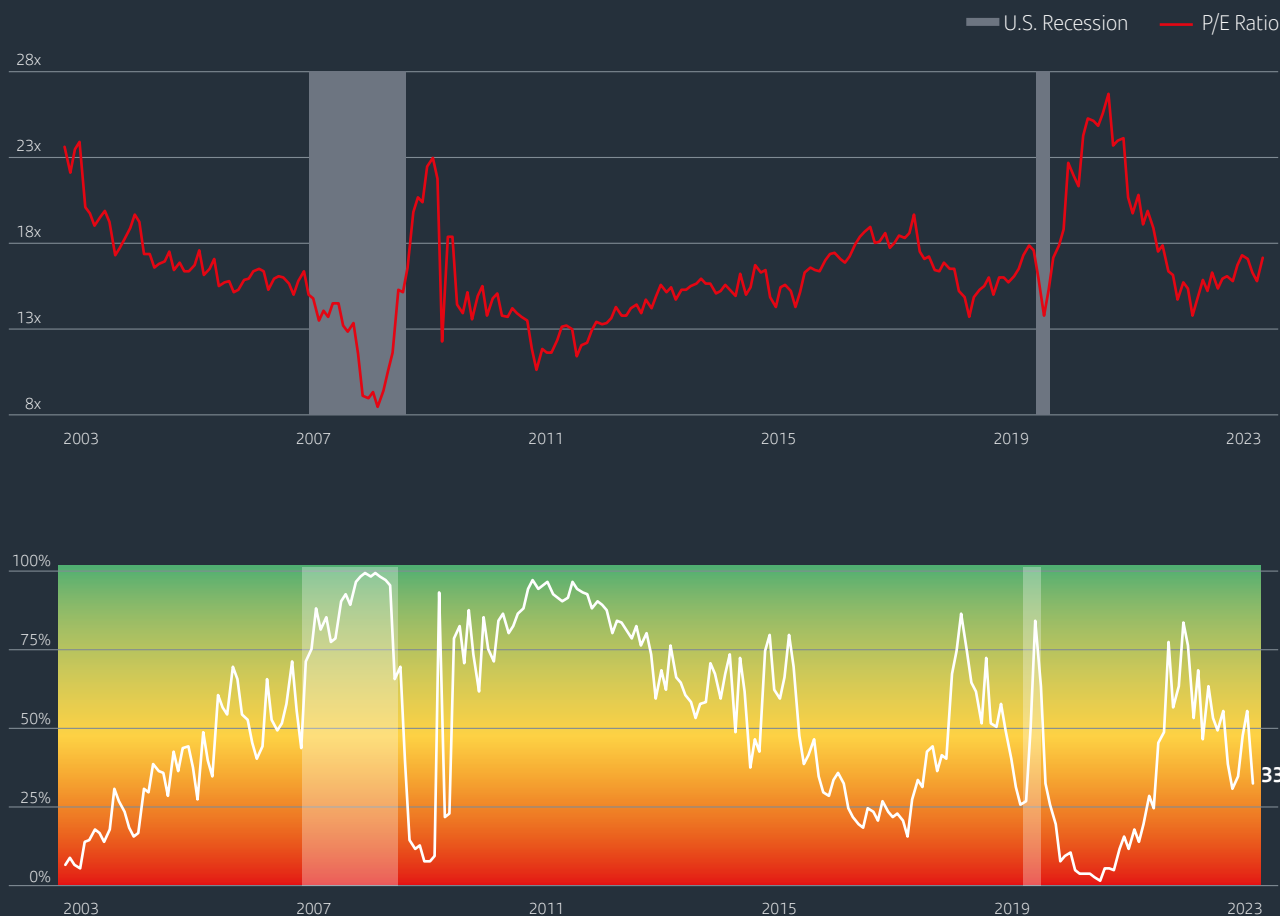
Source: Bloomberg. Data as of 11/24/2023



* The valuation of each asset is based on its PE historical levels

(1) MSCI ACWI (2) S&P500 (3) Stoxx 600 Europe (4) Nikkei (5) FTSE 100 (6) IBEX 35 (7) MSCI EM (8) MSCI Latam.

Global Equity (MSCI ACWI) Historical PE Ratio



Appendix: Tables.

Historical returns of main asset classes.

Source: Bloomberg and Santander.

