Year Ahead 2024

A new world

Chief Investment Office GWM | Investment Research



Year Ahead 2024 – UBS House View

This report has been prepared by UBS AG, UBS AG London Branch, UBS Switzerland AG, UBS Financial Services Inc. (UBS FS), UBS AG Singapore Branch, UBS AG Hong Kong Branch, and UBS SuMi TRUST Wealth Management Co., Ltd.. Please see important disclaimers at the end of the document.



Foreword

Welcome to the Year Ahead 2024.

2023 was a historic year for markets. Bond yields reached their highest levels in more than 15 years. The first trillion-dollar artificial intelligence company was crowned. The robust health of the US economy, despite major rate rises, confounded expectations.

Of course, the year was also a historic one for us at UBS, and I would like to take the opportunity to thank you for continuing to place your trust in us. It's our privilege to help you realize your financial goals in the coming year and beyond.

In this *Year Ahead*, we look ahead to what we call "a new world," one characterized by economic uncertainty and geopolitical instability, but also profound technological change.

We think it will pay to focus on quality in 2024. As interest rates fall, we expect quality bonds to deliver both attractive income and capital appreciation. And we believe it will be quality stocks, including many in the technology sector, that will be best positioned to grow earnings in a slowing global economy.

As the new world develops, and as the trends of deglobalization, demographics, digitalization, decarbonization, and debt have a growing impact on economies and markets in the years to come, we expect to see a wave of disruption across the technology, energy, and healthcare sectors in particular. We expect investment success over this time frame to be driven by identifying the "leaders from disruption," and the associated investment opportunities in both public and private markets.

We hope this *Year Ahead 2024* provides you with the right context, analysis, and ideas to help navigate your portfolio through a new world. We look forward to partnering with you on that journey.



MMM

Iqbal Khan President, UBS Global Wealth Management

⁰⁸ The Year Ahead



Outlook

09 A new world

Key questions for 2024

- **13** What's the outlook for growth?
- **16** What's the outlook for rates and yields?
- **19** How will politics shape markets?

Investing in 2024

- 25 Manage liquidity
- 27 Buy quality
- **31** Trade the range in currencies and commodities
- **34** Hedge market risks
- **36** Diversify with alternative credit

38 The Decade Ahead



Investing in the decade ahead

- **39** The decade ahead
- **43** Asset class expectations
- **45** What will generative AI mean for markets and economies?

Investing in the future

- **51** Pick leaders from disruption
- **55** Capture growth with private markets
- **58** Getting in balance in the year and decade ahead

Looking back and looking ahead

- 62 2023 in review
- 63 Forecasts



To find out more about the Year Ahead 2024, visit ubs.com/yearahead

Scott Webb I Unsplash

A new world

The economic and political aftereffects of the global pandemic continue to reverberate, years after its onset. We are in a new world. It's time to build a plan, get in balance, and stay disciplined, yet agile.



Mark Haefele Chief Investment Officer Global Wealth Management

Never before in human history has a pandemic caused governments to forcibly and almost simultaneously shut down their economies and then shock them back to life. The result? The return of inflation, labor market stress, and a surge in interest rates, bond yields, and government debt. At the same time, wars in oil-producing regions, a maturing China, and the rise of national industrial and environmental policy are remaking the geopolitical sphere. And while the old threat of great powers at war seems to be returning, new developments in artificial intelligence (AI) might also transform humanity.

This leaves us in a new world, one defined by economic uncertainty and geopolitical and environmental instability, but also profound technological change.

What should we expect in the year ahead?

First, we expect slower growth for the US economy in 2024 as consumers face mounting headwinds. We expect European growth to remain subdued, and China to enter a "new normal" of lower, but potentially higher-quality, growth. We think this environment speaks in favor of tilt-

ing equity allocations toward quality stocks, including in the technology sector, that can deliver earnings growth even against a backdrop of slowing global growth.

Second, we expect central banks to start cutting rates in 2024. In our view, government bond markets are overpricing the risk that high interest rates will represent the new normal, and we also expect yields to fall in 2024. This speaks in favor of limiting cash allocations and locking in yields in quality bonds.

Third, we expect politics to have an outsized role in 2024. The US presidential election, the Israel-Hamas and Russia-Ukraine wars, and the ongoing rivalry between the US and China could all have global market repercussions. And political decisions to engage in large and unfunded fiscal spending create both upside and downside investment risks to base case economic forecasts. Investors should prepare to hedge market risks. We see capital preservation strategies, macro hedge funds, oil, and gold as hedges to focus on in 2024.

A decade of transformation

As we look to the decade ahead, we expect the effects of AI, China's maturing economy, the energy transition, and high global debt levels to grow larger still. We think AI will spur meaningful value creation across a range of sectors. For now, investors have focused on the likely beneficiaries from AI hardware and platforms, but the potential spillover into applications will reach far and wide.

A new normal is coming into view for China. Constraints on old growth models will likely see slower growth than the norm over the past two decades. Investments aligned with the country's efforts to boost higher value-added manufacturing, drive a green transition, and develop greater selfsufficiency should be best positioned.

Concerns about climate change and national security will drive a global transition toward decarbonization. Achieving a complete transition to a carbon-zero economy is a complex undertaking. But significant investment in decarbonization projects should mean high growth potential for solution providers in the space.

Government investment in technological, environmental, energy, and physical security—as well as aging populations—means debt levels are likely to rise. We believe higher debt levels will contribute to higher volatility in fixed income, but also more opportunities for private investors to supply financing. These trends speak to the importance of building alternative assets into diversified portfolios for investors able to manage the specific risks associated with them.

What should investors do?

First, make sure you have a plan. In this new world, data has become more available but not necessarily more informative. The pervasiveness of social media means each data point is amplified more than ever before. The result? The power of stories to influence behavior has grown, information (or disinformation) can impact markets faster than ever, and popular opinion can flip in a matter of days. A clear plan, linking strategies with goals and values, can help investors stay focused on the bigger picture in an increasingly noisy world.

Second, investors should get in balance. In our base case, we expect positive returns for balanced portfolios in 2024, and our scenario analysis suggests that multi-asset diversification should also prove effective at hedging risk scenarios. Over the longer term, we believe that investors who keep a diversified multi-asset portfolio—traditional or sustainable—as a "core" investment strategy are most likely to successfully protect and grow real wealth over time. Third, stay disciplined yet agile. Discipline is key to successful investing: Given the right "core" strategy, the adage of "time in the market, not timing the market" has held true over time. But equally, markets evolve and investors' needs change. Investors should therefore regularly review their plans for strategic allocations, tactical allocations, and "satellite" investment ideas.

Lessons from "the old world"

As we enter a new world, it would be easy to feel a sense of trepidation. Yet it's worth remembering that since 1900, the world has seen two world wars, nine pandemics, hundreds of civil or regional wars, more than 2,000 nuclear detonations, revolutions in both the world's largest and most populous countries, at least a dozen hyperinflations, over 15 bear markets, over 20 recessions, and almost 200 sovereign defaults or debt crises.

When it comes to investing, all these years of adversity have taught us three things: the value of global diversification, the virtue of patience, and, most important, the resilience and ingenuity of humankind.

We wish you a happy, healthy, and prosperous year ahead.



What's the outlook for growth?

We expect the strength of the US economy in 2023 to give way to slower, though still positive, growth in 2024 as consumers face mounting headwinds. We expect European growth to remain subdued, and China to enter a "new normal" of lower, but potentially higher-quality, growth.

US

A long-awaited slowdown. US economic growth was more resilient than expected in 2023, with the support of excess consumer savings. In 2024, we think growth is likely to slow. High interest rates are likely to curb the propensity to spend: Items often purchased by borrowing, like houses and cars, are the least affordable they have been in years. Households are having to grapple with the end of childcare subsidies, the trimming of Medicaid rolls, and the resumption of student loan payments. And we think savings rates are likely to rise as confidence ebbs.

No significant contraction. While we expect a slowdown, we do not expect a significant contraction in activity. It would be historically unusual for the US economy to avoid a recession after a period of rate hikes, but we think there is cause for optimism this time. First, job security among the key spending group of middle-income households is likely to remain high. Second, we expect solid investment spending related to artificial intelligence, semiconductors, infrastructure, and green energy. Third, strong household and business balance sheets should mean a degree of resilience against negative shocks.

Europe

Some support. Real consumer incomes should rise because of falling inflation and a resilient labor market, and we expect those to translate into higher consumer spending. Households have already accumulated precautionary savings and reduced debt. Supportive fiscal policy, particularly in southern and eastern Europe, should also stimulate growth, as funds from the NextGenerationEU fiscal plan drive investment in infrastructure and low-carbon energy production.

Headwinds remain. We expect European growth to remain sluggish overall. Monetary policy will likely stay restrictive through next year, even after the three rates cuts we expect. Bank lending will likely be constrained by pressure on bank profitability, less generous support from the European Central Bank (ECB), and concern over remuneration of reserves. Subdued external demand and high energy costs are likely to weigh on exporters and manufacturers.

China

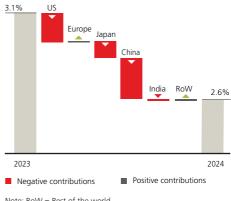
A new normal. We expect the Chinese economy to grow by 4.4% in 2024, below an estimated 5.2% in 2023, weighed down by muted consumption, slow external demand, and challenges in the property sector. Over the longer term, a shrinking labor force, structural limits to trade-driven growth, and a fragile geopolitical balance mean the era of over 6% annual growth for China is likely behind us.

Still a growth engine. A new normal for the Chinese economy is no reason to write it

Figure 1

US and China to become drivers of slowing global growth

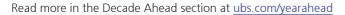
Global GDP growth forecasts and main contributors to the slowdown



Note: RoW = Rest of the world Source: UBS, as of November 2023

off, however. Beijing recently announced a CNY 1 trillion bond issuance program that could lift next year's GDP growth by 0.4–0.8 percentage points, and this could fore-shadow more policy action in 2024. Longer term, we expect consumer spending, lead-ership in the carbon transition, and industrial supply chain upgrades to provide durable and quality growth drivers.

What will China's new normal mean for the decade ahead?





Investment implications

Buy quality bonds. We think slower growth will lead to lower interest rate expectations, and lower yields, in 2024, making high-quality bonds an attractive investment opportunity. For more, see page 27.

Buy quality stocks. We expect equity markets to rise broadly, but particularly like quality companies, including those in the technology sector, with the potential to grow earnings against a backdrop of less robust economic activity. For more, see page 28.

UBS real GDP growth forecasts



Source: UBS, as of 13 November 2023

Lessons from history

Can the Fed defy history and avoid causing a recession?

History suggests that aggressive monetary tightening often, but not always, leads to a recession.

Since 1971, there have been eight cycles of interest rate hikes before the current one in which the Federal Reserve raised rates by more than 200 basis points. A recession followed in five of those instances, including in all four when rates were hiked by 375bps or more. In two, 1983–84 and 1994–95, the Fed achieved a soft landing. The conditions that allowed this included future inflation expectations being well anchored, a tight labor market, and sizable household savings—three features that are present in today's environment. The recession in 2020 was triggered by the coronavirus pandemic.

