

2024 Year-Ahead Outlook

The Last Leg on the Long Road to Normal



Key takeaways

- Our outlook for the new year is “2024”: 2% growth, 0 recessions, 2% inflation and 4% unemployment. A soft landing remains in reach, particularly as disinflation looks set to continue and the Federal Reserve now appears satisfied with its progress.
- Global economic growth should be less divergent next year, but central banks more so given different journeys in the inflation battle. This should drive the U.S. dollar lower.
- Given the Fed is done with the current tightening cycle, we believe long rates peaked in October and have scope to decline further as both growth and inflation cool to trend. Moreover, interest rates should broadly stabilize and the curve should gradually steepen over the course of 2024 as markets anticipate rate cuts beginning over the next 6-12 months.
- After a strong 2023, investors should temper expectations for 2024 as earnings estimates look lofty, volatility has been unusually low, valuations could come under pressure and economic growth is likely to slow.
- International equities should continue exhibiting solid and diversified returns next year driven by still favorable valuations, positive earnings growth and improving return of capital to shareholders.
- Although the dust is still settling on valuations, alternative investments can support the outcomes investors seek in portfolios, like diversification, inflation hedging and alpha.
- Against a challenging backdrop of turning tides, investors would do well to diversify and lean on active management, stepping out of cash and into risk assets to take advantage of the anticipated changes ahead.

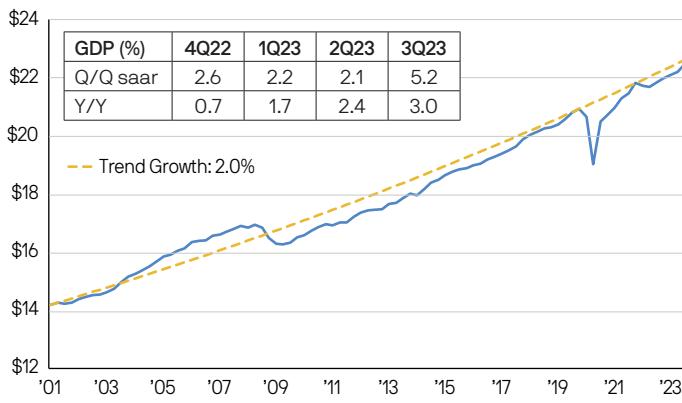
U.S. economy: Hoping for a boring 2024

Our baseline U.S. economic forecast for 2024 can be summed up by the number 2024 – 2% growth, 0 recessions, 2% inflation and unemployment staying at roughly 4%. However, there are clearly risks that could divert us from that path.

On economic growth, demand is gradually easing following a surprisingly strong 2023. Real GDP growth in 3Q23 was 3.0% year-over-year powered by strong gains in consumer and government spending, resilient investment spending, inventory restocking and improving international trade. All of these areas should see slower growth going forward.

Growth should slow following a strong 2023

Exhibit 1: Real GDP, trillions of chained (2017) dollars, seasonally adjusted at annual rates



Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19. Data are as of December 13, 2023.

Consumer spending should grow more slowly as job gains diminish and banks gradually tighten lending standards. That being said, while younger and poorer households are showing signs of increased financial stress, on aggregate, consumer financial conditions are not nearly as dire as they were before the Great Financial Crisis, and we expect consumer spending to grow more slowly rather than shrink.

Capital spending could be more challenged as businesses react to higher interest costs and slowing revenue growth. Moreover, the longer high interest rates remain in place, the greater is the risk of a surge in small business bankruptcies. However, the outlook for capital

spending is not entirely negative, as booming spending on artificial intelligence and federal government incentives for semiconductor manufacturing should be able to offset weakness due to declines in the construction of retail and office facilities.

After improving in 2023, international trade should drag on growth in 2024, reflecting a still very-high dollar and sluggish global growth. Meanwhile, government spending growth should slow as federal spending is constrained by Washington gridlock and state and local spending is trimmed in line with a slowing U.S. economy.

All of this being said, we believe that demand growth in the U.S. should still be strong enough to support 2% real GDP growth in 2024. But how about supply?

The unemployment rate has been in a narrow band of between 3.4% and 4% since December 2021 and could stay in this range in the year ahead. If it does, then all growth in employment in 2024 would have to come from growth in the labor force. This will be challenging – just released Census projections show the population aged 18-64 rising just 0.1% in 2024, in a long-standing trend reflecting the aging of the baby boom generation. However, tight labor markets should encourage stronger immigration and some further gains in labor force participation. In addition, productivity has seen solid gains over the past year with output per worker rising by 1.1%. This could improve further in the year ahead, allowing for 2% real GDP growth without overheating the economy.

Provided the economy transitions to 2% growth and 4% unemployment, inflation should continue its steady downward trend.

One way to appreciate this is to break CPI inflation down into food, energy, shelter and everything else.

Food prices soared in the pandemic, reflecting fiscal stimulus and supply-chain disruptions – a trend that was extended by Russia's invasion of Ukraine. These effects are now fading and real food spending has declined for much of the last two years, reflecting a squeeze on lower and middle-income consumers. Restaurant spending has proven more robust, reflecting a post-pandemic bounce-back. Nevertheless, barring another supply shock, we expect these forces to continue to erode food inflation in 2024.

Aggregate supply will be constrained by very slow growth in the working age following a strong 2023

Exhibit 2A: Growth in working-age population

Percent increase in civilian non-institutional population ages 16-64

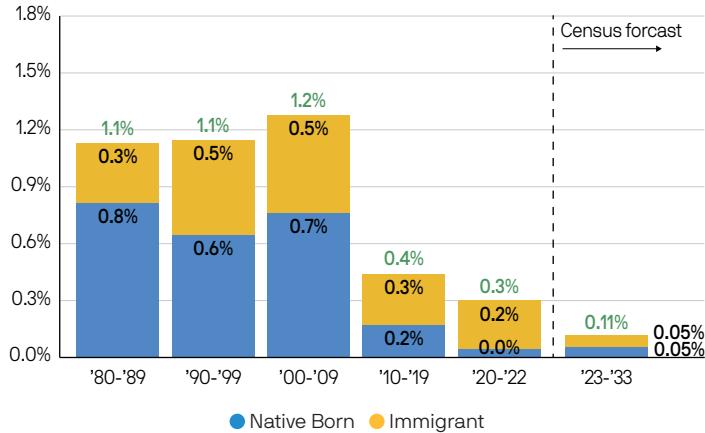


Exhibit 2B: Growth in private non-residential capital stock

Non-residential fixed assets, year-over-year % change

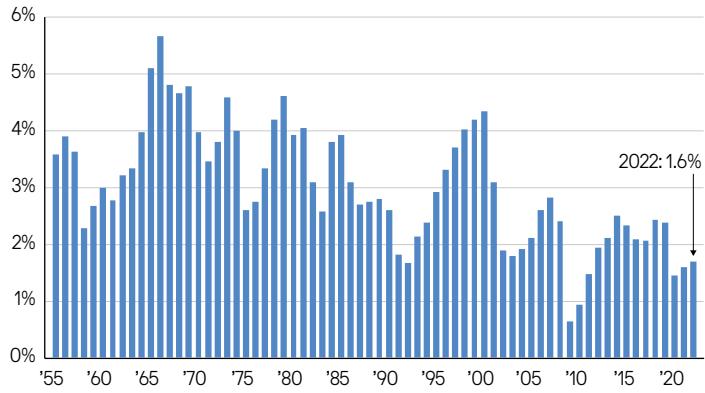
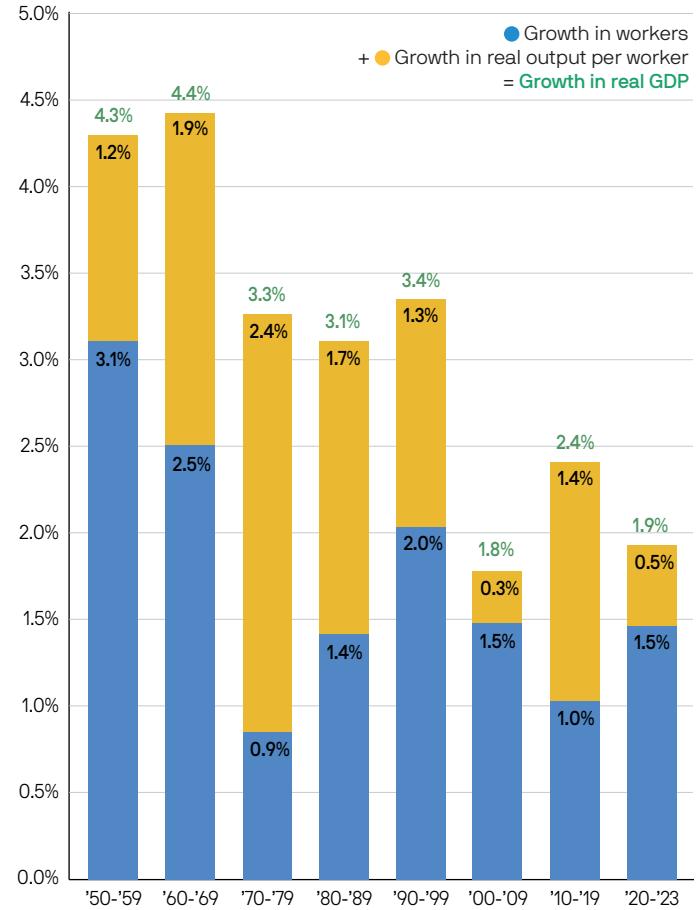


Exhibit 2C: Drivers of GDP growth

Average year-over-year % change



Source: J.P. Morgan Asset Management; (Top left) Census Bureau, DOD, DOJ; (Top left and right) BLS; (Right and bottom left) BEA. GDP drivers are calculated as the average annualized growth in the 10 years ending in the fourth quarter of each decade. *The latest period reflects 1Q20 to 3Q23. Future working-age population is calculated as the total estimated number of Americans from the Census Bureau, per the November 2023 report, controlled for military enrollment, growth in institutionalized population and demographic trends. Growth in working-age population does not include illegal immigration; DOD Troop Readiness reports used to estimate percent of population enlisted. Numbers may not sum due to rounding. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated. Guide to the Markets – U.S. Data are as of December 13, 2023.

Turning to energy, after slumping and surging in recent years, oil prices have fallen back to a more normal range of USD 80-90 per barrel of West Texas intermediate crude. Importantly, the tragic events in the Middle East have not, as yet, had a major impact on oil prices. Going forward, a combination of a sluggish global economy and increased output from the U.S. and non-OPEC nations should more than offset continued reductions in OPEC and Russian output, allowing oil prices to move sideways or down in the year ahead.

Importantly, the spread between gasoline prices and crude oil prices has narrowed significantly in recent months from very elevated levels. This has allowed gasoline prices to fall sharply and should allow for further modest declines in the year ahead. Relatively high natural gas inventories should keep natural gas prices steady or falling in the year ahead, contributing to a similar pattern for electricity prices. All told, we expect the energy component of CPI to post modest year-over-year declines throughout 2024.

Shelter comprises almost 35% of the CPI basket, of which roughly 8% is actual rent and 26% is “owners’ equivalent rent.” The government uses a complicated procedure to estimate these concepts that causes measured inflation in these areas to lag behind changes in rents negotiated in the market place. While this is hardly ideal, it does help economists predict trends in shelter inflation well in advance based on data on new leases, and given this trend, we expect shelter inflation to fall steadily throughout next year.

Finally, there is the rest of inflation, which has been boosted in recent years by a very restricted supply of new and used cars, a resurgence in airline travel following the pandemic, general supply chain issues and, to some extent, the impact of higher wage growth. However, all of these trends are easing, suggesting that this area of inflation will also moderate in the year ahead.

Pulling all of this together, and recognizing that consumption deflator inflation normally tracks a little cooler than CPI inflation, suggests that the year-over-year change in the consumption deflator is still on track to fall below 2% by the fourth quarter of 2024 – well ahead of the Fed’s current projections.

So, overall, a base case forecast of 2024 for 2024 – 2% growth, 0 recessions, 2% inflation and 4% unemployment. However, it should be recognized that there are many potential risks to this outlook, including a U.S. election, the lagged consequences of higher interest rates and very significant geopolitical tension. Any of these issues, or something else entirely, has the potential to trigger recession in a slow-growing U.S. economy, making 2024 a year for hope but not complacency.

International economy: Another year of divergence? Consumers will decide

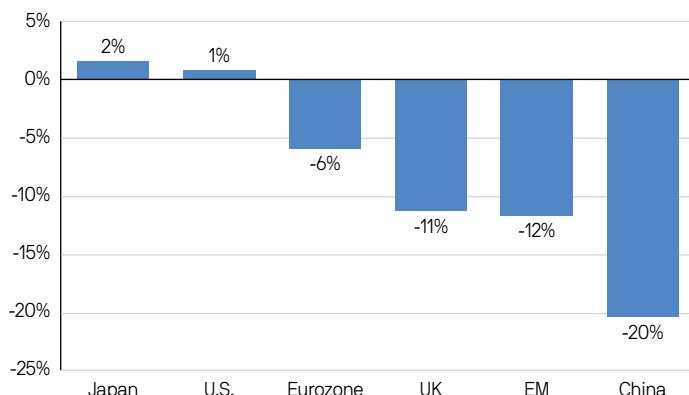
Despite the negative headlines, the global economy has grown 2.8% so far this year, in line with its 15-year average pace. Beneath the surface, however, a lot of divergence is on display – albeit not the divergence investors expected going into the year. The eurozone, UK, Canada and China ended up disappointing, while the U.S., Japan and emerging markets ex-China ended up surprising positively. In Europe, energy rationing did not occur, but neither did falling energy prices deliver an uplift, as consumers remained cautious and higher

rates weighed on manufacturing. In China, the end of “zero COVID policy” did not prove disruptive, but still low confidence led to a subdued recovery in investing, hiring and spending despite normalized mobility levels.

In 2024, the key question for the global economy is: will this divergence persist, and if not, will it close in the positive or negative direction? Central to this question is consumer spending (**Exhibit 3**). Japanese and U.S. consumer goods spending has been robust and is now above pre-pandemic trends, but consumers in the eurozone, UK and China have been cautious, with spending still 6%, 11% and 20% below trend, respectively. The good news is this is where excess pandemic savings persist. There is hope for some modest reacceleration in Europe, as inflation continues to fall (boosting real incomes) and the sticker shock of 2022’s energy price spike fades. In China, consumers may remain cautious for a bit longer given a weak housing market, but policy makers are now in pro-growth mode, providing a floor to growth at this year’s 5% pace. Meanwhile, like the U.S., growth in Japan and emerging markets ex-China should downshift from this year’s pace given used up savings. This should leave global growth less divergent, albeit a bit slower than its long-run average. A heavy calendar of elections next year may be consequential, especially the one in Taiwan (given geopolitical tensions with China) and India (given the positive reform momentum under the Modi government).

Consumer spending has room to catch up in Europe and China

Exhibit 3: Consumer goods spending, deviation of current spending vs. 2014–2019 trend growth



Source: national sources, J.P. Morgan Economic Research, J.P. Morgan Asset Management. Retail sales data is as of September 2023 except for the U.S. and China, which have data as of December 13, 2023.

Central bank action has been more uniform since 2022 (with notable exceptions of easy policy in Japan and China), as central banks hiked rates aggressively to combat globally elevated inflation. Next year, more divergence may creep in: as the year ends, U.S. and Eurozone core inflation has already retraced about half of its pandemic surge, the UK only a third, and Japan's is still hovering at its peak (**Exhibit 4**). The key to these differences is wages, with sticky wage growth in Europe and (finally) accelerating wages in Japan. This gives European central banks less breathing room to start cutting rates as soon or as quickly as the Fed and pressures the Bank of Japan to finally get going on exiting negative rates. The lone exception to stimulative policy should remain China, given below-target inflation and modest growth.

Next year should bring some continuation of the U.S. dollar downward trend that began in October 2022 due to narrowing growth and interest rate differentials, as well as flows returning to non-U.S. markets (as they began to in 2023). The risk to this thesis is U.S. recession fears returning, which would dampen investor sentiment again. Stronger international currencies should provide a relief for central bankers' fights against inflation and for U.S. dollar-based investors' international returns from this year's very small currency drag.

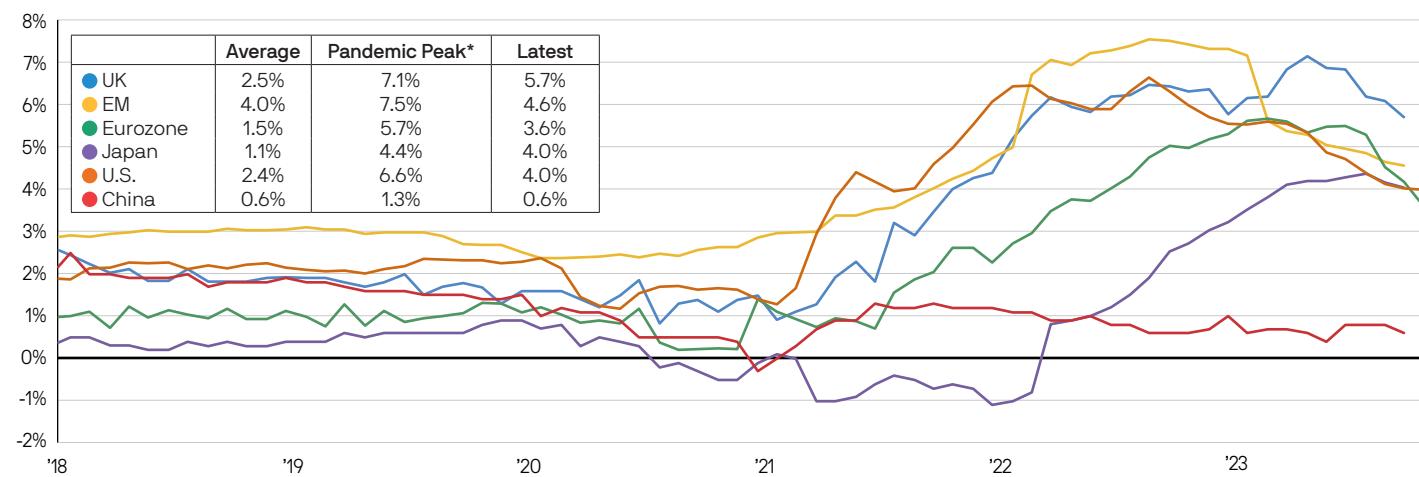
Fixed income: Prolonged pause or cautious cuts?

Recent data on inflation and labor markets and signals from the December Federal Open Market Committee (FOMC) meeting reinforce the assumption that the Federal Reserve is finished hiking rates this cycle. To be clear, economic activity indicate a decelerating economy, not an economy destined for a near-term recession, and while the Fed may not need to tighten further, it does suggest the central bank can keep rates higher for longer. Given the Fed is likely done tightening policy but will be in no rush to ease, investors are curious on how long-term rates may behave over the next year after spiking in the third quarter before settling down to ~3.9% at time of writing.

While it's not unreasonable to assume rates could move higher from here given quantitative tightening, softening demand for U.S. Treasury debt from foreigners and commercial banks, political uncertainty in Washington and increased Treasury supply due to higher deficit spending, history suggests (**Exhibit 5A**) that the timing of the last hike normally coincides with the peak in the U.S. 10-year Treasury yield. As highlighted, on average over the previous five tightening cycles, the U.S. 10-year has historically peaked 3 months prior to the last hike. Given the hawkish tilt in Fed commentary and firm economic data since its last hike in July, it's not surprising yields may have peaked 3 months after in October this year.

Progress on core inflation is less far along in Europe and Japan

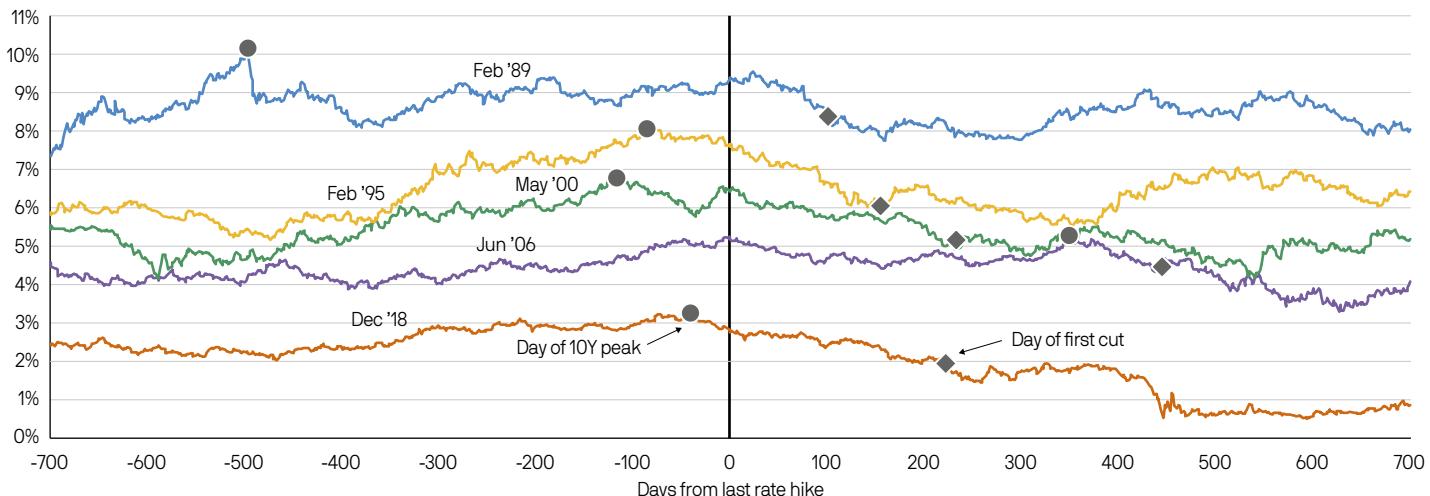
Exhibit 4: Core inflation, year-over-year, seasonally adjusted



Source: FactSet, national sources, J.P. Morgan Economic Research, J.P. Morgan Asset Management. Shows 15-year averages. "Latest" is as of October 2023 except for the Eurozone and U.S., which are as of November 2023. *The pandemic peaks for each country are as follows: UK - May 2023, EM - October 2022, Eurozone - March 2023, Japan - August 2023, U.S. - September 2022, and China - October 2021. Data are as of December 13, 2023.

Peak in U.S. 10-year Treasury yield tends to coincide around the last Fed rate hike

Exhibit 5A: Percent, 0 = day of last rate hike



Source: Bloomberg, J.P. Morgan Asset Management. Label represents the month in which the last rate hike occurred. Data are as of December 13, 2023.

Exhibit 5B: Rate hiking cycles and the U.S. 10-year

Month of last hike	Month of 10Y peak around last hike	Peak 10Y relative to last hike (months)	Month of first cut	Change in 10Y from last hike to first cut
Feb '89	Oct '87	-16	Jun '89	-0.95%
Feb '95	Nov '94	-3	Jul '95	-1.48%
May '00	Jan '00	-4	Jan '01	-1.51%
Jun '06	Jun '07	11	Sep '07	-0.73%
Dec '18	Nov '18	-1	Jul '19	-0.70%
Average		-3		-1.07%

Notably, not only do long rates tend to peak near the final rate increase, but long rates have also consistently declined following the end of a tightening cycle. On average, the U.S. 10-year has fallen by 107 basis points during the period between the last rate hike and the first rate cut (**Exhibit 5B**). Moreover, yields tend to fall further once the Fed begins cutting rates by an additional 46 basis points on average, six months after the first cut.

Since peaking at 5% in mid-October, the 10-year has already fallen by 1%, but we believe there is room for long-term rates to fall even further while Fed remains on hold, particularly if growth and inflation continue to trend lower. This suggests that investors should consider stepping out of cash and extending duration as falling yields could generate strong price appreciation in longer maturity bonds.

Lower rates, lower volatility

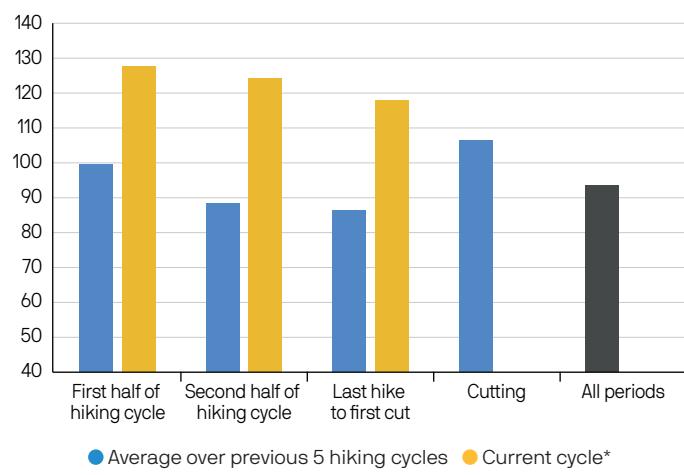
Over the past two years, aggressive tightening from the Federal Reserve, resilient data relative to expectations and technical factors have caused elevated interest rate volatility. Historically, as evidenced in **Exhibit 6**, interest rate volatility tends to be highest when the Fed first begins raising interest rates and when the Fed is cutting interest rates. This makes intuitive sense; when the Fed first begins hiking rates it is often unclear how high rates will go before economic activity begins to come under pressure, leading to uncertainty around the path forward for rates. Similarly, when the Fed is cutting interest rates, it is often in response to a recession leading to a quick shift in the outlook.

This cycle has experienced higher rate volatility than in any of the previous five rate-hiking cycles, and while volatility has come down slightly since July, it is still elevated relative to history. That said, we believe rate volatility should fall for two reasons. First, a decelerating economy should keep the Fed firmly on hold through the first half of 2024. Second, assuming the economy avoids a recession next year, we expect the Fed to reduce policy rates gradually and avoid a knee-jerk pivot to aggressive rate cuts.

Given this, rate volatility should continue to drift lower next year providing some much-desired stability in rates and helping support spread products. All things considered, bond investors should prepare for brighter days from both an income and capital appreciation perspective.

While current interest rate volatility remains elevated relative to history, volatility tends to decline later in rate hiking cycle and when the Fed is on hold

Exhibit 6: Average daily level of MOVE index during previous five rate hiking cycles and current cycle



Source: Haver Analytics, J.P. Morgan Asset Management. Averages are based on the last five hiking/cutting cycles beginning with the hiking cycle in March 1988. Interest rate volatility is measured by the Merrill Lynch Option Volatility Expectations or MOVE index. The MOVE is an index measure of Treasury yield volatility and is based on one-month over-the-counter implied yield volatility (normalized) weighted as follows: 20% 2-year tail, 20% 5-year tail, 40% 10-year tail, 20% 30-year tail. A higher reading indicates higher interest rate volatility. *The MOVE index for the current cycle assumes the first hike was in March 2022 and the last hike was on July 2023. The last hike to first cut volatility for the current cycle is the average level of the MOVE index from July 2023 to present. Data are as of December 13, 2023.

U.S. equities: Tempering expectations

2023 has turned out to be a surprisingly strong year for equity markets, with the S&P 500 boasting double-digit returns. However, investors should temper expectations for 2024 as estimates for profit growth look lofty, volatility has been unusually low, valuations could come under further pressure and economic growth is likely to slow.

Analysts' expectations show earnings growing by 11% next year, double the long-term average, while our models are estimating 5-6% growth. Dissecting the sources of earnings growth, margins could maintain stability, but revenues are likely to slow. On margins, pricing power is waning, but input costs and wages are decelerating. Interest costs remain high, but 49% of S&P 500 debt is fixed beyond 2030, with no more than 7% maturing in any calendar year until then. Many S&P 500 companies also maintain ample cash balances, which are earning meaningful interest. Therefore, interest costs as a share of profits are falling. However, disinflation, slowing economic growth and headwinds to the consumer are likely to constrain revenues. If the U.S. economy goes into recession, profit growth would likely contract, weighing on stocks.

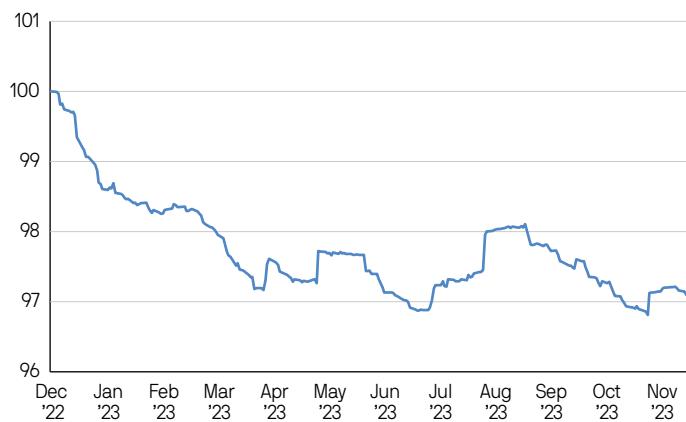
In addition, unusually low equity volatility in 2023 could be difficult to sustain in 2024. The VIX was at 16.8 on average this year, compared to 19.5 over the last 15 years, while interest rate volatility has been elevated to early pandemic levels since the Fed began raising rates. If the U.S. economy falters, interest rate volatility could pass the baton to equities.

Finally, on valuations, valuation dispersion deepened this year, with the top 10 stocks 38% more expensive relative to 25-year averages vs. 14% for the rest of the S&P 500. The S&P 500 overall is about 17% expensive; however, valuations since the Great Financial Crisis have been unencumbered by high rates. Looking at forward P/E ratios over the last 25 years, today's real interest rate implies that stocks are 30% overvalued. We don't expect a massive imminent correction while profits are still growing, but valuations may need to reset over time in a higher-for-longer rate environment.

Therefore, from an allocation perspective, we continue to favor quality exhibited in large caps. Small caps have seen a significant valuation reset, but are levered to domestic growth, which could slow. Furthermore, margin pressures could be particularly acute even if input and wage costs are slowing, as 38% of outstanding debt for small caps is floating rate, raising concerns that higher rates could result in more immediate pressure. Within large caps, it's less about growth vs. value, as we have seen significant divergence even within sectors and industries, and more about stock selection, gearing toward companies with resilient profits, solid balance sheets and favorable relative valuations (**Exhibit 7**).

2024 estimates have declined, but still look lofty

Exhibit 7: 2024 S&P 500 consensus EPS estimates, 12/31/2022 = 100, daily



Source: FactSet, J.P. Morgan Asset Management. Data are as of December 13, 2023.

International equities: A lot more than meets the eye

Despite divergent economic growth and some disappointment in parts of the world, international equity performance has been strong: up 10% year-to-date (in U.S. dollar terms). Beneath the surface, even stronger performance has occurred as Europe ex-UK and Japanese equities are both up 15%. In emerging markets (EM), there is more strength underlying the 5% return this year, as China is substantially dragging on performance and EM ex-China is up 12% this year. Style differences have also been significant, with international value outperforming international developed value outperforming international developed growth by 3 percentage points. Lastly, time frames also matter: the rebound in international performance began in October

2022, and on a rolling one-year timeframe, international developed markets have kept pace with the U.S., especially international value which has outperformed U.S. value by 2 percentage points (**Exhibit 8**).

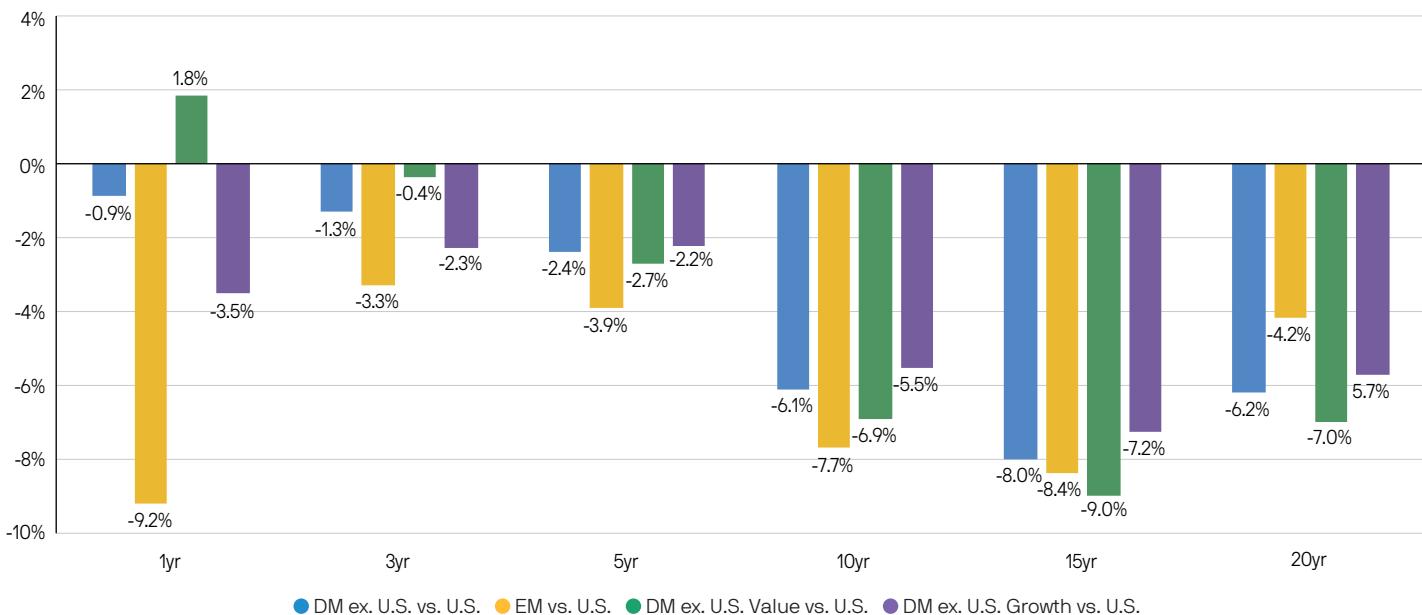
In addition to strong overall performance, international returns have seen a healthy breadth, driven by less concentration than U.S. performance: the spread in year-to-date returns between the top ten stocks and the remaining ones is only 7 percentage points in developed markets excluding the U.S. versus 53 percentage points in the U.S. In addition, performance has been driven by an equal contribution from multiple expansion, earnings growth and dividends. Investors have taken notice of the turnaround in international performance: international equities have been the fifth strongest category for net new flows so far this year.

Despite this year's strong performance, the starting point for international equities next year is favorable, as multiples are still sitting 5% below the 10-year average (and at double the normal discount to the U.S. at 33%). The improved long-term international outlook for stronger nominal growth and positive interest rates (vs. last decade's weak and negative outlook), combined with a turnaround in sentiment toward China from this year's very depressed levels, can lead to further multiple expansion. On earnings, Europe and Japan should see somewhat slower earnings growth than this year at low single digits, as nominal growth decelerates from this year's boomy pace. However, the new focus on increasing shareholder returns through buybacks should continue to provide a boost. EM should see much better earnings growth next year at high double digits, as commodity earnings swing from a big drag to a big support given year-over-year comparisons and as Chinese earnings estimates should improve given more policy support to the economy. Lastly, international equities should continue to provide a steady income boost, with dividend yields sitting at 3% (nearly double those in the U.S.).

Style leadership may vary by region, with value continuing to lead the way in Europe and Japan (as it often does in developed ex-U.S. led outperformance). Growth may take over the baton in EM given a better outlook for the semiconductor cycle, combined with more confidence in China's private sector growth, which should fuel technology and consumer-related sectors. As always with international, there will be a lot more than meets the eye beneath the surface, and with valuation spreads near record highs, active managers have a chance to uncover it.

International relative performance may be changed, led by Value outperformance

Exhibit 8: Relative returns vs. the U.S., USD, total return, annualized



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. "DM ex. U.S." is represented by the MSCI EAFE Index, "U.S." is represented by the S&P 500 Index, "DM ex. U.S. Value" is represented by the MSCI EAFE Value Index, and "DM ex. U.S. Growth" is represented by the MSCI EAFE Growth Index. The 1yr return shown is a cumulative return. Data are as of December 13, 2023.

Alternatives: As the dust settles

Public markets repriced significantly in 2022; 2023 was supposed to be the year when private markets followed suit. Repricing has begun and is still in various stages. It is still underway in real estate. It has been somewhat more benign thus far than expected in private equity as profits and economic growth have been resilient. It is likely yet to come in private credit once the economy slows, higher-for-longer interest rates apply pressure to floating rate loans and defaults pick up. Because transaction volumes have been lighter, it can be difficult to get a firm gauge on valuations as assets simply aren't trading frequently enough to give a clear barometer.

Still, although the dust is still settling on valuations, alternative investments can support the outcomes investors seek in portfolios. Some of the most pressing concerns for 2024 will likely be diversification, inflation hedging and alpha.

Diversification proved elusive in 2023. Bonds are tracking to narrowly avoid a third consecutive annual decline and interest rate volatility has been severe. Assets like gold and the U.S. dollar are expensive and produce no income. If diversification proves to be evasive again in 2024, infrastructure investments have provided low or

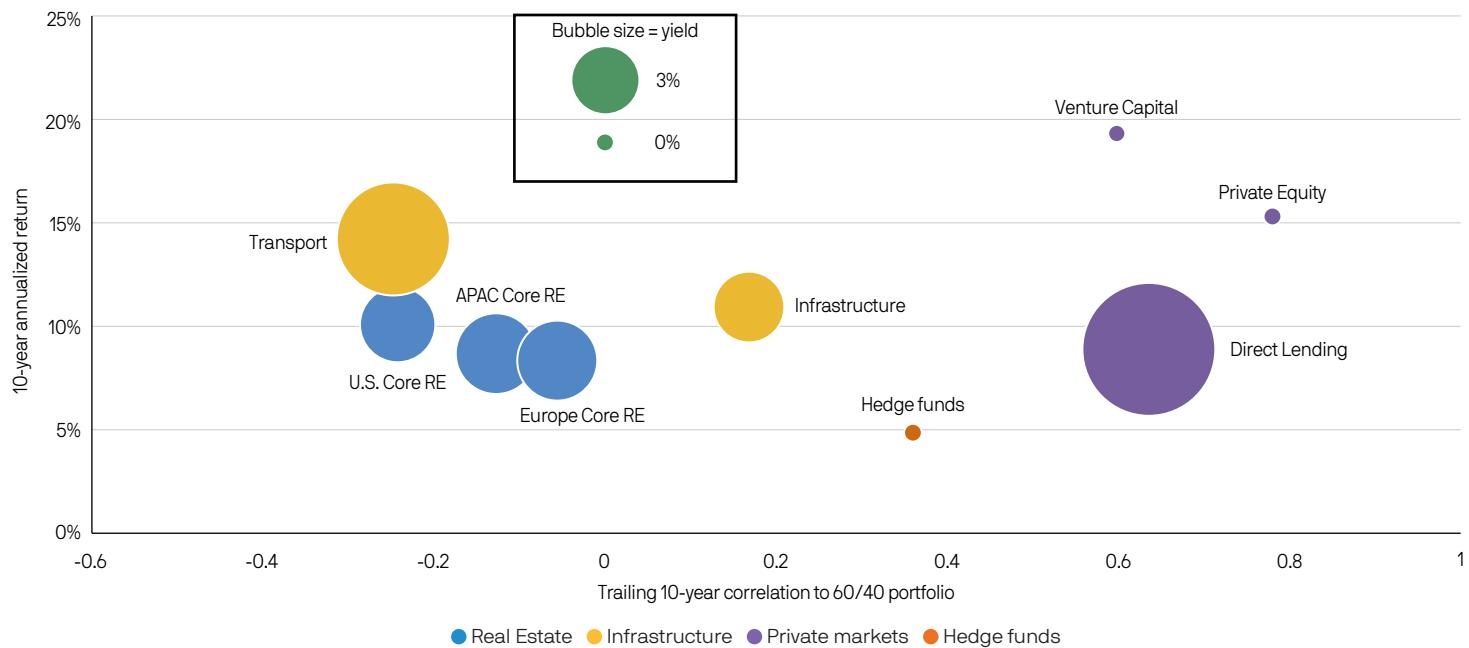
negative correlation to the public markets and stable income with minimal volatility over time. With industrial policy back in vogue across the U.S., Japan, India and Europe, the structural tailwinds are robust.

U.S. inflation saw significant declines in 2023 and could reach the Fed's 2% goal sooner than anticipated in 2024. However, as we note in our *Long-Term Capital Market Assumptions*, U.S. inflation could be closer to 2.5% over the next decade. If that is the case, real estate has proven to be an effective inflation hedge over time as higher costs can be passed on via higher rents. Public REITs have already repriced notably and could be the first place to deploy capital.

Unexpectedly buoyant public equity markets lavished investors with double-digit returns in 2023. However, higher-for-longer rates may pose a challenge to beta but allow alpha producers like stock pickers and private equity managers to shine in a less navigable environment going forward. In fact, history shows that performance from vintage years (the year when a private equity fund first deploys capital) that are economically challenging have tended to produce higher median returns. Still, quality and selectivity will be critical in both public and private equity (**Exhibit 9**).

Alternatives can provide alpha, income and diversification

Exhibit 9: 10-year correlations and 10-year annualized total returns, quarterly, 2013-2022



Source: Burgiss, Cliffwater, Gilberto-Levy, HFRI, MSCI, NCREIF, FactSet, J.P. Morgan Asset Management. Correlations are based on quarterly returns over the past 10 years through 2022. A 60/40 portfolio is comprised of 60% stocks and 40% bonds. Stocks are represented by the S&P 500 Total Return Index. Bonds are represented by the Bloomberg U.S. Aggregate Total Return Index. 10-year annualized returns are calculated from 2013 – 2022. Indices and data used for alternative asset class returns and yields are as described on pages 8, 9, and 11 of the Guide to Alternatives. Yields are based on latest available data as described on page 8 of the Guide to Alternatives. December 13, 2023.

Asset allocation in 2024: Expect the unexpected

Investors looking back at 2023 face a slew of contradictions. Inflation eased, the labor market cooled, a war broke out and banks failed, yet the Fed pushed rates higher; despite lower confidence and higher borrowing costs, the U.S. consumer kept consuming; growth equities outperformed value, though stretched valuations and rising rates should have encouraged the opposite; and the international recovery has been fragmented despite China finally emerging from the pandemic.

As a result, when investors look forward to 2024, asset allocation must reflect a hard-learned mantra: “expect the unexpected.”

The health of the U.S. economy remains top of mind, and investors are likely confounded by its remarkable resilience. While tighter lending standards, weaker job gains and lower savings should result in some “belt tightening,” a recession may once again be avoided.

Some of this economic optimism can be attributed to growing confidence that the U.S. has already pushed through peak rates, with the Fed likely finished hiking. A lower Federal Funds Rate should translate into lower borrowing costs more broadly, providing a reprieve to indebted Americans. Meanwhile, the international economic laggards of 2023, like China and Europe, should accelerate through 2024 as other economies gradually lose steam, resulting in less divergence across global growth. Still, politics at home and abroad have the potential to temporarily sour this outlook.

In other words, investing remains a challenge, and asset allocation must reflect the inherent uncertainty of a world very clearly in flux.

Assuming that rates fall in 2024, bond investors should embrace intermediate-duration instruments while having confidence that attractive coupons will act as a “cushion” in portfolios if the rate view unexpectedly changes. They should also shore up quality to account for tighter-than-expected spreads and protect against unpredicted economic risk.

From an equity perspective, stretched valuations and overly optimistic earnings projections, coupled with a slowing economy, mean U.S. stock investors should look toward profitability in large cap names. This favors an allocation to quality regardless of sector and underscores the importance of security selection. Outside the U.S., favorable valuations and an improved growth outlook, including positive interest rates, should translate to further multiple expansion, benefiting most regions around the world and emerging markets in particular. Moreover, a declining dollar should provide an extra tailwind to local currency performance.

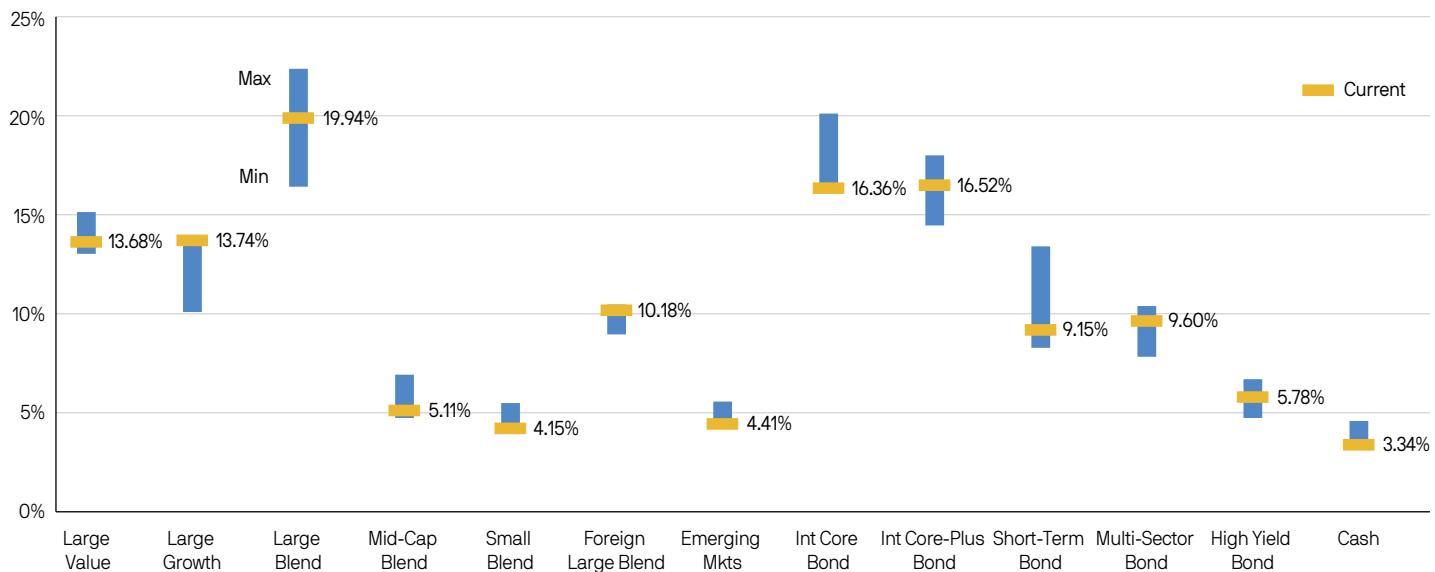
This backdrop is also supportive of alternative assets. Infrastructure investments can dampen portfolio volatility, particularly with a renewed interest in expansive industrial policy; real estate can protect against structurally higher inflation; and private equity and hedge funds can thrive if the beta trade weakens. Against this backdrop, however, investors should recognize that a repricing in some private markets is possible, underscoring the need for a long-term view.

Looking at the current portfolio positioning of individual investors, this outlook has only partially been implemented (**Exhibit 10**). Within fixed income, appetite for higher-quality, extended-duration bonds has increased since the start of the year. Within equities, growth investing is back in vogue, likely a reflection of investors chasing momentum given this year's surprise rally; this has somewhat unwound the shift toward value that had occurred earlier in 2023 and has driven up duration in stock allocations. Meanwhile, interest in non-U.S. stocks has increased since the beginning of the year, albeit mostly through passive vehicles, with investor allocations trending higher than the historical average despite a hazy geopolitical horizon. Finally, investors are still broadly overweight cash, weighing on returns in 2023 and positioning portfolios poorly relative to the opportunity set in 2024.

All told, the investing landscape is challenged, and predicting the winners and losers in periods of uncertainty is nearly impossible. Instead, investors would do well to expect the unexpected, diversify and lean on active management, stepping out of cash and into risk assets to take advantage of the anticipated changes ahead.

Investors are fairly well positioned to take advantage of market opportunities

Exhibit 10: Average allocations in moderate portfolios, last 12 months



Source: J.P. Morgan Asset Management. Note average allocations will not sum to 100 as not all categories are represented in each portfolio analyzed. Data as of December 13, 2023.

Authors



Dr. David Kelly, CFA

Managing Director
Chief Global Strategist



Jack Manley

Executive Director
Global Market Strategist



Gabriela Santos

Managing Director
Chief Market Strategist - Americas



Jordan Jackson

Vice President
Global Market Strategist



Meera Pandit, CFA

Executive Director
Global Market Strategist

Index Definitions

All indexes are unmanaged and an individual cannot invest directly in an index. Index returns do not include fees or expenses.

The **Composite PMI future output index** is a gauge of economic growth and can provide valuable insights into GDP, service sector growth and industrial production trends well ahead of official data.

The **Bloomberg Euro Aggregate Corporate Index** is a benchmark that measures the corporate component of the Euro Aggregate Index. It includes investment grade, euro-denominated, fixed-rate securities.

The **Bloomberg Pan-European High Yield Index** measures the market of non-investment grade, fixed-rate corporate bonds denominated in the following currencies: euro, pounds sterling, Danish krone, Norwegian krone, Swedish krona, and Swiss franc. Inclusion is based on the currency of issue, and not the domicile of the issuer. The index excludes emerging market debt.

The **Bloomberg U.S. Aggregate Treasury Bond Index** is a broad-based benchmark that measures the investment grade, U.S. dollar denominated, fixed-rate taxable bond market. This includes Treasuries, government-related and corporate securities, mortgage-backed securities, asset-backed securities and collateralized mortgage-backed securities.

The **ICE BofA MOVE Index** tracks fixed income market volatility.

The **J.P. Morgan Corporate Emerging Markets Bond Index Broad Diversified (CEMBI Broad Diversified)** is an expansion of the J.P. Morgan Corporate Emerging Markets Bond Index (CEMBI). The CEMBI is a market capitalization weighted index consisting of U.S. dollar denominated emerging market corporate bonds.