Data as of 11/24/2023













































	Returns						Annualized returns		
	2018	2019	2020	2021	2022	2023	3 years	5 years	10 years
Short-term (USD) ⁽¹⁾	1.9%	2.2%	0.4%	0.1%	1.7%	4.7%	2.1%	1.8%	1.2%
Short-term (EUR) ⁽²⁾	-0.4%	-0.4%	-0.5%	-0.5%	0.1%	3.0%	0.8%	0.3%	0.1%
Global Fixed Income ⁽³⁾	-1.2%	6.8%	9.2%	-4.7%	-16.2%	0.6%	-6.5%	-0.9%	-0.2%
Fixed Income (USD) ⁽⁴⁾	0.0%	8.7%	7.5%	-1.5%	-13.0%	0.9%	-4.7%	0.6%	1.3%
Sovereign (USD) ⁽⁵⁾	1.4%	5.2%	5.8%	-1.7%	-7.8%	1.6%	-2.7%	0.8%	0.9%
Corporates (USD) ⁽⁶⁾	-2.5%	14.5%	9.9%	-1.0%	-15.8%	3.0%	-4.7%	1.8%	2.4%
High Yield (USD) ⁽⁷⁾	-2.1%	14.3%	7.1%	5.3%	-11.2%	8.3%	1.2%	4.0%	4.2%
Fixed Income (EUR) ⁽⁸⁾	0.4%	6.0%	4.0%	-2.9%	-17.2%	2.7%	-6.1%	-1.7%	0.6%
Sovereign (EUR) ⁽⁹⁾	1.0%	6.8%	5.0%	-3.5%	-18.5%	2.3%	-6.9%	-1.7%	0.8%
Corporates (EUR) ⁽¹⁰⁾	-1.3%	6.2%	2.8%	-1.0%	-13.6%	4.2%	-3.7%	-0.5%	1.0%
High Yield (EUR) ⁽¹¹⁾	-3.6%	12.3%	1.8%	4.2%	-11.1%	8.6%	0.6%	2.6%	3.4%
Emerging Global Fixed Income (USD) ⁽¹²⁾	-2.5%	13.1%	6.5%	-1.7%	-15.3%	3.6%	-4.2%	1.1%	2.5%
LatAm (USD) ⁽¹³⁾	-4.9%	12.3%	4.5%	-2.5%	-13.2%	4.4%	-3.1%	1.0%	2.4%
MSCI World (USD)	-10.4%	25.2%	14.1%	20.1%	-19.5%	15.6%	5.7%	8.8%	6.4%
S&P 500 (USD)	-6.2%	28.9%	16.3%	26.9%	-19.4%	18.7%	8.4%	11.6%	9.7%
MSCI Europe (EUR)	-13.1%	22.2%	-5.4%	22.4%	-11.9%	8.0%	6.1%	5.1%	3.4%
MSCI Emerging Markets (USD)	-16.6%	15.4%	15.8%	-4.6%	-22.4%	3.3%	-6.8%	0.4%	-0.2%
MSCI Asia Pac. ex-Japan (USD)	-13.9%	19.2%	22.4%	-2.9%	-17.5%	2.8%	-4.6%	3.6%	3.5%
MSCI Latin America (USD)	-9.3%	13.7%	-16.0%	-13.1%	-0.1%	16.2%	4.4%	-0.7%	-2.9%

⁽¹⁾ Barclays Benchmark Overnight USD Cash Index; ⁽²⁾ Barclays Benchmark 3mEUR Cash Index; ⁽³⁾ Bloomberg Barclays Global Aggregate Total Return Index Value Unhedged USD; ⁽⁴⁾ Bloomberg Barclays US Agg Total Return Value Unhedged USD; ⁽⁵⁾ Bloomberg Barclays US Intermediate Treasury TR Index Value Unhedged USD; ⁽⁶⁾ Bloomberg Barclays US Corporate Total Return Value Unhedged USD; ⁽⁷⁾ Bloomberg Barclays US Corporate High Yield Total Return Value Unhedged USD; ⁽⁸⁾ Bloomberg Barclays EuroAgg Total Return Index Value Unhedged EUR; ⁽⁹⁾ Bloomberg Barclays EuroAgg Treasury Total Return Index Value Unhedged EUR; ⁽¹⁰⁾ Bloomberg Barclays Euro Aggregate Corporate Total Return Index Value Unhedged EUR; ⁽¹¹⁾ Bloomberg Barclays Pan-European Aggregate High Yield TR Index Value Unhedged EUR; ⁽¹²⁾ Bloomberg Barclays EM Aggregate Total Return Value Unhedged USD; ⁽¹³⁾ Bloomberg Barclays Emerging Markets LatAm Total Return Value Unhedged USD

Equities indices.