Our base case remains that the US will achieve a "soft-ish" landing in 2024, thanks to robust labor demand, solid investment spending, and strong consumer and business balance sheets.

What's the outlook for rates and yields?

We expect central banks to commence rate-cutting cycles in 2024. In our view, government bond markets are overpricing the risk that high interest rates will represent the new normal, and we expect yields to fall in 2024.

Inflation and rates

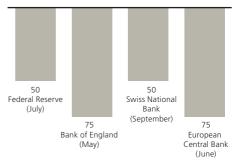
Back to normal. Inflation made progress toward central bank targets in 2023, and in 2024 we believe that journey will continue. In our base case, we expect US and Eurozone core consumer price inflation to end 2024 in the 2–2.5% range. Key drivers include falling homeowner-related inflation, weaker consumer demand, and slower wage growth.

Expect lower rates. We believe that the combination of lower growth and lower inflation should lead to interest rate cuts in 2024. Although inflation will likely remain above the 2% targets through most, or all, of the year ahead, we believe policymakers will be sufficiently confident by midyear that inflation is falling sustainably toward

Figure 2

Our expectations for central bank rate cuts

Cumulative rate cuts in 2024, in bps, and month of first rate cut (in parentheses)



Source: UBS, as of November 2023

target. Our base case is for the ECB and Bank of England each to cut rates by 75bps in 2024, while we expect the Fed and Swiss National Bank to ease by 50bps next year.

Yields

Markets pricing higher-for-a-lot-longer. Markets are implying that the Fed will not cut rates below 4.2% over the next five years. While it is possible that interest rates could stay higher for longer than we expect, we consider it highly unlikely that the Fed will not need to cut rates below 4%, or otherwise intervene in markets, within the next half-decade. Over that time frame, at least one recession, period of low inflation, or financial turbulence should be considered likely. Political decisions to engage in large and unfunded fiscal spending create risks to this view.

Expect bond yields to fall. We expect slower economic growth in 2024 to lower interest rate expectations, both over the short and longer term. Commensurate to this, we expect the 10-year US Treasury yield to fall to 3.5% by the end of next

year. As we discuss in more detail in our bonus content (see link below), we estimate the equilibrium 10-year yield to be 3.5% (based on a combination of inflation of 2–2.5%, a neutral real interest rate of 0.5–1%, and a term premium of 0.5%).

Investment implications

Manage liquidity. With interest rates and rate expectations set to fall, we believe investors should ensure they don't hold too much cash, and look to optimize potential returns. For more, see page 25.

Buy quality bonds. We believe that quality bonds have attractive yields and the potential for capital appreciation if markets start to price lower expectations for interest rates in 2024. For more, see page 27.

Are higher debt and higher rates the new normal?

Read more in the Decade Ahead section at ubs.com/yearahead



Lessons from history

What does history suggest about the path for rates and yields?

Peak rates don't last long. In the 10 instances of Fed rate-hike cycles since 1970, interest rates stayed at the peak for a median of three months. The shortest "hold" was just one month, and the longest 15.

Cuts can be sharp. When the Fed started cutting rates, it cut by an average of 260bps in the first 12 months (excluding 1987 and 2006, when rates rose again after a pause) and 410bps within the first 24 months. Today, markets are pricing 150bps of easing within the next two years.

Yields come back to earth. While the recent rise in 10-year US Treasury yields has been swift, it is not without precedent: Since 1962, there have been 16 episodes in which the long yield has climbed by more than 100bps over six months. All but one of them (1979–80) were followed by a decline in yields over the following 12 months. We believe this time will be no exception.

Figure 3



Rate cuts can be sharp

Federal funds rate, in %, with US recession periods shaded

Source: Bloomberg, UBS, as of November 2023

How will politics shape markets?

We expect politics to play an outsized role in 2024. The US presidential election, the ongoing Israel-Hamas and Russia-Ukraine wars, and the rivalry between the US and China could all affect markets globally. Investors should prepare for bouts of politically driven volatility and consider hedges.

US presidential election

Sizing the odds. President Joe Biden and former President Donald Trump currently hold significant leads in their quest for the nomination from their respective political parties.

Betting markets ascribe a 70% chance of Biden becoming the Democratic nominee an unusually small number for an incumbent seeking reelection. Meanwhile, although Trump has an 80% chance of securing the Republican nomination according to betting markets, legal obstacles could undermine his appeal to unaffiliated voters and reduce his chances of securing the presidency—the markets are putting this probability at 35% (and Biden at just 30%). An outside risk is that this dissatisfaction could lead to third-party candidates tipping the election or even preventing a candidate from winning the majority of the Electoral College votes, throwing the election decision to the House of Representatives.

A divided Congress is likely. We think a divided Congress is the most likely scenario after the elections in 2024. We expect the Republicans to assume control of the Senate because they have fewer seats to defend. However, we believe the Democrats have a higher chance of retaking control of the House, with some Republicans facing tough reelection campaigns in the aftermath of the ousting of former Speaker Kevin McCarthy.

A divided Congress would mean that legislation would need to be passed on a bipartisan basis. This would reduce the likelihood of sweeping domestic reforms—such as changes to tax or health policy, or a rollback of climate spending—being introduced, but the sitting president would retain discretion on foreign policy, including areas like trade relations with China and the US's stance with respect to the Russia-Ukraine and Israel-Hamas wars.

Israel-Hamas war

Amid a growing humanitarian crisis, the Israel-Hamas war remains highly fluid. At the time of writing, the conflict remains a contained confrontation confined to Hamas and Israel in the geographical areas under their control. The risks, however, appear tilted toward the downside case of a regional escalation that draws in other nations. Israeli ground operations in Gaza, and exchanges of fire between Israel and Hezbollah and other Iranian proxies, point to the risk of escalation.

Impact on oil markets. In our base case, we expect Brent to trade in a USD 90–100/bbl range. But if Iranian crude exports fall by around 500,000 barrels per day, this could push oil prices to USD 100–110/bbl. A broadening of the conflict across the region, involving other oil producers, could push oil prices above USD 120/bbl.

Russia-Ukraine war

At the time of writing, the war is having a relatively limited day-to-day impact on global financial markets. That said, the tightening in global oil markets has left the world more vulnerable to other supply shocks.

America first? If Biden were to secure reelection, we would expect a continuation of the status quo in which the US supplies financial and military support to Ukraine. However, if Trump runs on an "America First" platform and is victorious, we would expect US financial and military support for Ukraine to significantly decline. This would leave European governments needing to materially increase spending—a fiscal risk or accept potential Russian military gains.

US-China rivalry

Trade and tech. US-China trade relations appeared to have found a new uneasy equilibrium in 2023, but China's efforts to become self-sufficient in semiconductor production are testing this balance. The White House is attempting to block Chinese access to foundational AI chips and chipmaking technology. *Taiwan.* While we expect mutual interest in cross-strait and US-Taiwan cooperation to continue, heightened US-China tensions surrounding Taiwan could have material consequences on global supply chains, with second-round impacts on both global markets and diplomatic relations.

Investment implications

On page 34, we detail some of the primary ways investors can hedge portfolios in 2024, including through capital preservation strategies, oil, gold, and hedge funds.

Lessons from history

Do US presidential elections impact markets?

While the US presidential elections are important for domestic and foreign policy, our research shows that they do not have a reliable impact on markets. We recommend investors express their political preferences at the polls and not with their portfolios.



*Excluding 2008, when the S&P 500 fell by 37% chiefly as a consequence of the global financial crisis. Source: Bloomberg, UBS, as of November 2023

Scenarios

Base case scenario: Soft-ish landing

Probability: 60% S&P 500: 4,700 | US 10-year: 3.5% | EURUSD: 1.12

We expect both equities and bonds to deliver positive returns in 2024. Slowing US economic growth, falling inflation, and lower interest rate expectations should mean lower yields, supporting bonds and equity valuations, while the absence of a severe US recession should enable companies to continue to grow earnings.

Downside scenario: Hard landing

Probability: 15% S&P 500: 3,500 I US 10-year: 2.75% I EURUSD: 1.00

We expect equities to deliver negative returns and bonds positive returns. A sharp slowdown in growth—possibly resulting from the cumulative effect of interest rate hikes enacted so far—results in a moderate or severe recession. Grim investor sentiment and sharply lower earnings expectations feed into equity price declines. Bonds fare well as interest rate expectations plummet and investors seek safe havens.

Upside scenario: Liftoff

Probability: 20% S&P 500: 5,100 | US 10-year: 5% | EURUSD: 1.18

We expect positive returns for equities and flat returns for bonds. Strong economic growth buoys corporate earnings growth, investor sentiment, and ultimately equity prices. By contrast, resilient growth and persistently above-target inflation keep bond yields elevated or push them even higher, leading to flat bond returns.

Alternative downside scenario: Bond vigilante

Probability: 5% S&P 500: 3,800 | US 10-year: 6% | EURUSD: 1.10

We expect both equities and bonds to fare poorly. Bond yields continue to rise, potentially due to fears about excess budget deficits, higher energy prices, or a drawn-out period of above-target inflation. Higher bond yields also weigh on equities as higher interest rates pull down estimated fair valuations and as some investors reallocate away from stocks and toward bonds.



How should I invest in 2024?

To navigate the year ahead, we believe investors should focus investments around five broad ideas.

Manage liquidity

With interest rates likely to fall, we believe investors should limit overall cash balances and take opportunities to optimize yields, using fixed term deposits, bond ladders, and structured solutions.

Buy quality

We expect positive returns for both equities and bonds, but focus on quality. We expect quality bonds to deliver both yield and capital appreciation. And we believe stocks with a high return on capital, strong balance sheets, and reliable earnings are best positioned to generate earnings despite weaker economic growth.

Trade the range in currencies and commodities

We expect US dollar stability as we enter 2024, yet USD weakness may emerge as the year progresses. We therefore think it is

appealing to sell USD upside to generate yield. In commodities, we expect Brent crude oil to trade in a USD 90–100/bbl range through 2024.

Hedge market risks

Geopolitical uncertainty means investors need to prepare for volatility ahead. In addition to diversification, investors can further help insulate portfolios against specific risks through capital preservation strategies, using alternatives, or with positions in oil and gold.

Diversify with alternative credit

We expect elevated price and spread volatility in fixed income amid high global debt balances. This is a supportive backdrop for various credit strategies including credit arbitrage and distressed debt.

Manage liquidity



We believe investors should limit overall cash balances and optimize yields in the year ahead. War and geopolitical uncertainty may increase the perceived safety of cash, but we expect interest rates to fall in 2024, reducing the return of cash and increasing reinvestment risks. Investors should use a combination of fixed term deposits, bond ladders, and structured solutions to cover expected portfolio withdrawals over the next five years.

Fixed term deposits

Interest rates on cash are poised to fall in 2024, in our view, as global growth and inflation moderate. With this in mind, we believe investors should use fixed term deposits to lock in currently high yields on cash, and cover potential expenses and liabilities up to 12 months out. Investors concerned about issuer and counterparty risks can diversify their deposits. Investing in fixed term deposits of different maturities can also help match liabilities and reduce interest rate and reinvestment risks.