The **J.P. Morgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)** tracks total returns for U.S. dollar-denominated debt instruments issued by emerging market sovereign and quasi-sovereign entities: Brady bonds, loans, Eurobonds. The index limits the exposure of some of the larger countries.

The **J.P. Morgan GBI EM Global Diversified** tracks the performance of local currency debt issued by emerging market governments, whose debt is accessible by most of the international investor base.

The **J.P. Morgan Leveraged Loan Index** is designed to mirror the investable universe of U.S. leveraged loans.

The **MSCI ACWI (All Country World Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets.

The **MSCI EAFE Index (Europe, Australasia, Far East)** is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the global emerging markets.

The **MSCI Europe Index** is a free float-adjusted market capitalization index that is designed to measure developed market equity performance in Europe.

The **MSCI Pacific Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance in the Pacific region.

The **MSCI World with USA Gross Index** measures the performance of the large and mid-cap segments across 23 Developed Markets (DM) countries. With 1,540 constituents, the index covers approximately 85% of the global investable equity opportunity set.

The **Russell 1000 Index**[®] measures the performance of the 1,000 largest companies in the Russell 3000.

The **Russell 1000 Value Index**[®] measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

The **S&P 500 Index** is widely regarded as the best single gauge of the U.S. equities market. The index includes a representative sample of 500 leading companies in leading industries of the U.S. economy. The **S&P 500 Index** focuses on the large-cap segment of the market; however, since it includes a significant portion of the total value of the market, it also represents the market.

The **U.S. Treasury Index** is a component of the U.S. Government index.

2024 Year-Ahead Outlook

J.P. Morgan Asset Management

277 Park Avenue | New York, NY 10172

The Market Insights program provides comprehensive data and commentary on global markets without reference to products. Designed as a tool to help clients understand the markets and support investment decision making, the program explores the implications of current economic data and changing market conditions.

For the purposes of MiFID II, the JPM Market Insights and Portfolio Insights programs are marketing communications and are not in scope for any MiFID II/MiFIR requirements specifically related to investment research. Furthermore, the J.P. Morgan Asset Management Market Insights and Portfolio Insights programs, as non-independent research, have not been prepared in accordance with legal requirements designed to promote the independence of investment research, nor are they subject to any prohibition on dealing ahead of the dissemination of investment research.

This document is a general communication being provided for informational purposes only. It is educational in nature and not designed to be taken as advice or a recommendation for any specific investment product, strategy, plan feature or other purpose in any jurisdiction, nor is it a commitment from J.P. Morgan Asset Management or any of its subsidiaries to participate in any of the transactions mentioned herein. Any examples used are generic, hypothetical and for illustration purposes only. This material does not contain sufficient information to support an investment decision and it should not be relied upon by you in evaluating the merits of investing in any securities or products. In addition, users should make an independent assessment of the legal, regulatory, tax, credit and accounting implications and determine, together with their own professional advisers, if any investment mentioned herein is believed to be suitable to their personal goals. Investors should ensure that they obtain all available relevant information before making any investment. Any forecasts, figures, opinions or investment techniques and strategies set out are for information purposes only, based on certain assumptions and current market conditions and are subject to change without prior notice. All information presented herein is considered to be accurate at the time of production, but no warranty of accuracy is given and no liability in respect of any error or omission is accepted. It should be noted that investment involves risks, the value of investments and the income from them may fluctuate in accordance with market conditions and taxation agreements and investors may not get back the full amount invested. Both past performance and yields are not reliable indicators of current and future results.

J.P. Morgan Asset Management is the brand name for the asset management business of JPMorgan Chase & Co. and its affiliates worldwide.

To the extent permitted by applicable law, we may record telephone calls and monitor electronic communications to comply with our legal and regulatory obligations and internal policies. Personal data will be collected, stored and processed by J.P. Morgan Asset Management in accordance with our privacy policies at <https://am.jpmorgan.com/global/privacy>.

This communication is issued by the following entities:

In the United States, by J.P. Morgan Investment Management Inc. or J.P. Morgan Alternative Asset Management, Inc., both regulated by the Securities and Exchange Commission; in Latin America, for intended recipients' use only, by local J.P. Morgan entities, as the case may be.; in Canada, for institutional clients' use only, by JPMorgan Asset Management (Canada) Inc., which is a registered Portfolio Manager and Exempt Market Dealer in all Canadian provinces and territories except the Yukon and is also registered as an Investment Fund Manager in British Columbia, Ontario, Quebec and Newfoundland and Labrador. In the United Kingdom, by JPMorgan Asset Management (UK) Limited, which is authorized and regulated by the Financial Conduct Authority; in other European jurisdictions, by JPMorgan Asset Management (Europe) S.à r.l. In Asia Pacific ("APAC"), by the following issuing entities and in the respective jurisdictions in which they are primarily regulated: JPMorgan Asset Management (Asia Pacific) Limited, or JPMorgan Funds (Asia) Limited, or JPMorgan Asset Management Real Assets (Asia) Limited, each of which is regulated by the Securities and Futures Commission of Hong Kong; JPMorgan Asset Management (Singapore) Limited (Co. Reg. No. 197601586K), which this advertisement or publication has not been reviewed by the Monetary Authority of Singapore; JPMorgan Asset Management (Taiwan) Limited; JPMorgan Asset Management (Japan) Limited, which is a member of the Investment Trusts Association, Japan, the Japan Investment Advisers Association, Type II Financial Instruments Firms Association and the Japan Securities Dealers Association and is regulated by the Financial Services Agency (registration number "Kanto Local Finance Bureau (Financial Instruments Firm) No. 330"); in Australia, to wholesale clients only as defined in section 761A and 761G of the Corporations Act 2001 (Commonwealth), by JPMorgan Asset Management (Australia) Limited (ABN 55143832080) (AFSL 376919). For all other markets in APAC, to intended recipients only.

For U.S. only: If you are a person with a disability and need additional support in viewing the material, please call us at 1-800-343-1113 for assistance.

© 2023 JPMorgan Chase & Co. All rights reserved.

MI-MB_2024_investment_outlook

09zz231512221702

Wealth Outlook

2024

Slow then grow
Investing in the markets' big reset



INVESTMENT PRODUCTS: NOT FDIC INSURED · NOT CDIC INSURED
NOT GOVERNMENT INSURED · NO BANK GUARANTEE · MAY LOSE VALUE

Wealth Outlook 2024

Foreword

By Andy Sieg, Head of Wealth

3

Our outlook

Taking advantage of the markets' big reset	5
Slow then grow	10
Geopolitics and elections: assessing risk in 2024	24

Portfolio views

Core portfolios could be ready to shine	34
Alternative investing in 2024	41
Peak rates equals peak income: extend duration	47

Opportunistic

Our top 10 high conviction potential opportunities	54
Investing with and in unregulated financial companies	71

Unstoppable trends

How generative AI might reshape every sector	77
AI-propelled digitization in 2024: five areas of focus	82
OPEC's unlikely role in the energy transition	86
For investors, healthcare innovation is on sale	92
The implications of G2 polarization on global technology	98

Regional outlook

Asia: faster growth for 2024 as headwinds recede	106
Europe: a slow recovery, with stronger equity returns later into 2024	115
Latin America: potential opportunities amidst low valuations	120
North America: an emerging set of new opportunities	126

Foreword

Andy Sieg

Head of Wealth



Welcome to **Wealth Outlook 2024: Slow then Grow, Investing in the Markets' Big Reset**, Citi Global Wealth Investment's annual report that presents our assessment of the global economy and the potential opportunities that follow for the coming year and beyond.

As we enter 2024, we are faced with several conundrums as investors. Given how high interest rates are, how has the world economy avoided recession? Is a downturn imminent? With all of the geopolitical challenges, what should we consider when investing for the future?

The Office of the Chief Investment Strategist at Citi Global Wealth, led by our Chief Investment Officer, David Bailin, has assembled this comprehensive analysis of potential opportunities and risks for this unique moment in time.

It is clear that there is much to be optimistic about as the world economy returns to normal after the pandemic. We believe both bonds and stocks are attractive investments, making balanced portfolios valuable to investors. For qualified clients, alternative investments are seeing attractive entry points, as valuations are more modest now than they were during the “free money” period that just passed. The team also believes in potential opportunities in specific regions, industries and trends, such as tech supply chain infrastructure and investments in economic security.

One risk for long-term investors can be the inclination to hold too much cash. We expect that rates will fall over the next 12-24 months and that returns on cash will drop rapidly. The Fed forecasts that its key policy rate will fall to a “longer run” normal of 2.5% over the next few years. Investment-grade bonds with a similar duration yield more than twice this rate today. This is why we encourage our clients to determine their true liquidity needs and take this moment to consider adding appropriate investments to diversified portfolios. Historically, balanced portfolios have outperformed cash over time.

In addition to the Wealth Outlook 2024, we have created helpful summaries, including our Findings & Opportunities publication and our popular At-a-Glance, that distills all of our observations and insights.

In my experience, markets lead economies and smart investors lead markets. Our insights are designed to help you seek your individual investment objectives, and our team is available to help you define and achieve your goals.

We look forward to discussing our insights with you and hope that the ideas and opportunities presented will enrich your portfolios in 2024 and beyond.

A handwritten signature in cursive script that reads "Andy".

Our outlook



- 5 Taking advantage of the markets' big reset
- 10 Slow then grow
- 24 Geopolitics and elections: assessing risk in 2024



Taking advantage of the markets' big reset

David Bailin
Chief Investment Officer

While it may not seem like it now, our analysis suggests that the global economy is healing and poised for further recovery, full of potential opportunities to build profitable and resilient portfolios.

This is a good time to be a global investor, maybe even a very good time.

If you find that hard to believe, you are not alone.

In 2023, we have seen moments when investors were absolutely sure that equities were headed lower (September) and when investors were absolutely sure that rates could only go higher.¹ In both cases, investor sentiment proved wrong. Nevertheless, as of the week ending November 15, investor confidence as measured by the American Association of Individual Investors stood at 16% net bullish, hardly a ringing endorsement for the future.²

With war in Ukraine and Israel, tensions ongoing between the US and China, impending contentious presidential elections in the US and six other countries, gridlock in the US Congress and abounding doomsday scenarios about the impact of artificial intelligence (AI), it is not easy to have a clear vision on the direction of markets. Meanwhile, 5% annualized short-term rates are distracting investors, encouraging them to quietly become market timers.

¹ In the University of Michigan survey, a historical record high 88% of respondents in April said interest rates in the coming year would rise. In the American Association of Individual Investors poll, the net bullish % of investors was -43.1% in the week of September 21, the lowest level since March 4, 2009.

² The AAII Investor Sentiment Survey, www.aaii.com/sentimentsurvey.

Clear thinking and wise analysis

This is a moment when facts, data, clear thinking and wise analysis matter most. Our conclusions may surprise you. However, they are not optimistic. They are realistic. Here is what we see:

- Inflation is coming down. Wage growth is moderating, even in services.
- Employment growth is slowing.
- The US economy is more resilient than many expected.
- Some US industries suffered a “rolling recession” in 2023. These sector contractions will roll out in 2024. Though the new year will initially see a slowdown in growth, there will be no broad-based economic collapse.
- For many sectors and markets, equity valuations are more reasonable than investors believe.
- Corporate profits are rebounding and are likely to hit an all-time high in 2025.
- High short-term interest rates today are unlikely to be available tomorrow. The same is true for longer-term rates. Investors should not assume that they will be able to maintain rates as they roll over short-term Treasurys and bonds.
- As rate pressures recede, the US dollar is likely to decline. This could help set the stage for stronger global growth in 2025.
- Market timing is a bad strategy.

What is “Slow then grow”?

We have seen three distinct phases of market activity since the start of the pandemic. The first was a period of stimulus-driven euphoria from 2020–2021. During this period, low emergency rates plus broad support for the economy led to excessive and unsustainable market returns. The second phase was a period of bear market caution in 2022–2023. The Fed’s about-face of higher rates and quantitative tightening crushed bonds and equities, but not the economy. Now, we are entering a period of normalization and growth in 2024–2025. We are exiting a period of rolling sector recessions and unusual levels of employment demand to begin a global economic recovery led by the US.

Our “Slow then grow” thesis sees a deceleration in economic activity during the early part of 2024, but no synchronized recession, followed by an economic acceleration later in the year. Our global gross domestic product (GDP) estimates for 2024 and 2025 are +2.2% and +2.8%, respectively.

How is this possible? Even as the job market cools, we see corporate profits rising from 2023 to 2024 at a 5.0% rate and then at a 7.0% rate from 2024 to 2025. We also expect the US Federal Reserve to lower rates at the short end as it sees employment impacted negatively from the lagged effects of its tightening actions. If unemployment rises more quickly than expected, the Fed will also react faster by lowering rates more quickly. We see inflation running at 2.5% by the end of 2024 and 10-year rates in a range of 3.5% to 4.0% at that time. Following this period of falling inflation and rates, we expect the growth rate of production and capital investment to improve and consumer spending to firm heading into 2025.

What is the “big reset”?

The “big reset” in financial markets is happening across equity, fixed income and alternative investments. Its simplest explanation is that after a period like 2022 when stock and bond performance is deeply negative, markets tend to first heal and then recover toward historically normal ranges of activity.

The big reset is happening without a major recession. For many investors, the absence of a plunge in financial markets in 2023 could be a mixed blessing, failing to provide the “all clear” signal they might prefer to begin investing again. In our view, it would be unfortunate for investors to miss this moment as many asset classes are poised to recover in a fairly synchronous manner, with equity, debt and alternative investments possessing both unique and related reasons for their return to potential solid returns. This is why trying to time markets will be impossible in 2024. It is time, instead, for investors to reset their expectations upward. Investors can potentially benefit from fully invested, broadly diversified portfolios.

Balanced is best

We believe, at this moment, the “balanced” portfolio is poised for stronger performance over the next decade than it has experienced in some time. Our expected returns as reflected in our Strategic Return Estimates (SRE) (see **Core portfolios could be ready to shine on page 34**) have risen meaningfully across all asset classes.

Diversified portfolios may also protect portfolios from security concerns and unpredictable election results, two impending risks.

Bond yields have tripled from their lows. For example, investment grade corporate debt yields, even those with low durations, sat at 6% as of November 16, 2023. If inflation were to end 2024 at our expected level of 2.5%, real corporate bond yields would be approximately 3.5%. Such high real yields are rare, last seen on a sustained basis in the late 1990s. And the risk of entering new bond positions only to see them eclipsed by even higher-yielding ones is much less at today’s yields than it was just 18 months ago.

The evolving macro environment also suggests that equity price appreciation will broaden in the US, then globally. The largest US tech-related shares (the “Magnificent 7”³) have driven the majority of returns in global equities in 2023. For 2024, we expect that profitable small- and mid-cap growth shares with solid balance sheets will see renewed interest. And there are other potential well-valued equity opportunities globally.

³ The Magnificent Seven stocks: Amazon.com (AMZN), Apple (AAPL), Google parent Alphabet (GOOGL), Meta Platforms (META), Microsoft (MSFT), Nvidia (NVDA) and Tesla (TSLA).

Understanding US economic resilience

After the fastest and largest rate hikes in Fed history, the US economy has been remarkably resilient. There have been several reasons for this. The bulk of the initial recovery from the pandemic was built on fiscal stimulus. During this time, the private sector did not “overbuild.” It “under-hired.” Subsequently, as stimulus was reduced, there was strong pent-up demand, particularly for services labor. While inflation harmed incomes, receding inflation is undoing this harm. Though the recent period of ultra-low interest rates was brief, many households and firms improved their balance sheets through refinancings.

The Fed’s powerful about-face that began in March 2022 has had a material impact on inflation. From a peak of 6.6% in June 2022, “core” US inflation (excluding food and energy prices, which tend to be more volatile) as measured by the Consumer Price Index (CPI) has fallen to 4.0% as of October 2023. The remaining lagging element of the CPI, shelter costs, remains elevated, but the October 2023 data suggest that it is also slowing rapidly. Labor demand is cooling now, too, leading to slowing jobs growth and to slightly higher levels of unemployment. However, industries and profits have already felt this slowdown and will not repeat them in 2024.

These atypical, asynchronous, and countervailing events have allowed the US to sustain meaningful economic growth. Normalization is the next phase. One likely to lead to stronger growth in 2024 and 2025 along with investment opportunities across many markets.

Reading Wealth Outlook 2024: Slow then grow

Steven Wieting's **Slow then grow** on page 10 summarizes our Wealth Outlook views and the macroeconomic arguments for our 2024 investing strategy. In particular, it explains why Citi Global Wealth went overweight equities from an underweight/neutral position on October 18 for the first time since 2020.

In **Geopolitics and elections: assessing risk in 2024** on page 24 we assess the main risks to the global economy in 2024. History shows that 90% of geopolitical events have not changed the trajectory of the world economy. But we also need to be prepared for events that can change the direction of markets and portfolios. Vulnerable energy supplies and cyberwarfare are two such risks. In both cases, portfolio construction can be adjusted to address a portion of the increased geopolitical risk we now face.

A new Wealth Outlook 2024 feature: “Our top 10 high-conviction potential opportunities”

We believe in “core” and “opportunistic” portfolio investments. Our core is a diversified portfolio based on a client’s risk profile and goals. Core allocations are made to benchmarked asset classes based on our Strategic Return Estimates, with tilts toward elements that can either diversify risk or offer the potential opportunity for incremental alpha over 12- to 18-month time horizons. For many investors, core is 85% of their assets.

In Wealth Outlook 2024, we have identified 10 special situations that may comprise up to 15% of one’s

portfolio depending upon an investor’s risk profile and investment objectives. These are timely and less recognized opportunities. For some, we may see a catalyst for growth or change in market conditions. Others are undervalued assets. There are country-specific ideas in Japan. Private credit shines in this environment. And we see investable ideas based on the impacts of artificial intelligence.

Seeking to improve your portfolio

It is my hope that you will read, enjoy, and ponder the information in **Wealth Outlook 2024: Slow then grow, Investing in the markets' big reset**. The investments team at Citi Global Wealth believes in turning our guidance into action. We recognize that our best thinking should be implementable and the value-add we provide should be measurable. We also acknowledge that the media amplifies news that stokes fear and tends to ignore the fact that economic and social development are themselves unstoppable trends. At this moment, our deep analysis suggests that the global economy is healing and is poised for further recovery, full of potential opportunities to build profitable and resilient portfolios.

That’s why we believe that this is a good time to be a global investor, maybe even a very good time.

Thank you for your confidence in Citi Global Wealth. It is our honor to present this Wealth Outlook 2024 for you and your families.

David Bailin,
Chief Investment Officer





Slow then grow

Steven Wieting

Chief Investment Strategist and Chief Economist

After the up-and-down volatility of the pandemic and its aftermath, we see 2024 as an important transition year that sets the stage for more sustainable rates of growth and market returns ahead.

Considerations:

- Growth is likely to slow in early 2024, but we see no synchronized collapse across the global economy, as many fear.
- The latter half of 2024 should show a return to sustainable economic momentum as well as an improvement in corporate earnings.
- We expect global economic growth to strengthen in 2025. This should become apparent to investors as earnings estimates for 2025 rise. We expect a 12% increase in earnings per share (EPS) over the next two years.
- The two pillars of investment returns – income and growth – have been reinvigorated. Therefore, this a very good time to build new balanced portfolios or to add to existing ones.
- Valuations for key elements of core portfolios are more attractive today. Our 10-year Strategic Return Estimates¹ for the constituents of global portfolios have doubled from two years ago. (For a complete view, see page 38.)
- Yields in the US have risen toward two-decade highs. We think investors should take advantage of them now. Inflation-adjusted “real” Treasury yields of 2.5% are higher than in 80% of all periods over the past 25 years. Broader US fixed income yields are 4% above expected inflation.
- Equity valuations are more attractive now. Except for large cap technology, many sectors trade at moderate valuations. Accordingly, we have already increased our exposure to small- and mid-sized growth equities and are likely to add more equity exposure over the year to come.
- While supply shocks are a possibility, we expect the upcoming period of slower growth to take pressure off labor markets. We expect these trends to alter the course for monetary policy. That said, we do not expect the US Federal Reserve (Fed) to push policy rates back toward zero or resume quantitative easing.

¹Source: Citi Global Wealth Allocation Team. Strategic Return Estimates (SREs) for 2024 based on data October 2023, prior Strategic Return Estimates for 2023 (based on data from October 2022) and 2022 (based on data as of October 2021). Returns estimated in US Dollars. All estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. Past performance is no guarantee of future returns.

Strategic Return Estimates based on indices are Citi Global Wealth's forecast of returns for specific asset classes (to which the index belongs) over a 10-year time horizon. Indices are used to proxy for each asset class. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes utilize a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes utilize other specific forecasting methodologies.

SRE do not reflect the deduction of client fees and expenses. Past performance is not indicative of future results. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index.

All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

Entering the third phase: bull/bear/bull

The massive swings in global output and inflation driven by COVID in the early 2020s are fading into the history books. The immediate world growth outlook is modest, far from “roaring” like the “Twenties” of a century ago. However, prospects for a sustained expansion after a near-term period of slower growth are solid. We expect global growth to strengthen in 2025 after another year of convalescence in 2024 (**FIGURE 1**).

Investors should recognize this “Slow then grow” pattern. It’s a transition that is unfolding in three

distinct phases: 1) Massive fiscal and monetary stimulus by policymakers around the world drives equity and bond markets to unusually strong returns in 2020–2021, despite the pandemic shock. 2) Global markets then suffer a payback in 2022–2023. This period was one of just three years in the last century during which combined bond and stock returns were negative together. 3) After a “valuation reset” for both stocks and bonds, we see a period of lower inflation, slower growth and higher earnings ahead. 2024 should start slower and see the economy accelerate as the year progresses. These “third-phase” conditions could offer stronger return opportunities in 2024 and 2025.

FIGURE 1

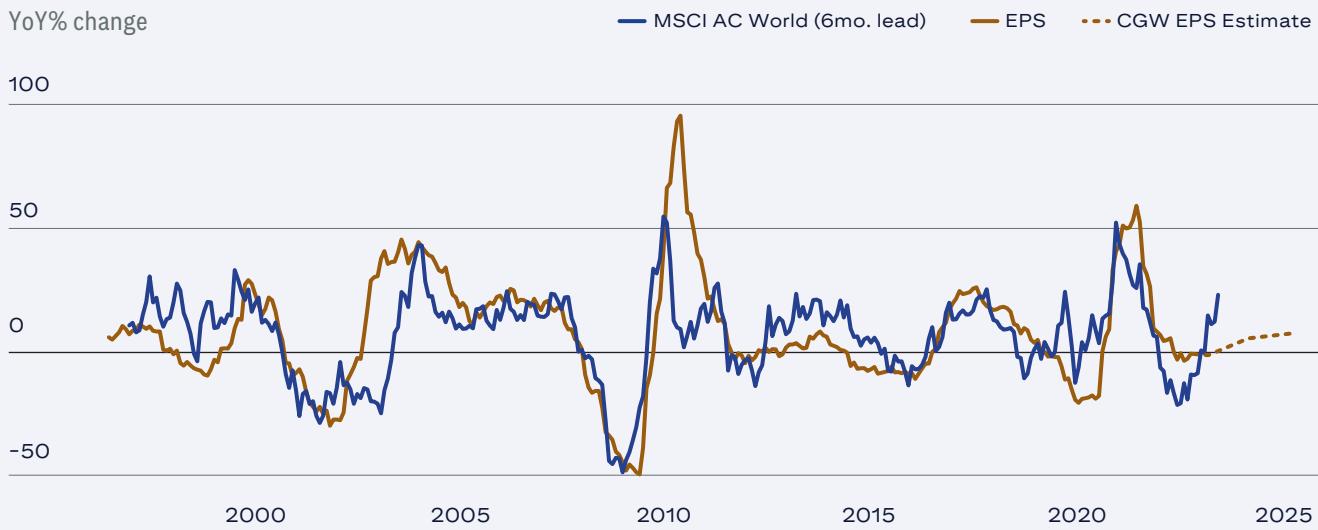
Citi Global Wealth (CGW) real gross domestic product (GDP) forecasts

CGW Real GDP Forecasts (%)	2020	2021	2022	2023E	2024E	2025E
US	-2.8	5.8	1.9	2.4	1.6	2.6
China	2.2	8.5	3.0	5.5	4.0	4.0
EU	-6.3	5.6	3.4	0.5	0.4	1.3
UK	-11.0	7.6	4.3	0.6	0.6	1.5
Global	-3.2	5.9	3.3	2.6	2.2	2.8
CGW EPS Forecasts (%)	2020	2021	2022	2023E	2024E	2025E
S&P 500	-13.5	46.9	6.0	0.9	5.1	6.8

Source: Citi Global Wealth Investments and Bloomberg as of November 12, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 2

Developed market equities year-over-year (YoY) change in share price versus next-six-months projected earnings per share (EPS)



Source: Bloomberg through October 31, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

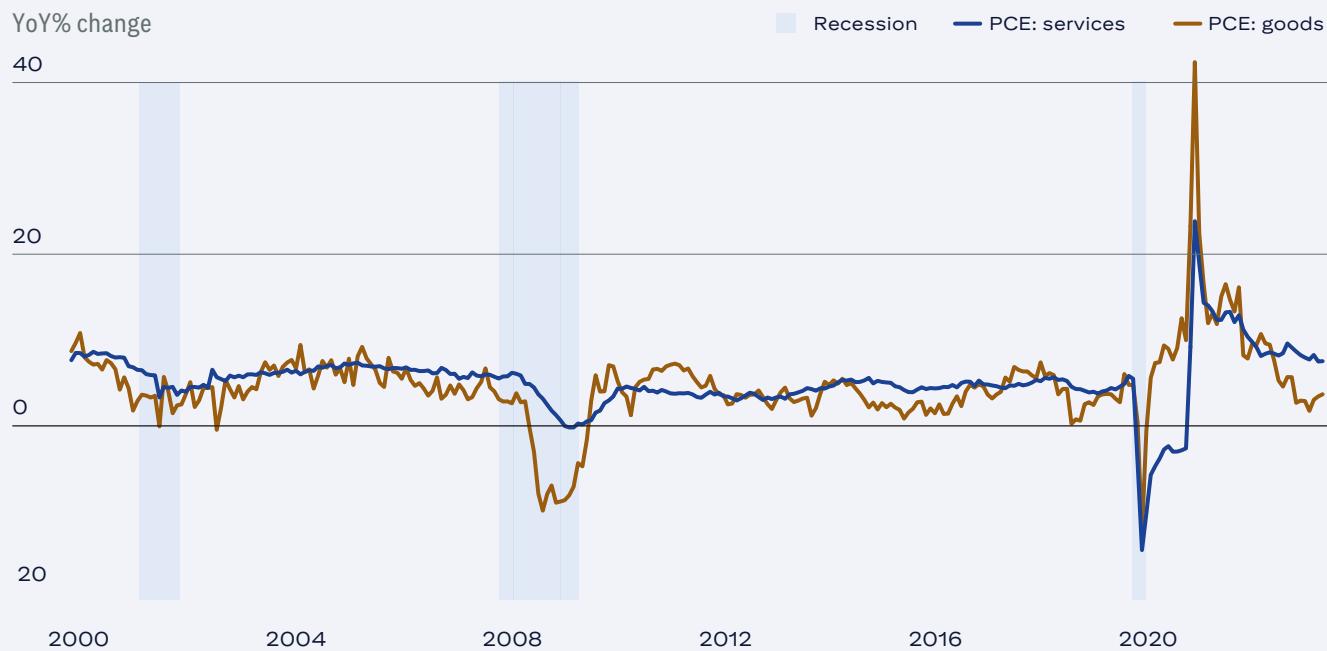


Aftershocks diminishing

We expect an acceleration in the rate of economic growth in the latter part of 2024 and a stronger 2025 (**FIGURE 2**). Markets lead the economy and will begin to react to prospects for 2025 in 2024. This may allow US equities to reach new highs once the calendar flips over again. Though politics will be grabbing the headlines and creating anxiety for investors at year end, we think a brightening economy and markets will be evident at election time (please see **Geopolitics and elections: assessing risk in 2024** on page 24).

FIGURE 3

YoY change in inflation-adjusted US consumer goods and services spending

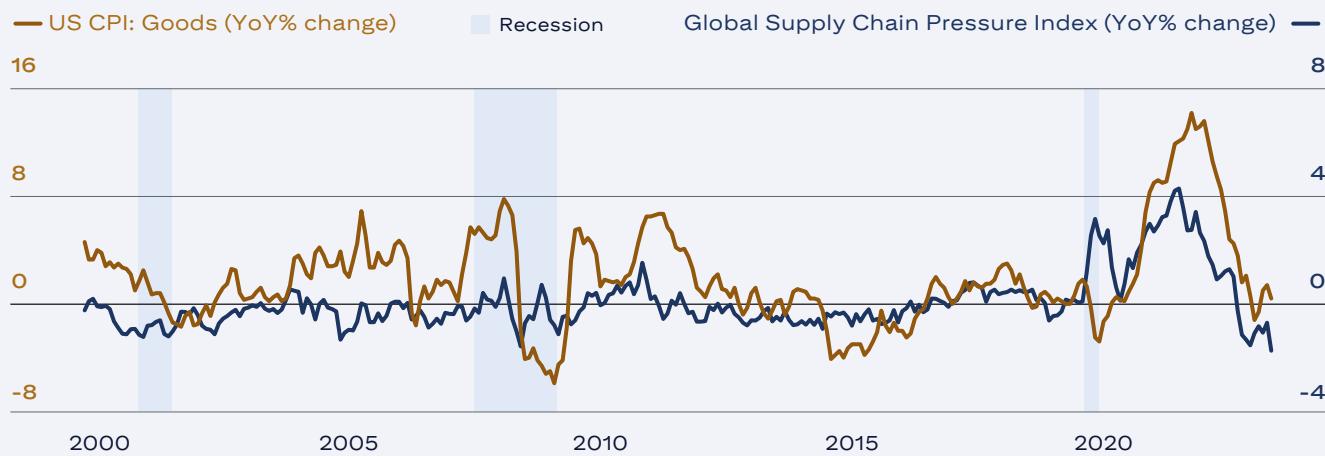


Source: Haver Analytics through October 31, 2023.

In recent years, we've likened the record economic swings of 2020–2021 and the inflation that followed as an “earthquake” and “aftershocks.” The amplitude of aftershocks tends to decrease over time. Massive swings in demand from services to goods and back was a recipe for inflation, but those swings are abating (**FIGURE 3**).

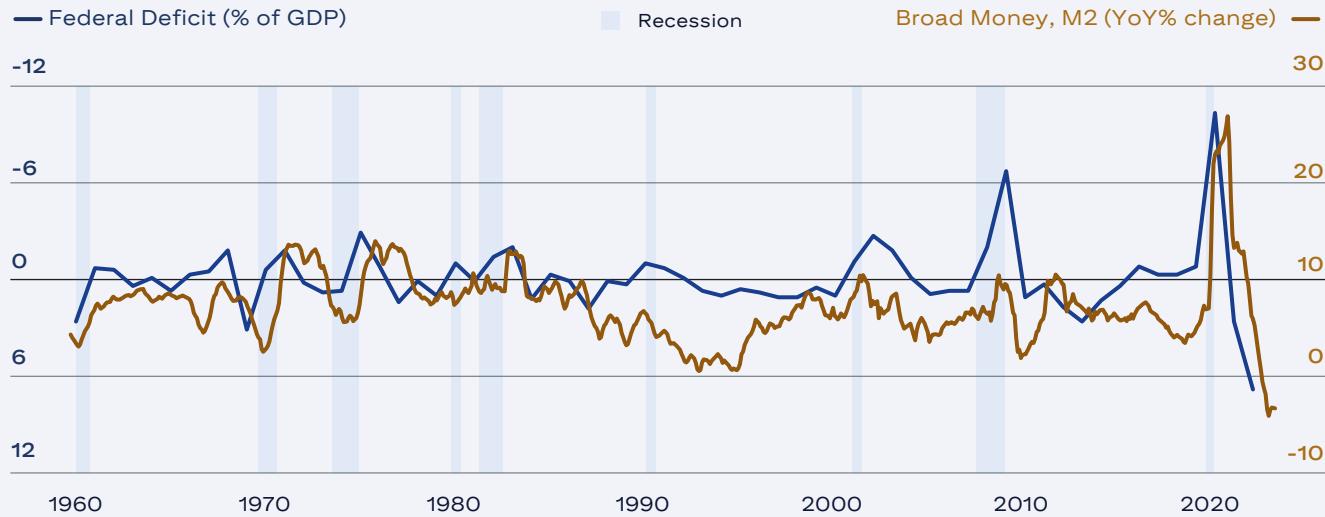
For forecasters it has been difficult to determine how much of the pandemic period's strange features will become structural issues for the economy. The evidence suggests that most pandemic impacts are transitory. Supply chains have normalized. Tradeable goods prices have stabilized, and macro stimulus has largely, if not completely, been unwound (**FIGURE 4-5**).

FIGURE 4 YoY change in the Global Supply Chain Pressure Index versus the US Consumer Price Index (CPI) for goods (as opposed to services)

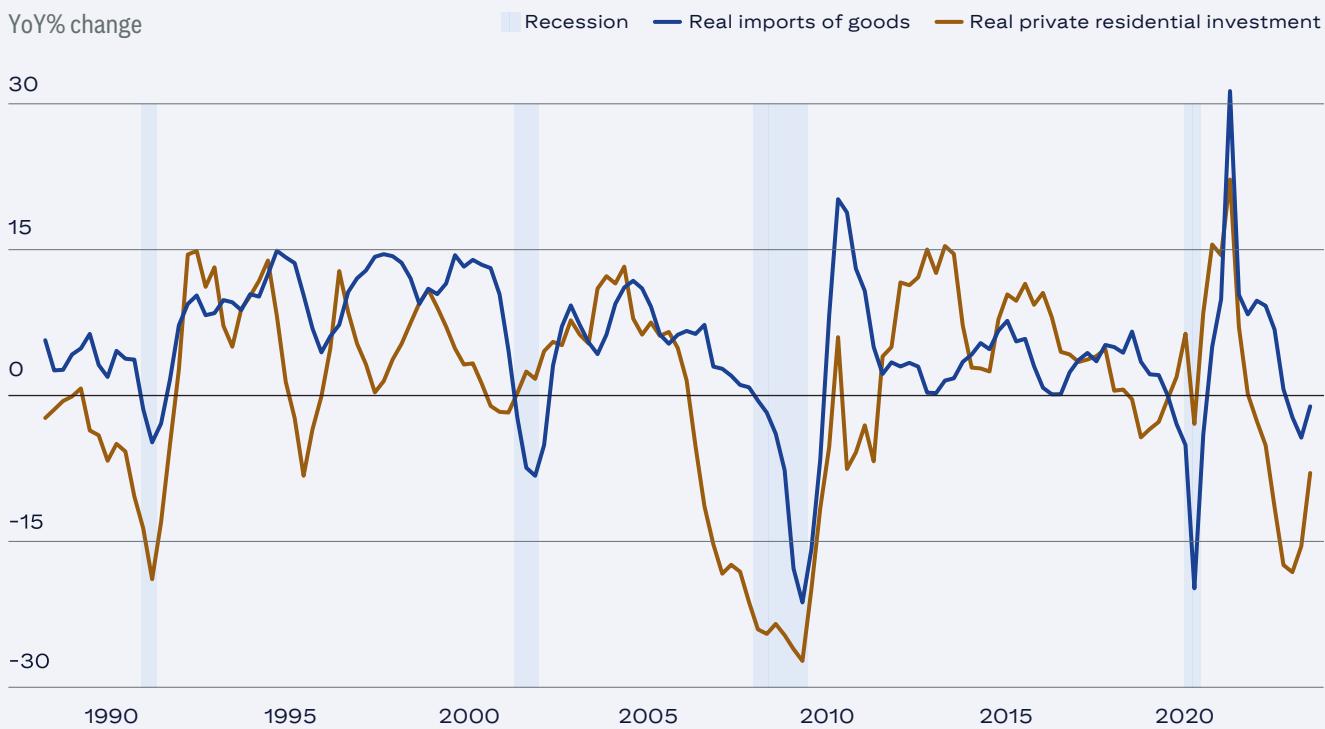


Source: Haver Analytics through October 31, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 5 Change in the US money supply (“M2”) versus the change in federal deficit as a percentage of GDP



Source: Haver Analytics through October 31, 2023

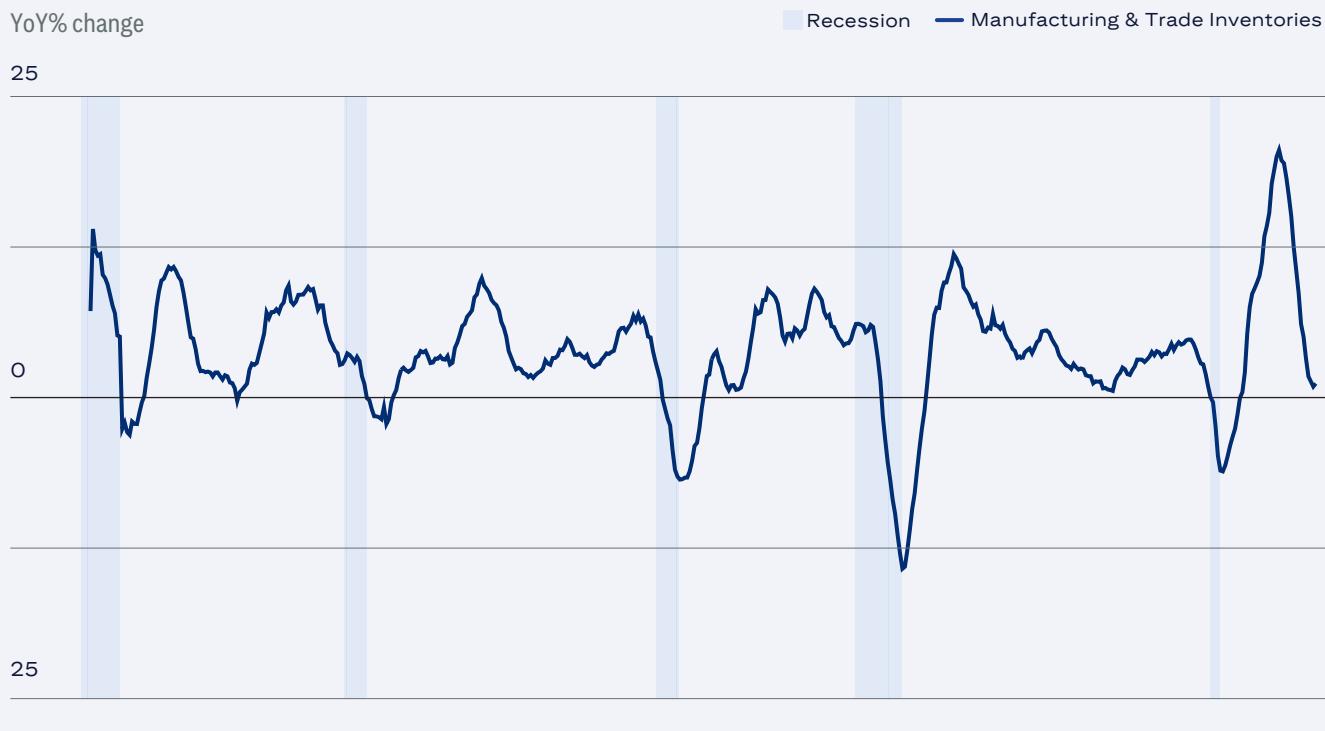
FIGURE 6 YoY change in imports and real estate investment

Source: Haver Analytics through September 30, 2023.

Rolling sector recessions are ending

Various developed and emerging market economies are currently suffering from drags on economic growth that likely won't be repeated in 2024 and beyond. Export volumes of goods across the world are falling. Manufacturing activity has contracted, along with the faster-adjusting segments of housing markets (**FIGURE 6**). This is beginning to clear the overhang of high inventories that has been the source of significant recession risk (**FIGURE 7**).

Those who fear a full-blown recession are overlooking that there are sector recessions running through various industries now, impacting the economies most exposed to them. In the US, for example, there is a clear recession in real estate and certain manufacturing sectors, but there is no broad-based collapse. Globally, services industries that endured a depression in 2020 have grown disproportionately and are unlikely to either contract or boom in 2024. This composition of growth benefits the services-heavy US economy for now. But over the coming two years, as the global manufacturing contraction ends, a broader worldwide economic expansion should begin to kick into gear.

FIGURE 7 YoY change in US inflation-adjusted business inventories

Source: Haver Analytics through September 30, 2023.

China's slide

Relative to the US, an opposite dynamic is unfolding in China currently. Property and trade sectors are much larger shares of China's economic activity, and the larger structural changes needed to clear major imbalances have not been sufficiently implemented. In the near term, these headwinds pose a great challenge for China's policymakers as discussed in our **Asia: faster growth for 2024 as headwinds recede** on page 106.

The impact of China's challenges has not been all bad for the global economy. China's struggles are lowering the cost of goods worldwide at a time when inflation concerns remain high.

The immediate stimulus measures undertaken by the Chinese government in recent months have been significant, probably enough to engender a cyclical recovery in 2024 and into 2025. Indeed, the latest data suggest it has already started. That said, an ongoing, deep slowdown in China is perhaps the biggest risk to worsening the "slow" and delaying the "grow" in our accelerating global growth pattern.

Labor markets are poised to slow, stemming US rate pressures

A center point of our Wealth Outlook is a sharper slowing in US employment in 2024 than many expect. Job gains in 2022–2023 exceeded GDP gains by the most since 1974. However, we believe this period of falling productivity – another anomaly from the pandemic era's strange swings in demand and labor composition – is likely coming to an end. As **FIGURE 8** shows, labor input is already slowing while productivity growth is rebounding.

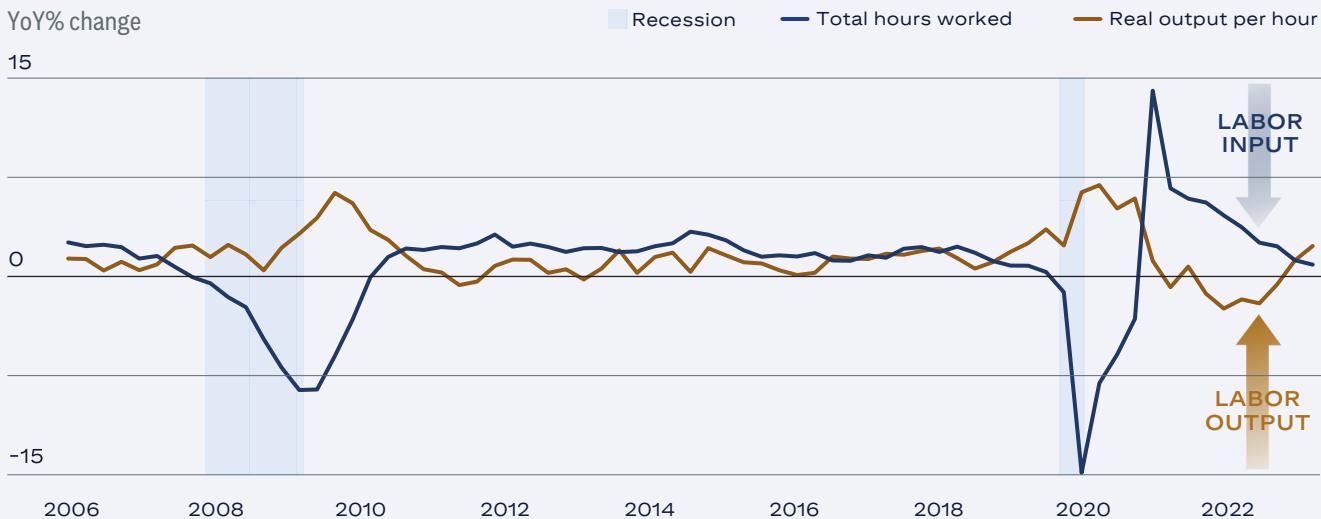
The US labor market is far more cyclical than most developed market economies, with relatively low barriers to hiring and firing. Consequently, US monetary policy is also much more variable, constantly reacting to the state of employment (**FIGURE 9**). As a contrast, consider that Japan has not changed its short-term policy rate significantly since 2008 (though that could be about

— The US labor market has outperformed virtually *all forecasts* over the past two years, but a *shift* is likely

to change – see our discussion of the prospect of yen strengthening in No. 8 of **Our top 10 high conviction potential opportunities on page 54**).

In 2023 to date, US employment gains have averaged 239,000 per month. While strong, this run rate is half the average of the same period in 2022. In October, those gains slowed to 150,000. We expect them to slow further in 2024.

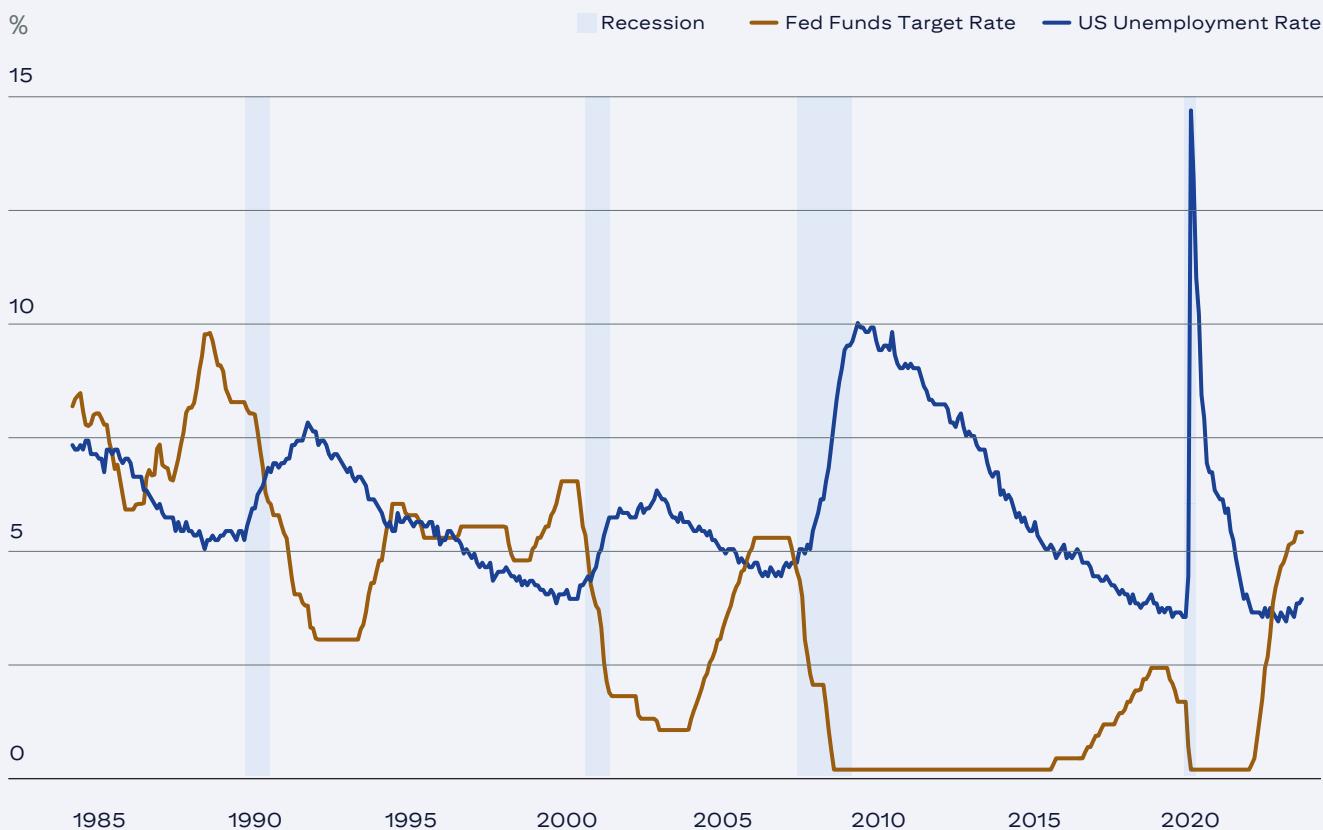
FIGURE 8 YoY change in US non-farm output per hour and hours worked



Source: Haver Analytics through September 30, 2023.

FIGURE 9

YoY change in Fed policy rate and growth of non-farm US employment



Source: Haver Analytics through October 31, 2023.

An economic collapse is not a prerequisite for Fed easing. As employment growth slows, the Fed will become increasingly concerned about the interaction of its self-described restrictive monetary policy and the labor market. It is notable that since 1980 (when the Fed started taking more responsibility for controlling inflation), the Fed has begun cutting rates with US employment averaging gains of 146,000 per month for the half-year before.

This is one of the reasons the Federal Open Market Committee (FOMC) participants forecast two rate cuts as a median estimate in 2024. While we don't project anything close to a return to zero interest rate policy, we will note that easing cycles tend to be more pronounced than the Fed's projections made a year or more in advance.

Employment growth down, output up

As labor markets cool off, we think corporate profits will heat up. Many cyclical industries contracted output in 2023 even while hiring across the economy rose. As consumer spending slows in 2024, that will leave firms in a position to boost production. After all, large declines in global trade anticipated a consumer demand collapse that never occurred and left inventories contracting. Corporate profits have already risen for the past two quarters, and we see S&P 500 EPS over the next two years rising 12%.

Shifts in the composition of industry demand and output play a larger role in the short-term than enduring technological innovation, but greater benefits could soon be realized on the latter front as well (see our pair of our articles about the Unstoppable Trend of digitization and how to invest in it, starting on pages 77 and 82).

This prospective improvement in corporate profits led us this past October to raise the equities allocation in our core portfolios to overweight from neutral for the first time since 2020. For now, the overweight is 2% and mostly centered on the US – but we suspect we're being conservative. If the US dollar weakens along with falling interest rates, as we expect, and credit stays firm, equity returns could be significantly stronger and broader than we currently anticipate. This would suggest a higher global equity overweight if key conditions are met.