Source: Bloomberg and Santander.

Data as of 11/24/2023

		Last Price	Change	Last 10 years			Return			Annualized return		
			12 months	Low	Range	High	2021	2022	2023	3 years	5 years	10 years
US	S&P 500	4,556		1,783		4,766	26.9%	-19.4%	18.7%	8.4%	11.6%	9.7%
	DOW JONES INDUS.	35,384		15,699		36,338	18.7%	-8.8%	6.7%	6.1%	7.8%	8.2%
	NASDAQ	14,231		4,104		15,645	21.4%	-33.1%	36.0%	6.2%	15.4%	13.6%
Europe	Stoxx 50	3,981		2,701		4,054	22.8%	-4.4%	9.0%	9.2%	6.6%	3.3%
	Eurozone (EuroStoxx)	4,373		2,787		4,471	21.0%	-11.7%	15.3%	8.1%	6.9%	3.6%
	Spain (IBEX 35)	9,954		6,452		11,521	7.9%	-5.6%	21.0%	7.6%	2.2%	0.3%
	France (CAC 40)	7,295		4,166		7,498	28.9%	-9.5%	12.7%	9.9%	8.1%	5.5%
	Germany (DAX)	16,031		9,306		16,447	15.8%	-12.3%	15.1%	6.9%	7.5%	5.7%
	United Kingdom (FTSE 100)	7,483		5,577		7,876	14.3%	0.9%	0.4%	5.7%	1.5%	1.2%
	Italy (MIB)	29,427		16,198		29,645	23.0%	-13.3%	24.1%	10.7%	9.5%	4.6%
	Portugal (PSI 20)	6,338		3,945		7,608	13.7%	2.8%	10.7%	12.5%	5.7%	0.0%
	Switzerland (SMI)	10,878		7,808		12,876	20.3%	-16.7%	1.4%	1.3%	4.2%	2.8%
LatAm	Mexico (MEXBOL)	52,836		34,555		56,537	20.9%	-9.0%	9.0%	7.7%	5.1%	2.5%
	Brazil (IBOVESPA)	126,035		40,406		126,802	-11.9%	4.7%	14.9%	5.5%	7.9%	9.1%
	Argentina (MERVAL)	911,420		5,391		911,460	63.0%	142.0%	351.0%	160.6%	97.0%	66.6%
	Chile (IPSA)	5,803		3,439		6,394	3.1%	22.1%	10.3%	12.0%	2.5%	4.5%
Asia	Japan (NIKKEI)	33,626		14,304		33,626	4.9%	-9.4%	28.9%	9.6%	9.2%	8.1%
	Hong Kong (HANG SENG)	17,559		14,687		32,887	-14.1%	-15.5%	-11.2%	-12.8%	-7.5%	-3.0%
	South Korea (KOSPI)	2,497		1,755		3,297	3.6%	-24.9%	11.6%	-1.4%	3.9%	2.2%
	India (Sensex)	65,970		20,514		66,528	22.0%	4.4%	8.4%	14.4%	13.5%	12.6%
	China (CSI)	3,538		2,146		5,352	-5.2%	-21.6%	-8.6%	-10.9%	2.4%	4.0%
World	MSCI WORLD	3,009		1,547		3,232	20.1%	-19.5%	15.6%	5.7%	8.8%	6.4%

Equities by style and sector.

Source: Bloomberg and Santander.