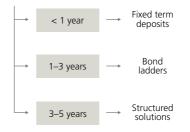
Bond ladders

Bond ladders can help provide investors with added certainty over future returns. A bond ladder involves buying a series of individual short-duration bonds of varying maturities, staggered to provide a steady stream of income, and aligned with the size and timing of expected portfolio withdrawals over the next 12–36 months. We see current yields on short-duration bonds as attractive, and do not expect current yields to last if central banks cut rates. Holding quality bonds may also offer scope for gains in downside economic scenarios.

Structured solutions with capital preservation features

For cash intended for use in 3–5 years' time, liquidity and safety concerns need to be balanced with the opportunity costs from potential stock market rallies. Investors concerned about limiting losses but also participating in equity gains can consider structured solutions with capital preservation features. Lower bond prices and lower equity market volatility in 2023 have improved the pricing of such strategies, which should mainly be focused on covering longer-term liabilities, since costs may apply if investors need to sell before maturity.

How to structure your liquidity



Source: UBS, as of November 2023

Changes in interest rates, implied volatility, and dividend levels can also influence the pricing of structured solutions. Investors should be aware of the additional risks borne when using structured solutions or other options-based strategies, including that the issuer fails to meet its obligations or repay an investor's principal at maturity.

Buy quality

We expect positive overall returns for both equities and bonds in the year ahead. But within each asset class, we believe investors should focus on quality. In fixed income, quality bonds offer attractive yields and should deliver capital appreciation if interest rate expectations decline, as we expect. In equities, quality companies with strong balance sheets and high profitability, including those in the technology sector, appear best positioned to generate earnings in an environment of weaker growth.

▶ The outlook for bonds

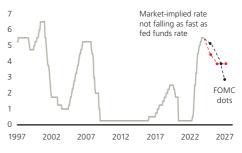
We expect government bond yields to fall in 2024, supporting positive returns for the asset class.

We think weaker growth should contribute to lower interest rate expectations. Market expectations that the Fed will not cut rates below 4% within the next five years are overly hawkish, in our view. And in an uncertain world, we believe government bonds could periodically attract safe-haven flows.

Quality bonds. We think this is an opportune time to add to high-quality bonds specifically high grade (government) and investment grade. Current yields should Figure 4

The market is overly hawkish

Federal funds rate, market pricing based on forwards, in %



Source: Bloomberg, UBS, as of November 2023

provide attractive returns, with positive returns possible across a range of scenarios (see <u>page 22</u>), and particularly in downside economic scenarios.

We see value in the 1- to 10-year duration segment, and particularly the 5-year duration point. We believe this middle part of the yield curve offers an appealing combination of higher yields and greater stability than the longer end, as well as some sensitivity to falling interest rate expectations. We are somewhat more cautious on longer-term bonds due to their greater sensitivity to technical factors, including currently high Treasury supply.

We do see select opportunities in riskier credit segments, including high yield credit and emerging market bonds. However, tighter lending standards, higher refinancing costs, and slower economic growth suggest higher default risks. Liquidity risk premiums may also rise as global money supply shrinks. As a result, we see high yield spreads as vulnerable to widening relative to investment grade and high grade.

The outlook for equities

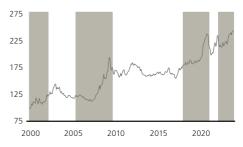
We expect a moderate rally in global equity indexes in 2024 as earnings grow, and as interest rates and bond yields fall. In our base case, we see the S&P 500 rising to 4,700 by December next year.

We also see a 9% rise in earnings per share for S&P 500 companies next year after a flat outcome in 2023. We think that leaner inventories, one-off base effects in healthcare, and earnings contributions from the technology sector and other quality companies should offset cyclical headwinds

Figure 5

In the current environment, focus on high-quality stocks

Performance of high ROIC (top third of Russell 1000) relative to low ROIC (bottom third), sector neutral, indexed to 100



ROIC = Return on invested capital

Note: Shaded areas denote periods when the yield on 10-year Treasury minus the yield on 2-year Treasury is less than 0.75% or the economy is in recession.

Source: Bloomberg, UBS, as of November 2023

from slower US economic growth. We expect 3% growth for European companies and 16% from emerging markets.

We also believe that lower interest rates and bond yields should provide a tailwind for stocks, provided we avoid a meaningful contraction in economic growth. In 2023, the equity risk premium deteriorated as bond yields rose, making equities progressively less appealing relative to bonds. We expect that trend to reverse in 2024.

Of course, uncertainty around the broader macroeconomic and geopolitical outlook creates higher uncertainty around our earnings estimates, and the MSCI All Country World Index (ACWI) is trading at 15.9 times 12-month forward price-to-earnings, roughly 10% above its 15-year average. Hence, we maintain a neutral stance on equities overall, while we await opportunities to change our allocation to stocks.

Regionally, we like emerging market equities and view UK equities as least preferred.

Quality stocks. These are among our highest-conviction calls in the equity market. We believe that companies with strong returns on invested capital, resilient operating margins, and relatively low debt on their balance sheets will be best positioned to continue generating profits in an environment of weaker growth.

A proxy for these stocks, the MSCI ACWI Quality Index, has historically outperformed the MSCI ACWI by 1 percentage point over six-month periods in which growth has been slowing but staying positive (as measured by the Atlanta Fed GDPNow survey)—the environment we expect in 2024.

Also, quality stocks have historically outperformed in the late stages of the business cycle, including in periods of economic contraction, which should offer portfolio protection if the economy slows more than we expect. The quality tilt also aligns with our preference for US technology companies, which should be among the key beneficiaries of AI-related demand for both hardware and software.

Quality stocks typically have higher valuations than the overall index, but we think that quality is worth paying for in 2024. Investors can find quality stocks within US tech; stable quality-income and high-quality cyclical stocks in Europe; and in select names in Asia.

Focusing on sustainability in fixed income and equities

Investors can invest in fixed income and equities while aligning with sustainability objectives.

Multilateral development bank (MDB) bonds, which channel capital into development projects with environmental and social goals, are rated AAA and offer slightly higher yields than benchmark government bonds.

Sustainable bonds—comprising green, social, sustainability, and sustainability-linked bonds—offer comparable yields to otherwise identical traditional bonds while delivering transparency on the projects financed from their proceeds.

"ESG leaders" strategies within equities and bonds focus on companies with top metrics across environmental, social, and governance criteria. Some empirical research supports a link between companies with better sustainability management and financial performance, and ESG leaders' portfolios correlate strongly with "quality" factors, and typically enjoy valuation premiums across both equities and bonds.

Trade the range in currencies and commodities



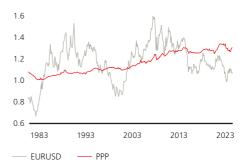
As we enter 2024, the US dollar should be stable around current levels. But as the year progresses, USD weakness may emerge, which makes selling USD upside for a yield pickup attractive. In commodities, investors can position for potential carry returns while hedging against geopolitical or weather risks. We like yield generation strategies, or those that enable investors to systematically buy currencies at cheaper levels.

▶ The outlook for currencies

We expect the US dollar to stay stable in the first months of the year due to robust US economic growth and high US interest rates relative to the rest of the world. However, strong US economic performance and high relative rates are already priced in at current valuations. At the same time, gains by the euro, the British pound, and the Swiss franc are likely to be limited amid lackluster growth and data-dependent central banks. As a result, we favor yield pickup strategies within these currencies.

Figure 6

The USD remains overvalued EURUSD and EURUSD purchasing power parity value



Source: Bloomberg, UBS, as of November 2023

The Australian dollar is our preferred currency as the Reserve Bank of Australia should be one of the last major central banks to cut interest rates. Favorable fiscal and external account positions add to an attractive currency mix.

We also like the Japanese yen given that the Bank of Japan is tightening monetary policy, and the authorities may step in to limit further yen weakness. That said, yen gains will likely be impaired by the currency's negative carry, requiring investors to focus on exchange-rate momentum.

We expect the Chinese yuan to bottom out against the US dollar in the early part of 2024. Nevertheless, we see limits to any CNY rebound considering China's structural challenges and ongoing geopolitical risks. We think this makes it hard for pro-growth currencies in Asia to perform unless economic growth outside the region surprises very positively. Risks to our view include the US economy continuing to exceed expectations and deliver robust growth. On the flip side, economic activity in the Eurozone or China could come under further pressure, preventing their currencies from reaping the benefits of a dip in US growth. Geopolitical risks also abound—any escalation could make the US dollar's safe-haven characteristic shine again, likely only eclipsed by the Swiss franc.

Navigating currencies in 2024. For investors whose base currency is the US dollar, we think selling the dollar's upside potential for yield pickup or selling the dollar on rallies, is an attractive strategy. We think upside risk for the USD is limited in the short run, and that strong US economic growth is already priced in at current valuations.

For investors based in euro, the British pound, the Swiss franc, or select other currencies, we recommend finding range-trading opportunities in the crosses (see table).

Currency crosses	Buy at lower end of range	Sell at upper end of range
EURUSD	1.0–1.05	1.10–1.12
USDCHF	0.85–0.87	0.92–0.94
EURCHF	0.94	1.0
GBPUSD	1.19–1.21	1.26–1.30
USDJPY	137–140	152–155
AUDUSD	0.63–0.64	0.70–0.72

Source: UBS, as of November 2023

Meanwhile, we like the AUD from a carry perspective, and believe selling downside risks in the JPY, the Norwegian krone, and the AUD are appealing strategies from a spot risk and volatility perspective.

▶ The outlook for commodities

With GDP growth likely staying subdued in China, hovering around zero in Europe, and declining in the US, the potential for commodity price gains is relatively limited.

But total returns should be supported by yields on cash collateral of more than 5%, and roll gains from downward sloping futures curves in energy and parts of agriculture. These should add 1–2 percentage points per annum to broad index returns (based on the UBS CMCI index).

Overall, we expect broad commodity indexes to deliver low-teens percentage returns over the next 12 months. We think this strategy provides an attractive risk-reward trade-off to investors who continue to hold their positions, while also providing some protection against geopolitical and weather risks that threaten supply.

Trading the range. We like strategies that take advantage of the trading ranges within commodities, selling the upside in some cases, and the downside in others.

In energy, by restricting production, OPEC+ has created an artificial market deficit, although much higher prices would likely result in both a supply response and demand destruction. We see Brent crude oil prices fluctuating in a USD 90–100/bbl range, but with risks tilted to the upside given the potential for oil supply disruptions.

We expect gold to rise further to a record USD 2,150/oz by end-2024 if potential US rate cuts become a reality. However, in the short term, opportunity costs attached to holding gold remain elevated, so we favor buying on dips.

Hedge market risks



Investing against a backdrop of war and geopolitical uncertainty can be challenging, and investors need to prepare for volatility ahead. We believe that investing across asset classes and regions should be most investors' first defense against potential market turbulence. But investors can also further help insulate portfolios against specific risks through defensive structured investments, alternatives, or positions in oil and gold.