Resilience, with some risks

The US and the world economy overall have endured the impact of higher rates and other macro policy tightening better than we and many others expected. Compared to our forecast a year ago, the US economy has seen a sharp upward revision for 2023 by a full 1 1/2 percentage point in real GDP terms. The drop in US inflation from a peak of 9% has strongly helped US

real incomes in the year past. By year-end 2024, we expect headline US CPI inflation to fall to 2.5%, from ~3.7% at year-end 2023. This slowing has boosted real incomes and sentiment at the same time savers have enjoyed a surge in real yields.

Many of the world's economies are likely to experience the same deceleration in inflation given the normalization of supply chains and trade. This inflation drop can't be counted on to boost economies quite as forcefully as in 2023, but other tailwinds may increase globally on a lag from the US as we move deeper into the year and then into 2025.

— After-inflation US Treasury yields of 2.5% are currently higher than 80% of all periods in the past 25 years.

The inversion of the US yield curve, even if less pronounced than before, remains an indicator of tight monetary policy. This can leave the economy more vulnerable to a shock, as was the case when the pandemic hit. Another supply shock that tips the economy into a broader recession can never be ruled out given geopolitical uncertainties. If a new, global shock were to materialize, monetary easing could be more profound than we expected, but it would be no immediate substitute for economic growth and profits.

Assuming no imminent recession or major global supply shock, it seems likely that the Fed will ease monetary policy gradually in the coming few years. This should be consistent with 10-year US Treasury yields falling back somewhat, perhaps to 3.75% by

FIGURE 10 US 5-year Treasury yield index

Source: Haver Analytics as of November 21, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

year-end 2024. Investors should also understand that the long period of zero interest rates – and even negative yielding bonds – will go down in history as an outlier. We see this much like the mirror opposite period of “great monetary neglect,” which boosted inflation and yields throughout the 1970s.

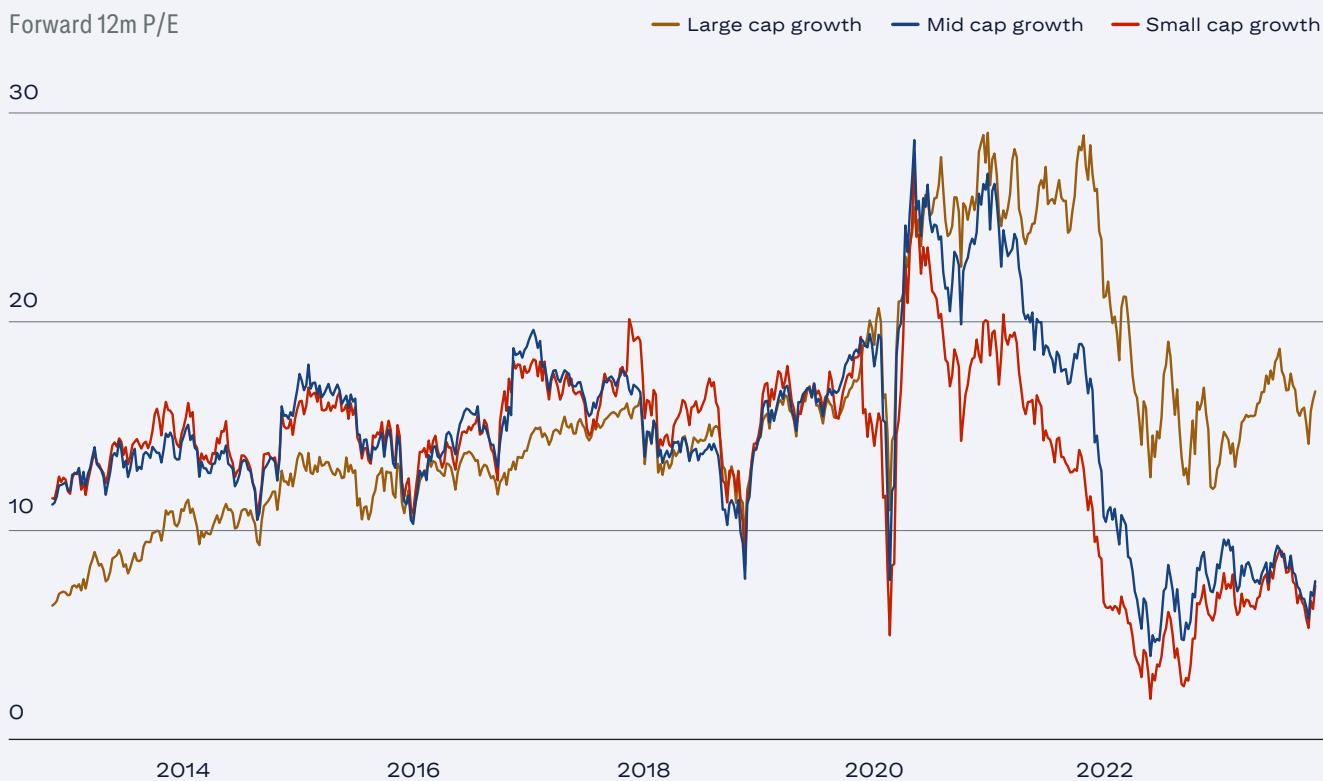
Investment strategy: both income and growth opportunities have been restored

The two pillars of investment returns – income and growth – have been reinvigorated. Yields in the US have risen toward two-decade highs (FIGURE 10).

With investment grade US corporate bond yields averaging 6% and inflation decelerating, it is quite possible to earn real returns of 4% across a diversified range of fixed income (please see **Core portfolios could be ready to shine on page 34**).

At the same time, tight monetary policy has driven both bond and equity investors to focus predominantly on the largest and safest perceived corporate balance sheets. This has left numerous growth opportunities behind. The seven largest US technology-related shares have driven most of the return in global equities in 2023. We believe this is unlikely to be the case in 2024 and 2025.

FIGURE 11 US large-cap, mid-cap and small-cap growth forward P/E



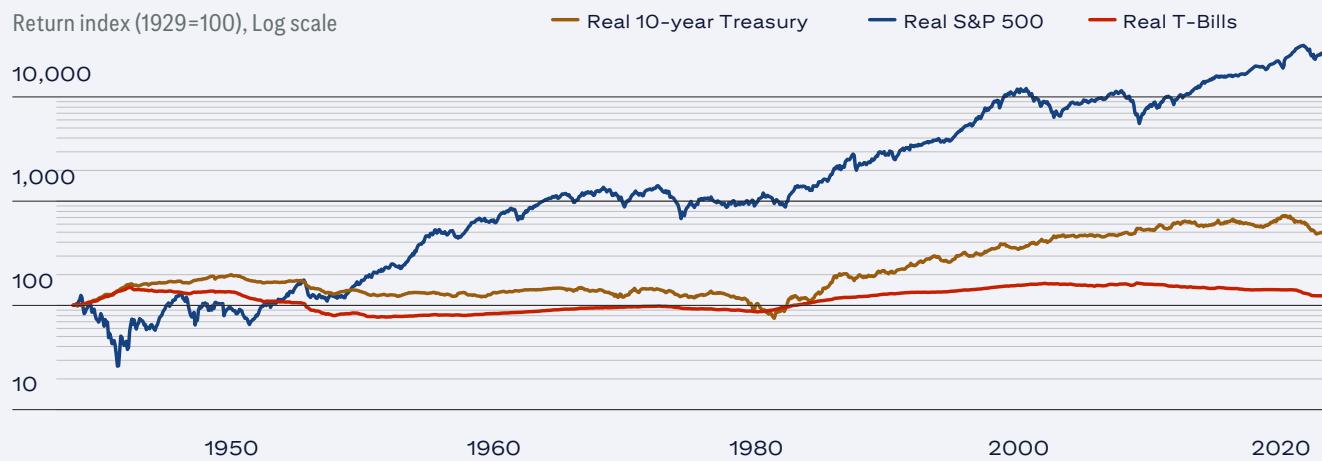
Source: Bloomberg as of November 3, 2023. Small cap growth proxied using the S&P 600 Growth Index, mid cap growth proxied using the S&P 400 Growth Index, large cap growth proxied using the S&P 500 Growth Index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Finding value in growth shares

Tight monetary policy could hasten the failure of chronically unprofitable firms, but the market appears to be looking for trouble well beyond the marginal businesses most likely to be at risk. As **FIGURE 11** shows, the valuation of currently profitable and generally growing small- and mid-cap (SMID) US firms has dropped far below the valuation of large cap

growers. In the past five years, the profitable SMID firms of the S&P 400 and 600 growth indices have averaged annual EPS growth of 11%. That's even above the 9% pace of the large cap S&P 500 growth index. Yet, the SMID growth shares trade cheaper, for an unusually deep discount of 39% on current-year estimates compared to the valuation for the large cap segment. In fact, they trade 29% below their own 25-year history based on trailing price-to-earnings (P/E) ratio.

FIGURE 12 Inflation adjusted return indices for US stocks, bonds and cash



Source: Haver Analytics through October 31, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

We do not see this disconnect as a market dislocation similar in scope to early 2020. That period was followed by a 145% increase for the Russell 2000 index in the 19 months that followed. But surely, investment portfolios can't ignore the value of growth while seeking income (see FIGURE 12). This is true even when there is no "V" shaped recovery for the economy in sight.



Geopolitics and elections: assessing risk in 2024

Steven Wieting

Chief Investment Strategist and Chief Economist

David Bailin

Chief Investment Officer

Maya Issa

Senior Investment Strategist

Malcolm Spittler

Investment Strategist and Senior US Economist

With two wars raging and major elections scheduled on every continent, headline risks for markets in 2024 would seem high. Historical precedent suggests otherwise.

Considerations:

- History shows that 90% of geopolitical events have not changed the direction of the world economy. We believe investors should stay invested seek potential opportunities through events that merely cause fear, but don't deliver catastrophe, while being prepared for the events that do.
- The share of geopolitically-vulnerable energy supplies the world relies on has increased. This points to investments in Western energy supplies – from conventional fossil fuels to alternatives – may mitigate such risks while maintaining energy security. Similarly, we see cybersecurity software as a critical defensive investment.
- General elections loom in the year ahead in nations whose equity markets comprise 68% of global market cap. However, nearly all of this is the US, where the combination of who controls the White House, Senate and House of Representatives is essentially unforecastable at this time. A change in control might have dramatic impact on foreign policy and/or domestic policy.

It's happened. Global investor clients have asked us to consider the implications of nuclear war between Russia and the United States. Purposefully or otherwise, some have altered their investment strategies to attempt to address this risk. But there are no good market hedges for an existential threat to human life. When "worst-case scenario" investing becomes a focus, the typical response is inaction. This degrades core portfolios and weakens returns over the long term (please see **FIGURE 12** in our **Slow then grow on page 10**, and our Strategic Return Estimates¹ in **Core portfolios could be ready to shine on page 34**).

¹ Source: Citi Global Wealth Allocation Team. Strategic Return Estimates (SREs) for 2024 based on data October 2023, prior Strategic Return Estimates for 2023 (based on data from October 2022) and 2022 (based on data as of October 2021). Returns estimated in US Dollars. All estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. Past performance is no guarantee of future returns.

Strategic Return Estimates based on indices are Citi Global Wealth's forecast of returns for specific asset classes (to which the index belongs) over a 10-year time horizon. Indices are used to proxy for each asset class. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes utilize a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes utilize other specific forecasting methodologies.

SRE do not reflect the deduction of client fees and expenses. Past performance is not indicative of future results. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index.

All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

— 90% of geopolitical events have not changed the trajectory of the world economy.

While some may build physical bunkers, we think that our monetary system might survive and “outperform” in a global catastrophe. However, given the difficulty of predicting when an exogenous shock may occur, we suggest building diversified portfolios that can offset the risks of various potential catastrophes.

FIGURE 1 shows some key regional economic crisis events of the past and the difference between local and global equity returns, and how, by implication, indices with diversified exposure across global markets would have performed during some of the worst crises of the past 30 years. That is not always the case, of course. A broadly diversified equity index would not have provided much shock absorption during the global financial crisis, the most sweeping economic crisis since the Great Depression. Similarly, the pandemic of 2020 and its aftermath was an unforeseeable global event that saw markets and economies move in concert, limiting the benefits of diversification for a time.

FIGURE 1
Index returns in select periods of regional crisis vs global equity total return

Regional crisis	Return during first year of crisis (%)	
Asian Crisis 1997	Asia -28.3	Global 15.0
LATAM Crisis 1998	LATAM -35.1	Global 22.0
EU Crisis 2011-2013	Europe -10.5	Global -6.9
Collapse 2015	LATAM -30.8	Global -1.8
Average	-26.2	7.1

Source: Factset as of October 4, 2023. MSCI All Country World Total Return Index is used as proxy for global equities. MSCI Asia Total Return Index is used as proxy for Asian equities. MSCI Europe Total Return Index is used as proxy for European equities. MSCI Latin America Total Return Index is used as proxy for LATAM equities. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 2

Geopolitical events have rarely altered the course of the global economy

	S&P 500	Initial impact (%)	30 days %	90 days %
Average all events		-4.8	-0.8	1.9
Average ex WW2		-4.7	-0.6	2.6
Average ex WW2 and oil embargo		-4.1	-0.2	3.5

Source: Haver Analytics, Bloomberg as of November 15, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

When diversification can be most beneficial

History shows that 90% of geopolitical events have not changed the direction of the world economy. They have had only short-term impacts on global asset prices (**FIGURE 2**). The exceptions are World War II, the gravest catastrophe in modern times, and the OPEC Oil Embargo of late 1973. This illustrates that staying invested in diversified portfolios while taking advantage of market dislocations through events that merely cause fear, but don't deliver catastrophe, may be most beneficial.

FIGURE 2 (DETAIL)**Geopolitical events have rarely altered the course of the global economy**

(% since event date)		S&P 500			Nikkei			MSCI World ex USA			DXY Dollar Index		
Event	Date	Initial Reaction	30 Days	90 Days	Initial Reaction	30 Days	90 Days	Initial Reaction	30 Days	90 Days	Initial Reaction	30 Days	90 Days
Pearl Harbor	12/7 1941	-6.87	-2.90	-12.02									
Cuban Missile Crisis	10/19 1962	-3.78	7.61	17.16									
JFK Assassination	11/21 1963	-2.81	3.06	8.28									
US Bombs Cambodia	4/29 1970	-15.30	-6.43	-4.94	-15.93	-12.49	-7.64	-10.45	-17.01	-16.07	-0.20	-0.23	-0.51
Arab Oil Embargo	10/18 1973	-16.23	-8.45	-13.04	-1.81	-1.44	-4.47	-14.68	1.96	-18.53	7.48	5.28	14.04
USSR Invades Afghanistan	12/24 1979	-2.27	5.37	-7.78	0.57	2.63	0.68	3.94	3.94	11.85	-1.06	-0.71	5.91
US Bombs Libya	4/15 1986	2.95	-1.39	0.16	3.09	3.73	16.08	0.00	6.19	8.16	-4.15	-4.80	-5.30
US Invades Panama	12/15 1989	-2.06	-3.73	-3.43	0.63	-3.71	-14.63	0.00	3.67	-7.04	0.31	-1.69	-0.44
Gulf War	12/24 1990	-4.16	0.09	12.10	-6.95	-4.43	10.47	1.75	1.75	15.97	-0.21	-3.61	4.90
World Trade Center Bombing	2/26 1993	-0.31	1.67	2.04	-0.44	12.36	23.00	0.00	8.52	18.62	0.18	-1.15	-4.79
911	9/11 2001	-11.60	0.45	4.34	-6.28	1.48	3.68	-8.48	3.24	5.48	-1.08	0.29	1.85
US Invasion of Iraq	3/20 2003	2.49	2.06	15.57	4.77	-1.02	12.94	1.53	4.58	22.05	0.84	-1.85	-7.89
North Korea Related													
Korean War	6/23 1950	-12.80	-8.67	1.20									
Operation Paul Bunyan	8/18 1976	-3.15	1.64	-4.32	-0.75	-0.21	-4.52	0.00	-0.26	-7.60	0.07	-0.57	-0.12
2009 Nuclear test	4/25 2009	-1.28	5.09	13.05	-2.46	6.92	14.20	-2.32	12.28	21.21	0.52	-5.54	-7.04
2016 Nuclear test	9/9 2016	-2.55	-0.81	2.97	-2.03	0.39	10.65	-2.06	-0.81	-0.72	-0.01	1.36	6.05
2017 Escalation	8/7 2017	-0.24	-0.64	4.44	-0.30	-3.89	12.43	-0.26	-0.49	3.60	0.23	-1.22	1.62
Political events													
Nixon/Watergate	3/15 1974	-1.72	-7.28	-8.04	-1.80	1.05	4.42	0.00	-2.57	-6.12	-1.04	-1.57	-2.12
Clinton intern scandal	8/20 1998	-12.30	-6.20	5.59	-8.34	-11.66	-6.74	-12.75	-12.75	-6.37	-1.76	-5.18	-6.58
Brexit	6/23 2016	-2.30	4.30	3.72	-6.93	3.50	4.62	-5.31	-0.37	1.70	1.85	4.00	2.46

Source: Haver Analytics, Bloomberg as of November 15, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Political risks and portfolio adaptations

The war in Ukraine has displaced or shifted the volume of commodity exports at a scope last seen in 1974 and the Iran/Iraq war beginning in 1980. We consider the economic repercussions of the war in Ukraine and the interaction with politics in the US and Europe as among the greatest of today's global risks. The Hamas attack on Israel, while not driving a significant regional conflict immediately, still has the potential to cause similar global disruption.

Russia has redirected its petroleum exports from the West to other markets. However, food commodities and other energy services remain significantly impaired. These shortages could potentially intensify in the year or two ahead. And with a significant oil market share gain for Iran – which has increased its crude output by 55% since 2020 – the share of geopolitically vulnerable energy supplies the world relies on has increased. This points to higher energy prices through a security risk premium. It also points to investments in Western energy supplies – from conventional fossil fuels to alternatives – as a potential portfolio hedge (see No. 3

in **Our top 10 high conviction potential opportunities** on page 54 and **OPEC's unlikely role in the energy transition** on page 86).

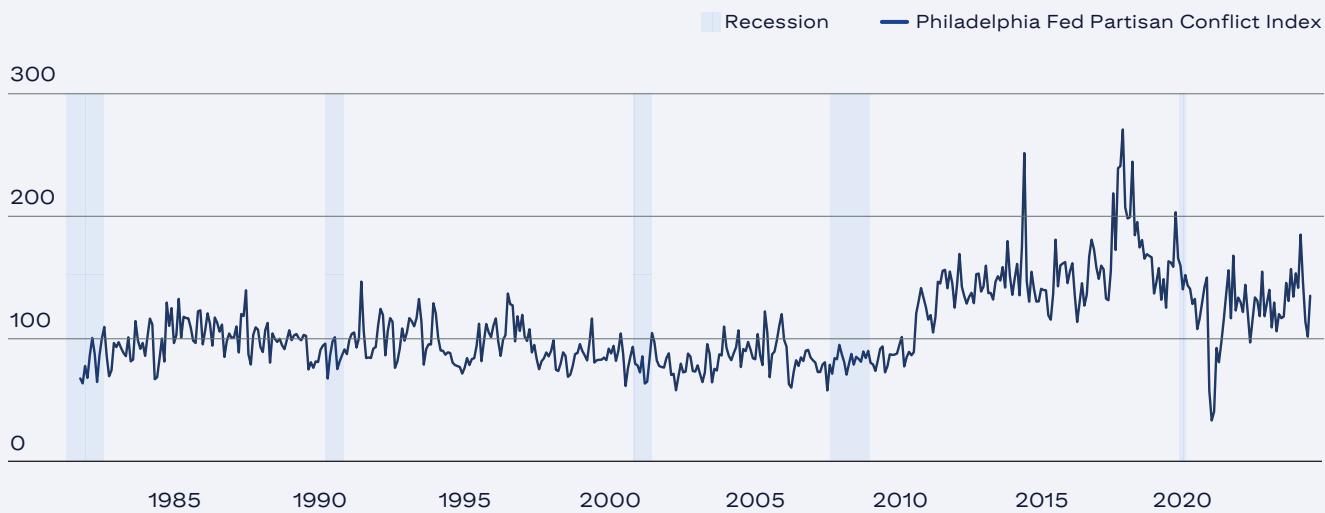
With that said, none of the geopolitical disputes – including the friction between the US and China over technology (see **The implications of G2 polarization on global technology** on page 98) – has resulted in a catastrophic loss of global trade. Because inventories of consumer goods bulged higher in late 2022, trade declines in 2023 have helped work down inventories of consumer goods that intrinsically posed a significant recession risk (**FIGURE 3**). And now, as discussed in our **Slow then grow** on page 10, even those trade shocks across the world's industrial supply chains are broadly abating.

Among other risks, we believe cybersecurity threats are escalating and collectively may rise to the level of a global shock. With cyber defense being the top priority of corporate chief technology officers, we maintain a thematic overweight in cybersecurity shares in core portfolios. (See No. 2 in **Our top 10 high conviction potential opportunities** on page 54).

FIGURE 3 Year-over-year (YoY) US change in world exports



Source: Haver Analytics through November 24, 2023.

FIGURE 4 Federal Reserve Bank of Philadelphia Partisan Conflict Index

Source: Haver Analytics through November 8, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

There are many other “manmade” risks to consider as well. Country-level risk is likely higher than usual. Key political elections loom at a time when recent surges in inflation have driven popular dissatisfaction. (See **FIGURE 6**, and our regional essays for more, starting on **page 105**.)

General elections loom in the year ahead for countries whose equity markets comprise 68% of global market cap. However, nearly all that market cap—62%—is in the US.

One doesn’t need to be partisan to see signs of dysfunction in US governance. It took a record 15 ballots to elect a speaker of the House of Representatives in early 2023 (a position second in line to succeed the US president). It took only one vote to remove the speaker following his willingness to cooperate with the opposition party to avoid a US government shutdown.

The US election of 2024 will almost certainly bring partisan conflict to new heights (**FIGURE 4**).

The US presidential election is approaching. At present, polling data are too close in our opinion to be of much value at this point. As discussed in **North America: an emerging set of new opportunities** on **page 126**, the US electorate often votes to keep the US government divided. Right now, a Democrat sits in the White House and Republicans control the House, with Democrats maintaining slim control over the Senate. Legislation needs consent of both chambers, including giving the president additional authority to fund Ukraine or provide support to Israel. Soon after the election of 2024, the US debt ceiling will also no longer be suspended.

There would be a stark difference in domestic policies if either party unified control of both Congress and the White House. If Congress is not unified, the president still has significant free rein when it comes to foreign policy and regulatory policy. Regulation of domestic natural resources such as oil and gas, the degree of support for Ukraine and cooperation with Europe

and other US allies would be starkly different in the case that a Republican candidate was inaugurated president in January 2025 compared to that of any Democrat. The way the US chooses to confront its migration issues, trade and law enforcement at the southern border would also differ starkly, pointing to political risk for Mexico as well, which will also elect

FIGURE 5 US president by party, real GDP, equity returns and US dollar

	Annualized Real S&P 500 Total Return (%)	Annualized Real GDP Growth (%)	Unemployment Rate At Start Of Term (%)	Annualized Real Trade Weighted Dollar Change (%)	Party	Term Start Date
Truman	9.7	4.7			D	04/12/45
Eisenhower	13.3	2.5	2.8		R	01/20/53
Kennedy	9.9	5.3	6.3		D	01/20/61
Johnson	7.9	5.1	5.5		D	11/22/63
Nixon/Ford	-2.1	2.7	3.4		R	01/20/69
Carter	1.3	3.2	7.8	-1.0	D	01/20/77
Reagan	9.4	3.6	7.4	0.1	R	01/20/81
Bush	11.0	2.2	5.3	-0.2	R	01/20/89
Clinton	14.2	3.8	7.4	2.2	D	01/20/93
Bush II	-5.3	1.9	3.9	-1.5	R	01/20/01
Obama	12.7	2.0	6.9	1.4	D	01/20/09
Trump	13.9	1.8	4.8	-1.5	R	01/20/17
Biden*	2.0	2.8	6.8	3.8	D	01/20/21
Weighted average						
Republican	5.5	2.5	5.8	-0.7		
Democrat	9.6	3.6	5.6	1.5		

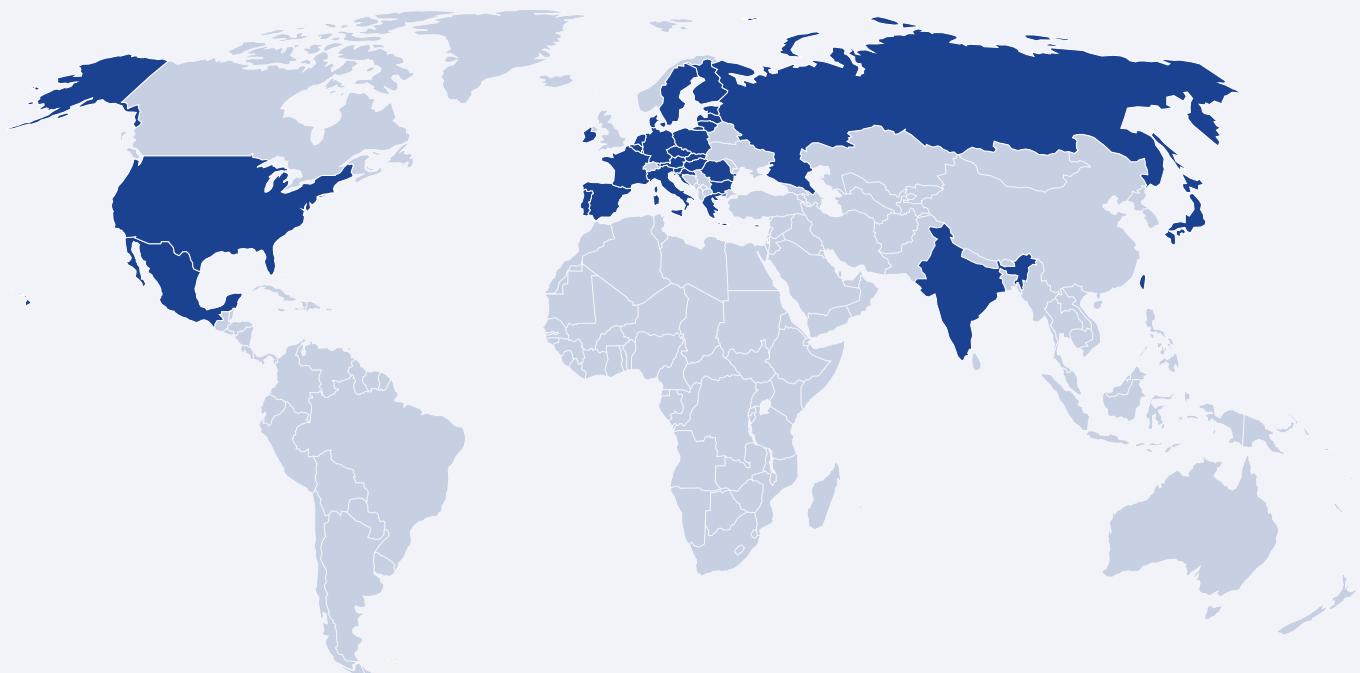
*Biden figures are through Q2 2023.

Source: Haver Analytics through October 5, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 6

Nations with key leadership and legislative leadership elections in 2024 and early 2025

The share of global equity market capitalization with general elections in 2024 is 68%



Sources: Office of the Chief Investment Strategist, mapchart.net, Bloomberg as of October 4, 2023.

■ Upcoming election in 2024

a president next year. (See **Latin America: potential opportunities amidst low valuations on page 120.**)

Unlike these issues, economic growth is not easily controlled by a US president. As **FIGURE 5** shows, history on average has been kinder to Democrats than Republicans in the record of economic growth and returns. In our view, this is largely because of the historical fact that Democratic presidents have been chosen in years following a business cycle

downturn. Depressed economies have greater room for expansion. There are of course counterexamples to this party bias (see: Jimmy Carter versus Reagan in 1980). Even those, however, are the exceptions that prove the rule: it's business cycle recoveries that are most important for broad returns and growth measures during a presidential term – not who the president happens to be.

Portfolio views

- 34 Core portfolios could be ready to shine
- 41 Alternative investing in 2024
- 47 Peak rates equals peak income: extend duration



Core portfolios could be ready to shine

Jonathan Leach

Head of Multi Asset Class Solutions,
Citi Investment Management

David Bailin

Chief Investment Officer

Paisan Limratanamongkol

Head of Global Asset Allocation and Quantitative Research

Davide Andaloro

Senior Portfolio Manager and Head of Multi Asset Strategy,
Citi Investment Management

After a rare down year for both stocks and bonds in 2022, returns were mixed in 2023.

The upside has been a reset of valuations across asset classes – and a promising setup for the decade ahead, according to our proprietary framework.

Considerations:

- As prospective returns have risen, so has the cost of sitting on excess cash.
- That makes this a good time to consider building a new or adding to an existing core portfolio.
- It's also a good time to revisit the basic principles of a core portfolio construction. That includes taking a professional approach, restoring bonds to their traditional role as anchor and diversifying within and across asset classes.



In our opinion, this is a good time to build new core portfolios or to add to existing ones. The two pillars of investment returns – income and growth – appear reinvigorated. For the first time in many years, prospective returns across all major asset classes look promising. Our 10-year Strategic Return Estimates (SRE) for the elements of global portfolios have increased from two years ago.

Of course, such forecasts are just that: forecasts fluctuate with changing conditions over time. A shock

that drives inflation higher (or more quickly lower, for that matter) is just one of the unexpected developments that could alter the patterns we foresee. But based on where the data stands now, bond yields look attractive to us. Fixed income should be able to anchor portfolio returns while providing diversification and resilience going forward. Yields have risen toward two-decade highs. As inflation abates, today's "real" after-inflation yields of 2.5% could be hard to come by.

US equity valuations are more attractive now. Global equity valuations have improved, too. Many sectors trade at moderate valuations. Accordingly, we have already increased our exposure to global equities for core portfolios and are likely to continue to add more over the months to come.

The setup for alternative assets is also promising, adding to our positivity about the opportunity set as we enter 2024.

After euphoric returns in 2020 and 2021, markets suffered in 2022 and had mixed results through 2023. This set-up suggests that a return to normal is ahead of us. As the economy slows, then grows, we expect markets will begin to anticipate the positive news we see ahead. (See **Slow then grow** on page 10)

Wise investors have a strong core

Core portfolios are a bedrock for wealth management. Maintaining exposure to growth and income through a balanced allocation to traditional and (for certain investors) nontraditional asset classes allows a portfolio to benefit from economic development, help minimize losses and potentially beat inflation. These are key to accumulating and sustaining wealth over time.

Typically, the returns for the two largest parts of the core – stocks and bonds – tend to offset one another, with stocks doing better in years that bonds struggle

FIGURE 1 Returns for US large caps, 10-Year US Treasury bonds and the 60/40 stock/bond allocation during years when bonds and equities fell in tandem (and consequent one- and two-year forward return for the 60/40 allocation)

Year	US large cap total return YoY % change	10-Year total return YoY % change	60% US large cap 40% 10-year US Treasury	1-Year forward 60/40 return	2-Year forward 60/40 return
1931	-43.9	-2.6	-27.3	-1.8	28.0
1969	-8.5	-5.6	-7.3	10.0	24.2
2022*	-18.1	-17.0	-17.7	4.6	

Source: CGW Global Asset Allocation and Quantitative Research Team, Global Financial Data (GFD). S&P 500 TR is used for US Large Cap index and US 10-Year Govt. Bond TR (Provider: GFD) is used for the 10-Year Total Return. The historical allocation levels use indices and are provided for informational purposes only. The historical index allocation levels should not be taken as an indication of future performance, which may be better or worse than the levels set forth above. The index returns shown do not represent the results of actual trading of investor assets. The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is not necessarily indicative of future returns. Real results may vary.**

* For 2022 line, 1-Year Forward 60/40 return is YTD performance as of October 31, 2023.

and vice versa. But in 2022, stocks and bonds sold off. That's just the third time in the last century this has happened.

The previous times that both sides of the classic “60/40” stock/bond allocation sold off were in 1931 and 1969 (FIGURE 1). Two years later, entering 1934 and 1972, core allocations had risen by more than 20%. While no one knows how we will enter 2025 after a dismal 2022, the opportunities for both equities and bonds appear ahead of us as we write Wealth Outlook 2024.

The pandemic was an aberration

The pandemic was one of the most disruptive events in human history yet was accompanied by one of the strongest bull markets on record. While this was cheered at the time, it created massive price distortions across major asset classes.

With interest rates persisting at zero and extensive interventions by governments and central banks, the valuations and relationships between securities

was distorted. High-risk securities in zero rate environments attracted risk capital. Low-risk assets were overlooked by many investors as speculation ran rampant.

We think of the inflationary spike and sharply restrictive monetary policies of 2022 and 2023 as the punishment applied to markets to correct those aberrations. They were also a reset that cleared out the speculators and restored asset prices to more temperate and ultimately more sustainable levels.

We cannot be sure of the exact timing (so patience is key), but we're confident (at least as confident as we can be) that a return to normal is coming.

Our Strategic Return Estimates for 2024

According to Adaptive Valuation Strategies (AVS), our proprietary strategic asset allocation methodology, our Strategic Return Estimates for all the major asset classes are higher than they have been for several years (**FIGURE 2**).

The 10-year SRE for global equities stands at 8.7% (**FIGURE 2**). Within that, we are estimating that developed market (DM) equities will average a return of 8.2%, rising from 7.0% in last year's estimates. We are also forecasting growth in DM corporate earnings, which should help to keep valuations at reasonable levels and sustain those share price gains.

On the flipside, emerging market (EM) equities experienced a setback in both prices and earnings in 2023, leading to a higher valuation. As a result, we forecast a slight decline in SRE from 12.9% to 12.8%.

Investment grade fixed income 10-year forecast now shows an SRE of 5.4%, marginally higher than last year's. Similarly, high yield fixed income also enjoys cheap valuation, which offsets tightening spreads,

bumping the decade-ahead high yield SRE to 7.9%. Our forecast for EM fixed income has increased marginally to 8.1% as spreads have tightened.

The shine returns to alternatives

When it comes to the alternative asset classes, our research has shown that the Strategic Return Estimates for hedge funds and private equity highly correlate with small- and mid-cap public equities. This helps explain why, with small- and mid-cap (SMID) stocks historically cheap, the strategic return estimate for hedge funds has risen to 11.5% and private equity to 19.5% – the highest of all the asset classes.

While private equity forecasts are attractive, it is important to balance this richer potential with the illiquid nature and high downside risk of the investments as well. Still, there are reasons to believe the asset class now presents potential opportunities for qualified investors.

We cover this in more detail in **Alternative investing in 2024 on page 41** and also provide more context on the regulatory backdrop contributing to this potential in the **Opportunistic** section that follows (**Investing with and in unregulated financial companies on page 71**).

Although real estate valuations cheapened, the broader income profile is not improving, especially in the commercial segment. The SRE for real estate has, therefore, edged up only slightly to 10.9%, reflecting reduced rates over the next decade. Commodities ticked up slightly as well, to 2.7%, roughly in line with marginally higher expectations for inflation over the long-term.

FIGURE 2

Long-term outlook for asset classes – our Strategic Return Estimates (SREs)

	2024 SRE	2023 SRE	2022 SRE
Global Equities	8.70%	7.60%	4.20%
Developed Market Equities	8.20%	7.00%	3.80%
Emerging Market Equities	12.80%	12.90%	8.10%
Global Fixed Income	5.80%	5.10%	2.00%
Investment Grade Fixed Income	5.40%	4.60%	1.80%
High Yield Fixed Income	7.90%	7.40%	2.60%
Emerging Market Fixed Income	8.10%	7.80%	3.60%
Cash	4.30%	3.40%	0.90%
Hedge Funds	11.50%	9.10%	4.10%
Private Equity	19.50%	17.60%	11.60%
Real Estate	10.90%	10.60%	8.80%
Commodities	2.70%	2.40%	1.50%

Source: CGW Global Asset Allocation and Quantitative Research Team. Strategic Return Estimates (SREs) for 2024 based on data October 2023, prior Strategic Return Estimates for 2023 (based on data as of October 2022) and 2022 (based on data as of October 2021). Returns estimated in US Dollars. All estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. Past performance is no guarantee of future returns. Strategic Return Estimates based on indices are Citi Global Wealth's forecast of returns for specific asset classes (to which the index belongs) over a 10-year time horizon. Indices are used to proxy for each asset class. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes utilize a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes utilize other specific forecasting methodologies.

SRE do not reflect the deduction of client fees and expenses. **Past performance is not indicative of future results.** Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index.

All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

Using Strategic Return Estimates and asset allocation to build core portfolios

At Citi Global Wealth we use these forecasts to build our asset allocation models, along with each asset class risk level, that help form the basis of our clients' core portfolios. AVS adapts to changing market conditions and recognizes that future returns are strongly affected by current valuations.

There are three principles that govern how we build core portfolios today.

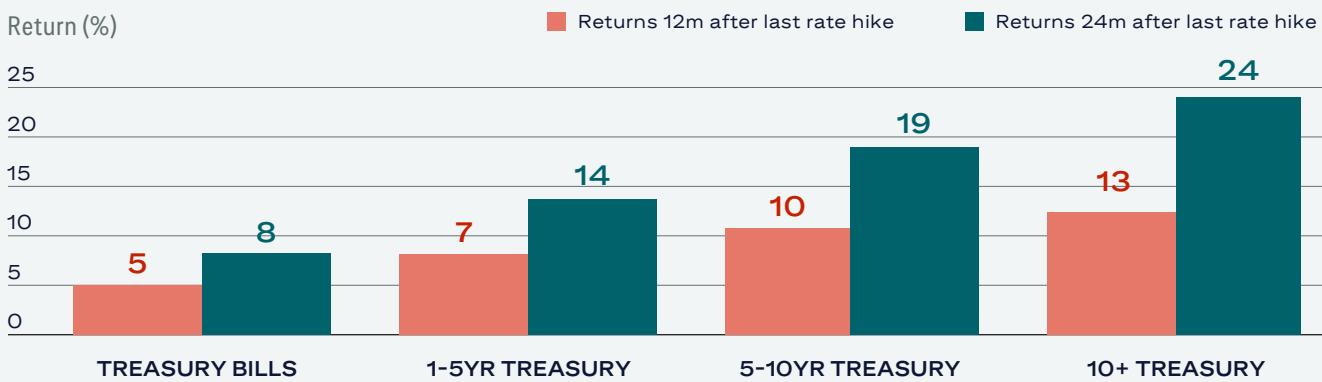
1: The importance of asset allocation and embracing a professional approach

Following an asset allocation plan is one of the most important decisions you can make as an investor.

The core elements of your portfolio should include bonds, equities and (depending on your asset level, risk and liquidity preference) alternatives. Hedge funds add diversification and often experience more contained drawdowns during volatile markets (though certainly come with their own downside risks related to illiquidity and the potential use of leverage). In addition, a mix of private equity and real estate can enhance returns and help further outpace inflation (albeit with potentially even greater liquidity constraints).

FIGURE 3

Bonds are back – potential return generation opportunities for 2024



Source: CGW Global Asset Allocation and Quantitative Research, and Bloomberg. Analysis as of October 31, 2023. Rate hike refers to an increase in the Federal Funds rate. Rate hike dates included in this analysis are from February 1995, May 2000, June 2006 and December 2018. The chart on the left shows the average of the cumulative total unhedged returns for the stated indices over the 12 months following the four aforementioned rate hike dates. Treasury bills are represented by the Bloomberg US Treasury Bill Index. 1-5yr treasury is represented by the Bloomberg US Treasury 1-5 years Index. 5-10yr treasury is represented by the Bloomberg US Treasury 5-10 years Index. 10+yr treasury is represented by the Bloomberg US Long Treasury Index. The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is not necessarily indicative of future returns. Real results may vary.**

2: Bonds anchor returns and seek to mitigate portfolio risk

We began to emphasize the improving value of bonds last year. With rates moving even higher in mid-2023, we acknowledge that our initial enthusiasm came a bit early. But now with higher yields, significantly lower inflation and the interest rate hiking cycle peaking in the US and other key regions, we like bonds even more for 2024. While we cannot be certain of the Fed's actions, historically, the periods following the end of hiking cycles have seen strong investment returns, especially for longer duration Treasurys (**FIGURE 3**).

Looking at the portfolio risk equation, high-quality fixed income may help to lower overall portfolio volatility. Leaving 2022 (and 1969 and 1931) aside, such assets can usually be counted on to deliver positive returns exactly when needed – during periods of severe market stress associated with equity drawdowns. Going forward, given compelling valuations and peaking policy rates, fixed income can once again play both parts of its role, delivering attractive returns while mitigating portfolio risk.

3: Within equities, diversification is a benefit

Beyond diversifying among stocks, bonds and alternatives, it is also important to diversify within asset classes – especially equities. This means diversifying geographically as well as across sectors and market capitalization.

Here is an interesting data point to consider: the UK and Brazilian domestic equity markets currently each have approximately a 1% weighting to the information technology (IT) sector. When you compare that to IT's recent 22% weighting in the global equity benchmark,

— When thinking about the importance of diversification in equities, consider that the global equity benchmark currently has a 22% weighting to Information Technology. The UK and Brazilian stock markets each has a *1% weighting*.

it is easy to see how a more intentional regional diversification could help to temper losses the next time a “tech rout” has other global investors seeing lots of red.

In a similar vein, no one knows exactly when EM equities will again start outperforming developed equities, or when US small caps will go on their next streak – but by maintaining a well-diversified equity portfolio investors can increase the probability that their results may eventually benefit from rallies as they occur. After all, to keep your core portfolio as your bedrock requires professional guidance to search for investment opportunities that leaves no country unexplored and no stone unturned.

A cash conundrum

Holding excess portfolio cash that greatly exceeds levels needed to meet unexpected expenses may be seen as tempting in turbulent times, but the feeling of security it conveys can be transient and costly over time. As our new 10-year Strategic Return Estimates have risen over the last two years across all asset classes, we are bullish about the long-term investment landscape. We are therefore encouraging clients to follow asset allocations based on their risk profile and consider adding to long term core portfolios as appropriate.

¹ The equity markets refer to the following indices in USD: MSCI United Kingdom Index, MSCI Brazil Index and MSCI ACWI Index, respectively



Alternative investing in 2024

Daniel O'Donnell

Head of Alternative Investments

Stefan Backhus

Head of Alternatives Strategy

In our opinion, alternative investments are like the vegetables of the core portfolio – most qualified investors are not getting enough. Higher forecast estimates and structural tailwinds argue for a heftier serving.

Considerations:

- Alternatives have the highest next-decade return estimates among all of the asset classes in our proprietary asset allocation methodology – and have for the past three years.
- The potential for enhanced returns and lower volatility is one of the benefits that a diversified exposure to hedge funds, private equity and real estate may provide for qualified investors.
- When investing in alternatives, it is important to understand the liquidity constraints and added risks involved, and why patience is key.
- Close consultation with a financial professional can help you choose the appropriate alternatives path for you.
- The Global Investment Committee (GIC) suggested allocation for a qualified and suitable moderate-risk investor to alternatives is 12% to hedge funds, 10% to private equity and 5% to real estate and we have provided this roadmap to get you started. Citi Global Wealth has deep capabilities across alternative investments and has multiple analytic tools available to assist you in holistically evaluating portfolio goals and risk tolerance.

With alternatives having some of the highest Strategic Return Estimates (SREs) among all the asset classes in our Adaptive Value Strategies (AVS) framework over the next 10 years, our suggested allocation for an appropriate moderate-risk investor is, in the aggregate, 27%: 12% of the portfolio to hedge funds, 10% to private equity and 5% to real estate for those who understand the level of illiquidity that may be added to a portfolio. We should note that, while prospective returns for alternatives are high, these are also the same expectations and weightings we have recommended for the last three years.

If 27% sounds like a lot to you, consider that alternatives allocations among US institutional investors in 2022 ranged from an average of 34% for state and local pension plans¹ to 59% for endowments.² Although certain subsets of our clients such as large family offices³ are adopters of alternative assets in their portfolios, with the average large family office allocation sitting around 46%,⁴ allocations to alternative investments by other qualified individual investors remain by and large lower than they should be, in our opinion, with most in the single digits.

¹ Center for Retirement Research at Boston College as of 31 December 2022.

² 2022 NACUBO-TIAA Study of Endowments, published February 2023.

³ Citi Private Bank's Global Family Office Group considers a single-family office to have US \$250 million+ net worth and one or more dedicated professionals covering i. a portfolio of assets/investments & liabilities; ii. legal matters; iii. finance and accounting; iv. trusts and tax planning; and/or v. philanthropy and foundations.

⁴ Citi Private Bank Global Family Office Survey Insights Report 2023.

FIGURE 1**Performance of global equity versus a mix of private equity and real estate**

Source: Citi Global Wealth (“CGW”) Global Asset Allocation team, as of October 31, 2023. The returns shown were calculated at an asset class level using indices and do not reflect additional fees or expenses, which would have reduced the performance shown. Indices are unmanaged, may or may not be investable, and have no expenses. Diversification does not ensure against loss of investment. Chart displays the performance of the Global Equity asset class, consisting of 90% Developed Market Equity (MSCI World Index and CGW Global Asset Allocation team data) and 10% Emerging Market Equity (MSCI Emerging Markets Index and CGW Global Asset Allocation team data), compared to a private illiquids proxy of 65% Private Equity (Cambridge Associates LLC US Private Equity Index and CGW Global Asset Allocation team data) and 35% Real Estate (FTSE EPRA Nareit Global Index and CGW Global Asset Allocation team data) for the period 1986–2022. Private equity and real estate indices are net of manager level fees and expenses. See Glossary for definitions. **Past performance is no guarantee of future returns. Real results may vary.**

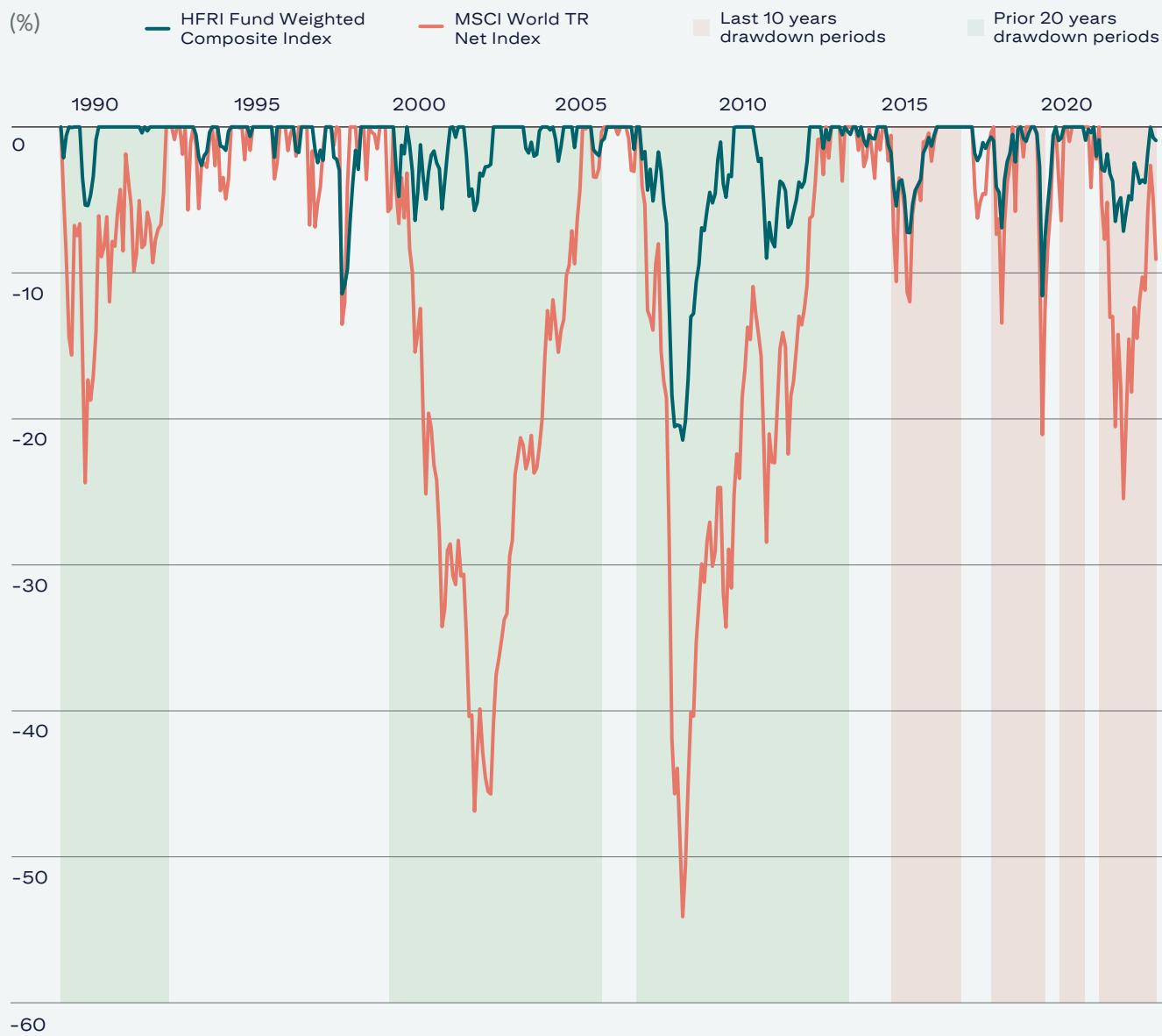
Alternative investments come with their own additional risks, including liquidity constraints and the potential for asymmetric losses from the possible use of leverage. Nevertheless, reconsidering your approach to constructing a core portfolio that includes a higher allocation to alternatives has some opportunities:

- Private equity and real estate have generated more wealth over time than a portfolio made of exclusively public equities (FIGURE 1). See our **Opportunistic section, Investing with and in unregulated financial companies on page 71**, for an explanation of some of the larger, structural issues creating opportunities for private equity firms today.