Data as of 11/24/2023

	Last Price	Change	Last 10 years			Return			Annualized return			Ratios	
		12 months	Low	Range	High	2021	2022	2023	3 years	5 years	10 years	PE Ratio	Dividend Yield
MSCI World	3,009		1,547		3,232	20.1%	-19.5%	15.6%	5.7%	8.8%	6.4%	17.40	2.12
Style MSCI World High Dividend Yield	1,352		978		1,447	12.6%	-7.4%	0.9%	2.8%	3.1%	2.3%	12.91	3.92
MSCI World Momentum	3,463		1,366		3,978	14.6%	-17.8%	7.7%	2.9%	10.2%	9.8%	18.37	1.73
MSCI World Quality	3,998		1,327		4,058	25.7%	-22.2%	26.7%	9.2%	14.7%	11.5%	21.71	1.70
MSCI World Minimum Volatility	4,433		2,202		4,730	14.3%	-9.8%	3.9%	3.2%	5.6%	7.0%	17.10	2.61
MSCI World Value	11,571		6,429		11,937	21.9%	-6.5%	4.7%	7.5%	6.3%	5.4%	12.67	3.45
MSCI World Small Cap	591		318		705	15.8%	-18.8%	4.6%	2.0%	6.0%	6.0%	16.85	2.33
MSCI World Growth	8,998		3,205		9,693	21.2%	-29.2%	31.1%	6.5%	14.2%	10.8%	26.51	0.90
Sector Energy	459		164		479	40.1%	46.0%	2.3%	27.6%	7.7%	1.9%	9.51	4.30
Materials	544		229		590	16.3%	-10.7%	6.1%	3.9%	8.2%	5.2%	15.91	3.13
Industrials	501		238		520	16.6%	-13.2%	13.4%	1.2%	6.4%	5.9%	19.13	2.03
Consumer Discretionary	506		210		595	17.9%	-33.4%	27.7%	-5.5%	5.6%	6.4%	20.24	1.41
Consumer Staples	432		241		470	13.1%	-6.1%	-0.9%	3.1%	5.8%	5.6%	18.88	2.81
Health Care	485		215		518	19.8%	-5.4%	-1.1%	5.9%	8.8%	8.8%	20.10	1.85
Financials	249		125		263	27.9%	-10.2%	7.9%	6.7%	5.4%	5.0%	11.94	3.01
Information Technology	692		132		692	29.8%	-30.8%	46.6%	-0.7%	13.1%	13.9%	31.50	0.78
Real Estate	351		269		517	28.7%	-25.1%	-9.5%	-0.6%	1.6%	3.6%	23.13	#N/A N/A
Communication Services	183		106		220	14.4%	-36.9%	41.9%	-8.6%	1.8%	1.6%	20.08	1.17
Utilities	301		175		331	9.8%	-4.7%	-3.5%	2.1%	6.0%	5.9%	14.49	4.04

Government Bonds.

Source: Bloomberg and Santander.

Data as of 11/24/2023

Data as of 11/24/2023

	Rating (S&P)	Interest rate			Change 12 months	10 years			Interest rates change (bp) 10 years			Yield curve steepness 10-2 years	
		C. Bank*	2 years	10 years		Last 10 years			Month	YtD	YoY		
						Low	Range	High					
Developed													
U.S.	AA+	5.50%	4.95%	4.48%		0.53%		4.93%	-45	297	87	-0.47	
Germany	AAA	4.00%	3.07%	2.65%		-0.70%		2.84%	-16	283	72	-0.42	
France	AA	4.00%	3.40%	3.21%		-0.40%		3.43%	-22	301	80	-0.19	
Italy	BBB	4.00%	3.66%	4.39%		0.54%		4.78%	-34	322	51	0.73	
Spain	A	4.00%	3.52%	3.64%		0.05%		4.15%	-25	307	69	0.12	
United Kingdom	AA	5.25%	4.74%	4.31%		0.10%		4.51%	-20	334	115	-0.43	
Greece	BBB-	4.00%	n.d.	3.83%		0.61%		15.42%	-34	250	-32	n.d.	
Portugal	BBB+	4.00%	3.17%	3.30%		0.03%		6.13%	-22	284	43	0.14	
Switzerland	AAA	1.75%	1.36%	0.99%		-1.05%		1.58%	-10	115	-9	-0.37	
Poland	A-	5.75%	5.39%	5.63%		1.15%		8.34%	-3	198	-96	0.24	
Japan	A+	-0.10%	0.06%	0.78%		-0.27%		0.95%	-17	71	52	0.71	
Emerging Markets													
Brazil	BB-	12.75%	10.36%	11.09%		6.49%		16.51%	-77	26	-165	0.74	
Mexico	BBB	11.25%	10.46%	9.63%		5.24%		10.20%	-57	206	40	-0.82	
Chile	A	9.00%	6.63%	5.85%		2.19%		6.79%	n.d.	n.d.	n.d.	n.d.	
Argentina	CCC-	133.00%	n.d.	n.d.		0.00%		0.00%	n.d.	n.d.	n.d.	n.d.	
Colombia	BB+	13.25%	9.77%	10.74%		5.39%		13.79%	-102	254	n.d.	0.97	
Turkey	B	35.00%	37.53%	n.d.		6.98%		26.62%	n.d.	n.d.	n.d.	n.d.	
Russia	A-	5.75%	5.42%	5.64%		1.16%		8.37%	-3	197	-96	0.22	
China	A+	2.39%	2.43%	2.70%		2.51%		4.58%	1	-7	-22	0.27	
India	BBB-	6.50%	n.d.	7.27%		5.84%		8.86%	-8	82	-1	n.d.	