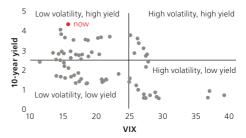
Defensive structured investments

We expect positive returns for equities in 2024. But with geopolitical and economic risks likely to be prominent, investors looking to hedge against the risk of losses can make use of structured investments with capital preservation features. Such strategies are particularly attractive in times of higher bond yields and average or belowaverage implied equity market volatility. Another option to reduce direct exposure is through yield generating strategies, a strategy which is attractive when volatility is high—as in the fixed income markets at present.

Figure 7

Higher yields and low volatility a boost for capital preservation

Past 5 years 12-month trailing VIX average vs. 10-year US bond yield, based on quarterly data, and current level



Source: Bloomberg, UBS, as of November 2023

Oil and energy stocks

Investors worried about the potential market impact of further escalation in the Israel-Hamas or Russia-Ukraine wars can consider hedging portfolios through oil market investments or energy stocks. Investors with a high risk tolerance can consider adding exposure via longer-dated Brent contracts, which currently trade at a discount to spot prices, or selling the risk of Brent prices falling.

▶ Gold

We think gold can provide a potentially effective portfolio hedge against rising geopolitical tensions. Current interest rate and geopolitical uncertainty may lead to choppy gold prices in the near term. But investors looking to add gold can consider buying the metal using options (buying below USD 1,900/oz). We think investors with existing long gold positions should hold onto them in anticipation of a recovery over the next 6–12 months.

Hedge by positioning for a steeper US yield curve

Investors concerned about widening US fiscal deficits could consider a steepening trade on the US government bond yield curve, buying 5-year Treasury bonds and selling 10-year ones (on a duration-adjusted basis). This takes advantage of the relatively flat yield curve to enact a "low cost hedge" against higher longer-dated bond yields. We would expect this position to perform well if investors demand more compensation for holding long-dated Treasuries, or if recession fears lead to lower short-term interest rate expectations.

Macro and multi-strategy hedge funds

Macro funds could also be an effective hedge and diversifier in 2024. They take advantage of macroeconomic volatility, using their top-down approach to navigate shifts in the economic landscape, central bank policies, and market conditions.

Meanwhile, multi-strategy funds, combining various hedge fund approaches, are also a potentially attractive way to diversify portfolios. These funds are typically highly diversified, reallocate dynamically, and exercise advanced risk management strategies. Investors should be aware of the risks inherent in alternative investments. These include liquidity risk, use of gearing, and limited disclosure requirements.

Diversify with alternative credit



We expect high global debt balances to contribute to elevated price and spread volatility, driving investors to seek ways to benefit from dispersion. This is a supportive backdrop for various alternative credit strategies including credit arbitrage and distressed debt.

Credit arbitrage

US credit markets have been in recovery since the fourth quarter of 2022. But lower-rated credit segments have underperformed, largely due to refinancing fears. Widening dispersion between borrowers makes credit arbitrage strategies a potentially attractive addition to portfolios.

In the current market, about a third of the US ICE BofA high yield index are trading at spreads below 300bps relative to the benchmark, 15% between 501bps and 800bps, and 9% above 800bps. This pres-

ents opportunities for discerning managers to make single-name credit choices based on fundamental analysis.

There are risks to consider when investing in this strategy. Alongside illiquidity and lower transparency than public markets, credit arbitrage portfolios are subject to near-term losses arising from higher levels of corporate distress, even if such distress may open up long-term opportunities. This underlines the importance of managing risk in stressed single-name credit and considering index portfolio hedges.

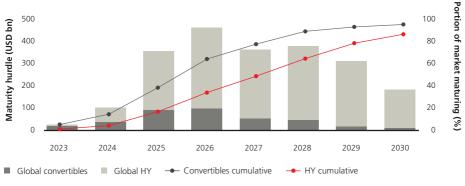
Distressed debt

We also see good strategic opportunities in distressed and special situation funds. Higher interest rates could put pressure on companies' ability to refinance. This should provide a consistent source of deal flow for distressed and special situation funds. The distressed opportunity is likely to be focused in areas of the market that have already seen some dislocation, with properties in bankruptcy and tenant distress. In other sectors, distressed funds could find opportunities in overly indebted businesses that struggle to cover interest costs.

Figure 8

Higher rates and the impending maturity wall put pressure on firms to repay loans, creating opportunities in distressed debt





Source: BofA Securities, Bloomberg, UBS, as of November 2023

Kacper Peciak | Unsplash

The Decade Ahead

The economic aftermath of the pandemic has been wide-ranging and often unexpected. Inflation soared and stayed high. Interest rates jumped to levels not seen in more than 15 years. Yet despite rising rates, unemployment stayed low and growth remained robust.

The unusual mix of economic outcomes in recent years begs the question of whether the "new world" post-pandemic has also brought with it a new macroeconomic regime, in which the global economy shifts from one characterized by muted demand and excess supply, to one of constrained supply and robust demand.

The answer to that question will be defined by developments in what we call the "Five Ds": deglobalization, demographics, digitalization, decarbonization, and debt.

Deglobalization

A new world will likely be one in which economies are less integrated. We think trade as a share of global GDP has likely already peaked—with reduced trade accelerated by the US, Europe, and China becoming accustomed to exchanging sanctions, tariffs, and export controls. Tensions between the US and China also risk splitting the world into incompatible financial, trade, and technological blocs. But precisely how deglobalization shapes the world economy in the decade ahead depends less on whether it happens and more on why it happens.

Should deglobalization occur mainly for political reasons—for example, due to increased trade restrictions or subsidies—it would likely constrain the overall supply of goods, reduce potential growth, or periodically lift inflation.

However, if deglobalization occurs mainly for economic reasons—a result of companies leveraging automation; focusing on integrated manufacturing; reassessing costs in light of rising wages in emerging markets; or building more resilient supply chains—the consequences are likely to be different. In this scenario, the net result is likely to be higher supply, lower inflationary risks, and higher potential growth.

Demographics

Demographics pose an increasing potential headwind in our new world. Half of the world economy measured by official GDP now has a declining population. Populations are shrinking in Japan, China, and several European countries. The ratio of retired to working-age people has risen globally from 11.8% to 14.8% in just the past decade, up more sharply in high-income countries from 23.2% to 29.1% over the same time period.

These trends represent a supply constraint. Economic growth is a function of growth in the labor force, capital investment, and productivity, so all else equal, lower labor force growth will mean lower potential economic growth. A higher proportion of retirees relative to workers will likely mean higher debt. In service-heavy economies, in which the potential for productivity growth is more limited, rising old-age dependency ratios could also contribute to higher inflation.

Whether the world economy can escape the negative supply-side effects of an aging population could depend largely on developments in our third D: digitalization.

Digitalization

The rise of artificial intelligence could presage an era of higher productivity. We see potential for an incremental annual increase of between 0.3% and 2% in the US alone.

If the full potential of AI is realized, it could help alleviate demographic challenges supporting growth and driving disinflation in certain goods and services, despite shrinking working-age populations. Meanwhile, upfront investment in AI and related industries like semiconductors could boost demand in the near term.

However, the impact of AI may not be as profound if the technology mostly boosts supply in industries less affected by demographic challenges (e.g., chatbots supporting professional services) and fails to boost supply in areas facing greater pressures (e.g., physical robots supporting healthcare).

Either way, for investors, we think the rise of AI should support overall corporate earnings growth and opportunities in companies enabling, offering, or benefiting from AI technologies.

Decarbonization

The drive toward clean energy and zero carbon emissions has been reinforced by fears over energy security and extreme weather events. In the years ahead, we expect public and private capital to continue to support the energy transition.

In the short to medium term, we believe the energy transition could disrupt supply, as energy storage and grid connectivity obstacles constrain the reliability of renewable energy even as costs and operational risks for fossil fuels rise. At the same time, investments in the sector could help keep global demand robust.

In the longer term, we see the drive toward decarbonization as a net positive for global supply. Enabling a more abundant supply of energy at lower cost should contribute to higher potential growth, lower inflation, and more robust supply chains. For investors, solution providers as well as early adopters should stand to benefit most.

Debt

The future for the fifth D—debt—may depend on how the other four contribute to different growth, inflation, and interest rate outcomes. Global total debt has risen as a share of GDP since the global financial crisis in 2008, as the world has grappled with weak demand. Fortunately, abundant supply and low interest rates have meant that interest payments in proportion to government revenue have so far stayed close to all-time lows.

Looking ahead, demographic challenges and investment needs related to decarbonization, digitalization, and deglobalization look likely to mean rising government debt as a share of GDP. If rates and yields do not fall in the way we expect in the coming years, higher interest payments could start to pose a challenge for governments in the second half of this decade.

Debt will need to remain affordable, not least because many voters prefer low borrowing costs. The preferred path to achieve this is through robust economic growth, which could materialize with the widespread use of AI, abundant green energy, and localized supply chains. Failing these, then some combination of financial repression, taxes, surprise inflation, or default may be needed. Here, the answer may be less about markets and economics and more about politics, with different countries likely to choose different paths.

Scenarios

As we consider the decade ahead, we see four potential scenarios for the new macroeconomic normal in our new world.

Roaring '20s Moderate inflation and high growth

Drivers could include high rates of investment linked to digitalization (AI), decarbonization, and defense. In this scenario, we would expect strong earnings growth and good performance from equities, but more muted initial performance from bonds as investors price interest rates staying higher for longer.

Secular stagnation redux *Low inflation and low growth*

Potential drivers include aging populations or the promise of AI and renewable energy not meeting expectations. This scenario would likely be initially positive for bonds as financial repression is used to manage rising debt burdens. Equity multiples could be supported by central bank stimulus, but companies could also struggle to deliver earnings growth.

Brave new world Low inflation and high growth

Potential drivers of this scenario include a prominent role for Al or a swing back toward globalization. We think this scenario would be favorable for both equities and bonds. We would expect good earnings growth to support equities, and lower interest rate expectations to support bonds.

Stagflation

High inflation and low growth

Drivers of this trend could include deglobalization, geopolitical tensions, and climate change. In this scenario, we would expect both bonds and equities to perform poorly (at least in real terms) as higher rate expectations and challenges to real earnings growth weigh on performance. Nominal returns for equities could still be positive.

Asset class expectations

Over the coming decade, we believe that cash will underperform other major asset classes, particularly in scenarios in which central banks return to financial repression. We see the highest returns in equities. Prospective fixed income returns should continue to improve. Good returns in underlying equity and bond markets should be supportive for the returns of alternative assets.

Cash

Cash rates are currently attractive, but we believe that interest rates are likely to fall in the year ahead. We also expect that cash, over the long term, will underperform other major asset classes like stocks and bonds, especially in scenarios in which central banks use financial repression to manage rising debt burdens. We recommend that investors hold no more than two to five years of expected net portfolio withdrawals in a liquidity strategy.

Government bonds

High yields bode well for government bond returns over the long term, and we also expect good returns in the near term as inflation and growth fall from today's levels. But while we expect yields to drop, we still expect them to stay higher than the pre-pandemic era, as increased investment needs related to deglobalization, digitalization, and decarbonization contribute to greater bond supply and higher estimates for the real neutral rate. We think this means an environment of consistent, attractive total returns for government bonds.