- When markets become more volatile, hedge funds have historically proven able to preserve capital better than long-only strategies, with certain funds capable of producing positive returns during negative market periods (FIGURE 2). That said, they are also subject to potentially higher volatility, can see limited redemptions and can change the risk profile of your portfolio.
- Alternative credit strategies, a subset of private equity or hedge funds, can potentially generate a yield premium over traditional fixed income portfolios. At a time when bond yields themselves are higher, the payouts for non-traditional credit can be higher for those willing to stay invested for the long-term. Just understand that, unlike with traditional bonds, there are no regular coupons.

FIGURE 2

Historically, long-term hedge fund returns benefit from smaller drawdowns than long-only equities



Source: HFRM, Hedge Fund Research (“HFR”), MSCI; as of September 30, 2023. Drawdown Periods for the MSCI World TR Index. The last 10 years (orange shaded areas) have had fewer and more shallow equity drawdowns than the 20 years prior (green shaded areas). Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Allocating to alternatives

We believe that alternatives are a key part of a core portfolio for qualified clients for whom the potential asymmetric risks and liquidity constraints are appropriate. That also means alternative investments may be evaluated under the same lens as traditional investments, in an integrated manner, starting with an understanding of one's objectives, risk tolerance and liquidity requirements. Each investor has his/her/their own unique investment objectives that will drive individual asset allocation decisions.

— The alternative investment universe contains *a wide variety of options across the risk/return spectrum to choose from*

There is no one-size-fits-all answer to the question of how to build an allocation with alternatives. However, the alternative investment universe does contain a wide variety of options across the risk/return spectrum to choose from. Let us explore how you might evaluate your own situation to build a more diversified portfolio that includes alternatives.

Know the objectives

Broadly speaking, alternative strategies can be placed into two groups, diversifying and directional strategies. Diversifiers provide some degree of downside protection and can profit from volatile markets but may underperform during bull markets. Directional strategies seek to generate alpha and/or

FIGURE 3

Alternatives strategies can be classified as diversifying or directional:

DIVERSIFYING

Seek to provide downside protection and potentially profit from volatile markets

→ **HEDGE FUNDS**

Relative value, volatility arbitrage, global macro & CTA strategies

→ **REAL ASSETS**

Yield-generating infrastructure and core real estate

DIRECTIONAL

Seek to generate alpha above traditional credit and equity exposures

→ **HEDGE FUNDS**

Equity long/short, event driven, credit & distressed strategies

→ **REAL ASSETS**

Value-add, opportunistic real estate, co-investments

→ **PRIVATE CREDIT**

Direct lending, mezzanine and special situations & distressed

→ **PRIVATE EQUITY**

Secondaries, buyouts, growth, venture capital, co-investments

Diversifying and Directional are internal descriptors based on a fund's strategy and objective that CGW Alternatives has developed and uses to categorize alternatives funds. Such descriptors have not been approved by the portfolio managers of any of the underlying funds making up the Portfolio. The internal classification noted above is subject to change without notice. Please see Important Information at the end of this document for the definitions of "Diversifying" and "Directional" funds.

yield above traditional credit and equity exposures. A conservative approach may emphasize diversifying and yield strategies while someone with a more moderate or aggressive profile might add more directional strategies to the mix.

Liquidity needs and parameters

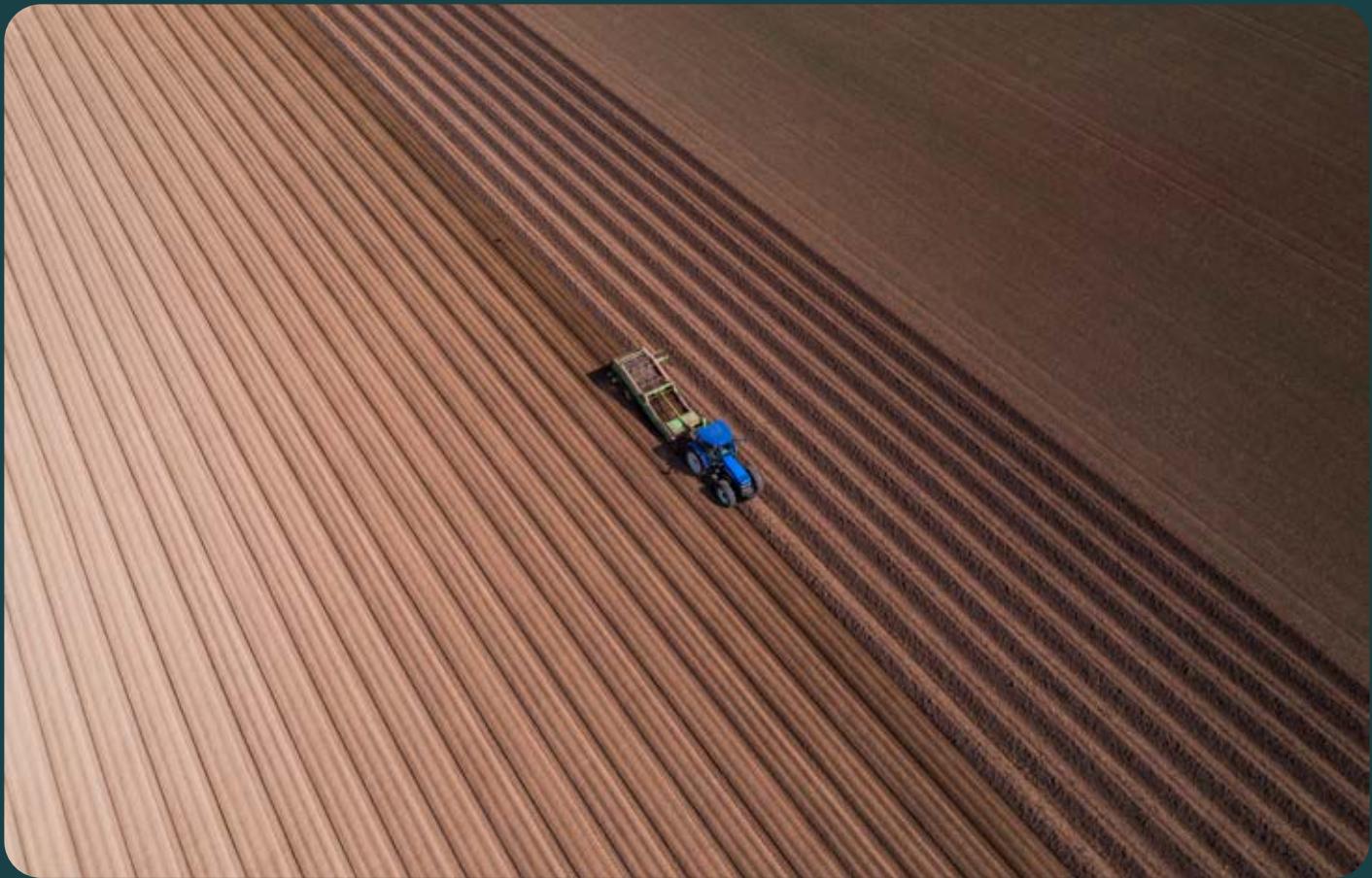
The benefits of adding alternatives to a diversified portfolio are potentially significant, but as noted, these benefits come at the cost of illiquidity. Illiquidity means that some of these strategies have limited or no redemption periods when clients need to access their funds. This requires a holistic evaluation of an entire portfolio within the context of one's time horizon and liquidity. What are your short- and long-term cash needs? Even the most liquid "liquid alts" funds will only provide for monthly or quarterly cash-out options, not daily. And some strategies will lock up capital for years in seeking to generate returns. Understanding one's cash needs is among the first risk analyses to be done when setting the portfolio parameters and selecting potential investment opportunities.

Paths to execute the plan

Once you have established the objectives and risk tolerances, you may want to consider a portfolio of individual funds and co-investment holdings or utilize a third-party investment manager for fund/deal selection. An advantage of building a portfolio of individual investments is customization and one less layer of fees; one of the downsides is the added due diligence required by you and your financial professional. A third option may be to outsource manager/fund selection to a platform fund or fund of funds that invests across multiple managers (and often across multiple strategies), accessing ideas of professionals dedicated to each asset class and strategy.

Take a long term approach

For hedge funds, one can meet an allocation target over a relatively short period of time and then manage exposures dynamically. However, private equity, private credit and real estate take a longer-term plan and implementation period, because they are typically structured as drawdown vehicles that have a finite term. They call the committed capital over a period of three to five years as suitable investments are identified and funded to fill the portfolio. Then invested capital and gains are distributed to investors as the individual portfolio investments are sold over a total fund life of eight to twelve years. Investors may get impatient and try to fully allocate to the asset class in the first year, when the preferred option should be to build a sustainable exposure over time. A rushed approach can then create more angst on the back end as well. We suggest working closely with your investment professional to determine your expected liquidity needs, then developing a slow and steady plan you can stick with over many vintage years.



Peak rates equals peak income: extend duration

Bruce Kirkwood Harris

Head of Fixed Income Strategy

Joseph Kaplan

Senior Fixed Income Investment Strategist

The benefits of intermediate bonds have grown, especially at (somewhat) longer durations.

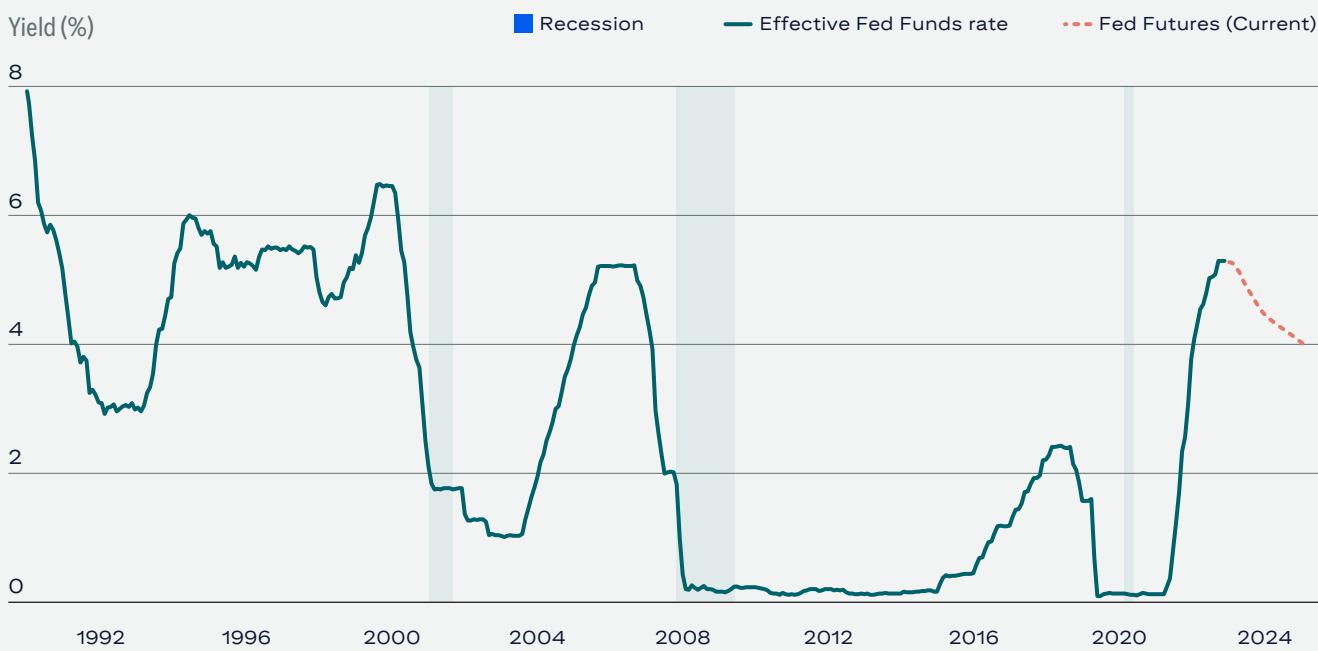
Considerations:

- Barring a surprise inflation scare, the US Federal Reserve (Fed) hiking cycle appears to be at its end.
- Present yields for all bonds are historically high and build in significant “real yield” premium over expected inflation.
- If unemployment rises in 2024, the Fed is likely to cut rates. This prospect of appreciation adds to the appeal of adding intermediate-term US dollar (USD)-denominated bonds to portfolios.
- Potential opportunities include intermediate-maturity US Treasurys, investment grade credit and municipal bonds. While US Treasurys do not have credit risk, it is possible for investors in Treasurys to experience losses if interest rates rise above their initial purchase level and the investor subsequently chooses to sell prior to maturity. Investment grade rated corporate and municipal bonds have this interest rate risk, as well as the credit risk of the issuer.
- Suitable investors may consider fixed income exposure in higher credit quality bonds averaging an intermediate maturity. Various maturities have different purposes in diversified portfolios.

Use higher yields to seek portfolio income

This past year, most US Treasury and credit indices suffered losses as the Fed continued to raise its policy rate. Credit indices, in contrast, performed substantially better as the economy was stronger than expected, and credit spreads tightened during the year. These credit spreads, when added to higher underlying Treasury rates, combined for a powerful “income effect” from corporate bonds due to higher starting current yields. Credit benefits from spread tightening also offset some of the mark-to-market losses from Treasury rates moving higher.

We believe the currently high level of Treasury yields, particularly when combined with high-quality credit, can add substantial and durable income to suitable diversified portfolios. Current yields are well above expected headline inflation (as measured by Treasury Income-Protected Securities, or TIPS). This means that investors can lock in “real” income. We estimate this post-inflation income to be roughly 225 basis points for 5-year Treasurys alone above the current (2.23%) rate of expected headline inflation as of November 24, 2023. This is one reason we believe that core portfolios are a strong investment. (See **Core portfolios could be ready to shine on page 34**).

FIGURE 1 Fed Funds rate implied by Fed Funds futures

Source: Bloomberg, as of November 22, 2023. All forecasts are expressions of opinion, are subject to change without notice, and are not intended to be a guarantee of future events. **Past performance is no guarantee of future results. Real results may vary.**

The impact of higher rates is not over. Ultimately, chances are that the Fed's actions will gradually slow global economic growth, while also raising US unemployment. As unemployment rises, we believe the Fed will move pre-emptively to begin lowering its policy rate, in turn perhaps resulting in sharply lower yields across the curve (**FIGURE 1**).

As such, 2024 may be a beneficial year for bondholders who add intermediate-maturity bonds to portfolios to lock in potentially peak interest rates. If rates drop, there is capital appreciation to be captured, while the current income protects investors to the extent that rates stay higher for longer. "Intermediate-term" in this case means any issues with five-to-seven years to maturity or less, although this will depend on one's overall investment objectives and suitability.

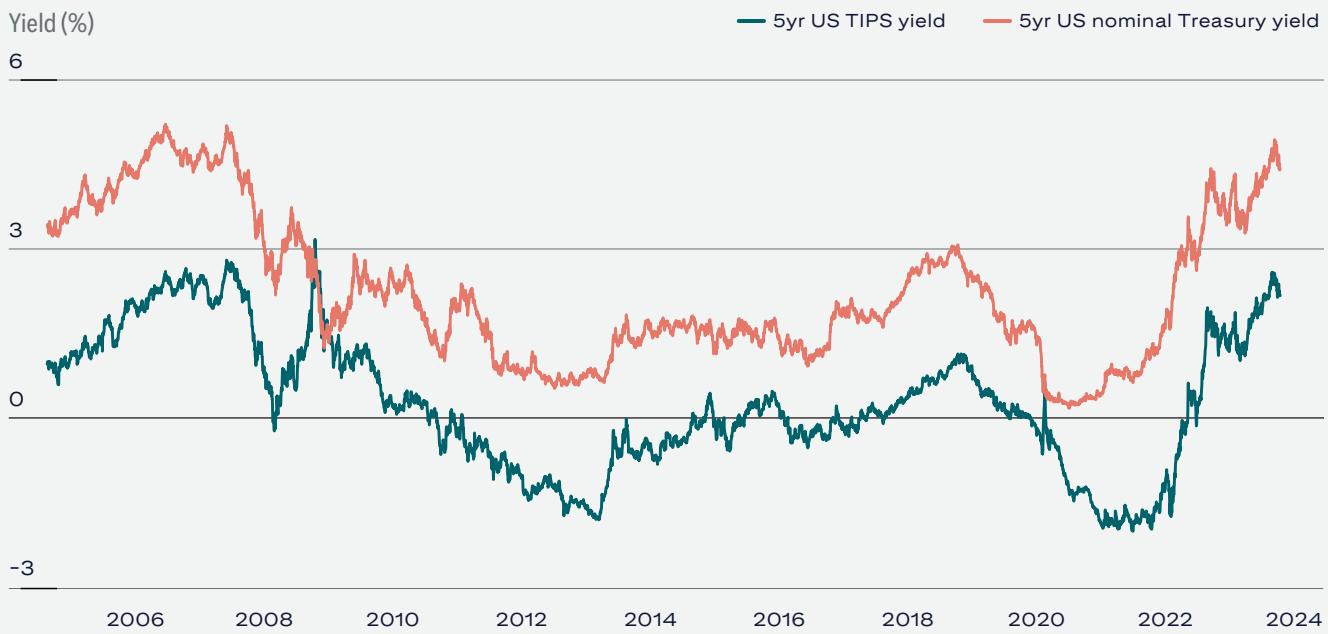
We present several high-quality fixed income asset classes to consider.

US Treasurys

US Treasurys come in many different maturities, but currently, all maturities offer high nominal and real rates by recent past standards. As we said, these high US government rates are also near historically high levels compared to expected headline inflation as measured by TIPS (**FIGURE 2**).

FIGURE 2

5-year Treasury rates high compared to expected headline inflation



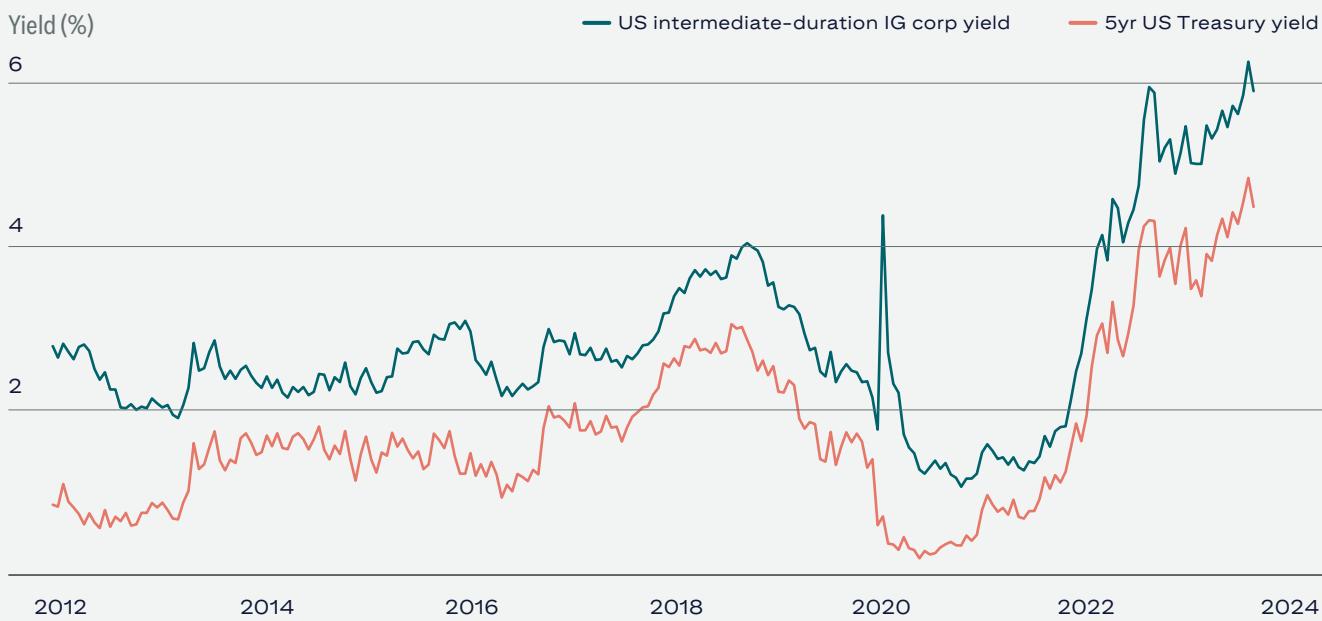
Source: Bloomberg as of November 22, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Investment grade credit

Corporate bonds have higher yields than Treasurys of comparable maturity, reflecting corporates' relatively higher credit risk. Still, the repayment risk for intermediate-term investment grade (IG) bonds issued by large, healthy companies with low levels of debt compared to earnings is generally much lower than it is for lower-rated high-yield bonds with higher level of debt to earnings. The intermediate-term IG index comprises debt of 1- to 10-year maturities, with low overall average duration – or price sensitivity to interest rate changes – of about four years. The IG index currently yields about 5.71%, about 1.05% above comparable-maturity (i.e., 4-year) Treasury bonds (as of November 23, 2023, **FIGURE 3**).

Besides investing in an ETF or mutual fund whose strategies are an index, investors may consider individual bonds, as there may be higher yield levels on individual IG-rated bonds for suitable investors who understand the credit risk of the issuer. An index is an “average” of yields, so often there are numerous examples of high-quality credits that pay above-index yields. For example, recently many of the largest US banks’ bonds of around 5-year maturities yielded more than the IG index referenced above. For those wishing to seek returns above those of the index, actively managed fixed income strategies can be considered.

FIGURE 3 Intermediate-term corporate yields vs 5-year US Treasury yield



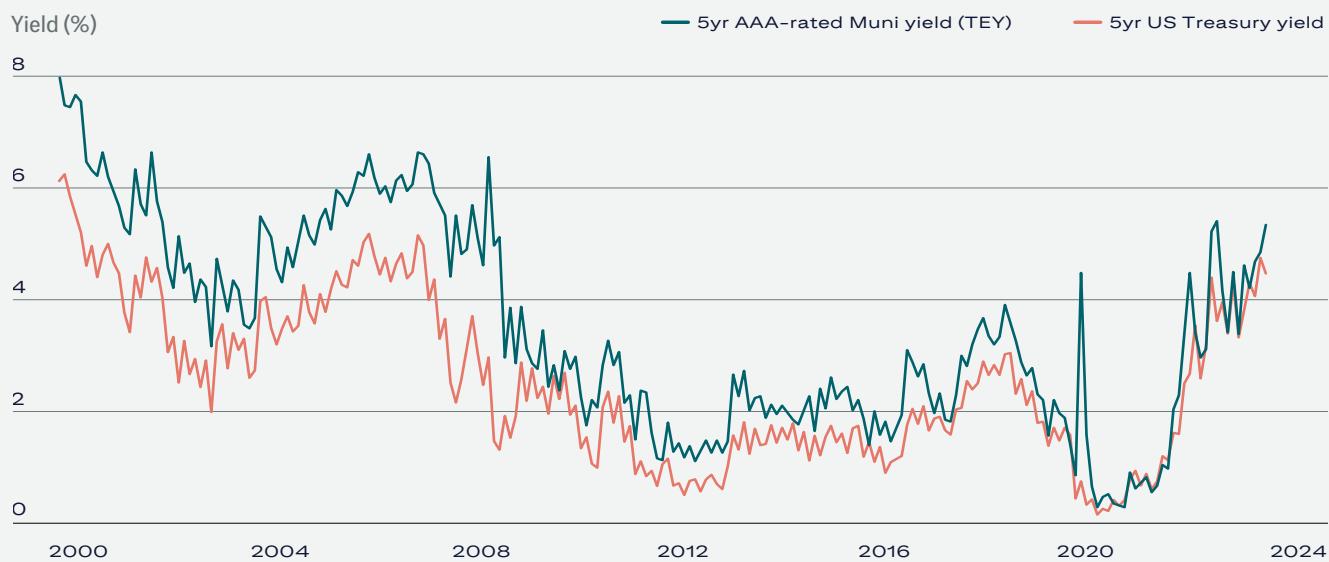
Source: Bloomberg, as of November 22, 2023. Bloomberg Intermediate Corporate Total Return Index used for US intermediate-duration IG corp yield. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

US municipal bonds

For investors eligible for the tax advantages, highly rated US municipals (“munis”) may be an interesting short-term fixed income opportunity. Munis generally pay a “tax-equivalent yield” near the equivalent Treasury yield (**FIGURE 4**). However, sometimes that tax-adjusted yield can be higher than Treasurys as it was earlier this year. When that occurs, the tax-equivalent yield, especially for US taxpayers in high-tax states, can offer similar yields to investment grade, except with government (i.e., very low) credit risk.

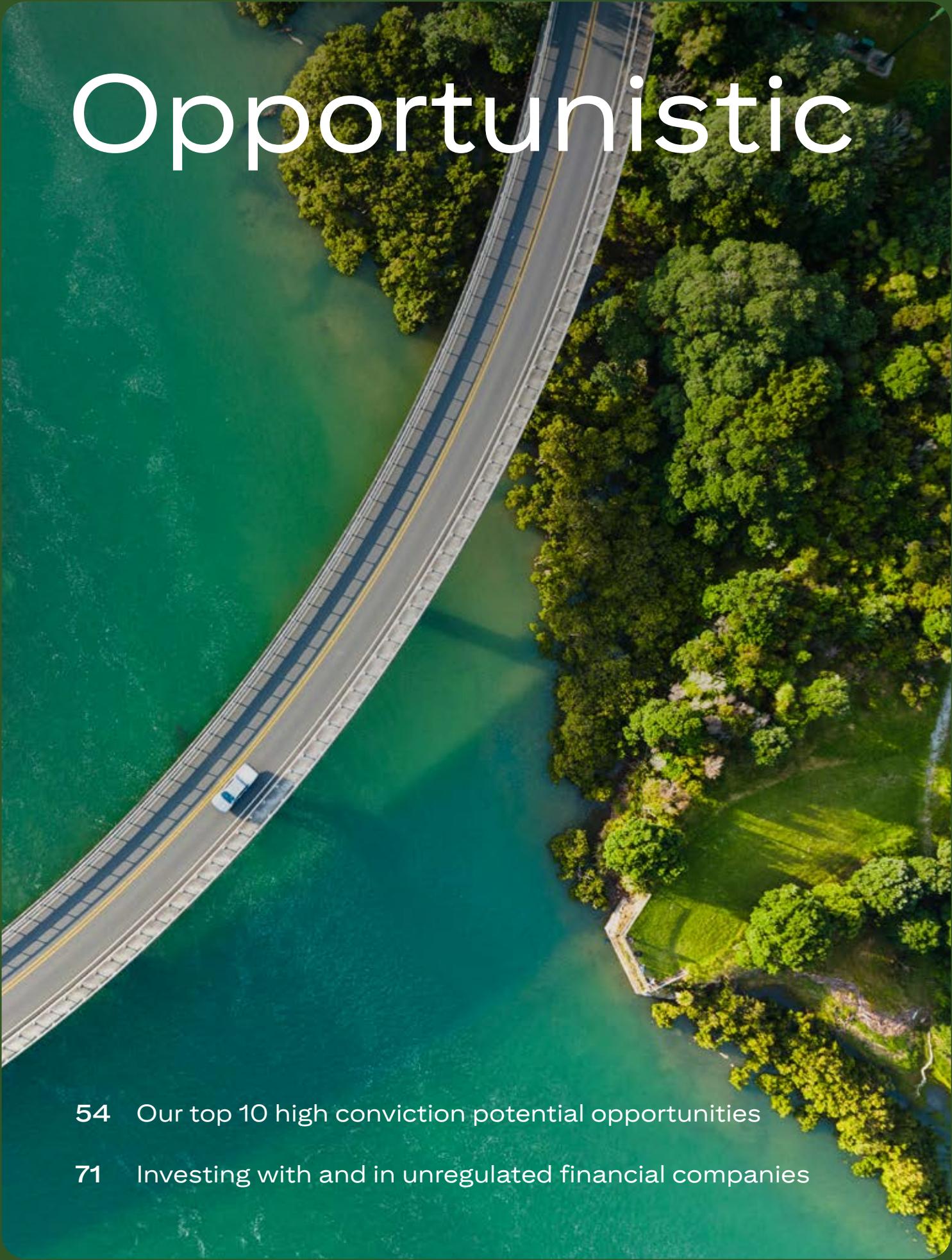
FIGURE 4

Muni yields may be attractive for tax-advantaged investors



Source: Bloomberg as of November 22, 2023. Note: Tax equivalent yields (TEY) adjust for top Federal and Affordable Care Act tax rate (40.8%). SIFMA Municipal Swap Index Yield used for yr AAA-rated Muni yield. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Opportunistic

An aerial photograph of a long, straight bridge spanning a wide river. The bridge has two lanes of traffic separated by a yellow dashed line. The water below is a vibrant turquoise color. On either side of the riverbank are dense green forests. In the bottom right corner, there is a small, developed area with a grassy field and some buildings.

54 Our top 10 high conviction potential opportunities

71 Investing with and in unregulated financial companies



Our top 10 high conviction potential opportunities

David Bailin

Chief Investment Officer

Steven Wieting

Chief Investment Strategist and Chief Economist

Joe Fiorica

Head of Equity Investment Strategy

Bruce Kirkwood Harris

Head of Fixed Income Investment Strategy

Jai Tiwari

Head of Foreign Exchange Investment Strategy

Stefan Backhus

Head of Alternatives Strategy

From the equipment makers helping to power generative AI to the normalization of the US yield curve, these are the shorter-term opportunities we feel strongly about heading into 2024.

At Citi Global Wealth, we have long viewed the wealth management process as a combination of “core” and “opportunistic” investments. Core carries most of the weight, both in terms of the amount of a client’s portfolio allocated to the assets, and in getting clients to their long-term strategic destinations. We make “core” allocations to benchmarked asset classes, based on a client’s risk profile and investment objectives and our rolling 10-year Strategic Return Estimates (SRE).¹ As the SREs and other parameters shift, we periodically make minor adjustments. Core investments are the bedrock of every client’s portfolio. Their role is to keep the portfolio steady and generally moving in the right direction.

At the same time, we recognize that some clients seek returns over shorter time horizons. So, we are continually looking for ways to identify timely, investible opportunities that may benefit from their present undervaluation, a likely change in market perception or faster growth than is expected, especially over the nearer (call it two-year) time frame.

These opportunities are almost by definition high-conviction and are thoughtfully executed without putting a client’s long-term strategic objectives at risk. If we were to attach rough percentages to the two – it might be 85% to core, 15% to these various side investments and areas of emphasis. Potential opportunities like the 10 that follow are therefore incremental, quite interesting and should be considered according to investor risk profile and investment objectives.

As we were putting together this year’s Wealth Outlook, we identified an assortment of high-conviction opportunities.

2023 has been a year of conflicting signals about markets and the economy. In the second half, however, some of the major questions around interest rates and inflation pressures have begun to resolve. As we triangulate these current developments with the larger, longer-term (i.e., decade-plus) trends that guide our strategic thinking (see **Unstoppable trends**, starting with [page 76](#)), we have become more convinced that the 10 ideas presented herein have merit.

¹ Source: CGW Global Asset Allocation and Quantitative Research Team. Strategic Return Estimates (SREs) for 2024 based on data October 2023, prior Strategic Return Estimates for 2023 (based on data from October 2022) and 2022 (based on data as of October 2021). Returns estimated in US Dollars. All estimates are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Strategic Return Estimates are no guarantee of future performance. Past performance is no guarantee of future returns.

Strategic Return Estimates based on indices are Citi Global Wealth’s forecast of returns for specific asset classes (to which the index belongs) over a 10-year time horizon. Indexes are used to proxy for each asset class. The forecast for each specific asset class is made using a proprietary methodology that is appropriate for that asset class. Equity asset classes utilize a proprietary forecasting methodology based on the assumption that equity valuations revert to their long-term trend over time. The methodology is built around specific valuation measures that require several stages of calculation. Assumptions on the projected growth of earnings and dividends are additionally applied to calculate the SRE of the equity asset class. Fixed Income asset class forecasts use a proprietary forecasting methodology that is based on current yield levels. Other asset classes utilize other specific forecasting methodologies.

SRE do not reflect the deduction of client fees and expenses. Past performance is not indicative of future results. Future rates of return cannot be predicted with certainty. Investments that pay higher rates of return are often subject to higher risk and greater potential loss in an extreme scenario. The actual rate of return on investments can vary widely. This includes the potential loss of principal on your investment. It is not possible to invest directly in an index.

All SRE information shown above is hypothetical not the actual performance of any client account. Hypothetical information reflects the application of a model methodology and selection of securities in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading.

1. Semiconductor equipment makers

In the past year, two major dynamic shifts took hold across our economy: 1) technical leaps in artificial intelligence efficacy and an associated 2) infrastructure spend in the sector from artificial intelligence (AI) service providers.² As we discuss elsewhere (see **How generative AI might reshape every sector** and **AI-propelled digitization in 2024**, starting on page 77), we believe AI could do more to boost economic output and labor productivity than any technology the global economy has seen in decades.

Competition is coming into the field of AI chip design. Some of the generative AI products might be a commercial failure or competitive laggard. But *all the work requires advanced semiconductor equipment*. As FIGURE 1 shows, the market cap of the top 10 semiconductor equipment makers has suddenly fallen behind the surging market cap of the semiconductor producers. In essence, there is less optimism for the “picks and shovels” than for the “silicon gold miners.” That makes little sense to us given that the barriers to entry for the makers of these sophisticated machines and materials tend to be at least as high as for the advanced chipmakers themselves.

FIGURE 1

Market capitalization of semiconductor designers versus equipment and fabricators

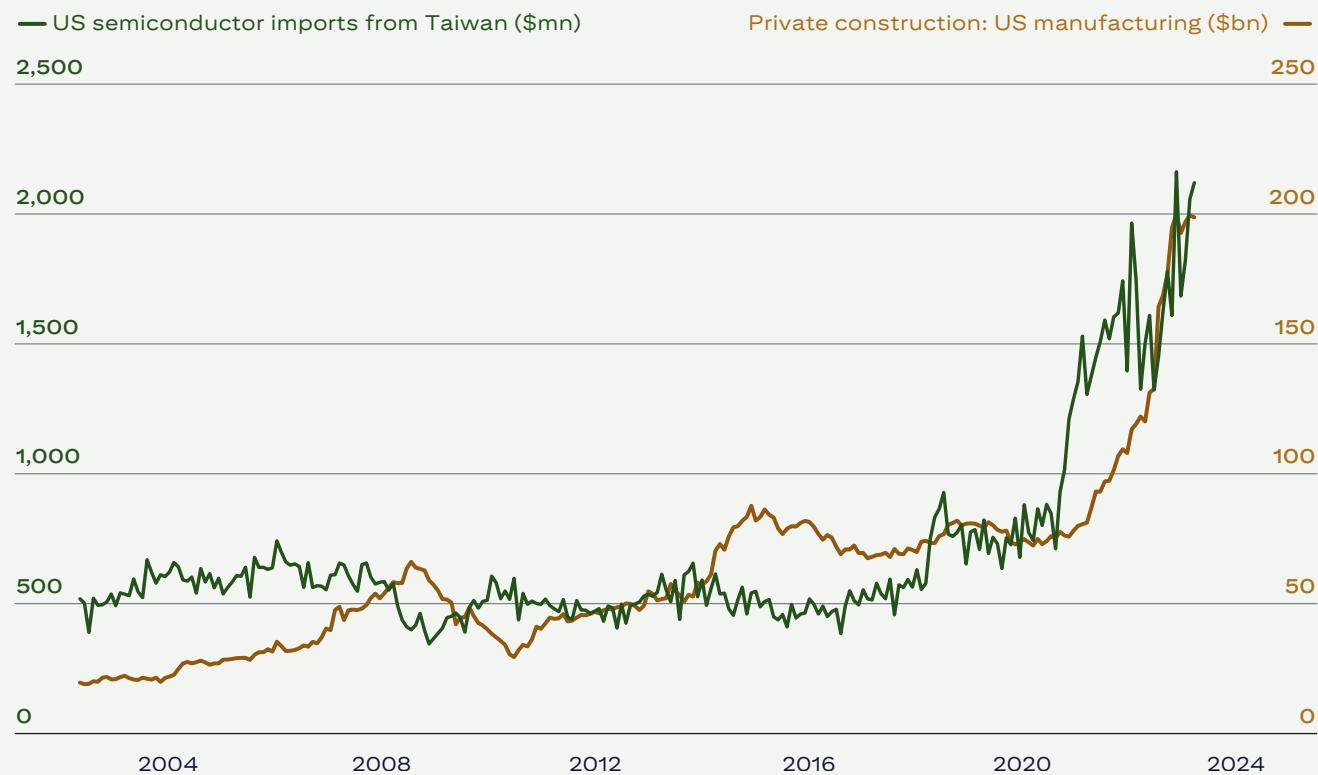


Source: Haver Analytics as of November 3, 2023

² Commerce department data shows US manufacturing facility construction spending has risen at a record 66% pace over the past year largely for semiconductor and battery supply chains.

FIGURE 2

US semiconductor imports from Taiwan and private construction spending on US manufacturing



Source: Haver Analytics as of November 15, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

But there is more to this story. As FIGURE 2 shows, the US government and its trade allies are offering industrial subsidies to diversify the highly concentrated semiconductor supply chain. Whatever the success of this diversification effort, it points to a strong prospective spending on semiconductor equipment (and battery technology). To date, this has largely only impacted a narrow segment of US construction spending. But in the next coming couple of years, this will be followed by capital equipment outlays.

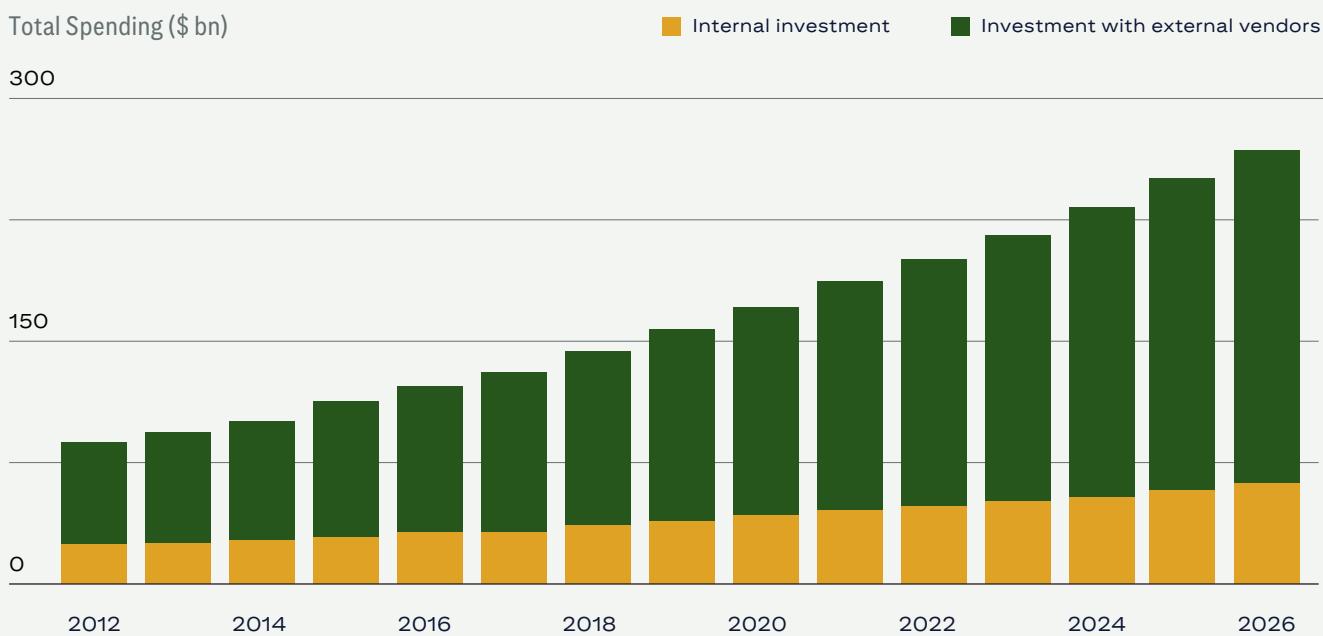
2. Cybersecurity shares

With geopolitical risk already heightened, the world will see heightened manipulation of news, data and images as critical 2024 elections get underway across the US, Europe, India and elsewhere (see **Geopolitics and elections, page 24**). Hacks and attempts to infiltrate the devices and files of political candidates have been a key tool for opposition research and malicious actors to add chaos to these democratic rituals. The continued growth of AI will bring with it ever-more sophisticated tools to be

weaponized for pattern recognition and decryption. Thankfully, these technologies are also available for the “good guys,” with AI being deployed to improve cyber threat detection and prevention.

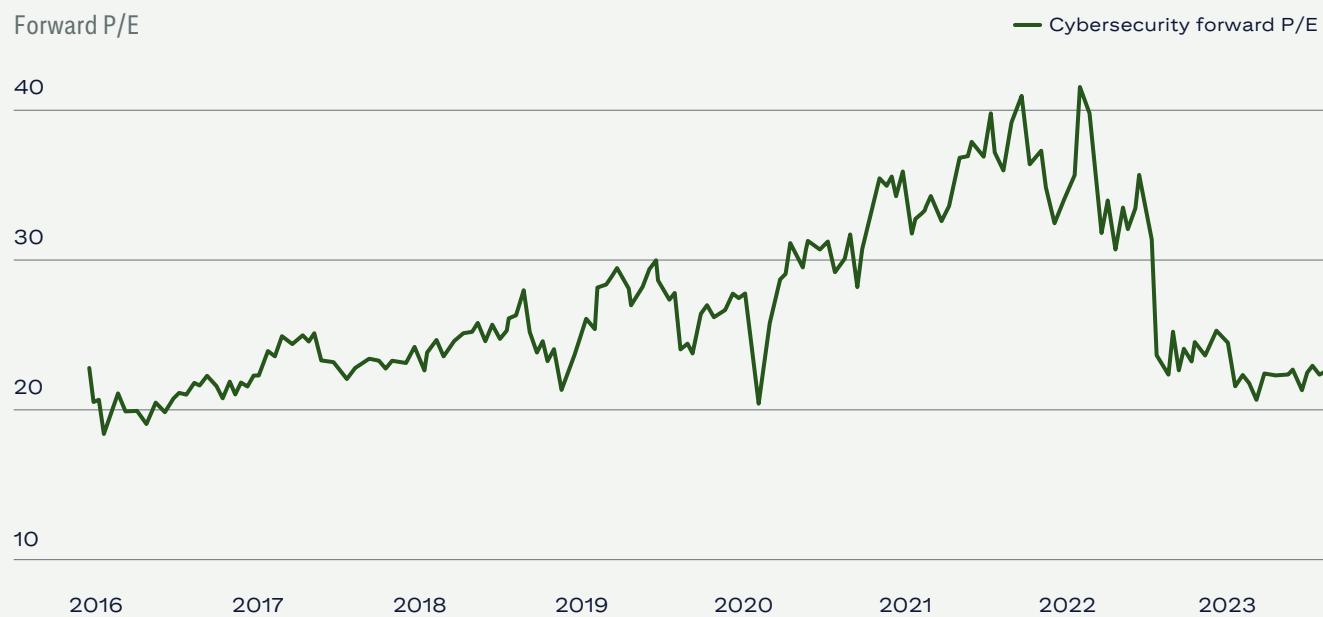
Citi Research’s survey of Chief Technology Officers³ at large US firms continues to indicate that spending on cybersecurity remains a top item in information technology budgets (**FIGURE 3**). When choosing the right solution for combating cyber threats, companies increasingly choose to contract with outside vendors to substantially augment in-house capabilities. The

FIGURE 3 Firm spending on cybersecurity is growing rapidly



Source: Haver Analytics as of November 15, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

³ Citi CIO Survey: IT budgets further stabilize with uptick in transformation projects, October 13, 2023

FIGURE 4 Cyber shares have rarely been cheaper despite EPS growth

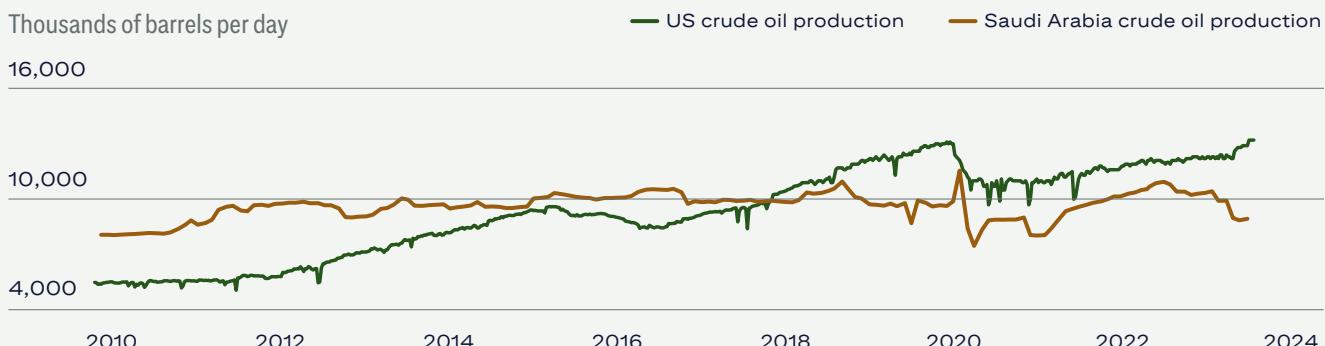
Source: Haver Analytics as of November 3, 2023. Using Nasdaq Cybersecurity Index. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**



Nasdaq CTA Cybersecurity delivered 14% earnings growth as October 31, 2023 (versus -0.4% for the S&P 500 as a whole). That's on top of a 36% increase in earnings per share (EPS) in 2022.⁴

Cybersecurity shares have failed to keep pace with this consistent, market-beating earnings growth. Valuations are hovering near early pandemic lows (**FIGURE 4**). As we look to 2024, we see cybersecurity shares rerating to be a source for reliable profits growth in an otherwise uncertain world.

⁴ Factset as of December 31, 2022.

FIGURE 5 Saudi production cuts benefit non-OPEC producers

Source: Haver Analytics through November 3, 2023.

FIGURE 6 Benefits show up in creating a floor under US crude prices...

Source: Haver Analytics through October 31, 2023.

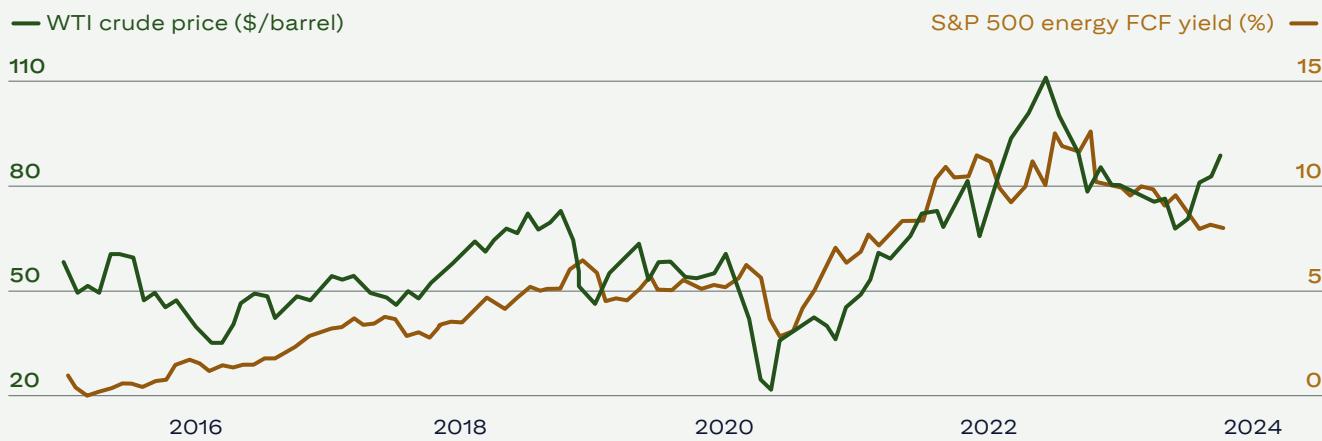
3. Western energy producers, equipment and distributors

Russia's invasion of Ukraine forever realigned energy supply chains, with Europe turning to gas suppliers from the US and the Mideast. Recent conflict in Israel and the Gaza Strip further underscores that world petroleum supplies have both "concentration risk" and substantial political/geopolitical risk. (Russia and Iran together account for 20% of world crude oil production.⁵)

OPEC's decision to lower crude oil production preemptively in a slowing world economy – to maintain high prices even at the expense of lost market share to alternatives – should be considered a "gift" to non-OPEC suppliers and the clean energy value chain alike (FIGURE 5). The competitive economics of energy supplies with oil at \$80 per barrel are markedly different for producers than at \$24, the trough price for Brent reached on average following the last four US recessions (FIGURE 6). Higher oil

⁵ Haver Analytics, OPEC as of October 31, 2023.

FIGURE 7 ... and in producers' high free cash flow yield



Source: Bloomberg and Haver Analytics as of November 22, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

prices also enhance the value of its competition from green alternatives.