*Central Bank lending facility, except in Eurozone countries, where the marginal deposit facility is used.

Currencies.

Source: Bloomberg and Santander.

Data as of 11/24/2023

	Last Price	Change	Last 10 years			Annualized return			
		12 months	Low	Range	High	2023	3 years	5 years	10 years
EUR/USD	1.0939		0.98		1.39	2.2%	-2.6%	-0.7%	-2.1%
EUR/GBP	0.87		0.70		0.92	2.0%	-0.8%	-0.4%	0.4%
EUR/CHF	0.96		0.96		1.23	2.6%	3.8%	3.2%	2.5%
EUR/JPY	164		114		164	16.5%	-8.9%	-4.8%	-1.7%
EUR/PLN	4.37		4.04		4.86	7.2%	0.8%	-0.4%	-0.4%
GBP/USD	1.26		1.12		1.71	4.3%	-1.8%	-0.3%	-2.5%
USD/CHF	0.88		0.87		1.03	4.8%	1.2%	2.5%	0.3%
USD/JPY	150		101		152	-12.3%	-11.3%	-5.5%	-3.8%
USD/MXN	17.12		12.86		24.17	13.9%	5.6%	3.6%	-2.7%
USD/ARS	357.52		6.52		357.52	-50.5%	-39.2%	-36.3%	-33.5%
USD/CLP	872		529		969	-2.4%	-4.0%	-5.0%	-5.0%
USD/BRL	4.89		2.21		5.75	7.9%	3.6%	-4.8%	-7.4%
USD/COP	4,039		1,877		4,940	20.2%	-3.4%	-4.4%	-7.2%
USD/CNY	7.15		6.05		7.32	-3.5%	-2.7%	-0.6%	-1.6%
EUR/SEK	11.44		8.83		11.88	-2.4%	-3.7%	-2.1%	-2.5%
EUR/NOK	11.71		8.12		11.85	-10.3%	-3.0%	-3.6%	-3.5%

Commodities.

Source: Bloomberg and Santander.

	Last Price	Change	Last 10 years			Return			Annualized return		
		12 months	Low	Range	High	2021	2022	2023	3 years	5 years	10 years
Crude Oil (Brent)	81.0		18		124	49.2%	5.5%	-0.5%	21.2%	12.0%	-9.3%
Crude Oil (W. Texas)	76.8		19		115	58.7%	4.2%	-4.4%	21.4%	15.2%	-6.7%
Gold	2,001.1		1,060		2,001	-3.5%	-0.1%	9.6%	2.9%	17.8%	17.2%
Copper	8,409.5		4,561		10,375	25.2%	-13.9%	0.4%	5.4%	10.7%	5.8%
CRB Index	275.1		117		317	38.5%	19.5%	-1.0%	20.5%	15.3%	0.0%
Natural Gas (USA)	2.8		3		6	31.4%	38.8%	-42.0%	0.8%	-0.3%	-19.7%
Natural Gas (Europe)	47.4		15		177	119.7%	144.3%	-43.7%	44.9%	36.5%	n.d.