Credit

Credit spreads are currently relatively tight compared to historical norms. While we expect spreads to widen in the near term as growth slows, we still believe credit exposure is valuable in the context of a longterm diversified portfolio to benefit from both carry and diversification. Refinancing risks, slower growth, and less certainty about central bank intervention may contribute to higher fixed income volatility in the years to come, favoring an active approach to the asset class.

Equities

We expect equities to deliver the highest return among major asset classes in the decade ahead. Aggregate earnings growth should be well supported by robust growth in companies driving technological, energy, and healthcare disruption. That said, likefor-like, equity valuations are likely to be lower than in the past decade, given higher interest rates than pre-pandemic norms. Global diversification will be important to navigate a deglobalizing world. Emerging market stocks, for example, are trading at sizable discounts to historical levels, and we expect them to deliver the highest rates of return over the next decade.

Alternatives

We estimate that allocating a 20% exposure to alternatives in a balanced portfolio could increase expected returns by about 50bps a year over the long term, for an equivalent level of portfolio volatility. An environment of higher rates and attractive returns for traditional assets bodes well for hedge funds, which we think will remain an important portfolio diversifier in the years to come. We also see attractive opportunities in entering private markets today, where secondaries are trading at a compelling 16% discount to net asset value (NAV), while new private loans are yielding 12.5%. Investors should be aware of the added risks borne in alternatives, including illiquidity, the use of gearing, and less transparency than in public market investments.

Currencies

We expect the US dollar to depreciate over the longer term due to its elevated valuation and concerns over deficit financing. However, this view is largely compensated for by USD interest rates, so our expected returns for most asset classes are similar in hedged or unhedged terms. We also expect the JPY to catch up in the years to come given its significant undervaluation.

Commodities

We think prices will stay high over the decade ahead amid higher climate, supply chain, and defense spending. Given the cyclicality of the asset class, we favor investing in commodities via active approaches, or via equity sectors or in countries and currencies with high commodity exposure.

What will generative AI mean for markets and economies?

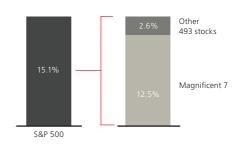
Generative artificial intelligence isn't a new concept—the broad idea has been around since the 1960s, and the transformer architecture that makes it more effective was detailed in 2017. But the launch of ChatGPT has shown its potential impact when combined with a platform with strong consumer adoption. Currently, we see Al-related opportunities across a range of software, internet, and semiconductor stocks.

History shows that the advent of new technologies can create value across a range of sectors.

We use a four-part framework to help identify common ways that technological developments create value in adjacent sectors through time.

Figure 9

Contribution to S&P 500 performance



Magnificent 7 vs. remaining 493 S&P 500 stocks, year-to-date, in percentage points

Source: FactSet, UBS, as of 3 November 2023

Generative AI is the latest technology creating value across sectors

The innovation value chain: Breakthrough technology is powered by infrastructure and inputs, creating new hardware running on platforms of operators and enablers, benefiting the economy at large

	Technology	Infrastructure / inputs	Hardware manufacturers	Operators and enablers	Application beneficiaries
- M	Steam engine	Steel, coal	Trains, ships	Railroad and ship operators	Trade
6	Telephone	Telecom cables, electricity	Telephones	Network operators	Services, trade
	Internal combustion engine	Steel, oil, auto parts	Car manufacturers	Service, insurance, dealerships	Retail, leisure, commuters
	Television	Towers, satellites	Television sets	TV networks	Advertising, subscription business models
	Computer	Semi- conductors	Mainframes	IBM	Professional services, manufacturing, aerospace
	Internet	Routers, data centers	PCs	Windows, Internet Explorer	Search, e-commerce, cloud
•))	Mobile internet	Towers, semiconductors	Smartphones	iOS, Android	Social media, e-commerce, gig economy
	Generative Al	Cloud	Graphics processing units	Large language models	Text generation, pro- gramming, image/ video generation

Source: UBS, as of November 2023

What does history tell us about technology innovation?

Infrastructure and input providers.

Demand for necessary infrastructure and inputs understandably often booms in the immediate aftermath of innovation—think steel and the railway, oil and the automobile, semiconductors and the smartphone. But history shows that while providers of key inputs can earn high profits initially, over time their products can become commoditized. Infrastructure and input providers therefore may eventually need to learn to run at a high scale and with lower profit margins.

Hardware manufacturers. Innovative technologies can often drive the adoption of new consumer hardware (e.g., cars, TVs),

and hardware manufacturers can therefore benefit from a surge in demand. At the early stages of a technology boom, hardware manufacturers may benefit from the uniqueness, quality, and novelty of their hardware. But sustaining leadership is often harder. Hardware can also become commoditized over time, and successful hardware companies often must learn to differentiate their products, potentially by integrating hardware with a leading operating system.

Operators and enablers. The largest and most enduring value creation derived from new technologies has historically tended to accrue to their operators and enablers. Railroad companies, radio and TV networks, software operating system developers, and digital platform companies are all examples of such enablers. In many cases, they have become the largest companies in the world at some point in time.

Application beneficiaries. Innovative technologies often create ecosystems of beneficiaries that may not be directly involved in the development of a technology, but may be well positioned to use them to build new businesses or improve the profitability of existing ones. Companies that increased crosscountry trade following the advent of the steam engine, retailers that boomed due to mass car adoption, or businesses that engage in e-commerce and social media as a result of the internet are all examples.

Where does AI stand today?

We can see this historical framework at play in the early stages of the AI revolution:

Infrastructure and input providers (cloud). Cloud computing is a crucial input for generative AI because it provides the computing power needed to both train and make generative AI applications work. Much like historical "inputs" into other key technologies, cloud computing is in some sense commoditized—it is a standardized service with a low unit cost. That means there are significant economies of scale, and the largest cloud platforms are already run by the largest technology companies. Cloud providers are also able to "lock in" customers through bundled services.

Hardware manufacturers (GPU manufacturers). Graphics processing units (GPUs) are chips that are crucial to the training of neural networks, a cornerstone of AI, and are therefore seeing a strong surge and significant share price appreciation for the leading manufacturers. In the short term, we expect this demand surge to continue. In the medium term, we may see a period of "digestion" in which buyers identify and refocus on only the most promising use cases. Over the longer term, it remains to be seen whether chipmakers can continue to develop, evolve, and innovate their products to maintain pricing power, or if GPUs will become commoditized, forcing manufacturers to run at a higher scale and with lower margins.

Operators and enablers (large language models). Large language models (LLMs) can be thought of as among the key "enablers" of the Al ecosystem. Developing an effective large language model requires significant scale in data, computing power, and talent, and while models may be better suited to a specific application (e.g., generating text, code, or images), they are generally not specific to an individual domain (e.g., finance, law, or marketing). Ultimately, there may only be a few LLMs on which most generative Al applications are built. So far, the most notable have mostly been built by, or in a joint venture with, the largest technology companies.

Application beneficiaries (text generation, programming, image/video generation). ChatGPT has been a clear example of how generative AI can exhibit human-like text-generation capabilities. It can also be used to generate computer code, images, or video. We see significant opportunities over the next few quarters in the integration of AI "copilots" in office productivity software, in the rising demand for AI analytics, and in AI integration in image, video, and other enterprise applications.

Investment implications

An unusual feature of generative AI is that, right from the onset of the new technology, many of the same companies are already operating in multiple stages of the value chain—from cloud, to the ownership of LLMs, to the development of end-user applications.

With that in mind, it is perhaps understandable why the Magnificent 7 in the S&P 500, mostly Al beneficiaries, have seen their market capitalization grow by 67% (or USD 4.6 trillion) so far in 2023. With the significant resources needed to build and benefit from complex Al models, we expect the large players to grow larger still.

We believe that investors looking for exposure to AI should seek broad exposure across the value chain, including in cloud, semiconductor, software, and internet names. Related semiconductor companies should continue to see robust demand in the near term; key generative AI product launches across many of the Magnificent 7 are likely to keep the momentum high; and internet stocks should benefit as AI becomes more integrated in consumer applications like gaming, entertainment, and advertising. While the long-term growth potential is large, investors should be prepared for potential short-term volatility or drawdowns. As with other technology booms, an initial surge in demand can often be followed by a digestion period for consumers and businesses. For long-term investors, such periods could present attractive entry points to increase exposure.

Economic implications

We think AI should meaningfully improve efficiencies and worker productivity, but the implications for economic growth are less clear. Depending on how AI is ultimately applied, it may result in unchanged output but increased leisure time.

Some jobs will become obsolete because of Al—few offices today have "typing pools," for example—but we should not necessarily expect a surge in unemployment. Al is likely to create at least some new jobs that were not previously thought of. Historically, roughly 10% of the labor roles that existed at the end of any given decade did not exist at its start. For example, employment in the entertainment industry has increased over the past decade as social media and streaming increased consumption of entertainment and reduced barriers to entry. Over the longer term, AI will likely be disinflationary for prices in some sectors, but the extent of the economy-wide impact will depend heavily on the magnitude, location, and timing of AI's use. It is already becoming clearer how AI text, image, and video generation could put downward pressure on pricing for sectors including customer services, computer programming, legal, and entertainment.

Finally, periods of economic upheaval tend to create social tensions as those who see their income and status decline seek someone or something to blame. These tensions can lead to populist and prejudice politics. Al could also further escalate geopolitical tensions as countries enter an Al "arms race" as a defense against the potential applications of Al by their rivals. This trend is already evident in the recent restrictions on Al technology introduced by the US, and other retaliatory measures by China.

1 ITT 1 1117 7 7 _____ TITI 7-17 1 - 1 T T 1 TITTT 1 T 1 ITTI 7 1 7-7-7 1 T 7 1 I TELEVILLET INTELLE KEILITIIII III Antoine Bussy I Unsplash 1-1

Pick leaders from disruption



We expect some of the highest returns in equity markets over the decade ahead to come from those companies that can harness new technologies to grow markets, dislodge incumbents, or slash costs. Successfully identifying these "leaders from disruption" is critical to boosting long-term portfolio potential. We expect the decade ahead to see a wave of disruption rippling across industries from technology to energy to healthcare.

Technology disruption

The arrival of mainstream AI services accessible to consumers has driven significant investment into the world's largest technology leaders, crowning the first trillion-dollar AI company in the process. The Magnificent 7, mostly AI beneficiaries, have seen their market capitalization grow 67% so far in 2023. With access to all the computing, financial, human, and data resources they need to grow and exploit the potential of generative AI, the largest players could grow even larger over the coming decade, in our view.

13 June 2023

Nvidia becomes the first AI company with a market capitalization of

USD 1 trillion

But this is not a story limited to mega-cap tech. We think technological disruption will be an enduring theme that spawns new opportunities and leaders across sectors in the decade to come.

As discussed on page 45, from an investment perspective, the beneficiaries of Al can be broken down into four areas: infrastructure and input providers (cloud), hardware (GPU manufacturers), operators and enablers (large language models), and application beneficiaries (text generation, programming, image/video generation).