A transition away from fossil fuels requires redundant energy supplies to avoid economic disruption. Geopolitical considerations also argue for redundancy. The relatively low valuation of most oil and gas producers, pipelines and equipment makers make them worthy portfolio components to consider. Their equities and bonds have reclaimed their traditional role as a potential source of income while also seeking a direct if partial hedge against shocks and inflation (**FIGURE 7**).

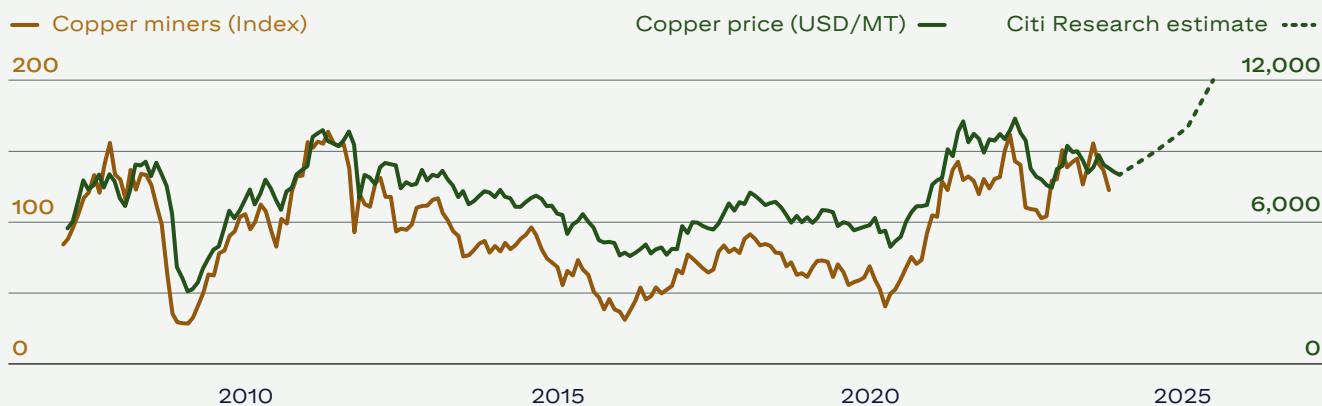
4. Copper miner equities/clean energy infrastructure

The transition to clean energy involves extensive investment and experimentation with new technologies. Some will prove uneconomic, while others will shape the grid of the future. The prospect of large capital outlays without immediate profit drove shares of clean energy producers lower during most of the past two years as US Federal Reserve (Fed) tightening rationed credit for unprofitable firms. China has supplied much of the world with solar panels at price levels that are ruinous for global competitors but still helpful for reducing global emissions. In other areas like hydrogen, potential producers and users are waiting for breakthroughs in technologies that are yet unproven.

Green tech – and related areas such as clean water infrastructure – involves a range of investments with differing risk/reward characteristics. One component

FIGURE 8

Historical and Citi Research-forecast copper miner equity and spot copper prices through 2025



Source: Bloomberg as of November 15, 2023 using Solactive Global Copper Miners Index, Citi Research as of November 15, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Past performance is no guarantee of future results. Real results may vary.

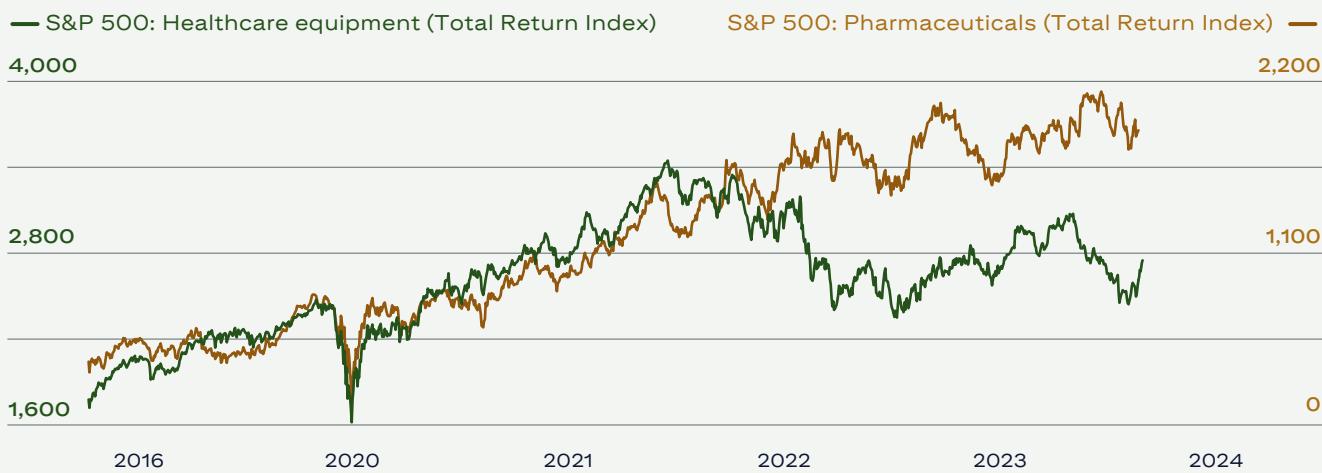
— As much as *176 pounds of copper go into every electric vehicle (EV), four times the amount used in the typical internal combustion engine car. Even with improved efficiencies, EVs are expected to use 3.8 million metric tons of copper by 2030, nearly triple today's amounts.*

where we see high future demand, restrained supply and no substitution is copper. Beyond the impact of near-term economic weakness, Citi Research forecasts⁶ copper prices being pushed higher by the relatively low level of investment, but lengthy time required, by the companies sitting atop the world's major copper reserves to bring on new supply (FIGURE 8).

Battery technology can change and bring surprising volatility to commodities such as lithium. But until new "super-conductor" materials are discovered, the electrification of infrastructure and almost every part of an electric vehicle will require large quantities of copper.

No single commodity should comprise a very large portfolio stake, but profitable copper producers may be one of the lower-risk components of the energy transition, with a strong correlation to global growth once it improves.

⁶ Citi Research: Commodities Strategy Copper Book 2023 update – the Energy Transition bull trade, July 24, 2023.

FIGURE 9**S&P pharmaceuticals total return vs S&P healthcare equipment**

Source: Haver Analytics through November 22, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

5. Medical technology & tools companies

Healthcare, a sector for which ever-rising medical spending typically lifts most boats, saw one of its widest performance dispersions in recent memory this year. While a handful of large companies with blockbuster new drugs (see **For investors, healthcare innovation is on sale on page 92**) experienced explosive share gains, many others struggled. Loss-making early-stage biotech firms straining under rising financing costs, insurers facing new US regulatory headwinds, pandemic vaccine makers and teledoc providers were among the subsectors that fell out of favor.

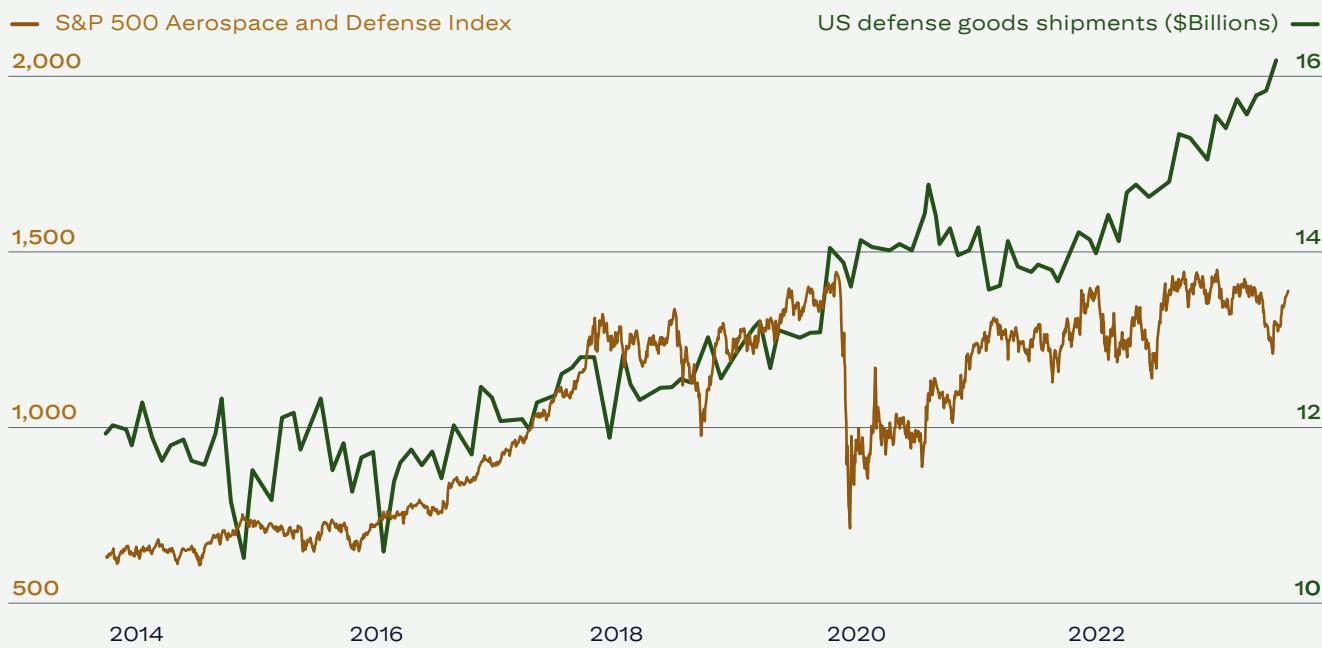
But the performance of another category makes no sense to us. With the advancement of AI, the methods for drug discovery and testing are about

to accelerate and become more productive. Think of AI-enabled drug research as Healthcare's answer to the semiconductor equipment makers. After valuations had gotten rich during the low-rate, peak-COVID medtech euphoria of a couple years ago, the abrupt switch to fast-rising discount rates led many companies to suffer severe share price declines that have overshot the mark, in our view (**FIGURE 9**).

As credit costs stabilize over the coming two years and regulatory changes force more best-selling drugs off patent, we expect merger and acquisition activity to pick up as pharma and larger biotechs acquire small earlier-stage firms with promising candidates to replenish the larger firms' pipelines. This should lead to the next leg in the biotech innovation investment supercycle. We also believe that cheaply valued tech and tools could be among the broadest beneficiaries.

FIGURE 10

US defense shipments vs S&P Aerospace and Defense Index



Source: Haver Analytics as of November 22, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

6. Defense contractors

The tragedies unfolding in Ukraine and the Middle East see history repeating as simmering, longstanding conflicts explode into major wars once again, sowing further tensions between the major powers lining up in the shadows on either side. The division of the world again into “Western” and “Eastern” Cold War blocks has dangerous precedent. However, the arms race of the 1980s showed that deterrents work. NATO nations see no choice but to increase defense spending to avoid a larger conflict.

These two wars have strained the capacity of US and European defense equipment and arms producers. Their share prices appear to reflect worries about government funding and the stress they are under as shipments of defense goods have fallen behind demand (FIGURE 10).

While buyer power is always a wild card in this unique segment of the market – with literally just a handful of taxpayer-supported customers around the world setting prices and all the rules – it’s hard to imagine Western defense agencies not doing almost whatever it takes to ensure these companies are able to catch up.

7. Private capital asset management firms

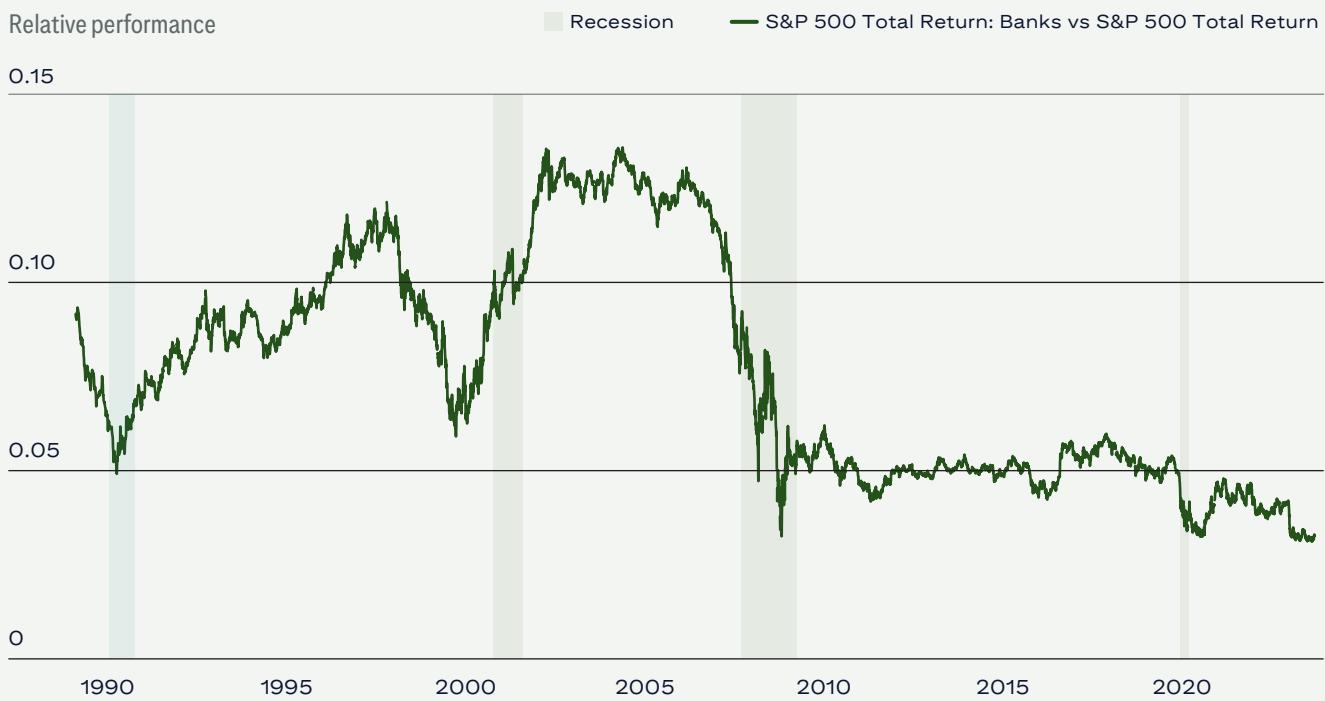
Equities of US banks have returned -6% in 2023.⁷ Their return relative to the S&P 500 matches a 35-year low (FIGURE 11). In core portfolios, we have effectively overweighted US bank preferred shares with an average yield near 7.6%⁸ on capital securities, but not their common shares.

⁷ Bloomberg as of November 28, 2023.

⁸ Bloomberg as of November 28, 2023.

There are many explanations for the deep underperformance of bank common shares (see **Taking advantage of the markets' big reset on page 5**). However, the most compelling explanation is the desire by regulators to force large, regulated banks to bolster balance sheets by issuing more long-term debt at a higher cost than deposits (FIGURE 12) and raising the capital requirements for certain banking activities (see **Investing with and in unregulated financial companies on page 71**). Though the economics of banking should have improved with higher yields, regulatory uncertainty is effectively preventing the big systemic banks from fully participating.

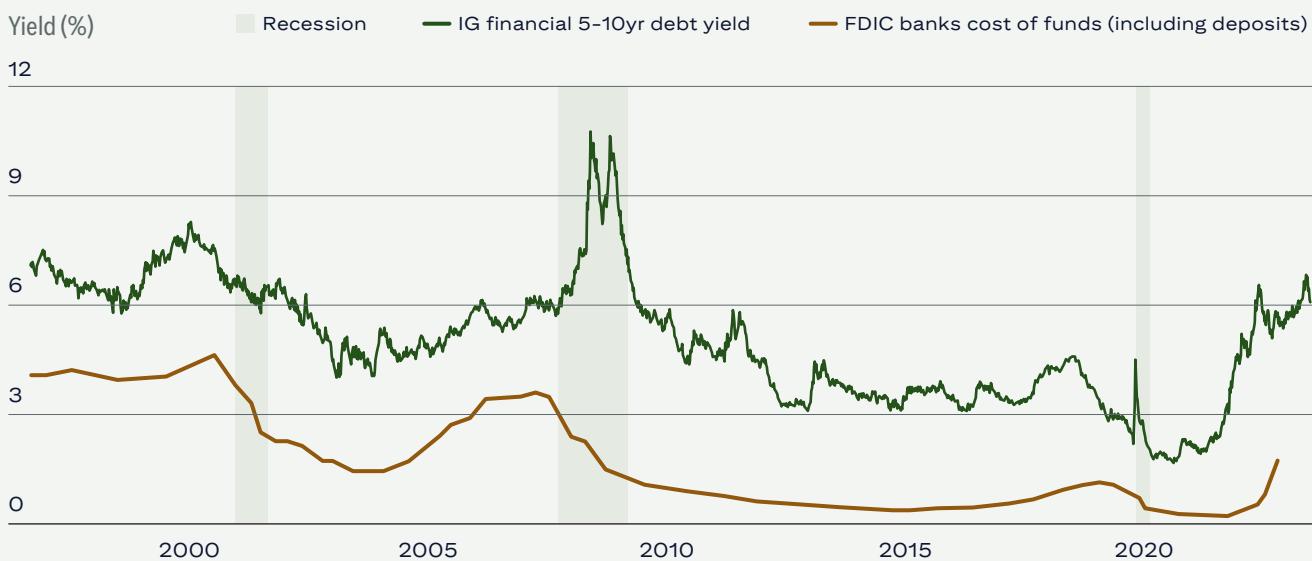
FIGURE 11 The underperformance of US bank shares matches a 35-year low



Source: Haver Analytics as of November 22, 2023. Ratio of S&P 500 Banks Index to S&P 500 Index. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 12

Regulators' insistence on shoring up bank balance sheets with long-term debt instead of deposits will potentially be very costly for banks



Source: Haver Analytics as of November 22, 2023. Index information from ICE BofA Merrill Lynch Corporate Bonds: Financials: 5 to 10 years yield to maturity. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

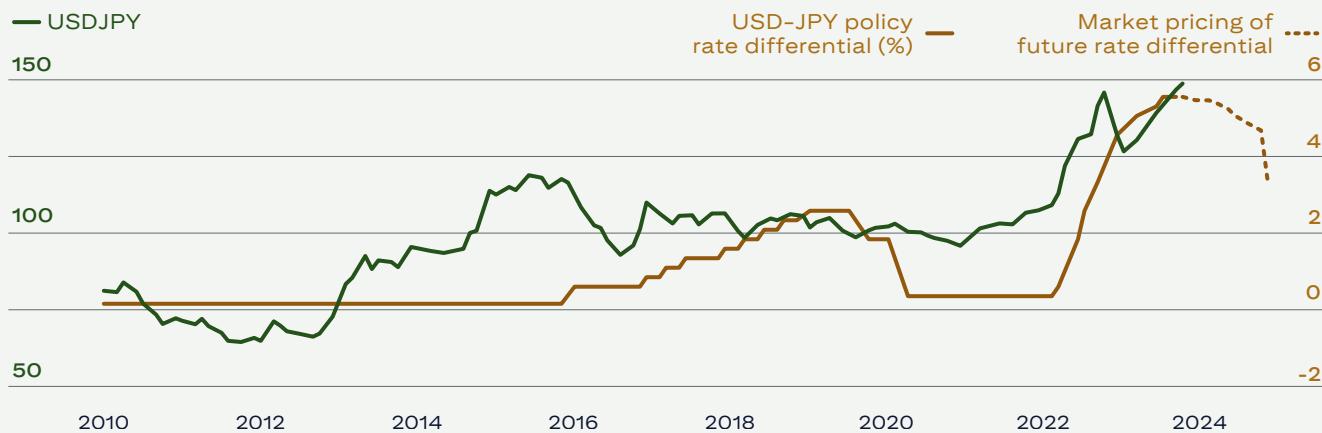
This creates a potential opportunity for firms that provide alternative sources of financing, such as the private capital managers that oversee private credit and other types of private equity funds. One of the ways to access this potential opportunity is to own the asset managers themselves that are seeking to take advantage of the regulatory burdens being placed on the banks. This can be done either by simply buying stock in the managers (for those that are publicly listed) or through other vehicles available in the alternatives markets for qualified investors (see **Alternative investing in 2024 on page 41**).

8. The Japanese yen and yen-denominated Japan tech, financial shares

Once the strongest currency in the world during its decades of deflation, the Japanese yen has more recently been among the developed world's weakest. From January 1, 2022 until October 31, 2022, the Japanese yen fell 23% against the US dollar since the Fed's first rate-hike eight months earlier.⁹ However, now Japan's policymakers seem to feel that their stubbornly dovish monetary policies have achieved their mission in helping to finally reinvigorate the

⁹ Bloomberg as of October 31, 2022.

FIGURE 13 What goes up ... US/Japanese policy rate differential and USD/JPY exchange rate headed for an inflection point?



Source: Bloomberg as of November 15, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. For illustrative purposes only. **Past performance is no guarantee of future results. Real results may vary.**

Japanese economy (and the data suggests they're probably right). That sets up the likelihood of a reversal in 2024.

Japan could hardly have taken a more different approach than the world's other major central banks to the inflation spike of 2021-2022. After having kept its short-term policy rates near zero or below for more than a dozen years, the Bank of Japan determined to keep going even as inflation in Japan rose. In contrast, the Fed raised its policy rates by 525 basis points. Over that time, Japan has merely allowed its longer-term yield targets to drift higher while keeping short rates negative.

Ironically, it's the Fed that may now soon need to swerve from a monetary policy path that could ultimately prove deflationary, while we see Japan swerving from its inflationary one. Japan's headline consumer price index inflation has averaged 3.6% for the past two years – a major victory. We can't imagine

policymakers will press their luck much longer, and based on FIGURE 13 above, the market seems to agree with us.

Aside from investing directly in the currency, investors can gain exposure through investing in the Japanese banks that may benefit from the monetary policy tightening we expect to help drive the strengthening. To the extent a stronger yen is a sign of continuing economic strength, another play are strong Japanese assets that might generate positive returns even if the currency does not boost returns further. Japanese tech firms providing semiconductor equipment, battery technology, robotics and automation are globally competitive in growing industries.



9. Private credit and structured debt securities

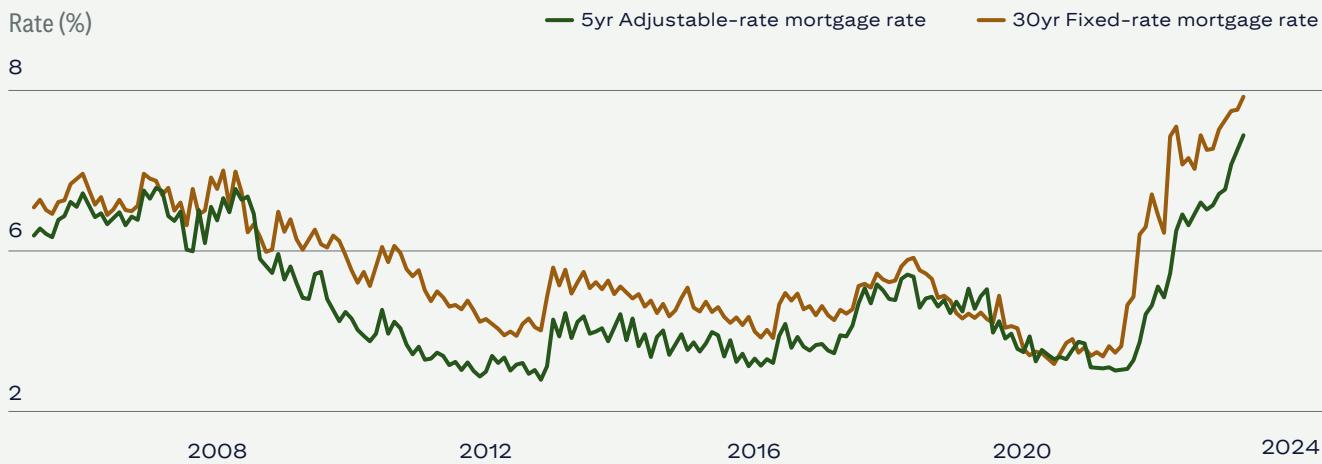
Private debt is a rapidly growing asset class among institutional investors and has continued to prove its value in 2023. The Cliffwater Direct Lending Index reports annualized return to loan maturity returns 9.69% as of June 30, 2023 (primarily attributable to senior debt). Uncertainty has continued to limit the availability of syndicated loans to the largest, near-investment grade offerings, and banks have also largely remained on the sidelines with the prospect of expected stricter liquidity and capital requirements, particularly in the middle-market and in certain sectors such as technology.

As a result, direct lenders are in high demand by private equity managers, driving new channels in the industry through nontraded business development companies, interval funds and tender offer funds.¹⁰

For fixed income investors looking for more liquid public market opportunities, another asset class used heavily by qualified institutional investors (and for other suitable investors can also be accessed via a managed fund) is structured credit. With US mortgage rates jumping 7-8% for various maturities, it is possible for structured debt funds holding prime mortgage-backed securities to yield 6.5-7.5% with short to intermediate holdings. Yields have risen even more widely for investment grade commercial mortgage- and asset-backed securities. The pipeline of new loans becoming securitized at higher rates points to higher yields for suitable institutional and retail investors alike (**FIGURE 14-15**).

¹⁰ Pitchbook as of June 30, 2023.

FIGURE 14 Behind the rise in US mortgage-backed securities (MBS) yields, a sharp rise in mortgage rates



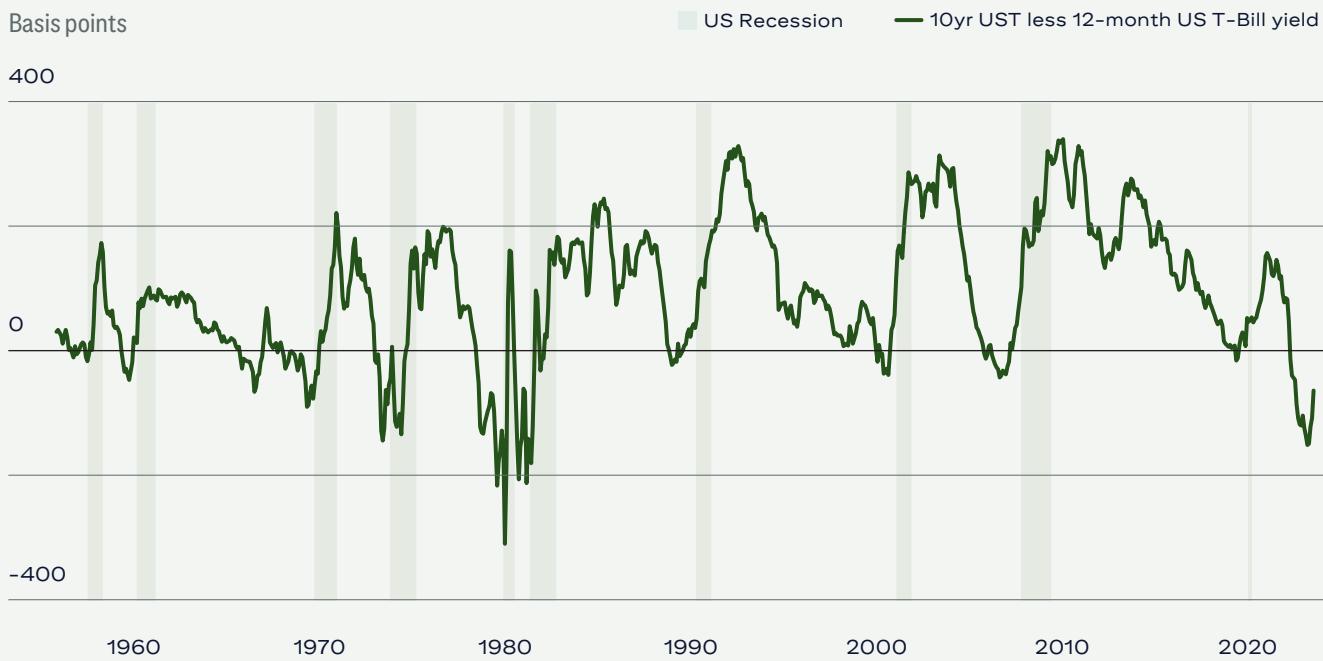
Source: Bloomberg as of November 22, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 15 Securitized credit yields higher than those for IG corporates



Source: Bloomberg, ICE BofA Indices as of November 22, 2023. Index used is the Bloomberg US Corporate Bond 1-5 Year Index. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

FIGURE 16 Already close to a record-long inversion – US Treasury yield “curve” showing the % spread between 10- and 1-year Treasury yields



Source: Bloomberg as of November 22, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

10. Normalization of the US yield curve

The US Treasury 1-year/10-year yield curve has been positively sloped in 82% of all months during the past 60 years. It can steepen on higher long-term rates and/or lower short rates. The longest period of an inverted US yield curve has been 20 months. The 10s/1s US Treasury curve has already been inverted for 15 months (FIGURE 16).

Strategies with a duration of two years can be constructed and can potentially earn a high current cash yield. Using similar tools, market opportunities

could enhance current Treasury yields or tailor investments for higher-yielding entry points.

Some of the conditions that might steepen the curve – either a recession or an acceleration in inflation – would likely be adverse for equities markets. For suitable clients, rate strategies may also serve as a risk hedge for equities or credit. The risk of implementing such a rate strategy is that the curve remains inverted or does not steepen sufficiently beyond the initial entry point of the strategy to result in a favorable gain, and so the investment in the strategy is reduced in value.



Investing with and in unregulated financial companies

Daniel O'Donnell

Head of Alternative Investments

Stefan Backhus

Head of Alternatives Strategy

2023's European and regional US banking crisis put regulators back on the case of raising banks' capital requirements. Alternative lenders again stand to potentially benefit.

Considerations:

- Unregulated providers of capital benefit when regulations hamper traditional low-cost providers (banks), and this is an investable trend.
- One can step in as the alternative lender through private credit funds to potentially generate yield premiums over traditional securities.
- Or for qualified investors, invest in the managers via listed alternatives firms or private general partner (GP) stakes funds.

More regulation for banks

US regulators recently proposed a comprehensive series of reforms designed to mitigate risk in the banking sector. Bank executives have expressed concern that the proposed rules – which would increase large-bank capital requirements by as much as 16% and enforce more consistent risk management standards – will have a negative impact on the banking industry. In the process, the executives say, the changes will push traditional banking services such as middle-market corporate lending to non-bank financial firms, potentially benefitting their investors.

Since the global financial crisis, systemically important banks have contended with wave after wave of higher regulatory capital requirements. The latest proposed increases are still just that: proposals. Still, the banks' response (primarily focused on limiting the impact on consumer lending and other specific business lines) suggests that an additional capital burden is all but inevitable.

The beneficiaries: alternative investment managers and funds

Negative trends for one sector can be a tailwind for another. That's why we see increased regulation today as a boost for non-bank capital providers tomorrow. This is especially true for alternative investment managers, who have seen their businesses grow faster and more profitably as bank regulatory requirements have constrained their competitors.

From 2000 to 2022, alternatives assets under management (AUM) grew at a 12.6% compound annual growth rate (CAGR) to \$16 trillion and are expected to reach \$23.3 trillion by the end of 2027 (**FIGURE 1**).¹ Private credit, a subset of private equity, has been a key component of that growth, growing twelve-fold between 2006 and 2022.² In all, non-bank lenders today represent 83% of the \$12.8 trillion non-real estate corporate lending market in the US.³

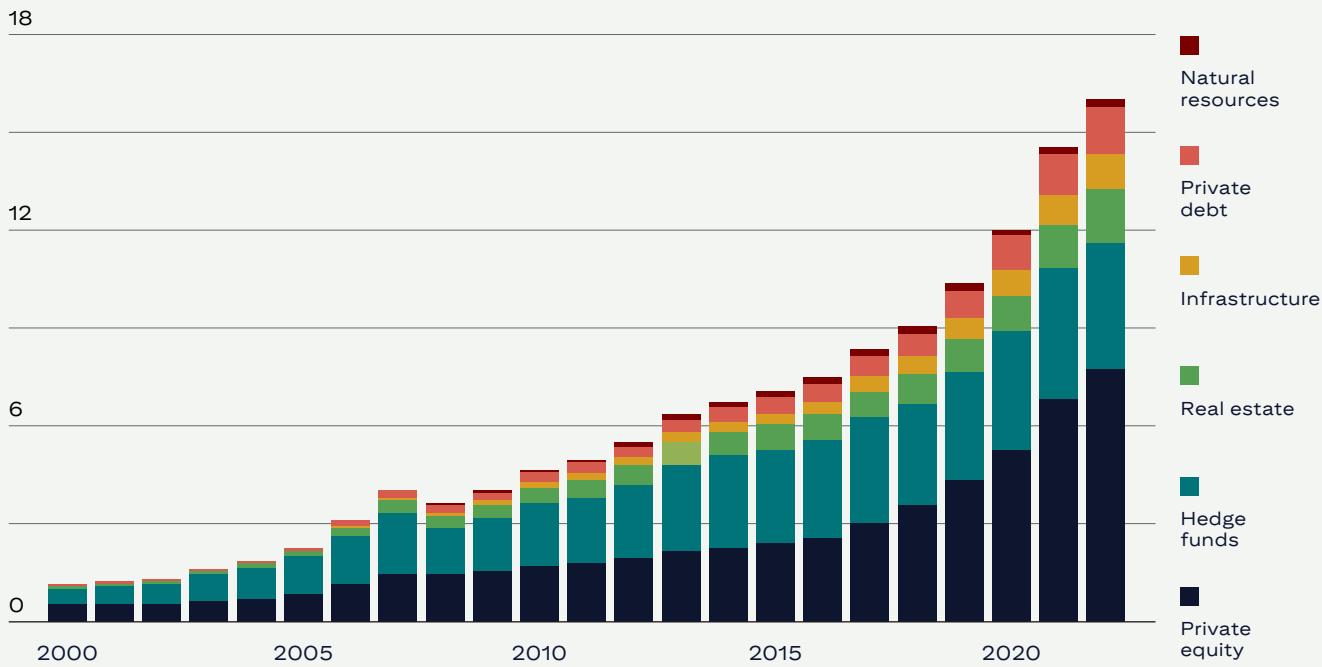
¹ JPMorgan Chase & Co. 2Q23 earnings call, July 14, 2023.

² Source: Prequin as of December 31, 2022.

³ Board of Governors of the Federal Reserve System, Financial Stability Report, May 2023.

FIGURE 1 Growth in alternatives AUM 2000-2022

Alternatives Assets Under Management Breakdown (USD tn)



Source: Preqin and HFRI as of December 31, 2022

Three ways to invest in private credit

We see several ways for qualified investors to take advantage of the continued growth of US and European private credit and other non-bank lending.

The most direct way is to invest in a private credit fund. Already, there is a growing imbalance between the demand for private capital and the capacity of the private credit system to provide it. Private capital providers are able to charge a premium in this environment and pass that on to their investors in the form of higher yields. For investors with the liquidity to accommodate extended lockup periods, these

vehicles may deliver a potentially attractive source of yield today. As of early November, direct lending was generating a premium of 276 basis points over comparable-risk leveraged loan funds and a 493 basis point premium over high-yield corporate bonds.⁴

Another option that investors often don't consider is to buy stock in the large publicly traded private

⁴ Cliffwater 2023 Q2 Report on US Direct Lending. Represents the premium of the takeout yield for the Cliffwater Direct Lending Index relative to the Bloomberg High Yield Index yield to maturity and the Morningstar LSTA US Leveraged Loan 100 Index yield to maturity.

equity firms that manage private credit funds. After all, buying stock in the managers allows an investor to benefit from three income streams underpinned by assets under management growth: underlying investment returns (as the manager has a general partner interest in each fund it manages), management fees and performance fees (i.e., “carried interest”). A diversified portfolio of alternative investment businesses is another reason to consider these shares. Many of these companies have other divisions that could benefit from cheaper financing when rates eventually head lower.

— Private capital providers are able to *charge a premium* in this environment and pass that on to their investors in the form of *higher yields*.

Finally, there's also another avenue to participating in the disintermediation of the banking sector: the ownership of general partnership interests, or “GP stakes,” in alternative managers. A General Partner (GP) stakes fund acquires a series of minority interests in private equity/private credit managers. When there is an investment in the fund, therefore, receiving a fractional ownership in each of the managers as well as a sliver of the general partnership stake the manager owns in each of its underlying deals.

This provides exposure to all three revenue streams, but also to a broader range of managers (including non-publicly listed ones) than one would get from owning only publicly traded companies.

Owning a GP stakes fund provides direct exposure to the underlying deals as one would get from investing in a private credit fund, but with the added benefit of sharing in management fees and carried interest revenues. There is also the potential benefit of better tax treatment befitting a fractional GP status. So, instead of being taxed as income, all the revenue exposure is currently taxed at the (much lower) capital gains rate, thanks to the special considerations in the tax code regarding a general partner's carried interest. Generally speaking, one's tax liability should be discussed with a tax and/or legal advisor prior to seeking this opportunity.

Regulatory risk for non-banks is not completely off the table

The growth in the US private credit system could attract the scrutiny of regulators. But we don't think that is imminent.

Our reasons are twofold. First, the asset/liability mix for non-financials is materially different. For banks, public depositors are “at risk” given that short-term deposits are used to fund longer-term lending. For alternative firms, capital is raised from institutions and wealthier individuals in segregated vehicles that limit broad contagion in the event of failure.

Second, regulators have repeatedly shown that while they recognize the potential for risk to build up in the so-called shadow banking sector, their primary priority remains systemic risk. The recent slump in commercial real estate is the latest example of this. As some real estate private equity funds



found themselves under water in 2022, and their investors waited out lengthy redemption delays, regulators focused most of their attention on curbing the issuance of commercial mortgage-backed securities which are underwritten and often held on the balance sheets of the large, systemically important banks.

As banks continue to face new regulatory challenges to their businesses, unregulated financial firms remain ready to step in to meet demand and fill the void. The shadow banking system is not without its own stresses and risks. And over time we expect regulation may well increase. But for now, there should be a good runway for continued growth accessible through the three strategies presented.

— Buying stock in large private equity firms managing private credit funds benefits from three income streams: investment returns, management fees and performance fees.

We believe the immediate risk for alternative managers is the tax reclassification of some of their profits from capital gains to ordinary income. As noted, the managers presently receive preferential treatment, but that has come under scrutiny as legislators seek new sources of income.

Before considering these strategies, qualified investors should consider their investment objectives, risk tolerances and liquidity profile. The strategies discussed can be speculative and entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in the fund, potential lack of diversification, absence of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation, higher fees than mutual funds and advisor risk.

Unstoppable trends



- 77** How generative AI might reshape every sector
- 82** AI-propelled digitization in 2024: five areas of focus
- 86** OPEC's unlikely role in the green energy transition
- 92** For investors, healthcare innovation is on sale
- 98** The implications of G2 polarization on global technology



How generative AI might reshape every sector

Citi Global Perspectives & Solutions

Considerations:

- Generative AI has the potential to be as revolutionary a technology as the printing press, democratizing information, idea communication and creativity.
- The efficiencies that AI can bring to many basic business, legal and medical services will become readily apparent sooner than many expect.
- Outside of technology, financials and fintech are likely to be among the most impacted economic sectors, with natural resources and climate tech the least impacted.
- Generative AI also brings risks associated with IP infringement, misinformation, reinforcement of biases and tools that can increase the severity of cybercrime.

A new age of human progress has dawned. Generative artificial intelligence (AI) – systems that create content such as images, text and audio with human-like results – is a game changing technology. Indeed, we believe it could prove to be as revolutionary a technology as the printing press, allowing people everywhere to enhance their creativity and share knowledge and ideas more widely and cheaply.

The potential of generative AI to advance wellbeing and drive growth is tremendous. For example, new cures for afflictions such as cancer and Alzheimer's disease may become more probable. Likewise, research to speed up the delivery of low-cost clean energy and the development of climate change-resistant crops may accelerate. For the global economy, this technology could transform the nature of work across industries and provide a much-required boost to long-sluggish productivity growth.

But generative AI also comes with risks. Skewed or inaccurate data can lead to results that reinforce gender, racial and many other biases. Gains may accrue disproportionately to select companies at the expense of those without access to similar capabilities.

The production of incorrect materials and falsehoods could harm trust in generative AI itself, as can the issue of AI's impact upon intellectual property rights.

Here, we examine generative AI's potential disruptive impact across broad economic supersectors.

How generative AI may reshape technology

The first wave of potential opportunities centers on the technology value stack. This supersector can be divided into a “value stack” based on impacts to different technologies (**FIGURE 1**). The foundational layer of the stack is “silicon.”

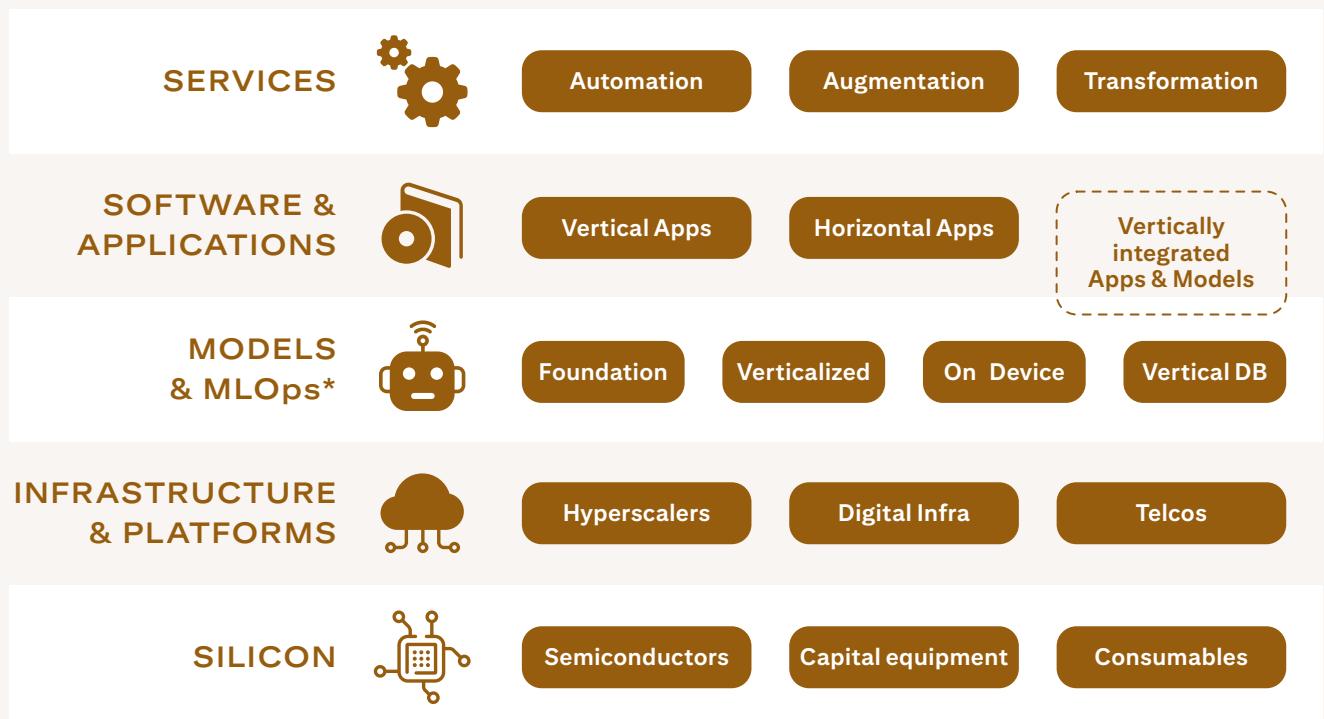
Generative AI requires massive amounts of data processing power. It also needs significant memory (i.e., temporary storage as data is transferred). We therefore see generative AI driving significant demand for multiple kinds of specialized chips, such as graphic processing units (GPUs) and application-specific integrated circuits (ASICs), as well as for memory technology. Producing such technologies requires specialist equipment and materials such as silicon wafers.

A vast amount of data infrastructure will also be built to support generative AI. Hyperscalers, essentially large cloud service providers, and other digital infrastructure specialists will supply much of this. Examples include data center-oriented firms in the US and telecom operators in Asia. Models and machine learning operations cover critical activities such as the development and training of generative AI models. Smaller, more efficient models trained on proprietary data and on-device AI – where activity takes place on specific devices such as users' handsets rather than on cloud computers – are key trends to watch here.

Generative AI is set to impact all types of software and applications. Front office software – including customer relationship management (CRM) and marketing automation and could become ever more insightful and efficient. The same is true of back-office software covering the likes of recruitment, talent management and other HR processes. And while cyber criminals are already seeking to harness generative AI for nefarious purposes, cybersecurity firms are deploying it in the fightback.

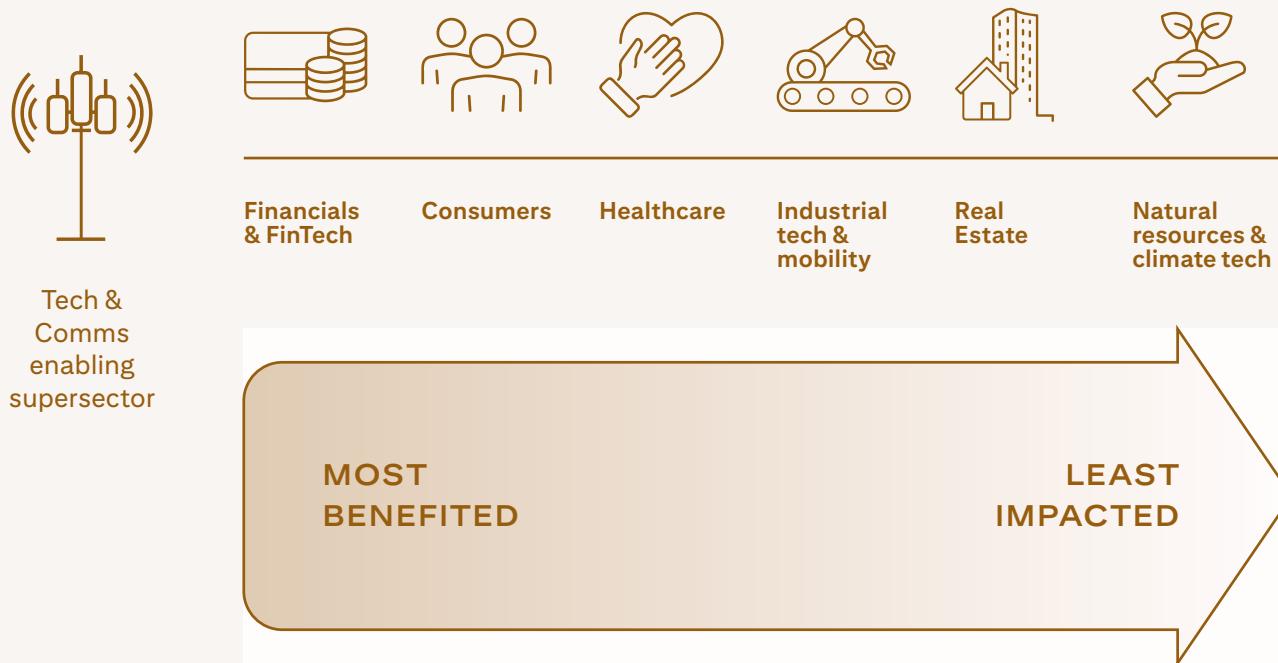
Lastly, we expect an AI-driven step forward in technology services. This includes the likes of consulting/advisory, third-party software development and business process optimization.

FIGURE 1 Generative AI technology value stack



* Machine Learning Operations

© Citi Research 2023

FIGURE 2 Generative AI: Order of impact across supersectors

Note: We show the Tech & Comms supersector separately as it is the enabling supersector. Source: Citi Research 2023

Generative AI and the rest of the economy

Dividing the economy into seven supersectors, Citi Research analysts have considered potential opportunities and challenges from generative AI. Excluding tech – the master sector – financials & fintech are seen as the most likely to be impacted, and natural resources & climate tech the least impacted.

Financials and fintech

Generative AI could potentially help democratize investing and markets, improve algorithmic trading, enable more robust data utilization and allow for better analysis and pricing of insurance risk. Other opportunities include 24/7 improved customer service via chatbots and digital assistants, better fraud detection and prevention and enhanced automated compliance monitoring. Risks to this super sector include generative AI enabling fraud; reputational and regulatory risks from mis-executed AI strategies; AI involvement in market manipulation; malfunctioning AI; and failure of investment managers to synthesize AI properly into their processes.

Consumer

Consumer staples companies – such as food, beverages, household and personal products makers – are exploring and deploying AI tools across their operations. This could mean faster innovation and more efficient data use in manufacturing, supply chain and marketing activities. Enhanced sustainability by reducing waste and energy consumption is a further avenue. Traditional luxury is adapting more slowly, by contrast. Jewelry firms see potential in design and modeling but not yet in cutting and polishing. Consumer retail is exploring the use of generative AI for handling customer inquiries, finding in-store items and supply chain management. The fight against counterfeiting could also receive a boost, particularly in high-end spirits and cosmetics.

Healthcare

AI is likely to have profound impacts in drug discovery and design. It will also create advances in patient selection and recruitment for clinical trials and optimization of sampling/sales calls. Generative AI can also help in communicating with patients, such as reminding them about healthy habits as well as streamlining physician tasks including note taking/data input into digital health records. Improvements could also come in patient risk coding, payment integrity and ensuring that treatments are cost efficient and necessary. Adoption of this technology involves the establishment of systems to protect patient, doctor and hospital privacy, among other data concerns.

Industrial tech and mobility

Industrial processes are increasingly digitized. Internet-of-things (IoT) platforms are allowing end-users to create industry-specific and process-specific apps. Generative AI could significantly broaden the ability to create code, massively opening up the market for analyzing data on industrial IoT platforms. In autos &

mobility, AI has many uses in autonomous vehicles and may drive product development, manufacturing and customer-facing services. Smarter decision making in defense systems could also emerge.