"Periodic table" for asset returns

		Calendar Year Returns											
Asset Class	Reference Index	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023 YTD	
US Equities	S&P 500 TR	54.4% Japan Equities	16.7% Spain Government	12.1% Japan Equities	14.8% Global High Yield	37.3% Emerging Markets Equities	2.6% Spain Government	31.5% US Equities	18.4% US Equities	38.5% Commodities	22.0% Commodities	29.4% Japan Equities	+
Japan Equities	Topix TR	32.4% US Equities	13.7% US Equities	6.4% Europe Equities	12.0% US Equities	22.4% Global Equities	2.4% Eurozone Government	28.2% Europe Equities	18.3% Emerging Markets Equities	28.7% US Equities	0.1% Liquidity EUR	25.6% Spain Equities	↑
Spain Equities	Ibex35 TR	27.8% Spain Equities	10.3% Eurozone Government	1.6% Spain Government	11.2% Emerging Markets Equities	22.2% Japan Equities	-0.4% Liquidity EUR	27.7% Global Equities	15.9% Global Equities	23.2% Europe Equities	-2.0% Spain Equities	20.4% US Equities	
Emerging Markets Equities	MSCI EM TR	26.7% Global Equities	10.3% Japan Equities	1.4% US Equities	9.7% Commodities	21.8% US Equities	-1.2% Europe IG	18.4% Emerging Markets Equities	8.0% Global High Yield	21.8% Global Equities	-2.5% Japan Equities	18.0% Europe Equities	
Europe Equities	Eurostoxx50 TR	21.5% Europe Equities	8.6% Spain Equities	0.3% Eurozone Government	7.5% Global Equities	11.3% Spain Equities	-3.3% Global High Yield	18.1% Japan Equities	7.4% Japan Equities	12.7% Japan Equities	-9.5% Europe Equities	17.4% Global Equities	
Commodities	RJ/CRB Total Return Index	11.0% Spain Government	8.3% Europe IG	-0.1% Liquidity EUR	4.8% Europe IG	10.2% Global High Yield	-4.4% US Equities	16.6% Spain Equities	4.4% Spain Government	10.8% Spain Equities	-13.2% Global High Yield	8.2% Global High Yield	
Global Equities	MSCI World TR	8.0% Global High Yield	4.9% Global Equities	-0.5% Europe IG	4.2% Spain Government	9.2% Europe Equities	-8.7% Global Equities	13.7% Global High Yield	3.0% Eurozone Government	1.4% Global High Yield	-14% Europe IG	5.8% Emerging Markets Equities	Returns
Europe IG	ERLO TR	2.3% Europe IG	4.0% Europe Equities	-0.9% Global Equities	4.0% Eurozone Government	2.5% Europe IG	-10.7% Commodities	11.8% Commodities	2.7% Europe IG	-0.5% Liquidity EUR	-17.7% Spain Government	4.0% Europe IG	
Liquidity EUR	Eonia TR	0.1% Liquidity EUR	0.1% Liquidity EUR	-3.5% Spain Equities	3.7% Europe Equities	1.7% Commodities	-11.5% Spain Equities	8.6% Spain Government	-0.5% Liquidity EUR	-1.1% Europe IG	-17.8% Eurozone Government	3.7% Commodities	
Global High Yield	HW00 TR	-2.3% Eurozone Government	-0.1% Global High Yield	-4.2% Global High Yield	2.6% Spain Equities	1.1% Spain Government	-12.0% Europe Equities	6.3% Europe IG	-3.2% Europe Equities	-2.50% Emerging Markets Equities	-18.1% US Equities	3.0% Liquidity EUR	
Spain Government	SPAIN 10 YR	-2.6% Emerging Markets Equities	-2.2% Emerging Markets Equities	-14.9% Emerging Markets Equities	0.3% Japan Equities	-0.4% Liquidity EUR	-14.6% Emerging Markets Equities	3.0% Eurozone Government	-9.3% Commodities	-2.7% Eurozone Government	-18.1% Global Equities	2.2% Spain Government	
Eurozone Government	GERMANY 10 YR	-5.0% Commodities	-17.9% Commodities	-23.4% Commodities	-0.3% Liquidity EUR	-1.4% Eurozone Government	-16.0% Japan Equities	-0.4% Liquidity EUR	-12.7% Spain Equities	-3.1% Spain Government	-20.1% Emerging Markets Equities	1.0% Eurozone Government	↓

*Data as of 11/24/2023

Total return indices track both the capital gains as well as any cash distributions, such as dividends or interest, attributed to the components of the index.