We therefore see AI-related opportunities across a range of software, internet, and semiconductor stocks. Based on Bloomberg Intelligence data, we now expect global AI demand to grow from USD 28 billion in 2022 to USD 300 billion in 2027—a 61% compound annual growth rate. In that time, we think the infrastructure segment will grow by 38%, and the applications and models segment by 139%. Recent company product and earnings announcements in the software sector have provided a peek into Al's monetization potential. For example, new copilots are being rolled out rapidly. These are Al companion tools integrated within office workflow software to boost employee productivity, performing tasks that range from finding information to creating content. The ability to charge additional monthly fees for copilot add-ons gives subscription-based software companies an expanded scope for Al monetization.

Energy disruption

Concerns about climate change, national security, and advancing technology are driving global decarbonization. Creating an economy free of carbon emissions and transitioning to clean fuels is a complex undertaking. It will require investment in power generation, energy infrastructure, transport, industry, buildings, and heating and cooling systems, with the adoption of green technologies to achieve net-zero targets. We think investors will gain most through exposure to a number of these themes given the different stages of development across countries and sectors.

We expect global solar capacity to triple in the coming years from the current 1,000 GW, increasing the share of renewables in the global power mix. The share of renewables in electricity generation has already risen from 20% to 30% over the past decade. Investors can tap solar opportunities through diversified exposure to greentech, long-term exposure to the energy efficiency value chain, or more concentrated exposure to smart energy solutions.

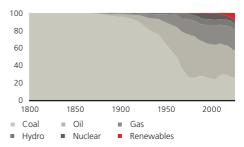
We expect electrified vehicles (including battery electric and hybrid) to make up around 30% of global auto sales by 2025 and more than 60% by 2030, driven by incremental technological developments. The electric vehicle value chain is integral to greentech investment themes, especially in Asia and Europe. Meanwhile, decarbonizing the heating and cooling systems of buildings and factories will require strong emphasis on energy efficiency investment. When the limits of hardware are reached, software can often be used to enhance energy efficiency. This opens up opportunities for companies that gather digital data and provide enabling technologies.

Beyond public markets, investors can tap into energy disruption opportunities in private markets, including in renewable infrastructure development, energy networks, storage, carbon capture, energy efficiency, and circular economy solutions.

Figure 10

The transition to renewables is under way

Primary energy consumption by fuel source, share of total, in %



Source: Energy Institute Statistical Review of World Energy 2023, UBS, as of November 2023

▶ Healthcare disruption

The healthcare sector will be a key source of disruptive innovation over the next decade. Aging populations will increase the demand for healthcare services and treatments, while tighter government budgets will necessitate new approaches to care delivery.

We see biological innovation and healthcare technology application as prime areas. Diversified exposure makes particular sense given that many companies in this field are small- or mid-cap.

In addition to obesity remedies, which grabbed investors' attention in 2023, we see opportunities in cancer treatment, rare diseases, immunology, and neurology. Companies have developed various new treatments that are now either reaching the market or close to approval, including antibody-drug conjugates, bispecific and multi-specific antibodies, and even cell therapy approaches for immunological conditions.

Meanwhile, increased connectivity and computational power are also leading to significant development. Trends include miniaturization, robotics, greater ease of interaction with patients, and improved access. The biopharma industry is also exploring Al-driven approaches to increase the output of the drug discovery process, develop new diagnostic approaches, or personalize medicines, although it is too early to see any tangible changes in drug discovery and approval rates.

When investing in healthcare disruption, we think it is important to keep a diversified exposure to various areas of innovation. Most of the disruptors are small companies, and tighter financial conditions can disproportionately affect short-term stock performance of those companies. Combining investments in the "disruptors" with investments in the "adopters"—more established companies that are using the new technologies—can be a lower-risk way of capturing the benefits of innovation.

We also see opportunity for investors to diversify across major subsectors (biopharma, medtech and tools, and services), and by geography, potentially enabling them to capture the growth in emerging market healthcare. Investors able to lock up capital for longer can also diversify beyond listed companies, given the significant role of private markets in funding early-stage research. Allocations to health-related investments across private and public markets could also benefit sustainability-focused portfolios.

Capture growth with private markets



A new world will see significant investment in healthcare, digitalization, and energy. But high government debt levels mean public funding for innovation is likely to be constrained. Private market managers, with their ability to provide equity or debt capital to companies at different lifecycle stages, have a key role to play. The asset class offers attractive return potential and direct access to the real economy, in exchange for lower liquidity.

Private markets provide access

Gaining exposure to fast-growing and innovative businesses through listed equities is becoming harder due to the shrinking supply of new listed firms. More companies are choosing to stay private, delay listings, or avoid them altogether, a trend we do not expect to reverse in the decade ahead. Similar dynamics apply in the debt markets, where traditional lenders' market share is declining in favor of private debt, particularly in funding small and midsize businesses.

Private equity

Value and middle-market buyout. In the middle market, entry multiples for acquisitions have declined to 10.3 times enterprise value relative to EBITDA year-to-date (as of 2Q23), down from 12.8 times on a trailing-12-month basis and below the average since 2008 (11.4 times). Add-on strategies, meanwhile, remain a powerful tool in off-setting growth and interest rate pressures given their potential for multiple arbitrage, cost-revenue synergies, and growth acceleration. We also expect carveout and divesti-

Figure 11

Secondaries are trading at unusually deep discounts

Pricing as % of NAV across private strategies



Source: Jefferies Global Secondary Market Review 1H23, UBS, as of November 2023

ture volumes to pick up further as the economic environment slows and companies spin out noncore or underperforming assets at potentially compelling acquisition prices.

Secondaries. With many investors still seeking to generate liquidity, secondary market managers that specialize in acquiring stakes in existing funds or portfolio companies that are, or are close to, generating cash flows remain attractive, in our view. Discounts are still above historical norms (16% to NAV as of June), bid-ask spreads have narrowed, and transactional activity is picking up. Thematic growth. For investors seeking to capture long-term secular trends in areas such as software, health, education, and climate, thematic growth private equity funds present an opportunity as improved pricing offers an attractive entry point.

▶ Private credit

Direct lending strategies are likely to be a good source of income in the coming decade. Debt-to-cash ratios have deteriorated, and defaults could rise, especially given the lagged effect of higher interest rates on the economy. But while defaults could lead to potential credit losses on existing loans, private lenders can dictate better terms on new loans and negotiate stronger lender protections which may include stricter covenants, lower leverage levels, and higher equity contributions. At current levels, private loans yield close to 12.5% on an unlevered basis and offer an attractive carry pickup over high yield and leveraged loans that should compensate for potential credit losses. We recommend focusing on experienced managers who are prudent at underwriting. Managers with turnaround capabilities or experience in taking equity ownership may also have an edge in this environment. Investors should consider the risks inherent to private markets before investing, including illiquidity, long lockup periods, leverage, and overconcentration.

Real assets

We are selective on the real estate market, maintaining a focus on quality and resilience. Fundamentals in the industrial, logistics, and multifamily sectors are sound, in our view, supported by favorable trends such as e-commerce and demographics. While uncertainty is high, the current challenges in the US office market will provide interesting investment opportunities in the decade ahead. Should some office properties further correct in price, we see conversion and refitting as a potential opportunity.

In infrastructure, developing new assets and modernizing existing ones is key to several structural trends, including digitalization, decarbonization, and deglobalization. Governments around the world are trying to spur capacity expansion (notably in renewables) while enhancing current and future project economics and competitiveness. Apart from being a thematic opportunity, infrastructure assets have unique characteristics—high barriers to entry, demand inelasticity, and consistent cash flows linked to inflation—that can be a strategic source of capital appreciation and income in multi-asset portfolios.

Getting in balance in the year and decade ahead

A new world will mean complexity and volatility, but also opportunity to grow wealth. To navigate this new world effectively, investors can build a plan using the Liquidity. Longevity. Legacy.* framework, get in balance through a globally diversified multi-asset portfolio, and stay disciplined yet agile by complementing their long-term portfolio with tactical trade ideas.

Liquidity. Longevity. Legacy.

The Liquidity. Longevity. Legacy. or 3L approach is designed to help investors explore and pursue their wealth goals over different time frames, and involves segmenting wealth into three strategies:

Liquidity.

This strategy is to ensure investors have enough liquid assets to meet their shortterm spending needs and is typically invested in cash or cash-like securities. With interest rates likely to fall in the year and years ahead, we recommend limiting this portion to two to five years of expected portfolio withdrawals and taking action now to optimize yields using certificates of deposit, bond ladders, or structured solutions.

Longevity.

This strategy is about investing in assets that can provide income over the course of an investor's lifetime. Amid heightened uncertainty in our new world, we believe this strategy is best invested in a well-diversified global portfolio, balancing return requirements with risk management, and complemented with many of the tactical ideas discussed in this *Year Ahead*.

* Time frames may vary. Strategies are subject to individual client goals, objectives and suitability. This approach is not a promise or guarantee that wealth, or any financial results, can or will be achieved.

Legacy.

This strategy is about investing for needs that go beyond an investor's own lifetime and potentially maximizing the value of assets for inheritance or philanthropy. Many of the ideas discussed in the Decade Ahead may be suitable for this strategy, including leaders from disruption and private markets. Impact investing, sustainable investing, and philanthropy can also be appropriate for Legacy strategies.

Investors can get started with the 3L approach by first considering how much they need to draw from their portfolios to meet their spending needs over the next two to five years; their spending plans for the next five years and beyond; and how much they intend to leave behind.

Mapping these sums into the Liquidity. Longevity. Legacy. investment strategies, in consultation with an advisor, can help investors clarify why they are investing and therefore boost their chances of achieving their goals. The Liquidity strategy can offer investors peace of mind during periods of market volatility, and a disciplined process of drawing on, and then refilling the strategy during bear markets can help generate meaningful outperformance over time.

The Liquidity. Longevity. Legacy. approach



Source: UBS

Strategies are subject to individual client goals, objectives and suitability.

Get in balance

We believe that holding a core position in a balanced portfolio is the most effective way for investors to both protect and grow wealth over time. The concept of a balanced portfolio is rooted in the principle of diversification, spreading investments across a variety of assets to earn returns and manage risks.

Diversification is often thought of as being about risk reduction, and it is: Spreading investments broadly can allow investors to earn equivalent returns with lower risk than they would be able to take on in individual investments.

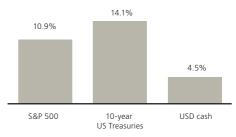
But it is important to remember that diversification is at least as much about not missing the right stocks as it is about avoiding overexposure to the wrong ones. For example, we know that picking future performance is hard: A study by Arizona State University professor Hendrik Bessembinder showed that just 0.3% of firms accounted for half of US stock market wealth creation between 1926 and 2019. Diversification is the only way investors can make sure they do not miss those very few outperformers—particularly important in an era of change.

Building a clear financial plan, thinking about required rates of return, and understanding one's tolerance for volatility and

Figure 12

Positive returns expected across asset classes

December 2024 total return expectations for select asset classes



Source: UBS, as of November 2023

risk is a way to get started. Balanced portfolios can be built to cater for a range of risk tolerances and return objectives, and we also think investors with sustainability-related objectives can earn comparable riskadjusted financial returns to traditional portfolios with a sustainable balanced portfolio.