Real estate

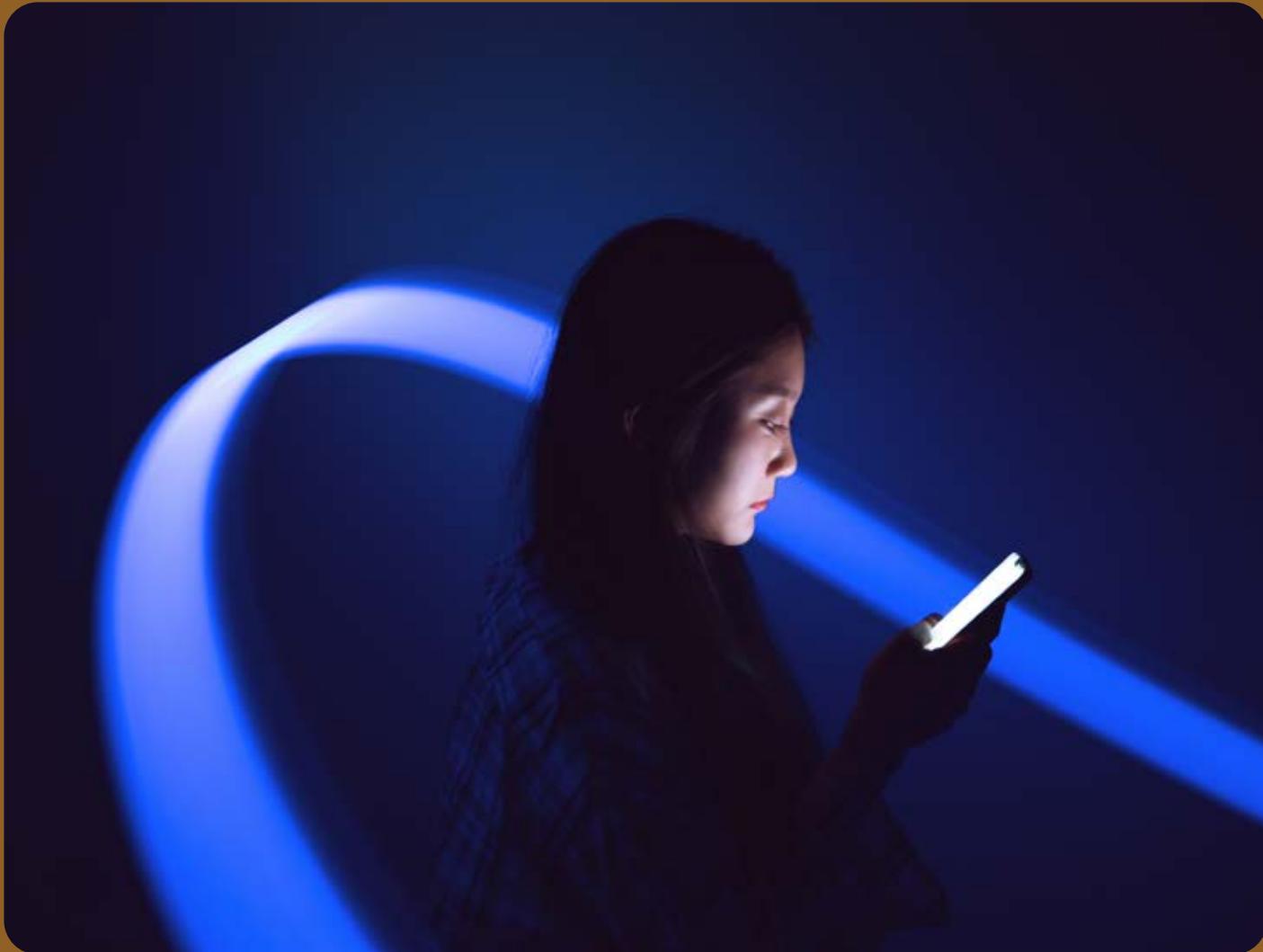
The real estate sector is generally less exposed to generative AI than other sectors. At least for the first few years of the adoption cycle, data center demand is set to strengthen. AI could have a role to play in smart buildings, assisting in the automation of temperature, lighting, alarms, leak sensors and security. Chatbots could enhance consumer-facing applications at hotel and residential properties, meanwhile. Office space could receive a potential boost from AI company demand in the near term but may suffer in the event of mass AI job displacement further out.

Natural resources and climate tech

Workforce productivity gains from AI are initially less likely for this supersector, given its heavy industry skew and relative lack of customer-facing roles. However, opportunities may arise alongside the likes of greater electrification and interconnectivity, along with more smart appliances and more distributed energy (e.g., rooftop solar). AI may be used to analyze the resulting increase in data produced to manage demand and plant usage, leading to more efficient energy use. Less wastage is a risk of sorts for the industry as it results in lower demand.

AI's vast impact

There appears to be no area of the economy that will be untouched by AI or the applications it may enable. Productivity is likely to be enhanced across many industries and embedding AI capabilities in existing processes, like software, will make its value readily apparent to users that used to rely on others to complete tasks.



AI-propelled digitization in 2024: five areas of focus

Joe Fiorica

Head of Equity Strategy

Cecilia Chen

Equity Strategist

Considerations:

- The most obvious beneficiaries of the generative AI revolution have already seen an expanded growth in their market cap in 2023, but there are potential opportunities as we enter the next stages of the buildout.
- It is, most certainly, not too late for investors to participate in the exponential growth of artificial intelligence (AI) technology. While mega-cap tech leaders will continue to provide reliable exposure to the AI trend, we see areas like semiconductor equipment, robotics, drug discovery and cybersecurity as clear beneficiaries from the coming integration of AI into everyday business and personal lives.

1. Mega-cap AI leaders

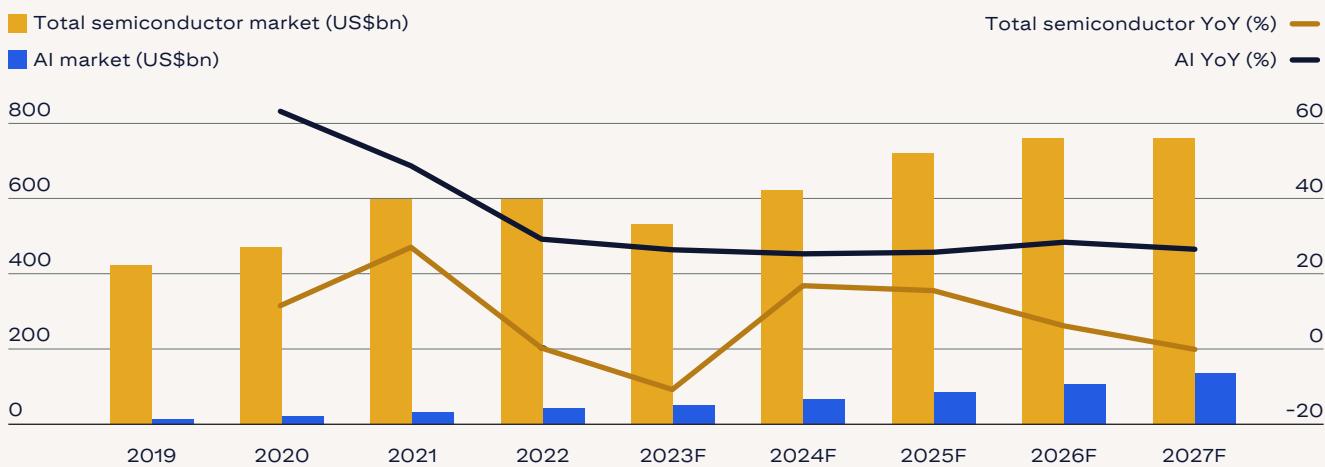
The basic theory behind AI models has been around for decades. The key to building human-like capabilities, for example writing code or even drafting this very article, is the development of a generative AI model that has access to lots of data and sufficient processing power. That's how the mega-cap tech leaders have built their AI edge – they've spent decades aggregating data and designing superfast chips that stood to benefit first from the AI revolution. From this perspective, the big tech rally in 2023 is logical.

We see the rise of the internet as a useful parallel for what's to come for AI. Initially, in the early and mid-1990s, telecommunications firms that already controlled phone lines and were laying the most fiber saw their shares surge as excitement around the internet's promise attracted significant investment. But as internet access became ubiquitous, benefits grew more diffuse as nearly every individual and company saw productivity gains from the ability to use email or create a website to improve their business or quality of life.

2024 is likely to be a year of AI capacity buildout. This dynamic will play out in the aftermath of a period of restrictive financial conditions following the US Federal Reserve's (Fed's) two-year inflation fight. This means that scale and free cash flow will initially favor larger companies. That said, we see opportunities beyond the "Magnificent 7"¹ as ways to play AI over the long run. But we still think portfolios should have exposure to these companies in the year to come given their scale and incumbent status.

¹ The Magnificent Seven stocks: Amazon.com (AMZN), Apple (AAPL), Google parent Alphabet (GOOGL), Meta Platforms (META), Microsoft (MSFT), Nvidia (NVDA) and Tesla (TSLA).

FIGURE 1 For all the promise, when it comes to chipmaking capacity, AI has a lot of catching up to do



Source: Citi Research, Gartner, as of November 17, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. **Past performance is no guarantee of future results. Real results may vary.**

2. AI infrastructure (chipmakers, semiconductor equipment, data centers)

As demand for AI grows exponentially, we expect key suppliers along the global semiconductor value chain to be big 2024 beneficiaries.

Today, chips required for AI computing make up just a small fraction of overall semiconductor manufacturing (**FIGURE 1**). But the rise of generative AI applications has seen demand shift from general-purpose computing to high-performance chips.

Semiconductor equipment providers and fab facilities with the capacity and know-how to produce cutting-edge chips hold near-monopoly positions in their areas of expertise. Leading players in the US, Japan, Taiwan,

South Korea and the Netherlands have dominated the market share for semiconductor fabrication, capital equipment and services that enable advanced chipmaking. For instance, one Dutch company is the sole provider of the lithography equipment needed to imprint silicon with the nanoparticle-sized circuitry. Taiwan's largest fab facility is aiming to at least double its capacity for AI-related chipmaking processes in 2024.

Alternatives to this equipment and manufacturing know-how are hard to come by (though under pressure from Western import restrictions, China is trying – see **page 98**), and there are significant barriers for potential new entrants. As the semi cycle turns upward in 2024, we see an opportunity for semiconductor manufacturer and equipment shares to catch up to the GPU design firms that led the market last year.

3. AI-equipped robotics and automation

The same underlying technology used in generative AI – neural networks – is also the engine that will power more human-like robots and other forms of automation. When combined with long-term trends of evolving supply chains and automobile technology, we see the stars aligning for investment in this space.

As we discuss elsewhere in this report (again, see **The implications of G2 polarization on global technology on page 98**), 2023 saw a boom in US manufacturing construction as the US aims to shift production of high-end semiconductors and cutting-edge batteries closer to home. The buildup of warehouse capacity to support ever-growing e-commerce continues apace. While manufacturing square footage is rising, we doubt that every overseas factory job will be replaced one-for-one with American workers in an already-tight labor market. More likely, firms will continue to invest in automation and robotics to move packages and operate assembly lines, to the immediate benefit of the leading industrial automation and supply chain management companies.

Advanced driver assistance systems (ADAS) are another form of automation reliant on AI technology. These systems take in data from sensors, cameras and ultrasound devices positioned at every angle of a vehicle to gain 360-degree vision to assist and eventually replace human drivers. Creating human-like vision for a fully autonomous electric vehicle may have proved more elusive than originally anticipated (probably not available at scale now at least until 2035, according to the latest projections),² but it will continue to arrive in stages. AI will be the key to powering each advancement.

² "Autonomous Vehicle Reality Check: Widespread Adoption Remains at Least a Decade Away," S&P Global Mobility, September 23, 2023.

³ "Smart Thinking on AI in Healthcare Part 4: Biopharma," June 23, 2023.

4. AI-augmented drug discovery

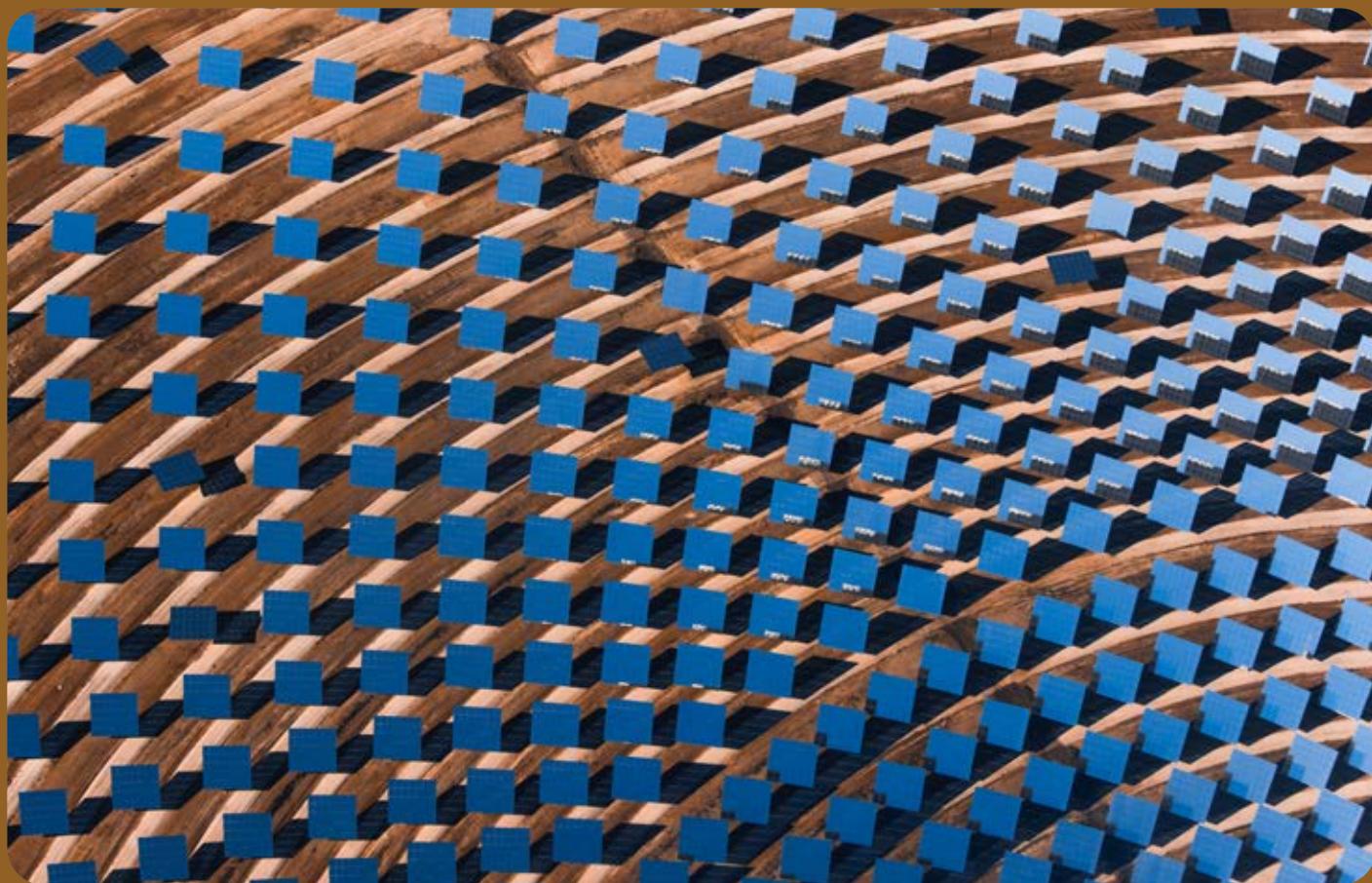
Drug discovery and design is another field likely to benefit from significant AI disruption. In the same way that the latest chatbots can understand natural language, neural networks can also be tuned to interpret the language of the human body: DNA, RNA and the structure of proteins and drug molecules. Drug discovery today is often a game of trial and error. The world's most highly sophisticated scientists pool their collective expertise and effectively make educated guesses on how certain combinations of proteins may affect the human body. Those tests then go through clinical trials, which can take over a decade to complete even before FDA review. According to Citi Research,³ 92% of these candidate drugs fail.

We believe AI will be able to dramatically reduce the failure rate of clinical trials. Given the amount of time and resources required to get a drug tested, approved and marketed to the public, a higher success rate for new drugs will have a dramatic effect on both the cost of drugs and drugmaker profitability.

5. Cybersecurity – AI boosts demand due to threats from AI

Cybersecurity remains the No. 1 investment priority for chief technology officers at large firms. While AI will surely make us all more productive, it will inevitably become another tool for malicious actors to infiltrate networks and devices. Bad actors – even unsophisticated ones – can leverage the latest AI chatbots to help write the code needed to perform a cyberattack. Professional hackers can also leverage AI for pattern recognition and decryption.

But AI can also be deployed to improve cyber threat detection and prevention. Industry-leading cybersecurity firms are more likely to develop and deploy cutting-edge solutions relative to in-house security operations.



OPEC's unlikely role in the energy transition

Malcolm Spittler

Investment Strategist and Senior US Economist

Maya Issa

Senior Investment Strategist

Harlin Singh Urofsky

Head of Sustainable Investing

The world's most powerful oil cartel has been become an accelerator of the green revolution.

OPEC has decided to maximize short-term profits even if it means speeding its own decline. We see two clear sets of winners.

Considerations:

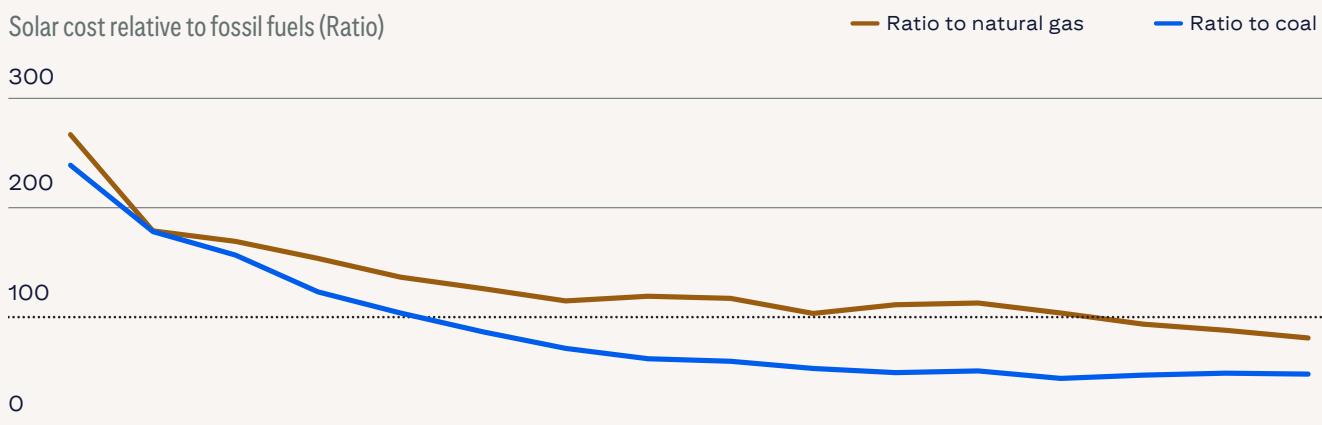
- Over the past several years, whenever oil prices have fallen, OPEC has repeatedly intervened by curbing production and restoring price stability, typically around \$80 a barrel.
- The strategy has been a gift to the green energy transition, creating a floor under the price at which alternative energy producers must compete with fossil-fuel-powered sources.
- One set of winners has been Western producers and pipeline suppliers who get the benefit of the higher price without the production cuts.
- Another set includes copper miners and spot copper, the one indispensable element in the global thrust toward electrification.

The transition from carbon-intensive to sustainable energy sources is accelerating. The cost of new electricity generation from the major alternative energy sources like wind and photovoltaic solar has fallen below that of building an equivalent new fossil-fuel-fired plant (**FIGURE 1**). Major, ongoing advances

in green technology and economies of scale are driving this historic shift.

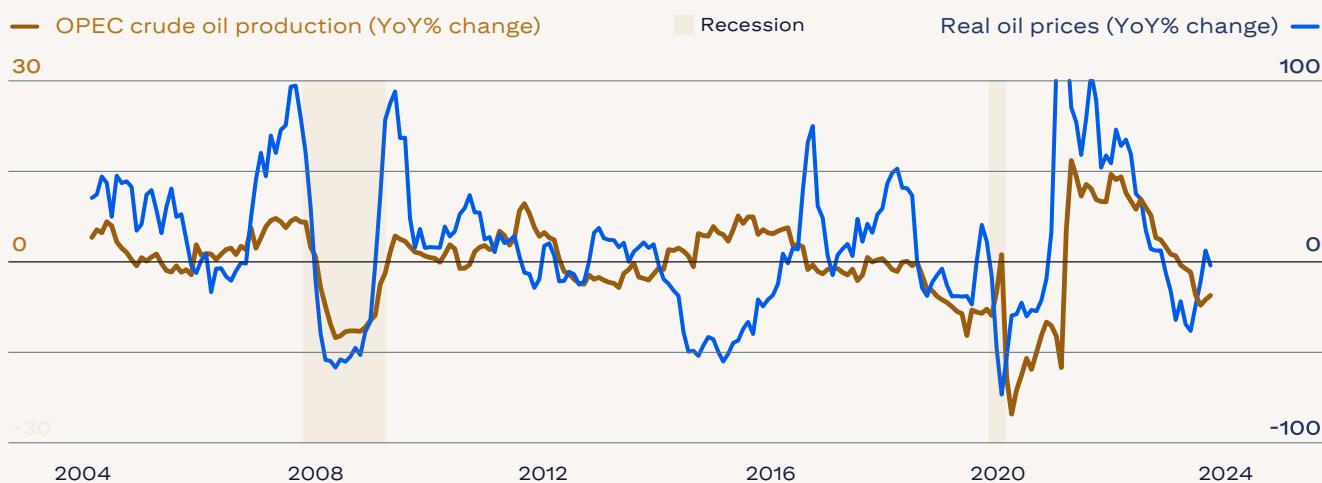
But there is another, unlikely driver that has come into sharper focus: the vitally supportive role of OPEC, the Organization of Petroleum Exporting Countries.

FIGURE 1 Global cost of adding new green electricity capacity relative to building an equivalent new fossil-fuel-fired plant



Source: Bloomberg as of December 31, 2022

FIGURE 2 Since the pandemic, OPEC production cuts have kept oil prices from falling too low



Source: Haver Analytics as of October 31,2023. Past performance is no guarantee of future results. Real results may vary.

The world's most powerful oil cartel has become an accelerator of the green revolution. Climate change and the rapidly falling cost of energy alternatives likely signal OPEC's ultimate demise. Thus, OPEC is faced with two choices: delay the inevitable by expanding production, lowering fossil fuel prices to compete with the price where alternatives compete, or alternatively maximize their current income by maintaining higher prices for as long as possible, even by reducing output to do so.

Evidence thus far suggests that OPEC is opting to increase its cash flow while making the likelihood of a faster rate of decline for oil output more likely. On repeated occasions over the past several years, whenever oil prices have fallen from lack of demand or higher supply in other parts of the world, OPEC has consistently intervened, curbing production and restoring price stability, typically around \$80 a barrel

(FIGURE 2). This strategy has been an unmitigated boon for the green transition, which has entered a critical stage of more aggressive developed-market government support aimed at accelerating private-sector take-up: a take up that's considerably more likely with oil at \$80 than \$40.

OPEC's gambit has produced other unexpected winners. While OPEC's strategy is designed to maximize its short-term profits, it is doing so by "taking the hit" for all oil and gas producers as it lowers its own production. That is not the case for Western producers, pipeline suppliers and other services. These companies get the benefit of the higher oil price without the accompanying production cuts and, in yet another irony, may be among the biggest winners of this next, strange phase of the energy transition (see No. 3 in **Our top 10 high conviction potential opportunities** on page 54).

The right cartel for the job

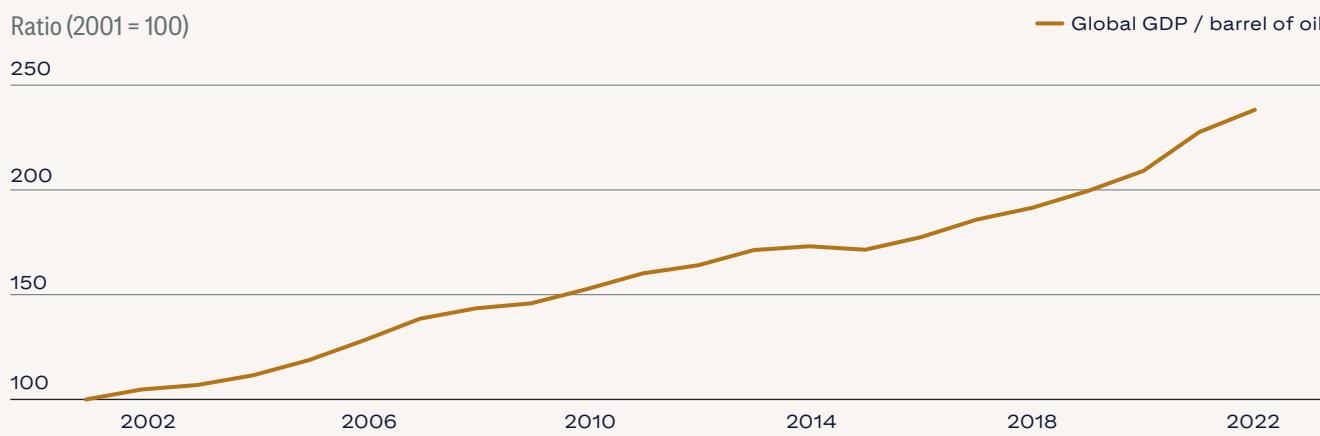
In 2015, world leaders congregated in Paris for the 21st Conference of the Parties (COP21). Their unanimous resolve led to the Paris Agreement – a global pledge to combat the looming threat of climate change. Their core objective? Swift transition from carbon-laden fuels to greener, sustainable alternatives that would keep a global temperature rise under 2° Celsius above pre-industrial levels.

Such a shift isn't solely reliant on technological innovation or political will. It is also a function of the resources available for communities to wean themselves from their dependency without destroying growth or exacting widespread scarcity and pain. In recent COP conferences, there has been particular emphasis on the balance between these competing priorities in developing countries, which

are now responsible for some two-thirds of all global emissions,¹ but also would be among the biggest casualties from a sudden withdrawal or skyrocketing in the price of traditional energy sources without ready and affordable replacements.

From early in the COP deliberations, it became apparent that the free market would need to play an important role in allocating these resources. Equally apparent was that the free market is not at its most efficient in pricing in externalities such as the impacts of climate change. Many of the actions taken by individual governments since, like the EU carbon tax or the US tax breaks and power plant rules, are designed to force those externalities into the free-market pricing and imbue it with a greater sense of urgency than it could muster on its own. But there is also another way to artificially set prices to incentivize the desired behaviors: let a cartel do it.

FIGURE 3 From at least a pure gross domestic product (GDP) standpoint, the global economy is increasingly weaning itself from oil



Source: Haver Analytics as of November 15, 2023.

¹ "Developing Countries Are Responsible for 63 Percent of Current Global Carbon Emissions," Center for Global Development, August 18, 2015.

FIGURE 3 From at least a pure gross domestic product (GDP) standpoint, the global economy is increasingly weaning itself from oil



Source: Haver Analytics as of October 31, 2023.

OPEC's long shadow in the green transition

Imagine if OPEC took a more aggressive stance “against” the green transition. We would have seen a collapse of the market price for oil and gas. While this would have produced undeniable economic benefit for households and businesses around the world, it would have come at a cost. OPEC could have set back the transition to a sustainable energy economy by years, possibly decades.

Instead, we have a situation where OPEC has kept the oil price at an almost ideal level to drive alternative energy development forward. Oil prices are low enough where many people can still afford to fill up their car and power their home until more green capacity becomes available, but high enough to see further investments in the critical infrastructure needed to keep the transition at least more-or-less moving

forward. That’s why it is no coincidence that the most recent COP conference this November is taking place in Dubai, where OPEC participated for the first time.

The question is, what is OPEC’s end game? We think the answer comes down to a cold, hard self-assessment of its own future. Saudi Arabia, the largest of the OPEC countries, for example, has staked out an ambitious agenda reimagining the entire country as a global commercial hub with a diverse economy built around finance, tourism, technology, services and abundant solar power, not oil. Almost every aspect of its long-term planning is geared toward this one set of goals, but those plans also take money. And as vast as the kingdom’s resources are, it seems to recognize that even more is needed, and at a faster pace apparently than even has been earned in many periods before. That’s why OPEC is “taking the cash now” option by keeping prices higher for longer.

Unexpected investment implications

We see a range of major beneficiaries of OPEC's decisions. Near the top of the list (and No. 3 on **Our top 10 high conviction potential opportunities on page 54**) are Western energy producers. These companies, which are not acting as the supply shock absorbers for marginal oil demand, are clearly benefitting as they produce at full volume.

Green energy producers with strong balance sheets can also see opportunity – eventually. Despite the surge of large-scale investments into green energy over the past few years, substantial profitability among green energy producers remains elusive. Much of the reason has to do with a very different supply-demand dynamic associated with producing green energy. With a primary input that is essentially free, all the economics are geared toward producing and selling the output at the cheapest cost possible. This requires large amounts of capital for infrastructure. And with today's high interest rates, that has become more expensive and harder to come by.

Some companies, through sheer dint of their size and regulated rate bases, can eventually get back to generating consistently respectable returns. They'll do this by becoming a cleaner version of an electric utility. Still, that's not an individual idea of a vehicle for short or even medium-term growth.

Substitutes for the green technologies

Higher up on the green energy value chain are the producers of the technology used in green energy production. In recent years, some of these companies have produced impressive earnings and share price growth. This is largely a high-scale, low-margin business. A handful of producers in China dominate the markets for solar panels and electric batteries, so that few other companies in the world can compete.

Investment in these leading producers is caught up in the geopolitics between China and the US. So, while there will be higher-beta opportunities in specific technologies like green hydrogen or new battery chemistries, it's not yet clear who the winners will be.

Copper connects us to a green future

For these reasons, in addition to Western energy producers, we favor irreplaceable inputs. We especially like copper, a commodity that, like oil and gas, benefits from natural supply constraints, but with much more durable, now-booming demand (see No. 4 on **Our top 10 high conviction potential opportunities on page 54**). For the foreseeable future every aspect of the global thrust toward electrification will require increases in global copper production and recycling.

In contrast, lithium, the highest-value input in today's leading battery chemistries, also benefits from near-term demand pressures but could increasingly face substitution risk as rival technologies emerge. Sodium could eventually crush lithium on price and availability. The only other metal able to compete with copper's conductive powers, meanwhile, is silver, which is considerably more expensive and rarer. Beyond that, the next threat on the horizon would be the first generation of commercially available room-temperature superconductor materials, decades from now, at the earliest.

By then, OPEC should be nearing the final phases of its exit from the center stage of global supply and demand, by which time all of us – investors and humans alike – could owe it an enormous debt.



For investors, healthcare innovation is on sale

Diane Wehner

Senior Portfolio Manager – Equities

Nathan Weinstein

Global Healthcare Analyst

Joe Fiorica

Head of Equity Strategy

We all share the inevitable journey of aging and more of us are farther along on that journey than ever before. According to American Association of Retired Persons (AARP), in the US alone, 10,000 people turn 65 each day. According to the National Council on Aging, nearly 80% of adults 60 and older have two or more chronic conditions.

— In the US alone, 10,000 people turn 65 each day.

Healthcare services consumes an ever-growing share of our household expenditures and is becoming a financial burden on many governments and societies. Reversing that tide requires better health outcomes at a lower cost of care. Within the Healthcare sector, that will necessitate a shift from the traditional approach of managing symptoms to addressing underlying causes, and from treating disease to preventing it.

Innovation is leading these healthcare paradigm shifts. Exciting technological advancements are being developed and deployed across every sub-sector of Healthcare, promising transformative breakthroughs in medicines, procedures, hospital care, nutrition and preventative actions in people's daily lives.

Since the mapping of the human genome at the turn of this century, various biologics-based platforms have emerged to treat a wide array of medical conditions. Biopharmaceutical companies are leveraging these platforms and successfully advancing drugs through the approval process to finally offer hope for age-related mysteries like Alzheimer's. We also see less toxic, more targeted and more personalized approaches to treating cancer (still the second-largest killer of people over the age of 65).

Treating obesity is an example of how healthcare can change rapidly. Now, with a new class of weight-loss medications, we see lower rates of diabetes, heart disease and associated co-morbidities among its growing user base.

Of course, innovation takes capital. And higher interest rates have raised the cost of financing research and development (R&D), the foundation of the innovation cycle.

Higher rates and tighter capital spending, along with regulatory uncertainty and an ongoing hangover from COVID-19, weighed on Healthcare share prices in 2023. Even the remarkable success of the weight-loss drugs turned into a kind of headwind, as investors shunned (prematurely, we believe – see **Anti-obesity drugs: Healthcare's "AI" moment?** box) the stocks of insulin, device and heart medication makers in the belief that demand for these solutions would decline as waistlines slim. To boot, the year marked the first earnings recession for Healthcare shares in decades.

For those dialed into the twin unstoppable trends of longevity and innovation, however, the 2023 downturn has created opportunities. Many of the issues that held back Healthcare stocks are transitory, in our opinion, thus creating a favorable setup for the sector's potential outperformance in 2024.

FIGURE 1**Share price returns for the pair of manufacturers responsible for the two leading GLP-1 weight loss drugs versus the rest of the developed market Healthcare sector**

Source: Bloomberg as of November 22, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

A perfect cyclical storm

A key headwind to drug development over the past two years has been higher interest rates. The trend has been especially tough on early-stage biopharma companies that rely on external funding to fuel their R&D efforts. Now, even large biopharma companies are reprioritizing their drug development pipelines and slowing the pace of mergers and acquisitions.

Concurrently, as the world has moved from a pandemic to endemic stage of COVID-19, the demand for vaccines and therapeutics has plummeted. While the diminishing impact of COVID is tremendously positive for the world, the glut of vaccine inventories and manufacturing capacity is negatively impacting the vaccine developers and the life sciences tools (LST) companies that supported them.

A resurgence in healthcare procedures post-COVID has been positive for medical device companies but negative for health insurance companies that are having to pay out more in benefits.

Regulatory uncertainties

Combatting high drug prices may be the one issue in the US Congress that Democrats and Republicans can agree on, and in the past two years they have taken a serious run at drug price reform. The 2022 Inflation Reduction Act (IRA) has empowered Medicare, for the first time, to negotiate directly with pharma companies on pricing for a certain focused set of high-priced drugs.

How significant is that? Significant enough for the pharma industry to file a barrage of lawsuits in 2023 seeking to strike down the measure before the first price reductions can take effect in 2026.

The impact of the new IRA framework may not be universally terrible for drug company profits. Drugs are only eligible for the negotiations after they have been on the market for seven years. So, as established high-priced drugs get added, some analysts have noted that Medicare could use the savings to expand coverage for other, newer medications.

The new regulations could potentially impact how pharmaceutical companies direct their R&D resources. The bill provides more runway for biologics than for less complex, small-molecule drugs. So, some biopharma leaders are contemplating a shift in their pipeline focus away from small molecule drugs towards an emphasis on biologics.

In addition, a pharmacy benefit manager (PBM) reform bill is now moving through Congress as well. PBMs are pharmacy middlemen that administer prescription drug benefits for payers and negotiate drug prices with manufacturers. As written, the legislation would bring greater transparency to their business, a first step perhaps toward lowering retail drug prices and middlemen profits. While the debate continues, the overhang for PBMs and their parent companies – which include the insurer, pharmacy and provider network conglomerates that comprise some of healthcare's largest names – remains.

Innovation and investment lead a 2024 recovery

We think healthcare investors can climb this wall of worry in 2024.

We expect the Federal Reserve to ease its restrictive monetary policies over time. And we are already seeing a stabilization in biotech funding. Relaxing of financial conditions would support increased drug R&D, which, in turn, would help lift beaten-down biopharma and LST companies. Excess COVID inventories should be worked off and overcapacity fully redeployed to new advancements in drug development.

We also see a 2024 earnings recovery as likely. Demand for life-improving drugs, therapeutics and services will always be more resilient than discretionary consumption segments.

A pickup in dealmaking should see cheap small- and mid-cap healthcare shares get gobbled up by large biopharma companies, while easing monetary policy from central banks should help boost depressed valuations of other early-stage companies.

Right now, healthcare innovation is “on sale.” We are particularly drawn to discounted valuations in the medical technology and tools segments. Some of these are the necessary “picks and shovels” of the drug development ecosystem. They work in conjunction with their biopharma partners in the early stages of cell line production and later in the purification, formulation and packaging of an approved drug. Others are the producers of the new generation of devices either worn on or implanted in the body to address chronic conditions like heart disease and diabetes. Another investment opportunity is the makers of the equipment used in robotics-assisted surgery. Atypically, both large and small companies have suffered. Many well-

established firms have seen their prices underperform alongside the more speculative pre-revenue areas of the Healthcare sector. In the year ahead, cash-rich, now-cheaply-valued companies that help facilitate drug research and development, save costs and improve patient outcomes look like a safe way to play the Healthcare sector’s convalescence.

We also see potential opportunities in value-based care, a new paradigm that prioritizes proactive measures to prevent illness, departing from the traditional fee-for-service that incentivizes treating patients after they get sick. As with drug discovery (see [AI-propelled digitization in 2024: five areas of focus on page 82](#)), this is an area of healthcare where generative AI could have a profound impact. The new AI, like the old AI, is still only as good as the amount and quality of data it’s fed.

Healthcare has long sat atop a rich trove of data about symptoms, treatments and outcomes. Due to privacy concerns (and inertia), much of this data has been too siloed to be of much use. Today, though, through the tremendous consolidation – and innovation – happening across insurers, PBMs, pharmacy chains and providers, more of that data is being harnessed and hitched to the new analytics and predictive engines.

This shift, too, is helping to promote a more holistic, preventive and patient-focused approach to keeping people healthier so they can live full, more active lives as they age.

Anti-obesity drugs: Healthcare's "AI" moment?

The human body is exceedingly complex. Super-computers and the most advanced processing equipment have only just begun to achieve some of the brain's most fundamental capabilities. While full human genome sequences have been mapped and published for decades, scientists are still racing to pinpoint the exact causes of debilitating conditions like cancer, diabetes and Alzheimer's. Over the past few years, though, one enduring mystery has been solved: why we have such a hard time not reaching for those cheese fries.

In the realm of human metabolism, it turns out that an important hormone, GLP-1, contributes not only to insulin production but also appetite suppression and emptying of the stomach. GLP-1 drugs have been used to treat type 2 diabetes for years. But their more recent use to induce weight loss has taken the healthcare field by storm. According to the US Centers for Disease Control, the US obesity rate stood at 42% as of 2020. These drugs, generically called semaglutide and tirzepatide, have shown remarkable promise in helping individuals manage their weight – producing an average 15-20% reduction in body weight – reshaping the landscape of obesity treatment and potentially other areas of medicine as well.

One significant ramification of GLP-1 drugs is their potential to reduce the risk of heart disease, confirmed by a bombshell of a study this past August. Obesity is a well-established risk factor for cardiovascular problems, including hypertension and coronary artery disease (CAD). By helping individuals shed excess pounds and maintain healthier body weights, GLP-1 drugs may contribute to a decline in obesity-related heart issues. This has the potential to lead to fewer heart attacks and strokes, particularly in middle-aged and elderly populations where aging, weight gain and heart disease have so often gone hand-in-hand.

The relationship between obesity and sleep apnea is well-documented. Excess weight can lead to airway obstruction during sleep, resulting in disrupted breathing patterns and reduced sleep quality. So, the broader use of GLP-1 drugs could lead to a better night's sleep and improved well-being, perhaps allowing some individuals to avoid having to sleep with a CPAP machine. The same goes for patients who might otherwise need a knee replacement or take daily insulin for diabetes.

What these possibilities don't mean is that all medical device insulin and heart medication manufacturers will soon be out of business, as the market almost seemed to be pricing in this fall. The body, as we said, is complicated, and medicine rarely progresses in such a binary fashion. Take statins. As effective as they've been in helping to arrest CAD, the average CAD patient today still takes over three different medications a day (and the average congestive heart failure patient close to seven).

So, we are approaching healthcare's "AI" moment on parallel tracks. While valuations for the GLP-1 makers are feeling full, their near-term demand and earnings prospects keep us cautiously bullish. We are mindful of headwinds, including the drugs' high (\$1,000+-a-month) price and the open question of insurance coverage. It will also be important to watch how digestive side effects affect patient compliance – especially given that, without behavior modifications, a patient who stops either drug will see much of the weight come right back on.

At the same time, we're eyeing the low valuations of stocks caught in the GLP-1s' wake. It's another reason we like medical technology & tools. We have difficulty seeing how glucose monitor and robotic-assisted surgery makers – many of which have seen their shares crushed – will experience much, if any, actual hit to their bottom lines. So, we're selectively looking for opportunities where we think the reaction is exaggerated or the conclusion is just plain wrong.



The implications of G2 polarization on global technology

Ligang Liu

Head of Asia Pacific Investment Economic Analysis

Charles Reinhard

Head of North America Investment Strategy

David Bailin

Chief Investment Officer

Kerry White

Head of North America, Citi Investment Management

As the rivalry between the US and China intensifies and becomes the new norm, the companies and trading partners most caught in the middle scramble to keep up with the demands of a global tech sector that is effectively cloning in two.

Considerations:

- Amid the splintering of the old "Group of 2", technology has become an industrial and political battleground.
- While the bifurcation of tech industries is not the most efficient way to build global supply chains, it does have some benefits.
- The US and its allies have seen a reverse flood of onshoring jobs and China has cut into the West's lead in advanced chipmaking.
- We favor the agile enablers of these shifts, notably semiconductor equipment makers.

The US-China relationship is the most important and complex in the world today. Both countries have global reach but different histories, cultures, ideologies and forms of government. Still, for decades, this "Group of Two" (or "G2") relationship appeared to be working well for both sides, greater Asia, and the world.

Over the past 10 years, there has been a growing rivalry as China sought to expand its global political and economic influence. The response of the US has been to use technology as the centerpiece of its policy responses. Given China's ability to copy US intellectual property (IP), the US is limiting its access to chips, chip manufacturing technology and other IP deemed critical to US national security. Further, the US and the West have taken the position that some tech goods manufactured in China present a security

and surveillance threat. This dynamic has created a fissure between the countries and caused China to seek to develop its own technology industrial base.

While the bifurcation of tech industries is less efficient and cost-effective than a globalized model, it is not without some offsetting benefits. The redundancies now being built in semiconductor supply chains, electric vehicle (EV) batteries and solar panels is a result of this divorce. They add to the economic activity in and around both neighborhoods. It is also somewhat inflationary over the short run as the two compete for resources.

Recently, as talks have picked up between China and the US to thaw relations, another possibility has emerged as well: that the added distance ultimately makes for a more civil and stable arrangement.

Where did G2 polarization come from?

In June 2018, the Trump administration imposed tariffs on China to combat what it felt were unfair trade practices (**FIGURE 1**). That led to a series of tit-for-tat trade war actions by the two countries. The succeeding administration of President Biden left these measures in place.

Faced with an absence of vaccines and hospital capacity, China implemented a strict “zero-COVID” policy that made travel into, out of and within China all but impossible, and instituted lockdowns that inhibited global manufacturing and trade. This put great economic pressure on China and made it more isolated.

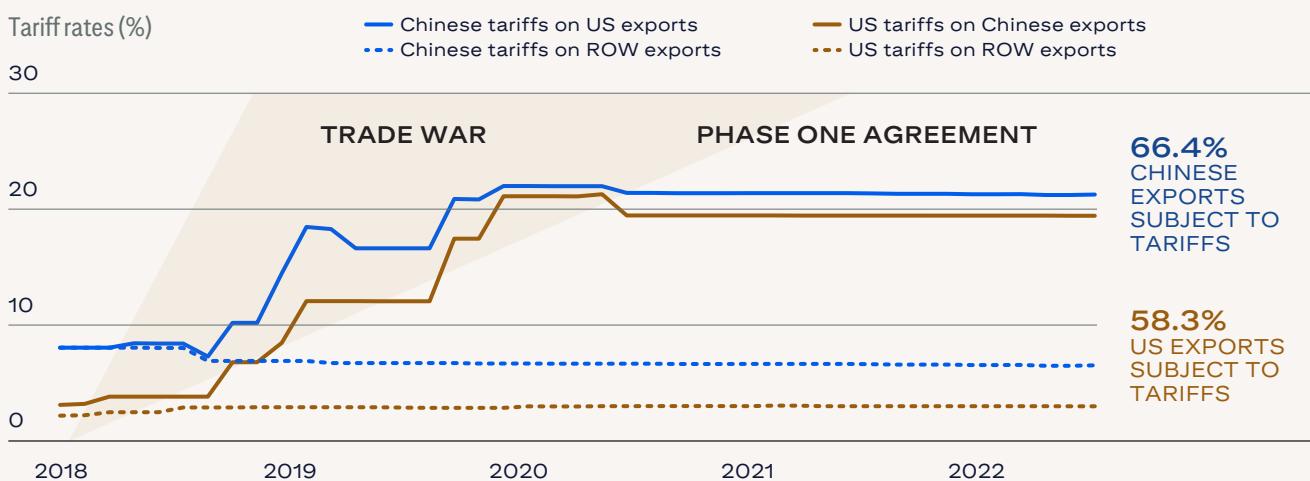
During this time, the US banned the export of certain chips vital to China’s development of advanced weapons systems and China followed by restricting

exports of rare earth elements essential to the US production of EVs. Then the Biden administration doubled down by invoking national security to make it harder for US firms to invest in certain Chinese companies.

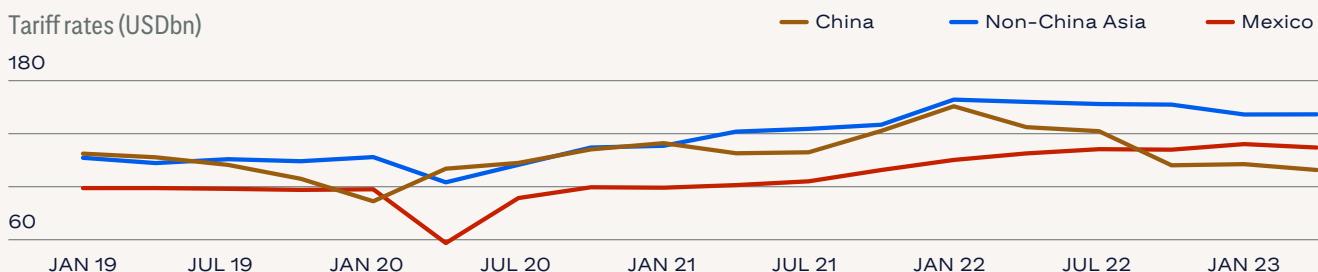
As tensions rose, the issue of Taiwanese independence became a greater political hot button. As a result, China accelerated its military operations in the Taiwan Strait even as Nancy Pelosi and other US elected officials flew into Taipei in solidarity.

A rougher-than-expected unwinding of a property bubble added to China’s economic woes. China stepped up enforcement against alleged espionage activities by the Chinese operations of foreign firms. Faced with a souring political and economic environment, a growing number of Western businesses began rethinking their future in the country.

FIGURE 1 US-China tariffs on each other and the rest of the world



Source: UN Comtrade, Trade Map and Market Access Map, as well as announcements from China’s Ministry of Finance’s and USTR, as of November 22, 2023.

FIGURE 2 US imports from China, non-China Asia and Mexico

Source: Haver Analytics, as of November 22, 2023. Note: Non-China Asia includes Taiwan, South Korea, Japan, and some key ASEAN such as Singapore, Vietnam, and Malaysia.

FIGURE 3 US reshoring & FDI job announcements

Source: Reshore.org as of Aug 18, 2023. For illustrative purposes only.

Impacts of the new status quo

The impact of G2 polarization on global supply chains, trade patterns and foreign direct investment (FDI) is plain to see in the data. For example, China's exports to the US have dropped 30% since peaking in the first quarter of 2022, as exports from Mexico to the US have steadily risen and ex-China Asia exports to the US have leveled off (FIGURE 2). Meanwhile, there has also been a sharp drop in semiconductor exports from the US and two of its allies – South Korea and Taiwan – to China, with year-to-date declines of 29%, 24% and 13%, respectively, through October 2023.

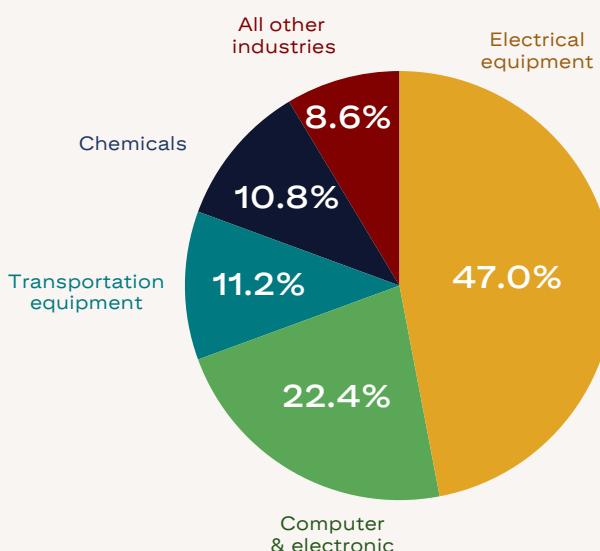
In March 2023, the US entered an agreement with Japan to help strengthen each other's critical minerals supply chains and reduce their dependency on China through, among other strategies, the development of EV batteries using fewer rare earths.