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Index Definitions

Barclays Benchmark Overnight USD Cash	Overnight Interest Rate in USD
Barclays Benchmark Overnight EUR Cash	Overnight Interest Rate in EUR
Bloomberg Barclays Global-Aggregate Total Return	The Bloomberg Barclays Global Aggregate Index is a flagship measure of global investment grade debt from 24 local currency markets. This multi-currency benchmark includes treasury, government-related, corporate, and securitized fixed-rate bonds from both developed and emerging markets issuers.
Bloomberg Barclays US Aggregate Total Return	The Bloomberg Barclays US Aggregate Bond Index is a broad-based flagship benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes treasury, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS and CMBS (agency and non-agency).
Bloomberg Barclays US Intermediate Treasury TR Index	The Bloomberg Barclays US Treasury: Intermediate Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury with maturities of 1 to 9.9999 years to maturity.
Bloomberg Barclays US Corporate Total Return	The Bloomberg Barclays US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by US and non-US industrial, utility, and financial issuers.
Bloomberg Barclays US Corporate High Yield Total Return	The Bloomberg Barclays US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market.
Bloomberg Barclays EuroAgg Total Return Index Value Unhedged EUR	The Bloomberg Barclays Euro-Aggregate Index is a benchmark that measures the investment grade, euro-denominated, fixed-rate bond market, including treasuries, government-related, corporate, and securitized issues. Inclusion is based on currency denomination of a bond and not country of risk of the issuer.
Bloomberg Barclays EuroAgg Treasury Total Return	The Bloomberg Barclays Euro-Aggregate: Treasury Index is a benchmark that measures the Treasury component of the Euro-Aggregate. The index consists of fixed-rate, investment grade public obligations of the sovereign countries in the Eurozone. This index currently contains euro-denominated issues from 17 countries.
Bloomberg Barclays Euro Aggregate Corporate Total Return	The Bloomberg Barclays Euro-Aggregate: Corporates Index is a benchmark that measures the corporate component of the Euro Aggregate Index. It includes investment grade, euro-denominated, fixed-rate securities.
Bloomberg Barclays Pan-European High Yield Total Return	The Bloomberg Barclays Pan-European High Yield Index measures the market of non-investment grade, fixed-rate corporate bonds denominated in the following currencies: euro, pounds sterling, Danish krone, Norwegian krone, Swedish krona, and Swiss franc. Inclusion is based on the currency of issue, and not the domicile of the issuer.
Bloomberg Barclays EM USD Aggregate Total Return	The Bloomberg Barclays Emerging Markets Hard Currency Aggregate Index is a flagship hard currency Emerging Markets debt benchmark that includes USD-denominated debt from sovereign, quasi-sovereign, and corporate EM issuers.
Bloomberg Barclays Emerging Markets LatAm Total Return	Bloomberg Barclays Emerging Markets LatAm Total Return Index Value Unhedged USD.
MSCI World	The MSCI World Index is a free-float weighted equity index. It was developed with a base value of 100 as of December 31, 1969. MXWO includes developed world markets, and does not include emerging markets.

MSCI Europe	The MSCI Europe Index in EUR is a free-float weighted equity index measuring the performance of Europe Developed Markets.
MSCI Emerging Markets	The MSCI Em (Emerging Markets) Index is a free-float weighted equity index that captures large and mid-cap representation across Emerging Markets (EM) countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
MSCI AC Asia Pacific ex Japan	The MSCI AC Asia Pacific ex Japan Index captures large and mid-cap representation across 4 of 5 Developed Markets countries (excluding Japan) and 9 Emerging Markets countries in the Asia Pacific region.
MSCI Emerging Markets Latin America	The MSCI Emerging Markets Latin America Index captures large and mid cap representation across 6 Emerging Markets countries in Latin America. With 101 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
S&P 500	The S&P 500® is widely regarded as the best gauge of large-cap U.S. equities and serves as the foundation for a wide range of investment products. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.
Dow Jones Industrial Average	The Dow Jones Industrial Average is a price-weighted average of 30 blue-chip stocks that are generally the leaders in their industry.
NASDAQ Composite	The NASDAQ Composite Index is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market, and Capital Market.
STOXX Europe 50 Price EUR	The STOXX Europe 50 Index, Europe's leading blue-chip index, provides a representation of supersector leaders in Europe. The index covers 50 stocks from 17 European countries.
EURO STOXX 50 Price EUR	The EURO STOXX 50 Index, Europe's leading blue-chip index for the Eurozone, provides a blue-chip representation of supersector leaders in the region. The index covers 50 stocks from 8 Eurozone countries.
IBEX 35	The IBEX 35 is the official index of the Spanish Continuous Exchange. The index is comprised of the 35 most liquid stocks traded on the Continuous market.
CAC 40	The CAC 40® is a free float market capitalization weighted index that reflects the performance of the 40 largest and most actively traded shares listed on Euronext Paris, and is the most widely used indicator of the Paris stock market.
DAX	The DAX is a total return index of 40 selected German blue-chip stocks traded on the Frankfurt Stock Exchange.
FTSE 100	The FTSE 100 Index is a capitalization-weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange.
FTSE MIB	The Index consists of the 40 most liquid and capitalized stocks listed on the Borsa Italiana.
PSI 20	The PSI 20® is a free float market capitalization weighted index that reflects the performance of the 20 largest and most actively traded shares listed on Euronext Lisbon, and is the most widely used indicator of the Portuguese stock market.
Swiss Market	The Swiss Market Index is an index of the largest and most liquid stocks traded on the Geneva, Zurich, and Basel Stock Exchanges.
S&P/BMV IPC	The S&P/BMV IPC seeks to measure the performance of the largest and most liquid stocks listed on the Bolsa Mexicana de Valores.
Ibovespa Brasil São Paulo Stock Exchange	Ibovespa is a gross total return index weighted by free float market cap and is comprised of the most liquid stocks traded on the São Paulo Stock Exchange.