There is never a bad time to invest in a balanced portfolio, but given our positive outlook for broad equity and bond markets and alternatives over the next year, as well as the potential for equities and bonds to effectively diversify each other in our key risk scenarios, we believe now is a good time for investors to get in balance.



2023 in review

Growth

We expected economic growth to decelerate in 2023. It did, though not as much as we expected. Developed economies are on track to grow by 1.7% in 2023 versus our initial estimate of 0.4% (and 2.4% in 2022), and emerging economies to grow by 4.3% versus our estimate of 3.5% (and 4.1% in 2022).

Inflation

We thought that 2023 would see inflation fall, and it did, albeit slightly less than we expected. US consumer price inflation looks set to end the year at 3.7%, versus our original expectation of 3.6%.

Rates

We expected central banks to be in a position to cut interest rates by the end of 2023. While they are at, or close to, the end of rate hikes, tighter labor markets have precluded looser policy for now. We now expect the first rate cuts to start in late spring or early summer 2024.

Bonds

Surprisingly resilient economic growth and labor markets allowed bond yields to continue to rise, contrary to our expectations. We thought 10-year US Treasury yields would decline from 3.9% in 2022 to 3% in 2023. They are at 4.6% at the time of writing.

Stocks

We had a neutral stance on equities as we entered 2023. An unexpected Al-fueled rally among a handful of stocks supported broad equity indexes during the year. In the 12 months through this time of writing, the S&P 500 is up 10.5%, Stoxx 600 3.3%, and MSCI Emerging Markets 1.8%.

Currencies

The US dollar is approaching the end of 2023 marginally weaker than it started against the euro, the pound, and the Swiss franc, directionally in line with our forecasts for the full year, but to a smaller degree than envisioned. We did not expect the prolonged weakness of the yen, a result of the Bank of Japan's continued loose monetary policy.

Commodities

Gold overshot our expectations as investors sought hedges against geopolitical risks despite high interest rates. By contrast, oil prices fell short of our initial expectations, though the efforts by OPEC+ to limit supply allowed prices to almost test the USD 100/ bbl mark in the third quarter.

Asset class forecasts

Currencies

Spot	June 24	Dec 24	PPP
1.07	1.10	1.12	1.29
1.23	1.25	1.27	1.59
0.90	0.88	0.87	0.78
1.38	1.34	1.32	1.21
0.64	0.69	0.72	0.69
0.96	0.97	0.97	1.00
0.59	0.61	0.62	0.61
152	143	140	84
7.29	7.20	7.00	4.45
	1.07 1.23 0.90 1.38 0.64 0.96 0.59 152	1.07 1.10 1.23 1.25 0.90 0.88 1.38 1.34 0.64 0.69 0.96 0.97 0.59 0.61 152 143	1.07 1.10 1.12 1.23 1.25 1.27 0.90 0.88 0.87 1.38 1.34 1.32 0.64 0.69 0.72 0.96 0.97 0.97 0.59 0.61 0.62 152 143 140

Source: UBS, as of 13 November 2023

Commodities

	Spot	June 24	Dec 24
Brent crude oil (USD/bbl)	83	95	95
WTI crude oil (USD/bbl)	78	91	91
Gold (USD/oz)	1,950	1,950	2,150

Source: UBS, as of 13 November 2023

Rates and bonds

	:	2-year yields (%)		10	10-year yields (%)				
	Spot	June 24	Dec 24	Spot	June 24	Dec 24			
USD	5.03	3.75	3.25	4.64	3.75	3.50			
EUR	3.08	2.50	2.00	2.71	2.25	2.25			
GBP	4.64	4.00	3.50	4.31	3.75	3.50			
CHF	1.31	0.75	0.70	1.09	0.90	0.90			
JPY	0.10	0.20	0.25	0.87	1.00	0.80			

Source: Bloomberg, UBS, as of 13 November 2023

Economic forecasts

GDP growth (%)					Inflation (average, %)			
2023E	2024E	2025E	2026E		2023E	2024E	2025E	2026E
2.4	1.1	1.7	1.8		4.2	2.7	2.0	2.3
1.1	0.2	1.3	2.1		3.9	2.5	2.1	2.0
0.5	0.6	1.2	1.1		5.5	2.4	2.1	2.0
0.6	0.6	1.5	1.3		7.4	2.6	2.1	2.0
0.7	1.2	1.5	1.6		2.2	1.8	1.7	1.4
5.2	4.4	4.6	4.2		0.4	1.2	1.6	1.8
1.9	0.7	1.0	0.8		3.3	2.3	1.5	1.6
6.3	6.2	6.2	6.5		5.5	4.8	4.5	4.5
1.9	1.6	2.2	2.1		5.7	3.6	3.0	2.9
1.7	1.1	1.6	1.6		4.6	2.5	2.0	2.0
4.3	3.9	4.3	4.2		7.6	8.7	5.1	4.1
3.1	2.6	3.1	3.0		6.3	6.0	3.8	3.2
	2023E 2.4 1.1 0.5 0.6 0.7 5.2 1.9 6.3 1.9 1.7 4.3	2023E 2024E 2.4 1.1 1.1 0.2 0.5 0.6 0.6 0.6 0.7 1.2 5.2 4.4 1.9 0.7 6.3 6.2 1.9 1.6 1.7 1.1 4.3 3.9	2023E2024E2025E2.41.11.71.10.21.31.10.21.30.50.61.20.60.61.50.71.21.50.71.21.55.24.44.61.90.71.06.36.26.21.91.62.21.71.11.64.33.94.3	2023E 2024E 2025E 2026E 2.4 1.1 1.7 1.8 1.1 0.2 1.3 2.1 1.1 0.2 1.3 2.1 0.5 0.6 1.2 1.1 0.6 0.6 1.5 1.3 0.7 1.2 1.5 1.6 5.2 4.4 4.6 4.2 1.9 0.7 1.0 0.8 6.3 6.2 6.2 6.5 1.9 1.6 2.2 2.1 1.7 1.1 1.6 1.6 4.3 3.9 4.3 4.2	2023E 2024E 2025E 2026E 2.4 1.1 1.7 1.8 1.1 0.2 1.3 2.1 1.1 0.2 1.3 2.1 0.5 0.6 1.2 1.1 0.6 0.6 1.5 1.3 0.7 1.2 1.5 1.6 5.2 4.4 4.6 4.2 1.9 0.7 1.0 0.8 6.3 6.2 6.5 1.5 1.9 1.6 2.2 2.1 1.7 1.1 1.6 1.6 4.3 3.9 4.3 4.2	2023E 2024E 2025E 2026E 2023E 2.4 1.1 1.7 1.8 4.2 1.1 0.2 1.3 2.1 3.9 1.1 0.2 1.3 2.1 3.9 0.5 0.6 1.2 1.1 5.5 0.6 0.6 1.5 1.3 7.4 0.7 1.2 1.5 1.6 2.2 0.7 1.2 1.5 1.6 2.2 5.2 4.4 4.6 4.2 0.4 1.9 0.7 1.0 0.8 3.3 6.3 6.2 6.2 6.5 5.5 1.9 1.6 2.2 2.1 5.7 1.7 1.1 1.6 1.6 4.6 4.3 3.9 4.3 4.2 7.6	2023E 2024E 2025E 2026E 2023E 2024E 2.4 1.1 1.7 1.8 4.2 2.7 1.1 0.2 1.3 2.1 3.9 2.5 1.1 0.2 1.3 2.1 3.9 2.5 0.5 0.6 1.2 1.1 5.5 2.4 0.5 0.6 1.2 1.1 5.5 2.4 0.6 0.6 1.5 1.3 7.4 2.6 0.7 1.2 1.5 1.6 2.2 1.8 5.2 4.4 4.6 4.2 0.4 1.2 1.9 0.7 1.0 0.8 3.3 2.3 6.3 6.2 6.5 5.5 4.8 1.9 1.6 2.2 2.1 5.7 3.6 1.7 1.1 1.6 1.6 4.6 2.5 4.3 3.9 4.3 4.2 7.6 8.7	2023E 2024E 2025E 2026E 2023E 2024E 2025E 2.4 1.1 1.7 1.8 4.2 2.7 2.0 1.1 0.2 1.3 2.1 3.9 2.5 2.1 0.5 0.6 1.2 1.1 5.5 2.4 2.1 0.5 0.6 1.2 1.1 5.5 2.4 2.1 0.6 0.6 1.5 1.3 7.4 2.6 2.1 0.7 1.2 1.5 1.6 2.2 1.8 1.7 5.2 4.4 4.6 4.2 0.4 1.2 1.6 1.9 0.7 1.0 0.8 3.3 2.3 1.5 6.3 6.2 6.2 6.5 5.5 4.8 4.5 1.9 1.6 2.2 2.1 5.7 3.6 3.0 1.7 1.1 1.6 1.6 4.6 2.5 2.0 4.3

E= Estimate

* Excludes Venezuela for inflation

Source: UBS, as of 13 November 2023

Impressum

Year Ahead 2024 – UBS House View

This report has been prepared by UBS AG, UBS AG London Branch, UBS Switzerland AG, UBS Financial Services Inc. (UBS FS), UBS AG Singapore Branch, UBS AG Hong Kong Branch, and UBS SuMi TRUST Wealth Management Co., Ltd.. Please see important disclaimers at the end of the document.

This report reflects the insights and perspective from the entire CIO team across the globe and demonstrates the intellectual leadership of UBS.

Global Chief Investment Officer Mark Haefele

Editor in Chief Kiran Ganesh

Supervisory analyst Abe De Ramos

Project manager Sagar Khandelwal

Editorial deadline 15 November 2023

Publishing date 16 November 2023 Design

CIO Content Design UBS Switzerland AG

Cover photo Photo by Lisa Therese on Unsplash

Languages

English, German, French, Italian, Spanish, Portuguese, Chinese (Simplified, Traditional), Japanese

Contact

ubs.com/cio

SAP-Nr. 82251E-2301

Cautionary statement regarding forward-looking statements

This report contains statements that constitute "forward-looking statements," including but not limited to statements relating to the current and expected state of the securities market and capital market assumptions. While these forward-looking statements represent our judgments and future expectations concerning the matters discussed in this document, a number of risks, uncertainties, changes in the market, and other important factors could cause actual developments and results to differ materially from our expectations. These factors include, but are not limited to (1) the extent and nature of future developments in the US market and in other market segments; (2) other market and macroeconomic developments, including movements in local and international securities markets, credit spreads, currency exchange rates and interest rates, whether or not arising directly or indirectly from the current market crisis; (3) the impact of these developments on other markets and asset classes. UBS is not under any obligation to (and expressly disclaims any such obligation to) update or alter its forward-looking statements whether as a result of new information, future events, or otherwise.

Emerging Market Investments

Investors should be aware that Emerging Market assets are subject to, among others, potential risks linked to currency volatility, abrupt changes in the cost of capital and the economic growth outlook, as well as regulatory and sociopolitical risk, interest rate risk and higher credit risk. Assets can sometimes be very illiquid and liquidity conditions can abruptly worsen. CIO GWM generally recommends only those securities it believes have been registered under Federal US registration rules (Section 12 of the Securities Exchange Act of 1934) and individual State registration rules (commonly known as "Blue Sky" laws). Prospective investors should be aware that to the extent permitted under US law, CIO GWM may from time to time recommend bonds that are not registered under US or State securities laws. These bonds may be issued in jurisdictions where the level of required disclosures to be made by issuers is not as frequent or complete as that required by US laws.