In the US, manufacturing job announcements related to reshoring and FDI have climbed and may top 400,000 in 2023 (FIGURE 3). If that happens, the US will have recovered 40% of the 5 million jobs lost to offshoring prior to 2010, according to the Reshoring Initiative. Many of the job announcements are skewed toward areas targeted by recent US industrial policy.

Almost half these job announcements have been in the electrical equipment category which includes EV batteries (FIGURE 4). The computer and electronic products category incorporates solar panels, robotics, drones and semiconductors. The chemicals category: pharmaceuticals, renewable fuels and rare earth products.

FIGURE 4

Percent of reshoring and FDI US job announcements by industry, 2023 projected



Source: Reshore.org as of Aug 18, 2023. For illustrative purposes only. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

¹ AmCham Shanghai Releases Report on Business Climate in China. September 18, 2023, www.amcham-shanghai.org/en/article/am-cham-shanghai-releases-report-business-climate-china

Western businesses leaving China

US-China tensions and the slowing Chinese economy have chipped away at the confidence of US businesses operating in China. In 2023, the American Chamber of Commerce (AmCham) in Shanghai found that just 52% of 325 firms were optimistic about the five-year business outlook in China, the lowest level since the annual survey began in 1999.¹ Uneasiness over China's policies and regulations toward foreign companies were another area of concern.

One key takeaway is that 40% of these firms, up from 34% a year ago, are currently redirecting or looking to redirect investment originally intended for China, mainly to Southeast Asia. Part of this may reflect a wider shift in global manufacturing and supply chain management. But some firms clearly view US-China relations as being important to their business success, with 46% believing that the bilateral relationship will continue to deteriorate.

At the same time, the size of China's market, its influence and its growing middle class cannot be ignored. When asked about moving existing manufacturing and sourcing outside of China, 74% of the US firms in the AmCham survey said they were not considering it. But it seems a growing number see manufacturing in China these days as a strategy for selling in China rather than as a strategy for more efficiently selling to the entire world.

China has also been on the move. The US high-tech embargo and sanctions on China have pushed China to become more self-reliant and innovative. The result has been that Chinese companies have been making significant strides in semiconductor manufacturing and the fifth and sixth generation (5G and 6G) of mobile communications. That's in addition to China's leadership in 37 of 44 technologies tracked by the Australian Strategic Policy Institute, in fields ranging from batteries to hypersonics. China's particular strengths include nanoscale materials and manufacturing, hydrogen and ammonia for power generation and synthetic biology, to name a few.



Forward implications

The upcoming decade could be fraught with tension. While Taiwan's electorate seems like it could be more reluctant to stir the pot, its January 2024 elections will be watched carefully by China, the US will be monitoring China's reactions, and vice-versa. The November 2024 US election cycle is apt to come with hawkish geopolitical rhetoric. Looking past the rhetoric, actions like deterrence and the projection of military power could determine if the floor for future areas of engagement and cooperation between the world's two largest economies rises or falls.

The Biden administration describes its sensitive technology strategy regarding China as a “small yard and high fence.”² The meaning of “small” has varied over time. The administration considered restricting investment in Chinese companies working in biotech and critical mineral mining. There was also a question as to whether chip-related prohibitions would extend

so broadly that they could start to severely impact China's electronics and EV industries, not to mention the profits of large Western tech companies for whom those industries are a major market.

In recent months some more clarity has emerged. After the latest updates issued in October, a few US and European chip designers and equipment makers balked at the stepped-up provisions closing loopholes in the types of high-end technology banned, while also acknowledging that they do not at this time anticipate a material effect on sales.

China has carved out some more breathing room for itself as well. Huawei's latest cell phone, the Mate 60 Pro, features breakthroughs in 5G and integrated circuit chip manufacturing and comes with satellite communication capability – something even the iPhone does not have.

China's response to tech competition

As part of the Western embargo, China can no longer import the world's most advanced chipmaking technology – Dutch-made “extra ultraviolet” (EUV) lithography machines. As a workaround, China has developed a new process using a particle accelerator to imprint the nanoparticle-sized circuitry. A vast factory is now under construction in Xiongan. As recently as

² Remarks by National Security Advisor Jake Sullivan on Renewing American Economic Leadership at the Brookings Institution, April 27, 2023

this year, Chinese producers were believed to be eight years behind their counterparts across the Strait in the processing power and speed of their chips.

Coincidentally or not, during the May 2023 G7 summit in Hiroshima, President Biden proclaimed that ties with Beijing would “thaw very shortly.” High-level officials from both countries subsequently started to meet more frequently, setting the stage for a reasonably constructive mid-November face-to-face meeting between Biden and Chinese President Xi Jinping held on the sidelines of an Asia-Pacific Economic Cooperation forum in San Francisco. China still receives billions in US-designed chips every month and the US still depends on Chinese critical minerals. The US is China’s largest export market. After Canada and Mexico, China is the US’s next largest. For better or worse, these two countries remain highly reliant on each other. Now, with each perhaps feeling a little more independent, just maybe they can stick a bit more to “business as usual.”

Investment implications

As investors, we believe in seeking geographical portfolio diversification with allocations that capture exposure to the global champions, agile players and beneficiaries of the supply chain transitions and changing trade patterns underway. In addition to the US and China, these companies can also be found in other areas of the world, including friends, allies and trading partners such as Vietnam and Mexico.

Broadly speaking, despite the return of jobs to the US, it would be cost-prohibitive to replace production and manufacturing performed in China on a one-to-one basis. Manufacturers integrating robotics and AI-enabled logistics to combat the higher labor costs associated with reshoring stand to benefit the most. Beneficiaries also include the suppliers of that equipment, such as the large US, Japanese and European industrial automation and supply-chain

management firms. Another winner looks to be the large industrial real estate investment trusts sitting atop much of the zoned-industrial and warehouse properties on either side of the Atlantic.

Within the most sensitive parts of supply chains, the leading Taiwan-based chip fabricators would prefer not to have to build out new capacity in the US and Europe as Western security concerns are pressuring them to do. (The economics would be better if they could keep the activity in Taiwan.) For the producers of the high-end equipment going into those fabs, however, all that new fabrication building is a net positive (assuming they can keep up with the orders). New capacity building in the US, Japan, and South Korea should more than offset the decline of the equipment makers’ business in China, which increasingly, it appears, will have its own high-end suppliers to invest in.

Moreover, for agile companies there is a cyclical element at play. We think there will be a tailwind for the most global players when manufacturing and economic growth accelerate under less restrictive monetary policies in 2024–2025.

Regional outlook



106 Asia: faster growth for 2024 as headwinds recede

115 Europe: a slow recovery, with stronger equity returns later into 2024

120 Latin America: potential opportunities amidst low valuations

126 North America: an emerging set of new opportunities



Asia: faster growth for 2024 as headwinds recede

Ken Peng

Head of Asia Pacific Investment Strategy

Asian economic growth should improve in 2024 as we expect headwinds from high inflation, US policy tightening and China's slowdown to abate.

We see opportunities in Japanese equities and currency, India's longer-term development, as well as some sectors in China as its policies take hold to dig its economy out of a deep slump.

Considerations:

- The easing phase in China's policy cycle for improving risk/reward in Chinese industrials, consumer discretionary and government-priority technology segments may pose opportunities.
- We are maintaining our overweight to Indian equities despite still-high valuations, with a focus on materials, industrials and staples.
- Investors should consider Asian equity exposure that are supported by a backdrop of broader growth, lower inflation and interest rates, as well as a softer US Dollar.



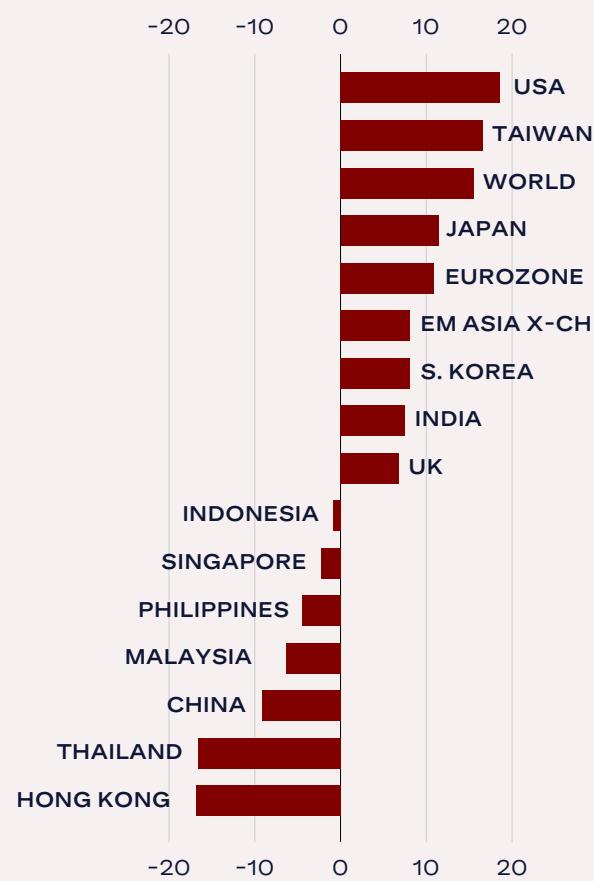
Despite headwinds from US Federal Reserve (Fed) tightening and China's sputtering economy, Asian economies and markets collectively held up relatively well in 2023. The foundering of China's property sector and the country's shorter-than-expected bounce from its long-delayed COVID reopening created a drag on the entire region as Chinese consumers and businesses were reluctant to spend at home or abroad. High inflation in some Asian economies shrank trade volume and restrained real consumption growth. But others benefited from high commodity prices. And balance of payments stayed surprisingly even-keeled despite the surge in the US dollar (USD) and US interest rates (reflecting the region's relatively healthy external financing conditions). Geopolitical tensions were also largely a wash: some markets like Japan and India benefited from supply chain diversification while China, Korea and Taiwan were negatively impacted.

These colliding forces resulted in the wide divergence of performance experienced by investors across the region. Hong Kong led regional stocks on the downside, shedding 15% through November 24, 2023 (worse even than the 8% slide in mainland Chinese shares). In contrast, Taiwan surprised with a 21% total return, rivaling even the US, as the still-Taiwan-centric global semiconductor industry roared back to life. Of special note: Japan had the region's second-highest equity returns, up 15%, as its reflation and policy reforms lured back long-absent global investors. India's returns approached 10%, after consistent outperformance in 2021-22 (**FIGURE 1**).

FIGURE 1

**In a turbulent year like 2023,
Asian equity markets saw wide
divergence in performance
(USD terms)**

2023 YTD MSCI equity market total returns (%)



Source: Bloomberg, MSCI Equity Market Total Returns Indices, as of November 14, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

A better 2024 ahead

In 2024, the macro headwinds facing Asia broadly will likely subside. The Fed is past its peak tightening and may shift into easing mode if US employment weakens as we expect. This should put US rates and the dollar on a more moderate track. Asian inflation is moderating, with most consumer price index readings across the region substantially below their third-quarter 2022 peaks. Monetary policy is broadly more flexible in the event growth underwhelms.

China remains the global and regional wild card for 2024. Its economy failed to sustain recovery after its COVID reopening due to a confluence of factors anchored by a major crisis in the residential real estate market. Chinese policymakers have taken many targeted steps to address growth issues across China, but structural challenges remain. We do see several constructive developments in the region's other major markets that could bear fruit in 2024 and beyond.

China: unclear policy outcomes

2023 has been monumentally volatile for China. Re-opening optimism in the first quarter quickly reversed in the second. In the summer, fears of China's "Lehman moment" dominated headlines as major property developers defaulted. But by September, piecemeal stimulus programs seemed to be having some positive impacts as seen in its macroeconomic data. More potent policies were announced in the fourth quarter, including sovereign fund stock purchases and fiscal stimulus of a trillion yuan each to boost infrastructure and housing demand. At this point, a modest cyclical economic recovery appears underway.

So far, the stock market has not been impressed. The CSI 300 was up just 2% through November 24, 2023 from its lows reached in late October. We think the anemic performance comes down to two issues: policy ineffectiveness and weak consumer sentiment.

Consumers in China are deeply impacted by the real estate crisis. Many developers with large inventories of pre-sold but incomplete projects await restructuring. Many consumers have deposits held by these players. New prospective buyers also worry whether their purchases will be completed. Demand for property has collapsed as a result, taking prices lower. Pricing for secondary sales has fallen meaningfully, too.

Chinese households use real estate as a store of wealth. Seventy percent of their assets are in real estate. The impact on the economy is therefore multiplied, as Chinese households have chosen to massively increase their precautionary savings over the past two years rather than make new discretionary purchases. There were 32 trillion yuan (\$4.7 trillion) in new bank deposits over this period, the largest increases on record.¹

Chinese business sentiment is poor as well. The repeated regulatory actions over the past two years – on the large internet firms, the after-school tutoring industry and the property sector (not to mention, the long months of zero-COVID shutdowns) – have left many business owners wary of making growth-oriented investments or seeking higher profits for fear they could be putting their fortunes and/or even their personal safety at risk.

Government support for now-favored industries such as electric vehicles, green energy and semiconductors – while helpful for gross domestic product (GDP) statistics – does not restore business confidence. These focus industries are not labor-intensive enough to spark a broad-based economic recovery. Until policymakers signal a broader “all-clear” for greater operating flexibility and less micromanagement of the wider economy, sentiment is likely to remain tepid.

Neither of these problems are intractable. The central government has the resources to continue deflating the property bubble while making more homeowners whole. The resumption of high-profile initial public offerings and a few other key free-market policy signals would go a long way toward restoring business confidence. Yet, these fixes feed into a larger, existential conflict experienced at the highest levels of government, over how far or how fast Chinese liberalization can proceed without putting internal stability and security at risk. That conflict is not going to be resolved in the near term.

— Over the past two years, Chinese households have socked away 32 trillion yuan – nearly \$4.5 trillion – in precautionary savings deposits, the largest increase on record.

Until then, we believe that the aggregate economic impact of the policies of 2023 is likely to produce a mild cyclical recovery in 2024. Potential tactical investment opportunities could arise among industrials, consumer discretionary and information technology – especially in the most advanced technology areas now favored by policies and benefiting from other surprise tailwinds from US-China decoupling (see **The implications of G2 polarization on global technology** on page 98).

¹ People's Bank of China as of September 2023.

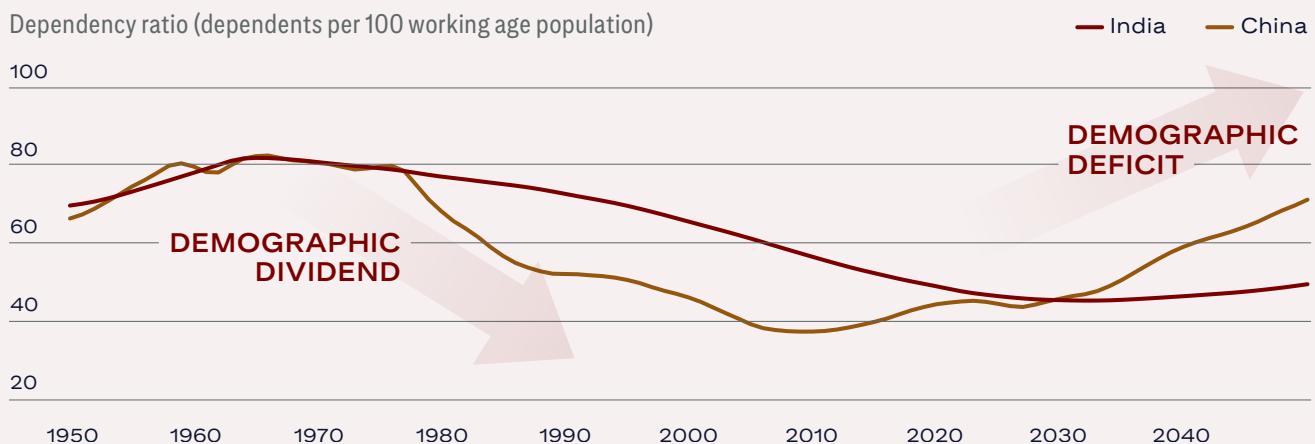
India: reforms and demographics support earnings and valuations

In India, the big event in 2024, the general elections in April–May, is largely a foregone conclusion. Opinion polls show a comfortable margin for Prime Minister Narendra Modi and the ruling Bharatiya Janata Party. The opposition may have grievances with Modi's

social policies, but economic reform and development have been robust, including reducing the cost of interstate commerce, production-linked incentives, digitizing the finance sector and investing in the country's famously awful infrastructure.

In some ways, India is the mirror opposite of China, having developed its services sector even though it

FIGURE 2 India's demographic dividend is expected to last for another decade to 2033, with fewer and fewer dependents per 100 workers on average



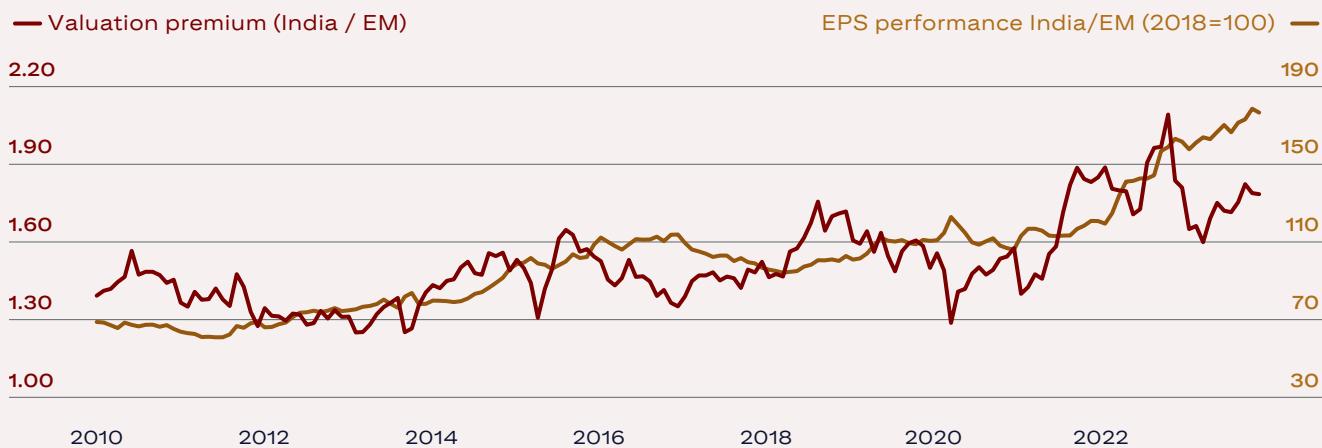
Source: United Nations population projections, as of July 2022. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events.

may take hours to travel from one end of Delhi to the other. Now, with infrastructure investment rising, the country is in a good position to industrialize, while China's recent struggles have galvanized global supply chain diversification.

India is the largest economy enjoying demographic dividends. India's dependency ratio (the number of children and seniors on average supported by every

100 working age persons) is 47 and likely to fall further to 45 by 2033 (FIGURE 2), according to the United Nations. Put another way, there are more than two workers supporting each dependent. When China had a comparable demographic dividend in 2000–2010, its GDP growth averaged 10.5% annually. These demographic trends are one reason we're confident Indian GDP growth can average 7–8% over the coming decade.

FIGURE 3 Indian equities premium valuations are supported by superior earnings growth



Source: Bloomberg, MSCI Indices, as of November 14, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Indian equities are among the most expensive globally, at 20 times forward 12-month earnings per share (EPS), or 77% more expensive than the emerging markets (EM) average. But they've been 65% more expensive than the EM average for the past five years, when Indian EPS grew by 8.8% annually even as overall EM EPS shrank by 2.6% (FIGURE 3). At this stage of development, Industrials, Materials and Staples are our favored sectors.

— In India today, there are now more than two workers supporting each dependent.

The last decade China had demographics that favorable was 2000–2010, when its GDP growth averaged 10.5% a year.

Japan: potential opportunities for both equities and currency

Japan should be a continued bright spot for investors, in both the equity and currency markets. As other major central banks hiked, Japan kept its own rates extremely low, punishing the yen but allowing inflation to continue drifting up to 3.5% (a welcome development in long-deflationary Japan). Japan's economy benefited as it expanded at an above-trend pace in both nominal and real terms in 2023. Even though consumption growth was lackluster after adjusting for inflation, real investment was strong, particularly in real estate and transportation. We look for that trend to spread into areas like defense and technology in 2024, and for real consumption to

regain some momentum as inflation moderates and employers allow wages to rise with higher profitability.

Against this backdrop, the Bank of Japan (BoJ) has begun to gradually normalize monetary policy. This should allow both Japanese short- and long-term interest rates to rise. The previous two BoJ moves to reduce monetary stimulus (in December 2022 and July 2023) caused US Treasury yields to rise, too. But with a more stable-to-dovish Fed, any future BoJ tightening is likely to have less impact on US yields and therefore could strengthen the yen to be among the best-performing currencies in 2024 (**FIGURE 4** and see No. 8 in **Our top 10 high conviction potential opportunities** on page 54).

FIGURE 4 With gradual BoJ tightening and a less hawkish Fed, the gap between US and Japanese yields is likely to narrow and potentially bring USD/JPY to around 130-135 by mid-2024

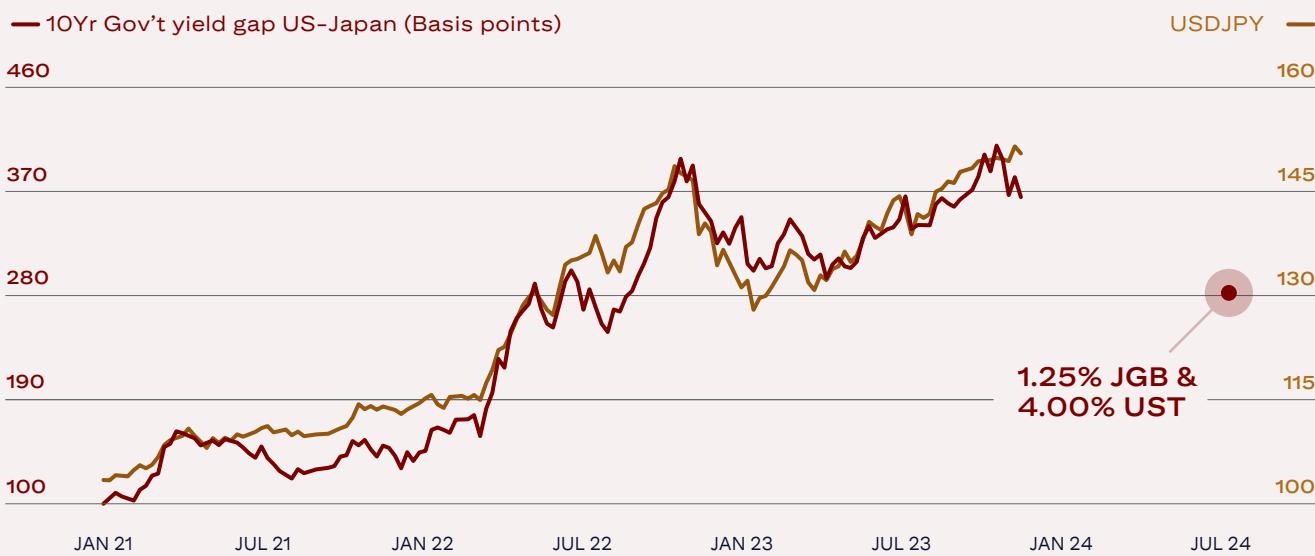


FIGURE 5 Even after the 2023 rally, TOPIX EPS continue to be revised up, while valuations remain below historical average



Source: Bloomberg, TOPIX Index, as of November 14, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. **Past performance is no guarantee of future results. Real results may vary.**

After a 15% rally in 2023 through November, the Tokyo Price Index (TOPIX) has a valuation of 14.5 times earnings, on par with its historical average. Meanwhile, earnings continued to be revised upward (FIGURE 5). Financials would be a prime beneficiary of higher interest rates, which widen their net interest margins (the difference between the amount banks earn on loans and pay out on deposits). Elevated geopolitical risks could boost demand for Japan's defense and

semiconductor equipment industries. Japan's partial reclaiming of its historic role from China as the preferred channel for accessing Asian development could be a multi-year tailwind for foreign investment, particularly in growth sectors like tech and consumer. Across sectors, governance reforms spearheaded by the Tokyo Stock Exchange continue to encourage dividends, buybacks and increases in productivity.

Watch Taiwan and the Whoosh

An election worth watching takes place January 13th in Taiwan. It's hard to underestimate the geopolitical significance associated with internal Taiwanese politics. At the same time, after the loud displays of power by the US and China over the past two years, lines of communication have reopened between the superpowers in some key areas, a tentative indication of a de-escalation that some Taiwanese voters will be reluctant to upset. Despite a tight race between the leading candidates, the odds of a significant change in the status quo seem low.

Like India and Japan, Southeast Asia is another part of the region where supply chain diversification should continue to draw business and investor interest. In Indonesia, Southeast Asia's first high speed railway, the Chinese built Jakarta-Bandung line – or Whoosh – just began operations and could lead to more such infrastructure projects. And Singapore may see meaningful currency strength in a market with a relatively hawkish monetary authority, solid economic growth and continued foreign investor inflows.





Europe: a slow recovery, with stronger equity returns later into 2024

Guillaume Menuet

Head, Europe, Middle East and Africa
Investment Strategy and Economics

Judiyah Amirthanathar

Europe, Middle East and Africa Investment Strategist

Europe's more conservative monetary policy, in combination with the withdrawal of energy support measures, suggests a prolonged and muted "slow then grow" cycle relative to the US. This will leave European equities unattractive on a relative basis for most global investors. Fixed income will, however, provide local investors some rich potential opportunities for yield.

Considerations:

- We're neutral Europe ex-UK, UK and Swiss equities for now, but do see some potential opportunities for qualified clients in European real estate investment trusts (REITs), given the heavily discounted valuations of their underlying property portfolios.
- Euro- and sterling-based local investors may benefit from high-quality government bonds given the historically high level of yields.
- Some improvement in business cycle dynamics by late spring/early summer, supported by a China recovery, may see us starting to add European equity exposure more broadly, starting with ex-UK.

As a highly import- and export-oriented economy, Europe remains strongly dependent on global growth. Economic sentiment will thus spend a good part of 2024 in wait-and-see mode, but should improve modestly, especially within the manufacturing sector, where output has contracted for most of 2023 and inventories already are back down to less worrisome levels.

Investment attitudes should also recover as the banking system begins to ease lending standards and an expected fall in government bond yields from historical highs reduces the cost of borrowing.

We forecast that European Union (EU) gross domestic product (GDP) growth will largely slow in 2024, growing by 0.4% (compared to 0.5% 2023) before some acceleration to 1.3% in 2025. For the UK, we anticipate the real GDP growth rate will largely tread water in 2024, growing by 0.6%, but outpacing the EU slightly with a gain of 1.5% in 2025 (**FIGURE 1**).

FIGURE 1 Euro area & UK GDP growth (actual and forecast)



Sources: Eurostat, Office for National Statistics, Bloomberg and Citi Global Wealth Investments, as of November 16, 2023. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. **Past performance is no guarantee of future results. Real results may vary.**

3 headline risks to keep an eye on

Spread between the 10-year Italian multi-year treasury bond (Buono del Tesoro Poliennale, or BTP) and German Bunds

In October, the spread between the 10-year Italian BTP and German Bund crossed the symbolically important 200 basis points threshold. Is this a sign of worries about the risk of Italy becoming a weak link in a worse-than-expected recession? Could be, but also important to keep in mind that the ECB has ample tools at its disposal to avoid panic-driven spread widening.

UK elections

Prime Minister Rishi Sunak's Conservative Party is trailing very far behind Labour in the polls. Most observers agree that he's going to push out the next general election as far as he's allowed, likely until autumn 2024. That gives investors plenty of time to scrutinize Labour statements about key fiscal pledges and for any hints of a possible closer relationship with the EU when the Trade and Cooperation Agreement comes up for renewal in 2026.

Geopolitics

Ukraine remains an agonizing human and political tragedy. Unlike last winter, when fears of a crippling gas shortage caused massive price increases and volatility, Europe looks far better prepared for this coming winter energy-wise. All bets are off of course – to the upside – in the unlikely event of a sooner-than-expected end to the war. European assets would expect to see significant inflows as investors focus on the subsequent peace dividend and major reconstruction effort.

Unless the war between Hamas and Israel escalates further, it would appear to have little impact on European asset prices. That said, the fact that there are now two major conflicts increases the risk of an oil shock. In addition, the Middle East conflict risks strains in NATO relationships as well as unity around ongoing support for Ukraine.

The prospect of a second presidential term for Donald Trump is likely causing concerns in some European Chancelleries with respect to the US role in NATO, trades and tariffs and the EU's green agenda, among other issues.

FIGURE 2 Fixed income opportunities



Sources: Eurostat, Office for National Statistics, Bloomberg and Citi Global Wealth Investments, as of November 16, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Less inflation

After the many challenges to growth in the second half of 2023, and the likely-tepid recovery especially in the first half of 2024, we expect headline inflation to decelerate meaningfully and to converge gradually towards the 2% target favored by both the European Central Bank (ECB) and the Bank of England (BoE).

We continue to think that peak policy rates have been reached in Europe, at 4% for the ECB and 5.25% for the BoE. However, the chances of actual rate cuts in the short-term appear slim unless more severe risks to economic activity begin to materialize. As a result, we expect rates to stay at those historical highs at least until the spring of 2024, and possibly throughout the summer.

We do expect economic activity to pick up in the second half of 2024 against a backdrop of well-above-average household savings ratios, higher interest

income and close to full employment. We see those trends further extending into 2025 as price pressures continue to normalize, providing some relief for households and businesses – enabling the former to finally enjoy positive real wage gains, and putting the latter in a better position to protect their margins.

Fixed income

With ECB and BoE policy rates having probably peaked in September 2023, we believe that both euro area and gilts yields are at an inflection point, especially for short- and medium-term maturities (**FIGURE 2**). We anticipate some steepening in sovereign yield curves and largely agree with the market's pricing in a first 25-basis point rate cut for both central banks around the middle of 2024.

Historically, the ECB and the BoE have been more conservative with monetary policy changes than the US Federal Reserve (Fed), a situation explained by

their single inflation mandate instead of the two-pillar (inflation and maximization of employment) approach of the Fed, and by the region's higher energy prices. Unless inflation were to fall materially in the spring of 2024, both the ECB and the BoE are likely to err on the side of caution before embarking on a rate cut campaign even if the labor market softens materially. We continue to think that for the next 12 to 18 months owning short- and medium-term Euro area bonds and gilts can be an attractive strategy for European and UK-based investors (even though we remain underweight European government bonds from a global perspective). This is true from the potential for both an income generation and total return perspective.

Equities

In 2023, Europe ex-UK equities' lackluster performance stemmed from a substantial increase in interest rates and energy costs, tighter credit conditions and a continued deterioration in both business and consumer confidence. Meanwhile, UK equities underperformed both Europe ex-UK and global equities due to their sensitivity to the prospect of lower commodity prices and earnings deterioration in key sectors such as Energy and Healthcare. At this point, both Europe ex-UK and UK stocks are, and are likely to remain, quite cheap.

As global economic activity softens heading into 2024, EU corporate revenues could come under pressure in some sectors for two to three quarters, while the combination of a tight labor market, elevated wage growth, and high input costs likely constrain operating margins.

There are some bright spots for equities. Consensus forecasts have Europe ex-UK earnings per share (EPS) growth rising by 7.7% year over year (YoY) in 2024 after 2.3% YoY in 2023. Most of the uptick is expected to stem from Real Estate (21.8%), Materials

(16.0%) and Information Technology (19.4%). These estimates seem a bit too bright for our taste. We do, however, see an opportunity in Real Estate, which we recently upgraded from underweight to neutral. It's a function of just how cheap the sector has become relative to the spread between property yields and nominal rates, together with onshoring tailwinds for its industrial and logistics segments, and the gradual improvement in conditions supporting demand that we foresee in the second half of 2024.

Europe ex-UK's 2024 price-to-earnings (PE) ratio is estimated to be 12.4, down from 13.3 in 2023, while the UK's PE ratio is 9.9, down from 10.5 in 2023. Even at those bargain-bin prices, we need to see a catalyst for meaningful improvement in fundamentals that would make present valuations attractive to us in 2024. As a result, we remain neutral both Europe ex-UK and UK equities, with a modest edge to the former as we move deeper into the year.



Latin America: potential opportunities amidst low valuations

Jorge Amato

Head of Latin America Investment Strategy

A transitioning US and global economy will make for some interesting, volatile and divergent opportunities across Latin America. Global investors will need to pick their spots, mindful of likely currency effects, long term trends and shorter term risks. One combination to consider is a US dollar (USD) denominated and active hedging strategies of local rate positions as well as perhaps some selective tactical exposure to the low equity valuations of some of the country indices.

Considerations

- Investor may consider locking in fixed income yields with selective USD-denominated debt.
- Domestic and foreign investors might still benefit from high (and falling) local rates.
- Equities are trading at attractive multiples, though it would depend on a pickup in global risk appetites to outperform.

In general, Latin America's economic and market performance in 2023 was better than expected. Economic growth surprised to the upside. Equity markets more-or-less performed in line with global equities. Foreign currency debt performed in line with other fixed income markets while domestic currency bonds unhedged were a top performer among global fixed income.

Latin American equities in 2023 saw a very high degree of correlation (0.77 R²) to global equities. As of November 23, 2023, the LATAM MSCI Index was up 15.59%, compared to 14.21% gains for the MSCI World Index.

In fixed income markets, local rate positions performed well as central banks began cutting rates from elevated levels. The Bloomberg Latin America Local Currency bond index, unhedged, was up 22.80% as of November 23, 2023. Foreign exchange (FX)-hedged exposure gained 5.43%, reflecting the positive-if-

wildly diverging currency effects in the region. The Brazilian real and Mexican and Colombian pesos appreciated 7.81%, 13.93% and 20.26%, respectively, while the Peruvian Sol was flat, and the Chilean peso lost 2.27%. In the foreign currency debt markets, performance was more muted, impacted by the rise in US interest rates. The Bloomberg Latin America bond index was up 4.76%, in line with other emerging regions' foreign-denominated fixed income markets.

2024 performance possibilities

On the surface, 2024 looks to be a repeat of 2023. Regional "real" (i.e., inflation-adjusted) gross domestic product (GDP) is set to grow a tick faster than 2023's (1.8%) pace. The composition of that growth, however, could vary widely. The region's two biggest economies, Brazil and Mexico, appear headed for sharp slowdowns, especially during the first half of the year. Headwinds there include slowing/slowly recovering conditions in the US and China – each market's respective biggest trade partner (see **FIGURE 1**). Chile and Peru, on the other hand, could see strong secular demand for key industrial metals. We expect Colombia to continue to muddle through under a cloud of policy uncertainty.

In 2024, we expect monetary policy to continue to loosen gradually across much of the region. While inflation measures have been receding for months, risks of relapse remain.

As some of the region's economies slow, fiscal policies and accounts will again become a focus. An electoral cycle in Mexico is likely to loosen fiscal purse strings, as previewed in the incumbent party's 2024 budget. For the most part, the policy impacts of the results of the elections of the last few years have been a pleasant surprise for investors, with incoming governments rarely rising to the extreme levels originally publicized during the campaigns. However, history suggests not to be complacent.

FIGURE 1 The oversized influence of the US, China and their growing rivalry on trade in Latin America

2022 exports (as % of total exports)	China	US	Next major
Argentina	9.0	14.0	14.0 Brazil
Brazil	27.0	11.0	4.6 Argentina
Chile	38.0	15.0	7.6 Japan
Colombia	4.4	31.0	14.0 Panama
Mexico	2.0	78.0	2.7 Canada
Peru	30.0	14.0	5.0 Japan

Source: World Bank, Santander Trade as of December 2022

A sturdy anchor for Mexico's most recent strong performance has been the inflows of foreign capital associated with US near-shoring. The influx drove a 20% appreciation in the peso to 16.62 to USD, before settling around 17.11, as of November 23, 2023. As electoral uncertainty picks up ahead of the June 2, 2024 general elections, this longer-term trend should at a minimum continue to provide a floor under the peso.

In Brazil, we expect the economy to slow to below 2% real GDP growth in 2024. Legislative focus seems to remain on structural reforms and ongoing debates over the fiscal balance. The central bank does at least have further room to cut rates – we expect 9-10% policy rates by year-end 2024, down from 12.25% as of November 2023.

Commodity price performance could be mixed, but generally supportive for the region. The expected slowdown of the global economy could weigh on some commodity prices while the ongoing climate pattern disruptions caused by El Niño, and the continuation of the war in Ukraine could lead to periodic spikes. More broadly, though, there are also longer-term, more constructive trends at work. Copper has become the largest and perhaps most indispensable component in the move toward electrification – a central thrust of the global energy transition – with critical applications in electric vehicles (EVs), wind turbines and practically every facet of the grid (No. 4 in **Our top 10 high conviction potential opportunities on page 54**). Lithium is

likely to be a dominant component in EV batteries and battery energy storage systems for the foreseeable future. With Chile and Peru first and second among the world's largest copper producing nations, respectively, and Chile second in lithium, these are trends that could benefit the region for years.

Lastly, there's Argentina: As part of a broad-based agenda aimed at reversing decades of economic crisis, newly elected president Javier Milei has proposed a raft of radically Libertarian reforms, including abolishing the Argentine central bank, fully dollarizing the economy and cutting government spending by 15%. Whatever the previous mismanagement and human hardship that led Argentina to this point, it's hard to imagine how, as a practical matter, Milei's methods can be implemented without large sacrifices and more pain for the Argentine economy and its

markets. Milei's diagnosis of Argentina's illness seems to be accurate. His prescription is shock therapy. The question now is whether the policies will be implemented and at what cost.

Equities

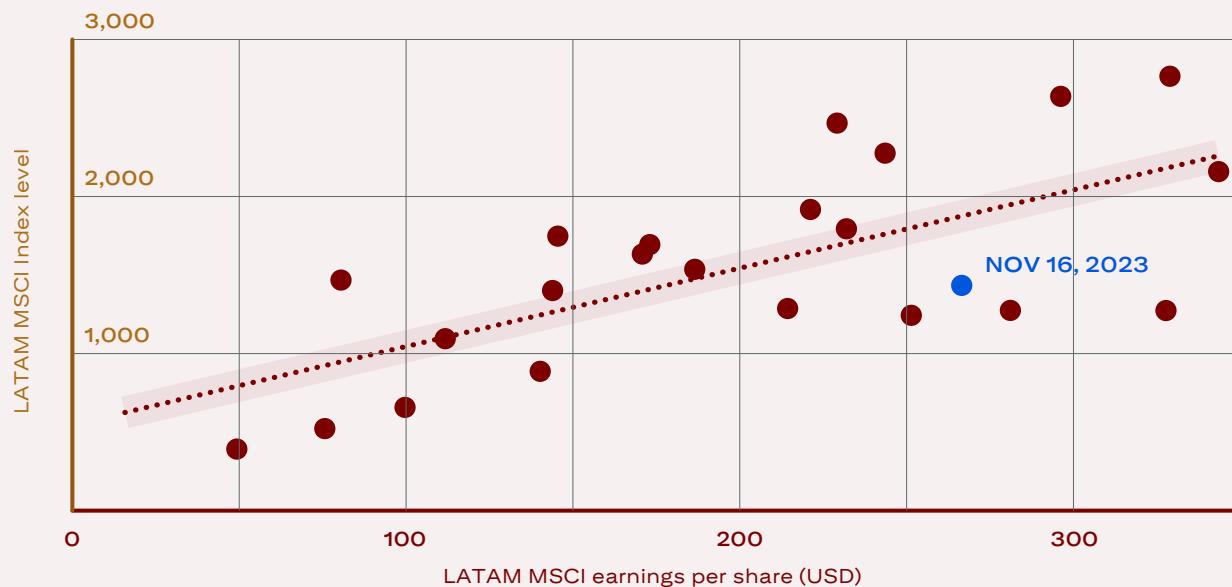
Emerging markets (EM) equities are cyclical, highly dependent on global financial conditions and risk appetites – all of which remain unsettled as we enter the new year. That said, valuations in Latin America have become attractive. As of November 23, 2023, consensus 2024 earnings per share for the MSCI Latin America index was around \$285, representing a forward price-to-earnings (PE) ratio of about 8 – a level ~1.5 standard deviations below its long-term average (**FIGURES 2-3**).

FIGURE 2 Even compared to a performance history prone to global risk-off sentiment, today's Latin American equity valuations look attractive



Source: Bloomberg, Citi Global Wealth Office of the Chief Investment Strategist ("OCIS") as of November 16, 2023; All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future returns. Real results may vary.**

FIGURE 3 The MSCI Latin America Index trades cheaply relative to its historical relationship to earnings



Source: Bloomberg, Citi Global Wealth Investments Office of the Chief Investment Strategist (“OCIS”) as of November 16, 2023. The blue dot is the data point as of November 16, 2023 to present the relationship. The equation is the linear regression of the straight line on the graph. All forecasts are expressions of opinion and are subject to change without notice and are not intended to be a guarantee of future events. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. For illustrative purposes only. **Past performance is no guarantee of future returns. Real results may vary.**

Our equity focus for a slightly longer investment horizon will be on the largest companies involved in the extraction of copper, lithium and other key industrial metals. With the prospect of lower interest rates (and the support that would provide growth, consumption and credit), consumer companies and Financials should also see a lift in the second half of 2024. E-commerce and fintech continue to be areas of high growth.

Fixed income

High nominal local rates in the 9–12% range, combined with lower currency volatility, improve the attractiveness of carry trades. At the same time, the deceleration in inflation has left locals earning attractive real rates. As of November 23, 2023, Latin America’s Bloomberg Local Currency Index, unhedged, was up around 22.80%.

USD-denominated debt, which remains challenged by US interest rate levels and volatility, is up around 5% year to date (Bloomberg LATAM Sov+Corp Index). However, we believe that with US Treasurys yielding



around 4.5% in nominal terms, regional credit spreads of between 200-300 basis points represent a potential opportunity for fixed income investors to lock in medium-duration exposure in selective names and sectors.

Currencies

Most Latin American currencies are set to end 2023 on a high note. As of November 23, 2023, the Brazilian real and Mexican and Colombian pesos managed to maintain gains, up 7.81%, 13.93% and 20.96% YTD against the greenback, respectively. But the Chilean peso has begun to struggle and is down 3.47% year to date, while the Peruvian sol is gaining slightly 1.97%. We do not see a fundamental reason why any of these free-floating currencies would overshoot, and so will view extreme trading levels as potential opportunities to take local bond exposure or actively manage currency hedging. The currency that appears most overvalued is the Mexican peso due to the sharp inflow of near-shoring investment. The Mexican peso traded as high as 16.62 to the USD before depreciating to above 18.00. We would view the 19.00 area as much closer to fair value but also fully recognize that the strong near-shoring flows could keep this currency relatively overvalued for some time to come.



North America: an emerging set of new opportunities

Charles Reinhard

Head of North America Investment Strategy

Lorraine Schmitt

North America Equity Strategist

2024 promises to be an eventful year in terms of politics, monetary policy and markets.

We see the end of a series of “rolling recessions.”

In particular, we believe that manufacturing will rebound after a 2022–2023 contraction while other sectors soften. Through it all, look for US gross domestic product (GDP) growth to slow modestly from about 2.4% in 2023 to 1.6% in 2024, before accelerating to 2.6% in 2025.

Considerations

- Investors should consider tilting equity exposures toward small- and mid-sized companies (especially growth) and early cyclicals. These are places to potentially find growth amid an economic slowdown and capture market leadership shifts as the Fed eases.
- We believe this is a moment to lock in current high yields with investment-grade intermediate maturity bonds.
- Focus on beneficiaries of US-China polarization, including areas of tech and tech-enabled industrial stocks.



As the labor market cools along with slower growth, we believe the US unemployment rate will rise modestly. We also see the consumer price index (CPI) measure of inflation falling towards 2.0%. If our forecasts play out, these conditions should allow the US Federal Reserve (Fed) to lower rates in 25 basis point (bp) increments two to four times starting in the middle of the year.

With growth and inflation both lower in 2024, and Fed easing likely ahead, we have penciled in 10-year Treasury yields falling to 3.50%-4.0% (from about 4.5% in late-November) and two-year yields (currently near 4.9%) crossing below 10-year yields: in other words, a classic steepening of the US yield curve (and the basis for one of **Our top 10 high conviction potential opportunities on page 54**).

We expect Canada's economy to also soften in 2024, and for the Bank of Canada to undergo its own mid-year transition from tightening to easing.

Still, risks remain. In addition to still-restrictive monetary policy, we will monitor potential labor strikes, fiscal polarization, the wars in Ukraine and the Middle East, energy shocks, low home affordability and the prospect for other unforeseen geopolitical events.

U.S. election and the markets: *a snap preview*

Who's going to win? Want a hint?
Watch the stock market.

While US presidents generally have less impact on the stock market than they're given credit for, the stock market can be a very good indicator of who is most likely to win the presidential election. As the chart below shows (**FIGURE 1**), during election years when the incumbent party's candidate goes on to win, the stock market performs significantly better in the first few months of the year – a period which includes the president's State of the Union address, the early primaries and Super Tuesday – than it does in the years when the incumbent suffers defeat. This performance differential then narrows mid-year before re-emerging in the final weeks leading up to the election.

Divided we stand

All else equal, the US stock market prefers a divided government over one party controlling the presidency, Senate and House. Based on a close reading of the electoral maps, the odds are in favor of investors getting their wish – but maybe not in an obvious way. In 2024, some states have gained and others lost Electoral College votes following the 2020 census. If state-by-state voting next November were identical to 2020, it would result in a 303-235 Democratic victory, slightly narrower than the 306-232 2020 win. The Senate map has become even more favorable for the Republican party, which is defending just 11 seats versus 23 between the Democrats (20) and the Independents (3) who caucus with them. Republicans can take control of the Senate by picking up just two seats or one plus the vice president's tie-breaking vote that comes with winning the presidency.

But the opposite is the case in the House, where Republicans have a slim majority and every one of those seats is up for re-election.

FIGURE 1 Presidential year stock market returns since 1952



Source: Haver Analytics of November 15, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Nothing to lose

If the two top current contenders indeed receive their party's nomination, it will set up a situation that hasn't occurred since 1894 when Grover Cleveland won his rematch with Benjamin Harrison. If the current top polling candidates remain the nominee, whoever wins in 2024 will be a second-term president. First-term presidents tend to be more mindful of the economy (so as to get re-elected) while second-term commanders in chief have tended to focus more on foreign policy (where their lame duck status has less impact on what they're able to accomplish). Stock market returns tend to be higher in year one of a second term than in a first but fade towards the end of a second term as the market often struggles amid succession uncertainty.

Deficits and (global) uncertainty up

At the time of this writing, neither party appears anxious to reform Social Security or let the tax cuts passed in 2017 sunset in 2025. Therefore, large budget deficits are apt to persist until pressure mounts enough to do something about them. On the one hand, higher rates and deficit spending have raised the interest expense the government must pay. On the other, with the Fed and foreigners owning less of this debt, this interest is increasingly being paid to private US investors, helping the US economy by increasing their interest income. Meanwhile, wars and US-China tensions persist. As a result, global policy uncertainty is likely to be higher than domestic policy uncertainty – or action.

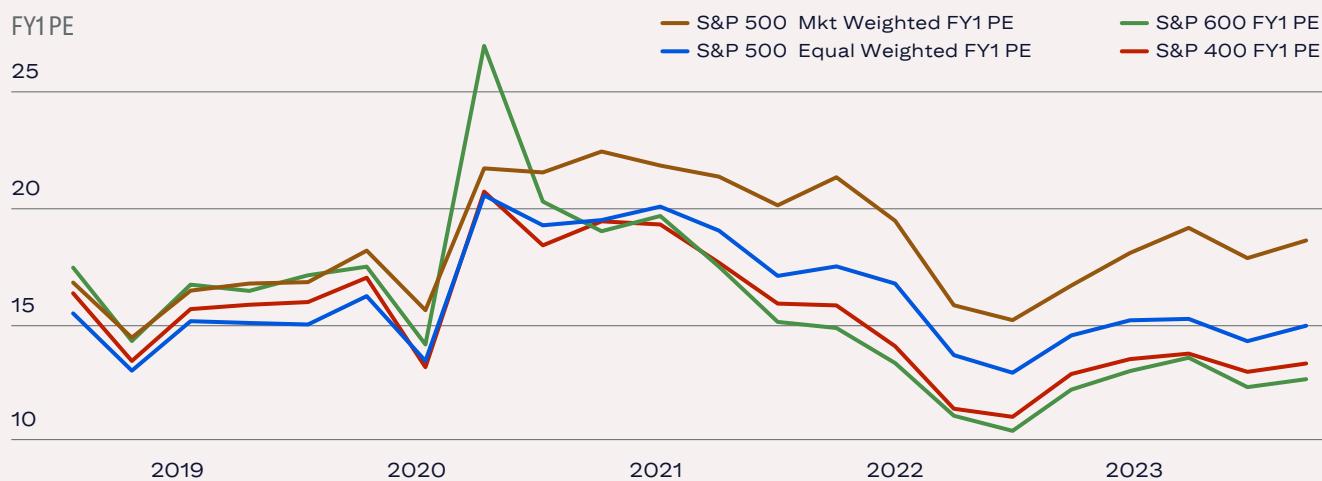
Equities

US equities have gained 20.0% in 2023 through late-November after a poor showing in 2022, when they lost 18.1%. But 2023 market leadership has been centered on a short list of artificial intelligence (AI)-led tech names. We move into 2024 with a wide valuation gap between the market-cap weighted and equal-weighted S&P 500 as well as between the market-cap weighted S&P 500 and small- (S&P 600) and mid- (S&P 400) cap (SMID) stocks (**FIGURE 2**). Our asset allocation is positioned for a broadening of equity performance.