S&P Merval	The S&P Merval Index (MERcado de VALor) is the most important index of the Buenos Aires Stock Exchange. It is a price-weighted index, calculated as the market value of a portfolio of stocks selected based on their market share, number of transactions, and quotation price.
S&P/CLX IPSA	The Indice de Precio Selectivo de Acciones (IPSA) is a Chilean stock market index composed of the 30 stocks with the highest average annual trading volume in the Santiago Stock Exchange.
Nikkei 225	The Nikkei-225 Stock Average is a price-weighted average of 225 top-rated Japanese companies listed in the First Section of the Tokyo Stock Exchange.
Hang Seng	The Hang Seng Index is a free-float capitalization-weighted index of a selection of companies from the Stock Exchange of Hong Kong.
Korea Stock Exchange KOSPI	The KOSPI Index is a capitalization-weighted index of all common shares on the KRX main board.
S&P BSE SENSEX	The BSE SENSEX (also known as the S&P Bombay Stock Exchange Sensitive Index or simply the SENSEX) is a free-float market-weighted stock market index of 30 well-established and financially sound companies listed on the Bombay Stock Exchange.
Shanghai Shenzhen CSI 300	The CSI 300 Index is a free-float weighted index that consists of 300 A-share stocks listed on the Shanghai or Shenzhen Stock Exchanges.
MSCI World Minimum Volatility Net Total Return	The MSCI World Minimum Volatility (USD) Index aims to reflect the performance characteristics of a minimum variance strategy applied to the MSCI large and mid-cap equity universe across 23 Developed Markets countries. The index is calculated by optimizing the MSCI World Index, its parent index, for the lowest absolute risk (within a given set of constraints).
MSCI World Growth Net Total Return	The MSCI World Growth Index captures large and mid-cap securities exhibiting overall growth style characteristics across 23 Developed Markets countries.
MSCI World Value Net Total Return	The MSCI World Value Index captures large and mid-cap securities exhibiting overall value style characteristics across 23 Developed Markets countries.
MSCI World Consumer Discretionary Net Total Return	The MSCI World Consumer Discretionary Index is designed to capture the large and mid-cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Consumer Discretionary sector.
MSCI World Consumer Staples Net Total Return	The MSCI World Consumer Staples Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Consumer Staples sector.
MSCI World Energy Net Total Return	The MSCI World Energy Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Energy sector.
MSCI World Financials Net Total Return USD Index	The MSCI World Financials Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Financials sector.
MSCI World Health Care Net Total Return	The MSCI World Health Care Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Health Care sector.
MSCI World Industrials Net Total Return	The MSCI World Industrials Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Industrials sector.


MSCI World Information Technology Net Total Return	The MSCI World Information Technology Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Information Technology sector.
MSCI World Materials Net Total Return	The MSCI World Materials Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Materials sector.
MSCI World Real Estate Net Total Return	The MSCI World Real Estate Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Real Estate sector.
MSCI World Communication Services Net Total Return	The MSCI World Services Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Services sector.
MSCI World Utilities Net Total Return	The MSCI World Utilities Index is designed to capture the large and mid cap segments across 23 Developed Markets around the world. All securities in the index are classified in the Utilities sector.
MSCI World Momentum Net Total Return	The MSCI World Momentum Index is based on MSCI World, its parent index, which includes large and mid-cap stocks across 23 Developed Markets (DM) countries. It is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum, while maintaining reasonably high trading liquidity, investment capacity and moderate index turnover.
MSCI World Quality Net Total Return	The MSCI World Quality Index is based on MSCI World, its parent index, which includes large and mid-cap stocks across 23 Developed Market (DM) countries. The index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage.
MSCI World Small Cap Net Total Return	The MSCI World Small Cap Index captures small cap representation across 23 Developed Markets countries. With 4,463 constituents, the index covers approximately 14% of the free float-adjusted market capitalization in each country.
MSCI World High Dividend Yield	The MSCI World High Dividend Yield Index is based on the MSCI World Index which includes large and mid-cap stocks across 23 Developed Markets countries. The index is designed to reflect the performance of equities with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent.




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