Investors interested in holding bonds for a longer period are advised to select the bonds of those sovereigns with the highest credit ratings (in the investment-grade band). Such an approach should decrease the risk that an investor could end up holding bonds on which the sovereign has defaulted. Subinvestment-grade bonds are recommended only for clients with a higher risk tolerance and who seek to hold higher-yielding bonds for shorter periods only.

Nontraditional Assets

Nontraditional asset classes are alternative investments that include hedge funds, private equity, real estate, and managed futures (collectively, alternative investments). Interests of alternative investment funds are sold only to qualified investors, and only by means of offering documents that include information about the risks, performance and expenses of alternative investment funds, and which clients are urged to read carefully before subscribing and retain. An investment in an alternative investment fund is speculative and involves significant risks. Specifically, these investments (1) are not mutual funds and are not subject to the same regulatory requirements as mutual funds; (2) may have performance that is volatile, and investors may lose all or a substantial amount of their

investment; (3) may engage in leverage and other speculative investment practices that may increase the risk of investment loss; (4) are long-term, illiquid investments; there is generally no secondary market for the interests of a fund, and none is expected to develop; (5) interests of alternative investment funds typically will be illiquid and subject to restrictions on transfer; (6) may not be required to provide periodic pricing or valuation information to investors; (7) generally involve complex tax strategies and there may be delays in distributing tax information to investors; (8) are subject to high fees, including management fees and other fees and expenses, all of which will reduce profits.

Interests in alternative investment funds are not deposits or obligations of, or guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other governmental agency. Prospective investors should understand these risks and have the financial ability and willingness to accept them for an extended period of time before making an investment in an alternative investment fund, and should consider an alternative investment fund as a supplement to an overall investment program.

In addition to the risks that apply to alternative investments generally, the following are additional risks related to an investment in these strategies:

- Hedge Fund Risk: There are risks specifically associated with investing in hedge funds, which may
 include risks associated with investing in short sales, options, small-cap stocks, "junk bonds," derivatives, distressed securities, non-US securities and illiquid investments.
- Managed Futures: There are risks specifically associated with investing in managed futures programs. For example, not all managers focus on all strategies at all times, and managed futures strategies may have material directional elements.
- Real Estate: There are risks specifically associated with investing in real estate products and real estate investment trusts. They involve risks associated with debt, adverse changes in general economic or local market conditions, changes in governmental, tax, real estate and zoning laws or regulations, risks associated with capital calls and, for some real estate products, the risks associated with the ability to qualify for favorable treatment under the federal tax laws.
- Private Equity: There are risks specifically associated with investing in private equity. Capital calls
 can be made on short notice, and the failure to meet capital calls can result in significant adverse
 consequences including, but not limited to, a total loss of investment.
- Foreign Exchange/Currency Risk: Investors in securities of issuers located outside of the United States should be aware that even for securities denominated in US dollars, changes in the exchange rate between the US dollar and the issuer's "home" currency can have unexpected effects on the market value and liquidity of those securities. Those securities may also be affected by other risks (such as political, economic or regulatory changes) that may not be readily known to a US investor.

UBS Chief Investment Office's ("CIO") investment views are prepared and published by the Global Wealth Management business of UBS Switzerland AG (regulated by FINMA in Switzerland) or its affiliates ("UBS"), part of UBS Group AG ("UBS Group"). UBS Group includes Credit Suisse AG, its subsidiaries, branches and affiliates. Additional disclaimer relevant to Credit Suisse Wealth Management follows at the end of this section.

The investment views have been prepared in accordance with legal requirements designed to promote the **independence of investment research**.

Generic investment research – Risk information:

This publication **is for your information only** and is not intended as an offer, or a solicitation of an offer, to buy or sell any investment or other specific product. The analysis contained herein does not constitute a personal recommendation or take into account the particular investment objectives, investment strategies, financial situation and needs of any specific recipient. It is based on numerous assumptions. Different assumptions could result in materially different results. Certain services and products are subject to legal restrictions and cannot be offered worldwide on an unrestricted basis and/or may not be eligible for sale to all investors. All information and opinions expressed in this document were obtained from sources believed to be reliable and in good faith, but no representation or warranty, express or implied, is made as to its accuracy or completeness (other than disclosures relating to UBS). All information and opinions as well as any forecasts, estimates and market prices indicated are current as of the date of this report, and are subject to change without notice. Opinions expressed herein may differ or be contrary to those expressed by other business areas or divisions of UBS as a result of using different assumptions and/or criteria.

In no circumstances may this document or any of the information (including any forecast, value, index or other calculated amount ("Values")) be used for any of the following purposes (i) valuation or accounting purposes; (ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or (iii) to measure the performance of any financial instrument including, without limitation, for the purpose of tracking the return or performance of any Value or of defining the asset allocation of portfolio or of computing performance fees. By receiving this document and the information you will be deemed to represent and warrant to UBS that you will not use this document or otherwise rely on any of the information for any of the above purposes. UBS and any of its directors or employees may be entitled at any time to hold long or short positions in investment instruments referred to herein, carry out transactions involving relevant investment instruments in the capacity of principal or agent, or provide any other services or have officers, who serve as directors, either to/for the issuer, the investment instrument itself or to/for any company commercially or financially affiliated to such issuers. At any time, investment decisions (including whether to buy, sell or hold securities) made by UBS and its employees may differ from or be contrary to the opinions expressed in UBS research publications. Some investments may not be readily realizable since the market in the securities is illiquid and therefore valuing the investment and identifying the risk to which you are exposed may be difficult to quantify. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS, into other areas, units, divisions or affiliates of UBS. Futures and options trading is not suitable for every investor as there is a substantial risk of loss, and losses in excess of an initial investment may occur. Past performance of an investment is no guarantee for its future performance. Additional information will be made available upon request. Some investments may be subject to sudden and large falls in value and on realization you may receive back less than you invested or may be required to pay more. Changes in foreign exchange rates may have an adverse effect on the price, value or income of an investment. The analyst(s) responsible for the preparation of this report may interact with trading desk personnel, sales personnel and other constituencies for the purpose of gathering, synthesizing and interpreting market information.

Different areas, groups, and personnel within UBS Group may produce and distribute separate research products **independently of each other**. For example, research publications from **CIO** are produced by UBS Global Wealth Management. **UBS Global Research** is produced by UBS Investment Bank. **Research methodologies and rating systems of each separate research organization may dif**fer, for example, in terms of investment recommendations, investment horizon, model assumptions, and valuation methods. As a consequence, except for certain economic forecasts (for which UBS CIO and UBS Global Research may collaborate), investment recommendations, ratings, price targets, and valuations provided by each of the separate research organizations may be different, or inconsistent. You should refer to each relevant research product for the details as to their methodologies and rating system. Not all clients may have access to all products from every organization. Each research product is subject to the policies and procedures of the organization that produces it.

The compensation of the analyst(s) who prepared this report is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking, sales and trading or principal trading revenues, however, compensation may relate to the revenues of UBS Group as a whole, of which investment banking, sales and trading and principal trading are a part.

Tax treatment depends on the individual circumstances and may be subject to change in the future. UBS does not provide legal or tax advice and makes no representations as to the tax treatment of assets or the investment returns thereon both in general or with reference to specific client's circumstances and needs. We are of necessity unable to take into account the particular investment objectives, financial situation and needs of our individual clients and we would recommend that you take financial and/or tax advice as to the implications (including tax) of investing in any of the products mentioned herein.

This material may not be reproduced or copies circulated without prior authority of UBS. Unless otherwise agreed in writing UBS expressly prohibits the distribution and transfer of this material to third parties for any reason. UBS accepts no liability whatsoever for any claims or lawsuits from any third parties arising from the use or distribution of this material. This report is for distribution only under such circumstances as may be permitted by applicable law. For information on the ways in which CIO manages conflicts and maintains independence of its investment views and publication offering, and research and rating methodologies, please visit <u>www.ubs.com/research-methodology</u>. Additional information on the relevant authors of this publication and other CIO publication(s) referenced in this report; and copies of any past reports on this topic; are available upon request from your client advisor.

Important Information About Sustainable Investing Strategies: Sustainable investing strategies aim to consider and incorporate environmental, social and governance (ESG) factors into investment process and portfolio construction. Strategies across geographies approach ESG analysis and incorporate the findings in a variety of ways. Incorporating ESG factors or Sustainable Investing considerations may inhibit UBS's ability to participate in or to advise on certain investment opportunities that otherwise would be consistent with the Client's investment objectives. The returns on a portfolio incorporating ESG factors or Sustainable Investing considerations may be lower or higher than portfolios where ESG factors, exclusions, or other sustainability issues are not considered by UBS, and the investment opportunities available to such portfolios may differ.

External Asset Managers / External Financial Consultants: In case this research or publication is provided to an External Asset Manager or an External Financial Consultant, UBS expressly prohibits that it is redistributed by the External Asset Manager or the External Financial Consultant and is made available to their clients and/or third parties.

USA: Distributed to US persons only by UBS Financial Services Inc. or UBS Securities LLC, subsidiaries of UBS AG. UBS Switzerland AG, UBS Europe SE, UBS Bank, S.A., UBS Brasil Administradora de Valores Mobiliarios Ltda, UBS Asesores Mexico, S.A. de C.V., UBS SuMi TRUST Wealth Management Co., Ltd., UBS Wealth Management Israel Ltd and UBS Menkul Degerler AS are affiliates of UBS AG. **UBS Financial Services Inc. accepts responsibility for the content of a report prepared by a non-US affiliate when it distributes reports to US persons. All transactions by a US person in the securities mentioned in this report should be effected through a US-registered broker dealer affiliated with UBS, and not through a non-US affiliate. The contents of this report have not been and will not be approved by any securities or investment authority in the United States or elsewhere. UBS Financial Services Inc. is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule") and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule.**

For country information, please visit <u>ubs.com/cio-country-disclaimer-gr</u> or ask your client advisor for the full disclaimer.

Additional Disclaimer relevant to Credit Suisse Wealth Management

You receive this document in your capacity as a client of Credit Suisse Wealth Management. Your personal data will be processed in accordance with the Credit Suisse privacy statement accessible at your domicile through the official Credit Suisse website <u>https://www.credit-suisse.com</u>. In order to provide you with marketing materials concerning our products and services, UBS Group AG and its subsidiaries may process your basic personal data (i.e. contact details such as name, e-mail address) until you notify us that you no longer wish to receive them. You can optout from receiving these materials at any time by informing your Relationship Manager.

Except as otherwise specified herein and/or depending on the local Credit Suisse entity from which you are receiving this report, this report is distributed by Credit Suisse AG, authorised and regulated by the Swiss Financial Market Supervisory Authority (FINMA). Credit Suisse AG is a UBS Group company.

Version D/2023. CIO82652744

© UBS 2023. The key symbol and UBS are among the registered and unregistered trademarks of UBS. All rights reserved.