After a three-quarter profit recession ending in the second quarter of 2023, we expect final profits for 2023 to be up 0.9%. We look for corporate earnings to grow by 5.1% in 2024 and 6.8% in 2025. Until then, investors will likely seek out companies with improving prospects. We believe the growth segment of the SMID-cap space, where firms carry less debt in their capital structures, should benefit from earnings growth and narrowing valuation gaps.

The stock market's leadership should further evolve as short- and long-term interest rates move lower.

- SMID cap stocks tend to perform well when investors sense that a decelerating economy is about to transition into an accelerating one after the Fed adequately pivots away from a restrictive policy stance.
- Tech, media and consumer stocks often shine in the year after first Fed rate cuts as falling inflation helps improve margins.
- If the US dollar declines, as anticipated, it would create a favorable backdrop for tech-enabled industrials and the miners of metals used to make electric vehicles. Some of these firms stand to benefit from US-China “Group of Two” (G2) polarization and the investments needed to bolster the world’s energy security. (See **The implications of G2 polarization on global technology on page 98**)
- The most intense energy consolidation in more than two decades is underway as firms seek to strengthen their Permian Basin and South American holdings to navigate the period ahead.
- Canadian equities tend to trade in line with other developed market ex-US equity valuations, so we have a neutral allocation there.

FIGURE 2**US stock market valuations**

Source: FactSet as of November 15, 2023. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. **Past performance is no guarantee of future results. Real results may vary.**

Fixed income

Today's high rates are unlikely to last. The Fed's long-term inflation goal is 2.0% and looking at the Treasury Inflation-Protected Securities (TIPS) yield, expected inflation is just 2.3%. Therefore, barring a complete policy reversal or lasting supply shock, investors may consider moving from cash to bonds and to build a durable, diverse fixed income portfolio to capture these unusual real yields.

US fixed income markets experienced one of their worst performance periods ever in 2022–2023 as the Fed moved aggressively to arrest inflation. But after Fed rate hikes of 525 bps in 2022–2023, the market now expects the central bank to lower policy rates in 2024 by 75–100 bps.

Long-term investors may benefit from a wide variety of US dollar (USD)-denominated fixed income offering high yields relative to the past 15 years (**FIGURE 3**). And these yields may be supplemented by price appreciation if yields fall.

Duration measures a bond or bond portfolio's sensitivity to interest rates. In our tactical asset allocation, we're running with a lower duration than our strategic benchmark, 5.5 years versus 6.2, with our largest exposure in US Treasury and investment grade (IG) corporate segments of the market. Currently, we see opportunities in 3- to 7-year IG issues and IG preferred securities. In high yield, where we are slightly underweight, BB-rated issues provide the most value, in our view.

FIGURE 3 North America fixed income yields

Fixed Income Yields	Current (%)
US Bank Loan	9.70
US High Yield (HY) Preferreds	8.80
US HY Bond	8.61
US IG Preferreds	7.59
US IG CMBS	6.06
US IG Corp	5.81
US Agg	5.24
US Agency MBS	5.07
US TIPS	4.92
US Treasuries	4.73
US Munis	3.83

Source: Bloomberg and FactSet as of November 24, 2023. Please see Glossary for further information. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance. Please see Glossary for further information. **Past performance is no guarantee of future results. Real results may vary.**

For investors still concerned about inflation, Treasury Inflation-Protected Securities (TIPS) pay a nominal yield plus the headline CPI rate and deliver a way to potentially hedge a portfolio against possible consumer price shocks. The current nominal yield is around 2.3% for most maturities over the rate that preserves purchasing power.

For most high-income earners in the US, tax-exempt municipal bonds offer an interesting tax-advantaged yield that may pay more than even lower-rated investment grade bonds on a tax-equivalent basis. Investors interested in the strategies or concepts should consult their tax, legal, or other advisors, as appropriate.

The rise of the balanced portfolio

After seeing deep declines in both equities and fixed income returns in 2022 and a one-sided advance by equities in 2023, we think both sides of a 60/40 (stock/bond) portfolio may contribute positively in 2024-2025. (See **Core portfolios could be ready to shine on page 34.**)

Currencies

The US dollar rally which started in mid-2023 has given back some ground in November. This is partly because the Fed is likely to ease more aggressively than other central bank peers. Another reason is that betting on the US dollar had become a crowded trade as investors sought out “safe haven” assets amid uncertainty. The US has large trade and fiscal deficits that should further encourage the US dollar softening over time. We expect the Canadian dollar to strengthen as broader USD strength wanes.

Glossary

132

Asset Class Definitions:

Bank loans is a generic term referring to commercial or real estate loans underwritten and sourced by banks and other regulated depository institutions. Banks may either retain the loans on their own balance sheets or as often occurs, package a portfolio of loans to securitize to institutional investors while retaining the servicing of the loan for a fee. Also commonly known as “leveraged loans,” a reference to the relatively high level of debt carried by the borrowers compared to investment-grade-rated segments of the debt markets. (See “Morningstar LSTA US Leveraged Loan 100 Index,” below.)

Cash also includes “cash equivalents” such as money market funds, CDs, and short-term Treasury bills beyond fully fungible cash sitting in a savings or checking account. While this asset class is considered very low risk (since the chances of losing one’s money are practically nil), it does come with an opportunity cost and the risk that its value could be eroded by inflation over time. Cash in the US is represented by the three-month government bond Treasury rate, measuring the US dollar (USD)-denominated active three-month fixed-rate, nominal (i.e., non-inflation-adjusted) debt issued by the US Treasury.

Commodities are an asset class containing the index composites – GSCI Precious Metals Index, GSCI Energy Index, GSCI Industrial Metals Index and GSCI Agricultural Index – measuring investment performance in different markets, namely precious metals (e.g., gold, silver), energy (e.g., oil, coal), industrial metals (e.g., copper, iron ore) and agricultural (i.e., soy, coffee), respectively. The Reuters/Jeffries CRB Spot Price Index and the TR/CC CRB Excess Return Index, an arithmetic average of commodity futures prices with monthly rebalancing, are used for supplemental historical data.

Diversifying funds are alternatives funds that are typically expected to display low and often negative correlation and/or beta to traditional risk asset classes such as equities over an investment cycle (though some funds in this category may display variable degrees of market correlation at certain points of the cycle). Such funds are designed to perform better during periods of high market volatility and generally may provide attractive diversification benefits to a client’s portfolio, although returns may vary between gains and losses and can be volatile during any given period. This internal classification is based on the analysis and subjective views of CGW Alternatives. The internal classification is subject to change without notice to investors and there is no guarantee that the funds will perform as described above. It is important to note that the market strategy described above will not completely eliminate market risk. There is no guarantee that alternatives funds classified as “Diversifying” will perform as described above. Alternatives funds should not be invested in based on their classification as “Diversifying” and other assets in a client’s overall portfolio should be taken into consideration before an investment is made.

Directional funds are alternatives funds expected to display moderate to high positive correlation and/or beta to traditional risk asset classes such as equities over an investment cycle (though some funds in this category may display variable levels of correlation at certain points of the cycle). Such funds often invest with a (sometimes significant) net-long bias, and because of this may also carry a higher level of risk . This internal classification is based on the analysis and subjective views of CGW-Alternatives. The internal classification is subject to change without notice to investors and there is no guarantee that the funds will perform as described above. It is important to note that the market strategy described above will not completely eliminate market risk. There is no guarantee that alternatives funds classified as “Directional” will perform as described above. Alternatives funds should not be invested in based on their classifications as “Directional” and other assets in a client’s overall portfolio should be taken into consideration before an investment is made.

Global developed market (DM) corporate fixed income is composed of Bloomberg indices capturing investment

debt from seven different local currency markets. The composite includes investment-grade (IG) corporate bonds from the DM issuers.

Global DM equity is composed of MSCI indices capturing large, mid- and small cap representation across nine individual DM countries as weighted by the market capitalization of these countries. The composite covers approximately 95% of the free float-adjusted market capitalization in each country.

Global DM IG fixed income is composed of Bloomberg indices capturing IG debt from seven different local currency markets. The composite includes fixed-rate Treasury, government-related, and IG corporate and securitized bonds from the DM issuers. Local market indices for the US, UK and Japan are used for supplemental historical data.

Global emerging markets (EM) equity is composed of MSCI indices capturing large and mid-cap representation across 20 individual EM countries. The composite covers approximately 85% of the free float-adjusted market capitalization in each country. For the purposes of supplementing long-term historical data, local-market country indices are used wherever applicable.

Global EM fixed income is composed of Bloomberg indices measuring the performance of fixed and floating-rate, USD-denominated EM sovereign debt for three different regions: Latin America; Europe, Middle East and Africa (EMEA); and Asia.

Global EM local currency fixed income, specifically the Bloomberg Emerging Markets Local Currency Government Index, is a flagship index that measures the performance of EM debt denominated in the local currencies (as opposed to in foreign currencies, such as US dollars – see “USD-denominated EM fixed income,” below). Classification as an EM is rules-based and reviewed annually. Sometimes the term “unhedged” is used (as in “local currency fixed income unhedged”) to clarify that absent other modifications the exposure comes with potential upside and downside risk from repatriating returns into one’s native currency. An investor then may (or may not, depending on one’s confidence about the potential upside) deploy an FX hedging overlay to help neutralize the currency risk.

Global high-yield fixed income is composed of Bloomberg indices measuring the noninvestment-grade, fixed-rate corporate bonds denominated in USD, British pounds, and euros. Securities are classified as high yield if the middle rating of Moody’s, Fitch and S&P is Ba1/BB+/BB+ or below, excluding EM debt. The Ibbotson High Yield Index – a broad high-yield index including bonds across the maturity spectrum within the BB-B rated credit quality spectrum included in the below-investment-grade universe—is used for supplemental historical data.

Hedge funds are composed of alternative investment managers employing different investment styles as characterized by different subcategories. Some tend to involve the use of leverage (and therefore also the potential for asymmetric losses) and lower liquidity, along with some combination of greater diversification and the potential for enhanced returns. The subcategories include various components of the HFRI Fund Weighted Composite Index: HFRI Equity Long/Short (positions both long and short in primarily equity and equity derivative securities); HFRI Credit (positions in corporate fixed-income securities); HFRI Event Driven (positions in companies currently or prospectively involved in a wide variety of corporate transactions); HFRI Relative Value (positions based on a valuation discrepancy between multiple securities); HFRI Multi-Strategy (positions based on realization of a spread between related yield instruments); HFRI Macro (positions based on movements in underlying economic variables and their impact on different markets); Barclays Trader CTA Index (the composite performance of established programs, such as Commodity Trading Advisors, with more than four years of performance history).

General partner (GP) stakes funds are a type of alternative investment that seeks to acquire minority interests in private equity managers. In contrast to a standard private equity fund’s company investments, a GP stake fund’s investments in underlying investment managers typically provides return from three distinct sources: management fees, balance sheet and carried interest. These investments typically provide exposure to all the funds managed by the manager, as well as any future funds to be raised.

Municipal bonds or “munis” is debt issued by state and local governments to help fund capital projects. From an

investor's perspective, a key advantage of munis is that their yields are exempt from federal and (in some cases) state income taxes. This can make their "tax equivalent yield" highly attractive, especially for people in high tax brackets, and even more so for those who live in high-tax states (provided the issuer is from the investor's home state). The Bloomberg US Municipal Index covers the USD-denominated long-term tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.

Preferred stock, or "preferreds," is a form of stock that acts almost like a bond. Investors who buy them are usually offered a fixed dividend payout on a set schedule for as long as they own those shares, which offers some more predictability than standard dividend-paying common shares. But there are also downsides: dividend payments can be deferred if the company has a financial hardship; the shares come with no voting rights; and while the shares trade on an exchange as common shares do, most companies don't issue preferred stock so the total market for them is small, and liquidity can be limited.

Private credit investing, a subset of private equity, is an asset class defined by non-bank lending where the debt is not issued or traded on the public markets. Private credit can also sometimes be referred to as "direct lending" or "private lending". Private credit covers a wide variety of strategies that span the capital structure and borrower types – from senior secured loans for blue-chip corporate borrowers to special and distressed situations. Different private credit comes carries different risk/reward based on the seniority of the loans. That said, private credit can be a good complement to fixed-income strategies, offering potential incremental income, resilience, enhancement of returns, and diversification.

Private equity is an alternative investment class which in its simplest form is the capital or ownership of shares not publicly traded or listed on a stock exchange. Private equity generally requires investors to make a longer-term commitment, but in exchange may offer an "illiquidity premium" – that is, the potential for elevated returns. Private equity's characteristics are often driven by those for DM small-cap equities (which, after all, tend to be the size of company bought by a private equity fund), adjusted for

illiquidity, sector concentration, and greater leverage and can include secondaries, buyouts, growth, venture capital and co-investments.

Real assets have a tangible form and intrinsic worth because of their properties and substance. The assets can include precious metals, commodities, real estate, equipment, and natural resources. They can be good diversifiers for a portfolio because of their somewhat low correlation to financial assets like stocks and bonds. In contrast, commodity futures, exchange-traded funds (ETFs), and real estate investment trusts (REITs) are financial assets whose value depends on the underlying real assets and thus are not quite "real."

Real estate investment trust (REIT) is a corporate entity that either has the bulk or all of its asset base, income and investments related to real estate. In the US, under Security and Exchange Commission (SEC) guidelines, for an entity to qualify as a REIT at least 90% of its taxable annual income to shareholders in the form of dividends must be from real estate. While typically REITs are publicly traded, not all are, as public non-listed REITs (PNLRs) can register with the SEC as REITs but do not trade on major stock exchanges. REITs are subject to special risk considerations like those associated with the direct ownership of real estate. Real estate valuations may be subject to factors such as changing general and local economic, financial, competitive, and environmental conditions. REITs may not be suitable for every investor. Dividend income from REITs will generally not be treated as qualified dividend income and therefore not eligible for reduced rates of taxation.

Real estate classes include Equity REITs (US REITs and publicly traded real estate companies) not designated as Timber REITs or Infrastructure REITs: NAREIT US REIT Index, NAREIT Canada REIT Index, NAREIT UK REIT Index, NAREIT Switzerland REIT Index, NAREIT Euro-zone REIT Index, NAREIT Japan REIT Index, NAREIT Hong Kong REIT Index, NAREIT Singapore REIT Index, NAREIT Australia REIT Index.

Small- and mid-cap (SMID) stocks unite the faster growth of small companies with the higher quality of mid-size firms so investors can gain access to a more resilient and less volatile collection of growing stocks. In the

US, the most-used SMID-cap benchmark is the Russell 2000 Index, which straddles all the stocks in the small-cap (S&P 600) and mid-cap (S&P 400) space.

Structured credit is a type of investment in which an issuer utilizes securitization to pool similar debt obligations, creating novel financial instruments to enable better use of available capital or serve as a cheaper source of funding, especially for lower-rated originators. Different classes of securities (typically with different credit ratings) from the same pool of assets are often pooled (called “tranching”) to create different investment classes for the securities. Structured credit can offer investors an opportunity for enhanced yield and diversification benefits at the portfolio level. Products include US mortgage-backed securities (MBS), asset-backed securities (ABS) and commercial-mortgage-backed securities (CMBS). When designated “Agency” (as in “US Agency MBS”), it means that in addition to a first lien, underlying loans are secured by a guarantee from a US Government-Sponsored Enterprise (GSE) such as Fannie Mae or Freddie Mac.

Treasury Inflation-Protected Securities (TIPS) are a type of Treasury bond indexed to an inflationary gauge. TIPS can help protect investors from a decline in their purchasing power and are a popular asset for protecting portfolios against inflation.

USD-denominated EM fixed income is represented by the FTSE Emerging Market Sovereign Bond Index (ESBI), covering the sovereign debt of EM governments issued in USD. The most common form of what is also known as “hard currency” debt, these bonds are less volatile than local debt due to the lack of EM currency risk.

Other index definitions:

Bloomberg US Aggregate Bond Index consists of the US IG fixed-rate bond market, including government and credit securities, agency mortgage pass-through securities, ABS and CMBS.

Bloomberg US Corporate Bond Index measures the IG fixed-rate, taxable corporate bond market. It includes USD-denominated securities publicly issued by US and non-US industrial, utility, and financial issuers.

Bloomberg Latin America Local Currency Bond Index measures exposure to debt of Latin American issuers denominated in local currencies, making it a way to diversify fixed income exposure beyond US borders and USD. Indeed, this asset class can be a hedge against USD weakening and a means for enhancing current returns in low-interest-rate environments.

Bloomberg Latin America Sovereign + Corporate Index measures sovereign and corporate debt securities from Latin American issuers denominated in USD, euro, and local currencies of issuers.

Bloomberg US Treasury Index measures USD-denominated, fixed-rate, nominal debt issued by the US Treasury.

Cambridge Associates LLC US Private Equity Index measures US private equity funds – buyout, growth equity, private equity energy, and subordinated capital funds – including fully liquidated partnerships.

Cliffwater Direct Lending Index (CDLI) measures the unlevered, gross-of-fees performance of US middle-market corporate loans, as represented by the underlying assets of Business Development Companies (BDCs), including both exchange-traded and unlisted BDCs, subject to certain eligibility criteria.

CSI 300 Index is an indicator for Chinese stock market performance. It includes the 300 largest companies by market capitalization traded on the Shanghai and the Shenzhen stock exchanges. It is somewhat equivalent to the S&P 500 Index in the US.

Federal Reserve Bank of Philadelphia Partisan Conflict Index tracks the degree of political disagreement among US politicians at the federal level. It does this by measuring the frequency of newspaper articles reporting disagreement and contention in each month between the two dominant political parties, various factions within Congress, and the president.

FTSE EPRA Nareit Global Real Estate Index is a free float-adjusted, market capitalization-weighted index designed to track the performance of listed real estate companies in both developed and emerging countries worldwide. Constituents of the Index are screened on liquidity, size, and revenue.

Global Supply Chain Pressure Index (GSCPI) is a measurement of supply chain conditions. The Index, created and maintained by the Federal Reserve Bank of New York, tracks variables from several indices in transportation and manufacturing usually related to prices, inventory, and delivery times.

ICE BofA US ABS & CMBS Yield Index tracks the performance of USD-denominated IG asset-backed and commercial mortgage-backed corporate debt publicly issued in the US domestic market.

Morningstar LSTA US Leveraged Loan 100 Index is designed to measure the performance, activity, and key characteristics of the most tradeable loans in the US leveraged loan market (see “Bank loans, also known as leveraged loans,” above). Index constituents include the 100 largest facilities (i.e., outstanding loans) at any given time in the US, weighted by market value, subject to a single loan facility weight cap of 2%.

MSCI All-Country World Index (ACWI) is designed to represent performance of the full opportunity set of large- and mid-cap stocks across 23 developed and 24 emerging markets. As of May 2022, it covered more than 2,933 constituents across 11 sectors and approximately 85% of the free float-adjusted market capitalization in each market.

MSCI AC World Healthcare Index includes large and mid-cap securities across 23 DM and 24 EM countries. All companies in the index are classified as being in the Healthcare sector per the Global Industry Classification Standard (GICS®).

MSCI ACWI Total Return Index measures the price performance of markets including the reinvested income from constituent dividend payments, considered a more complete representation than a measurement of appreciation alone. It’s used as a proxy for global equities. Related indices include MSCI Asia Total Return Index (a proxy for Asian equities), MSCI Europe Total Return Index (a proxy for European equities), and MSCI Latin America Total Return Index (a proxy for Latin American equities).

MSCI China Index captures large- and mid-cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g., ADRs). With 704

constituents, the index covers about 85% of this China equity universe.

MSCI EM ex China Index (CAD) captures large and mid-cap representation across 23 of the 24 EM countries, excluding China. With 672 constituents, the Index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI EM Index captures large and mid-cap representation across 24 EM countries. With 837 constituents, the Index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **MSCI India Index** is designed to measure the performance of the large and mid-cap segments of the Indian stock market. With 122 constituents, the index covers approximately 85% of the Indian equity universe.

MSCI EM Latin America Index captures large and mid-cap representation across five countries in Latin America. With 113 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

Nasdaq CTA Cybersecurity Index tracks the performance of companies engaged in the cybersecurity segment of the Information Technology and Industrials sectors. The Index includes companies primarily involved in the building, implementation and management of security protocols applied to private and public networks, computers, and mobile devices to provide protection of the integrity of data and network operations.

Russell 2000 Index measures the performance of the small-cap segment of the US equity universe. The Russell 2000 Index is a subset representing some 10% of the total market capitalization of the all-cap Russell 3000 Index.

S&P 500 Index is a capitalization-weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large cap segment of the market, with over 80% coverage of US equities it is also an ideal proxy for the total market.

S&P 500 Energy comprises those companies in the S&P 500 that are classified as members of the (GICS®) Energy sector.

Solactive Global Copper Miners Index is an index created by the German index provider Solactive as a measure of international companies active in the exploration, mining and/or refining of copper. At any given time, the index may have between 20 and 40 members. It's calculated in USD on a total return basis incorporating the reinvestment of dividends, and re-weighted semi-annually.

Tokyo Price Index (TOPIX) is a measure of the overall trends of Japan's stock market and is used as a benchmark for investment in Japanese stocks. TOPIX is a free float-adjusted market capitalization-weighted index.

Trade-weighted US Dollar Index, also known as the “broad index,” was created by the Fed to value USD, based on its competitiveness relative to 25 other currencies (both DM and EM) widely used in international trade. Published both in “nominal” and “real” (i.e., inflation-adjusted) terms, it’s considered an improvement over the older, privately operated US Dollar Index, both for its greater breadth and the fact that it’s reweighted annually. It’s now the standard for determining USD purchasing power, and for summarizing the effects of USD appreciation and depreciation against other currencies.

US IG Corporate (1-5yr) Yield Index measures the performance of IG fixed-rate, USD-denominated corporate bonds with maturities between one and five years. The index is market-capitalization weighted and does not incorporate environmental, social, or governance (ESG) criteria.

Other terminology:

Adaptive Valuations Strategies (AVS) is Citi Global Wealth Investments’ own strategic asset allocation methodology. It determines the suitable, long-term mix of assets for each client’s investment portfolio.

Application-specific integrated circuit (ASIC) is a microchip on which the pattern of connections has been set up exclusively for a specific function. Required for modern electronic engineering, ASICS form a diverse group of integrated circuits (ICs) that help designers optimize sophisticated electronic devices. One example is the memory technology required for generative AI.

Assets under management (AUM) are the total market value of the investments that a person or entity handles on behalf of investors.

Compound annual growth rate (CAGR) is the rate of return required for an investment to grow from its starting balance to its ending balance, considering any profits being reinvested at the end of each period of the investment’s length.

Consumer Price Index (CPI) measures inflation by tracking the changes in prices paid by consumers for a basket of goods and services over time and compares that to previous periods. A second CPI measured monthly called “core CPI” excludes specific items like food and energy due to their volatility.

Correlation is a statistical measure of how two assets or asset classes move in relation to one another. Correlation is measured on a scale of 1 to -1. A correlation of 1 implies perfect positive correlation, meaning that two assets or asset classes move in the same direction all the time. A correlation of -1 implies perfect negative correlation, such that two assets or asset classes move in the opposite direction to each other all the time. A correlation of 0 implies zero correlation, such that there is no relationship between the movements in the two over time.

Curve steepener trade is a strategy that uses a combination of long and short derivatives to benefit from escalating yield differences that occur between bonds of different maturities. This strategy can be effective in some macroeconomic situations in which the yields are pushed up (and the prices down) on longer-term bonds and/or the yields on shorter-term bonds are driven down (and prices up), causing a plotting of those maturities to, in effect, “steepen.” (See “yield curve,” below.)

Dollarization is the process by which a country decides to use two currencies—the local currency and a stronger, more established currency like USD. The process can encourage more international businesses to establish localized offices to take advantage of the stable currency, which can help the country’s economy develop more quickly.

Duration is a measurement of a bond's interest rate risk that considers a few different factors, including a bond's maturity, yield, coupon, and call features. These aspects

are calculated into one number that reveals how sensitive a bond's value may be to interest rate changes.

Electoral College comes into play every four years in the United States. Voters select a group of electors whose only purpose is to elect the president and vice president. This group of electors and the electoral process that goes with it is known as the Electoral College. The total number of electors is 538. The number of electors assigned to each state is equal to its two Senate seats plus its number of seats in the House of Representatives.

Federal Open Market Committee (FOMC) is the branch of the Federal Reserve System that determines the direction of monetary policy in the US by performing open market operations. The committee is made up of 12 members, or participants, who meet eight times a year to discuss whether there should be any changes to near-term monetary policy. A vote to change policy would result in either buying or selling US government securities on the open market to meet the Fed's "dual mandate" of promoting employment and restraining inflation.

Effective federal funds rate (EFFR), or the term fed funds rate, refers to the target interest rate range set by the FOMC (see above). This target is the rate at which commercial banks borrow and lend their excess reserves to each other overnight. The federal funds rate can influence short-term rates on consumer loans and credit cards. And investors keep an eye on it because it impacts the stock market as the "risk-free rate" that competes for investment capital.

FDIC banks cost of funds refers to the costs associated with borrowing for banks, since borrowing money costs money both for individuals getting a mortgage and large banks granting that mortgage.

Fed funds market-implied estimates are determined by a type of futures contract quoted as 100 minus the implied 30-day federal funds rate. In other words, the contract price indicates what the market expects the federal funds rate to be when the contract expires.

Foreign direct investment (FDI) is an ownership stake in a foreign company or project made by an investor, company, or government from another country.

Free cash flow yield acts as a good metric for cash flow in comparison to a company's size. It acts as a good indicator of how solvent or financially capable a company is in the event there is a need to access cash quickly.

Gilts are the government bonds (the equivalent of US Treasurys) of the UK, India, and the Commonwealth countries. The name comes from historical certificates with gilded edges issued by the British government.

Growth stocks are those of companies that have the potential to outperform the overall market because of their future potential more than their current level of profitability. In contrast, "value stocks" trade below what their current earnings might otherwise indicate. There is long-running debate over which provides superior returns over time, and each tends to become or less popular depending on various macro conditions. One of the most impactful factors is interest rates, which determine the rate at which future cash flows are discounted back to their present value. Lower "discount rates" tend to favor growth, while higher tend to be better for value.

Inflation Reduction Act is a major piece of US legislation signed into law in August 2022 aimed at tackling inflation, promoting economic growth, and establishing US leadership in the fast-growing energy systems of the future. The act includes a broad range of measures, including tax policy changes, investments in clean energy and infrastructure, support for US workers, and enhanced powers for Medicare to lower healthcare costs.

M2 is a measure of the US monetary supply that includes M1 (currency and coins held by the non-bank public, checkable deposits, and travelers' checks), plus savings deposits (including money market deposit accounts), small time deposits under \$100,000 and shares in retail money market mutual funds.

Net interest margin (NIM) compares the net interest income a financial firm makes from credit products (loans and mortgages), with the outgoing interest it pays savings customers for accounts and certificates of deposit (CDs). When rates go up, it's usually beneficial for banks as loan interest rates rise faster than deposit interest rates.

"**Period of monetary neglect**" famously occurred in the run-up to the 1969–70 recession when the fed tightened

monetary policy, slowing the growth in the money supply from 8% on a year-over-year basis to just 2%. (The associated increase in the fed funds rate to accomplish that slowing was roughly 4.5 percentage points, to 9 percent). This set the stage for the 1970s “stagflation,” combining high inflation with uneven economic growth.

Shadow banking system is a term used to describe financial intermediaries that engage in bank-like activities, usually lending, but are not subject to banking regulatory oversight.

Spread (and spread tightening) describe two aspects of yield activity. Yield spread is the difference between the quoted rate of return on different debt instruments, which often have varying maturities or credit ratings. Credit spreads often widen during times of financial stress when investors make a move toward safe-haven assets, driving down the yields of, say, US Treasurys, and drives up those of corporate and other types of sovereign bonds perceived to be riskier. Tightening often occurs during improving economic conditions.

Strategic Return Estimates (SRE) are Citi Global Wealth Investments’ forecast of returns for specific asset classes over a 10-year time horizon. The forecast for each specific asset class is made using a proprietary methodology that we believe is appropriate for that asset class.

Super Tuesday is the US presidential primary election day, usually in March when party members in over 20 states vote in primary elections to select their party’s presidential candidate. Approximately one-third of all delegates to the presidential nominating conventions can be won on Super Tuesday—more than on any other day.

The **EU-UK Trade and Cooperation Agreement** is the key agreement that governs the relationship after Brexit between Europe and the UK. (It came into effect on May 1, 2021, and is up for renewal in 2026.) The agreement outlines the parameters for free trade of goods as well as limited mutual market access in services.

Volatility is a statistical measurement of the variability of return, commonly defined as either the variance or standard deviation of returns. The higher an asset or asset class’s volatility, the riskier it is seen as being.

WTI Crude, for “West Texas Intermediate” crude oil, is a benchmark used by markets to represent petroleum produced in the US. It is based on a pipeline hub in Cushing, Oklahoma. It’s priced similarly to Brent Crude, which is extracted from the North Sea near Europe, though doesn’t have the same global reach. While both are considered light-sweet crude and trade on US exchanges and their prices tend to be correlated, there are times when WTI is more expensive than Brent and vice versa.

Yield curve is a visual representation of how much it costs to borrow money (or how much can be earned from lending money) for different periods of time. The curve is formed by a plotting of the yields for differing maturities of the same type of bond. So, the US Treasury Index, for example, is based on the daily plotting of yields all along the curve. A curve can “steepen” on higher long-term rates and/or lower short-term ones, or “flatten” on the opposite combination. An inversion of a yield curve is a more atypical occurrence in which the yields at the shorter end of the curve are higher than those at the longer. This tends to happen during periods of tighter monetary policy, as has been the case with Treasurys and other major DM sovereign debt for much of 2022 and 2023.

Yield-to-maturity is the annualized total return received on a bond when the bond is held to maturity and bond coupons are assumed to be re-invested. The total return includes both the payment of coupons and the return of the principal at maturity.

Disclosures

140

IMPORTANT INFORMATION

In any instance where distribution of this communication (“Communication”) is subject to the rules of the US Commodity Futures Trading Commission (“CFTC”), this communication constitutes an invitation to consider entering into a derivatives transaction under US CFTC Regulations §§ 1.71 and 23.605, where applicable, but is not a binding offer to buy/sell any financial instrument.

This Communication is prepared by Citi Global Wealth Investments (“CGWI”) which is comprised of the investments and capital markets capabilities that are provided to Citi Private Bank, Citi Global Wealth at Work, Citi Personal Wealth Management and Citi Personal Investments International (CPII).

Citi Private Bank, Citi Global Wealth at Work, Citi Personal Wealth Management, and Citi Personal Investments International, are businesses of Citigroup Inc. (“Citigroup”), which provide clients access to a broad array of products and services available through bank and non-bank affiliates of Citigroup. Not all products and services are provided by all affiliates or are available at all locations. In the U.S., investment products and services are provided by Citigroup Global Markets Inc. (“CGMI”), member FINRA and SIPC, Citi Private Alternatives, LLC (“CPA”), member FINRA and SIPC, and Citi Global Alternatives, LLC (“CGA”). CPA acts as distributor of certain alternative investment products to certain eligible clients’ segments. CGMI accounts are carried by Pershing LLC, member FINRA, NYSE, SIPC. Investment management services (including portfolio management) are available through CGMI, CGA, Citibank, N.A. and other affiliated advisory businesses. Insurance is offered by Citi Personal Wealth Management through Citigroup Life Agency LLC (“CLA”). In California, CLA does business as Citigroup Life Insurance Agency, LLC (license number OG56746). CGMI, CPA, CGA, CLA and Citibank, N.A. are affiliated companies under the common control of Citigroup.

Outside the U.S., investment products and services are provided by other Citigroup affiliates. Investment Management services (including portfolio management) are available through CGMI, CGA, Citibank, N.A., Citibank (Hong Kong) Limited and Citibank Singapore Limited and

other affiliated advisory businesses. These Citigroup affiliates, including CGA, will be compensated for the respective investment management, advisory, administrative, distribution and placement services they may provide.

CGWI personnel and GPS authors are not research analysts, and the information in this Communication is not intended to constitute “research,” as that term is defined by applicable regulations. Unless otherwise indicated, any reference to a research report or research recommendation is not intended to represent the whole report and is not in itself considered a recommendation or research report.

This Communication is provided for information and discussion purposes only, at the recipient’s request. The recipient should notify CGWI immediately should it at any time wish to cease being provided with such information. Unless otherwise indicated, (i) it does not constitute an offer or recommendation to purchase or sell any security, financial instrument or other product or service, or to attract any funding or deposits, and (ii) it does not constitute a solicitation if it is not subject to the rules of the CFTC (but see discussion above regarding communication subject to CFTC rules) and (iii) it is not intended as an official confirmation of any transaction.

Unless otherwise expressly indicated, this Communication does not take into account the investment objectives, risk profile or financial situation of any particular person and as such, investments mentioned in this document may not be suitable for all investors. Citi is not acting as an investment or other advisor, fiduciary or agent. The information contained herein is not intended to be an exhaustive discussion of the strategies or concepts mentioned herein or tax or legal advice. Recipients of this Communication should obtain advice based on their own individual circumstances from their own tax, financial, legal, and other advisors about the risks and merits of any transaction before making an investment decision, and only make such decisions on the basis of their own objectives, experience, risk profile and resources.

The information contained in this Communication is based on generally available information and, although obtained from sources believed by Citi to be reliable, its accuracy and completeness cannot be assured, and such

information may be incomplete or condensed. Any assumptions or information contained in this Communication constitute a judgment only as of the date of this document or on any specified dates and is subject to change without notice. Insofar as this Communication may contain historical and forward-looking information, past performance is neither a guarantee nor an indication of future results, and future results may not meet expectations due to a variety of economic, market and other factors. Further, any projections of potential risk or return are illustrative and should not be taken as limitations of the maximum possible loss or gain. Any prices, values or estimates provided in this Communication (other than those that are identified as being historical) are indicative only, may change without notice and do not represent firm quotes as to either price or size, nor reflect the value Citi may assign a security in its inventory. Forward looking information does not indicate a level at which Citi is prepared to do a trade and may not account for all relevant assumptions and future conditions. Actual conditions may vary substantially from estimates which could have a negative impact on the value of an instrument.

Views, opinions and estimates expressed herein may differ from the opinions expressed by other Citi businesses or affiliates and are not intended to be a forecast of future events, a guarantee of future results, or investment advice, and are subject to change without notice based on market and other conditions. Citi is under no duty to update this document and accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this Communication.

None of the financial instruments or other products mentioned in this Communication (unless expressly stated otherwise) is (i) insured by the Federal Deposit Insurance Corporation or any other governmental authority, or (ii) deposits or other obligations of, or guaranteed by Citi or any other insured depository institution.

Citi often acts as an issuer of financial instruments and other products, acts as a market maker and trades as principal in many different financial instruments and other products, and can be expected to perform or seek to perform investment banking and other services for the issuer of such financial instruments or other products. The author of this Communication may have discussed the

information contained therein with others within or outside Citi, and the author and/or such other Citi personnel may have already acted on the basis of this information (including by trading for Citi's proprietary accounts or communicating the information contained herein to other customers of Citi). Citi, Citi's personnel (including those with whom the author may have consulted in the preparation of this communication), and other customers of Citi may be long or short the financial instruments or other products referred to in this Communication, may have acquired such positions at prices and market conditions that are no longer available, and may have interests different from or adverse to your interests.

IRS Circular 230 Disclosure: Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside Citi. Any statement in this Communication regarding tax matters is not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor.

Neither Citi nor any of its affiliates can accept responsibility for the tax treatment of any investment product, whether or not the investment is purchased by a trust or company administered by an affiliate of Citi. Citi assumes that, before making any commitment to invest, the investor and (where applicable, its beneficial owners) have taken whatever tax, legal or other advice the investor/beneficial owners consider necessary and have arranged to account for any tax lawfully due on the income or gains arising from any investment product provided by Citi.

This Communication is for the sole and exclusive use of the intended recipients and may contain information proprietary to Citi which may not be reproduced or circulated in whole or in part without Citi's prior consent. The manner of circulation and distribution may be restricted by law or regulation in certain countries. Persons who come into possession of this document are required to inform themselves of, and to observe such restrictions. Citi accepts no liability whatsoever for the actions of third parties in this respect. Any unauthorized use, duplication, or disclosure of this document is prohibited by law and may result in prosecution.

Other businesses within Citigroup Inc. and affiliates of Citigroup Inc. may give advice, make recommendations, and take action in the interest of their clients, or for their own accounts, that may differ from the views expressed in this document. All expressions of opinion are current as of the date of this document and are subject to change without notice. Citigroup Inc. is not obligated to provide updates or changes to the information contained in this document.

The expressions of opinion are not intended to be a forecast of future events or a guarantee of future results. Past performance is not a guarantee of future results. Real results may vary.

Although information in this document has been obtained from sources believed to be reliable, Citigroup Inc. and its affiliates do not guarantee its accuracy or completeness and accept no liability for any direct or consequential losses arising from its use. Throughout this publication where charts indicate that a third party (parties) is the source, please note that the attributed may refer to the raw data received from such parties. No part of this document may be copied, photocopied or duplicated in any form or by any means, or distributed to any person that is not an employee, officer, director, or authorized agent of the recipient without Citigroup Inc.'s prior written consent.

Citigroup Inc. may act as principal for its own account or as agent for another person in connection with transactions placed by Citigroup Inc. for its clients involving securities that are the subject of this document or future editions of the document.

RISKS

Investments in financial instruments or other products carry significant risk, including the possible loss of the principal amount invested. Financial instruments or other products denominated in a foreign currency are subject to exchange rate fluctuations, which may have an adverse effect on the price or value of an investment in such products. This Communication does not purport to identify all risks or material considerations which may be associated with entering into any transaction.

Structured products can be highly illiquid and are not suitable for all investors. Additional information can be

found in the disclosure documents of the issuer for each respective structured product described herein. Investing in structured products is intended only for experienced and sophisticated investors who are willing and able to bear the high economic risks of such an investment. Investors should carefully review and consider potential risks before investing.

OTC derivative transactions involve risk and are not suitable for all investors. Investment products are not insured, carry no bank or government guarantee, and may lose value. Before entering into these transactions, you should: (i) ensure that you have obtained and considered relevant information from independent reliable sources concerning the financial, economic and political conditions of the relevant markets; (ii) determine that you have the necessary knowledge, sophistication and experience in financial, business and investment matters to be able to evaluate the risks involved, and that you are financially able to bear such risks; and (iii) determine, having considered the foregoing points, that capital markets transactions are suitable and appropriate for your financial, tax, business and investment objectives.

This material may mention options regulated by the US Securities and Exchange Commission. Before buying or selling options you should obtain and review the current version of the [Options Clearing Corporation booklet](#), Characteristics and Risks of Standardized Options. A copy of the booklet can be obtained upon request from Citigroup Global Markets Inc., 390 Greenwich Street, 3rd Floor, New York, NY 10013.

If you buy options, the maximum loss is the premium. If you sell put options, the risk is the entire notional below the strike. If you sell call options, the risk is unlimited. The actual profit or loss from any trade will depend on the price at which the trades are executed. The prices used herein are historical and may not be available when you order is entered. Commissions and other transaction costs are not considered in these examples. Option trades in general and these trades in particular may not be appropriate for every investor. Unless noted otherwise, the source of all graphs and tables in this report is Citi. Because of the importance of tax considerations to all option transactions, the investor considering options should consult with his/her tax advisor as to how their tax situation is affected by the outcome of contemplated options transactions.

Bond rating equivalence

Alpha and/or numeric symbols used to give indications of relative credit quality. In the municipal market, these designations are published by the rating services. Internal ratings are also used by other market participants to indicate credit quality.

Bond credit quality ratings	Rating agencies		
Credit risk	Moody's ¹	Standard & Poor's ²	Fitch Ratings ²
Investment grade			
Highest quality	Aaa	AAA	AAA
High quality (very strong)	Aa	AA	AA
Upper medium grade (strong)	A	A	A
Medium grade	Baa	BBB	BBB
Not investment grade			
Lower medium grade (somewhat speculative)	Ba	BB	BB
Low grade (speculative)	B	B	B
Poor quality (may default)	Caa	CCC	CCC
Most speculative	Ca	CC	CC
No interest being paid or bankruptcy petition filed	C	D	C
In default	C	D	D

¹The ratings from Aa to Ca by Moody's may be modified by the addition of a 1, 2, or 3 to show relative standing within the category.

²The ratings from AA to CC by Standard and Poor's and Fitch ratings may be modified by the addition of a plus or a minus to show relative standing within the category

Bonds are affected by a number of risks, including fluctuations in interest rates, credit risk and prepayment risk. In general, as prevailing interest rates rise, fixed income securities prices will fall. Bonds face credit risk if a decline in an issuer's credit rating, or creditworthiness, causes a bond's price to decline. High yield bonds are subject to additional risks such as increased risk of default and greater volatility because of the lower credit quality of the issues. Finally, bonds can be subject to prepayment risk. When interest rates fall, an issuer may choose to borrow money at a lower interest rate, while paying off its previously issued bonds. As a consequence, underlying bonds will lose the interest payments from the investment and will be forced to reinvest in a market where prevailing interest rates are lower than when the initial investment was made.

(MLP's) - Energy Related MLPs May Exhibit High Volatility. While not historically very volatile, in certain market envi-

ronments Energy Related MLPs may exhibit high volatility.

Changes in Regulatory or Tax Treatment of Energy Related MLPs. If the IRS changes the current tax treatment of the master limited partnerships included in the Basket of Energy Related MLPs thereby subjecting them to higher rates of taxation, or if other regulatory authorities enact regulations which negatively affect the ability of the master limited partnerships to generate income or distribute dividends to holders of common units, the return on the Notes, if any, could be dramatically reduced. Investment in a basket of Energy Related MLPs may expose the investor to concentration risk due to industry, geographical, political, and regulatory concentration.

Mortgage-backed securities ("MBS"), which include collateralized mortgage obligations ("CMOs"), also referred to as real estate mortgage investment conduits ("REMICs"), may not be suitable for all investors. There is

the possibility of early return of principal due to mortgage prepayments, which can reduce expected yield and result in reinvestment risk. Conversely, return of principal may be slower than initial prepayment speed assumptions, extending the average life of the security up to its listed maturity date (also referred to as extension risk).

Additionally, the underlying collateral supporting non-Agency MBS may default on principal and interest payments. In certain cases, this could cause the income stream of the security to decline and result in loss of principal. Further, an insufficient level of credit support may result in a downgrade of a mortgage bond's credit rating and lead to a higher probability of principal loss and increased price volatility. Investments in subordinated MBS involve greater credit risk of default than the senior classes of the same issue. Default risk may be pronounced in cases where the MBS security is secured by, or evidencing an interest in, a relatively small or less diverse pool of underlying mortgage loans.

MBS are also sensitive to interest rate changes which can negatively impact the market value of the security. During times of heightened volatility, MBS can experience greater levels of illiquidity and larger price movements. Price volatility may also occur from other factors including, but not limited to, prepayments, future prepayment expectations, credit concerns, underlying collateral performance and technical changes in the market.

An investment in alternative investments can be highly illiquid, is speculative and not suitable for all investors. Investing in alternative investments is for experienced and sophisticated investors who are willing to bear the high economic risks associated with such an investment. Investors should carefully review and consider potential risks before investing. Certain of these risks may include:

- loss of all or a substantial portion of the investment due to leveraging, short-selling, or other speculative practices;
- lack of liquidity in that there may be no secondary market for the fund and none is expected to develop;
- volatility of returns;
- restrictions on transferring interests in the Fund;
- potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized;

- absence of information regarding valuations and pricing;
- complex tax structures and delays in tax reporting;
- less regulation and higher fees than mutual funds; and
- manager risk.

Individual funds will have specific risks related to their investment programs that will vary from fund to fund.

Asset allocation does not assure a profit or protect against a loss in declining financial markets.

The indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only and do not represent the performance of any specific investment. Index returns do not include any expenses, fees or sales charges, which would lower performance.

Past performance is no guarantee of future results.

International investing entails greater risk, as well as greater potential rewards compared to US investing. These risks include political and economic uncertainties of foreign countries as well as the risk of currency fluctuations. These risks are magnified in countries with emerging markets, since these countries may have relatively unstable governments and less established markets and economics.

Investing in smaller companies involves greater risks not associated with investing in more established companies, such as business risk, significant stock price fluctuations and illiquidity.

Factors affecting commodities generally, index components composed of futures contracts on nickel or copper, which are industrial metals, may be subject to a number of additional factors specific to industrial metals that might cause price volatility. These include changes in the level of industrial activity using industrial metals (including the availability of substitutes such as manmade or synthetic substitutes); disruptions in the supply chain, from mining to storage to smelting or refining; adjustments to inventory; variations in production costs, including storage, labor and energy costs; costs associated with regulatory compliance, including environmental regulations; and changes in industrial, government and consumer demand, both in individual consuming nations and internationally. Index components concentrated in futures contracts on agricultural products, including grains, may be subject to a number of additional factors specific

to agricultural products that might cause price volatility. These include weather conditions, including floods, drought and freezing conditions; changes in government policies; planting decisions; and changes in demand for agricultural products, both with end users and as inputs into various industries.

The information contained herein is not intended to be an exhaustive discussion of the risks, strategies or concepts mentioned herein or tax or legal advice. Readers interested in the strategies or concepts should consult their tax, legal, or other advisors, as appropriate.

Diversification does not guarantee a profit or protect against loss. Different asset classes present different risks.

Environmental, Social and Governance (ESG) and sustainable investing may limit the type and number of investment opportunities, and, as a result may affect performance relative to other approaches that do not impose similar sustainability criteria. Sustainable investment products are subject to availability. Certain sustainable investment opportunities may not be available in all regions or not available at all. No guarantee is provided regarding the financial or sustainability performance of such products and the products may not meet their investment or sustainability objectives.

COUNTRY DISCLOSURES

Citibank, N.A., Hong Kong / Singapore organized under the laws of U.S.A. with limited liability. This communication is distributed in Hong Kong by Citi Private Bank operating through Citibank N.A., Hong Kong Branch, which is registered in Hong Kong with the Securities and Futures Commission for Type 1 (dealing in securities), Type 4 (advising on securities), Type 6 (advising on corporate finance) and Type 9 (asset management) regulated activities with CE No: (AAP937) or in Singapore by Citi Private Bank operating through Citibank, N.A., Singapore Branch which is regulated by the Monetary Authority of Singapore. Any questions in connection with the contents in this communication should be directed to registered or licensed representatives of the relevant aforementioned entity. The contents of this communication have not been reviewed by any regulatory authority in Hong Kong or any regulatory authority in Singapore. This communication contains confidential and proprietary in-

formation and is intended only for recipient in accordance with accredited investors requirements in Singapore (as defined under the Securities and Futures Act (Chapter 289 of Singapore) (the "Act") and professional investors requirements in Hong Kong (as defined under the Hong Kong Securities and Futures Ordinance and its subsidiary legislation). For regulated asset management services, any mandate will be entered into only with Citibank, N.A., Hong Kong Branch and/or Citibank, N.A. Singapore Branch, as applicable. Citibank, N.A., Hong Kong Branch or Citibank, N.A., Singapore Branch may sub-delegate all or part of its mandate to another Citigroup affiliate or other branch of Citibank, N.A. Any references to named portfolio managers are for your information only, and this communication shall not be construed to be an offer to enter into any portfolio management mandate with any other Citigroup affiliate or other branch of Citibank, N.A. and, at no time will any other Citigroup affiliate or other branch of Citibank, N.A. or any other Citigroup affiliate enter into a mandate relating to the above portfolio with you. To the extent this communication is provided to clients who are booked and/or managed in Hong Kong: No other statement(s) in this communication shall operate to remove, exclude or restrict any of your rights or obligations of Citibank under applicable laws and regulations. Citibank, N.A., Hong Kong Branch does not intend to rely on any provisions herein which are inconsistent with its obligations under the Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission, or which mis-describes the actual services to be provided to you.

Citibank, N.A. is incorporated in the United States of America and its principal regulators are the US Office of the Comptroller of Currency and Federal Reserve under US laws, which differ from Australian laws. Citibank, N.A. does not hold an Australian Financial Services License under the Corporations Act 2001 as it enjoys the benefit of an exemption under ASIC Class Order CO 03/1101 (re-made as ASIC Corporations (Repeal and Transitional) Instrument 2016/396 and extended by ASIC Corporations (Amendment) Instrument 2023/588).

In the United Kingdom, Citibank N.A., London Branch (registered branch number BR001018), Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB, is authorized and regulated by the Office of the Comptroller of the Currency (USA) and authorized by the Prudential

Regulation Authority. Subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. The contact number for Citibank N.A., London Branch is +44 (0)20 7508 8000.

Citibank Europe plc (UK Branch) is a branch of Citibank Europe plc, which is authorised and regulated by the Central Bank of Ireland and the European Central Bank. Authorised by the Prudential Regulation Authority. Subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. Citibank Europe plc, UK Branch is registered as a branch in the register of companies for England and Wales with registered branch number BR017844. Its registered address is Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB. VAT No.: GB 429 6256 29. Citibank Europe plc is registered in Ireland with number 132781, with its registered office at 1 North Wall Quay, Dublin 1. Citibank Europe plc is regulated by the Central Bank of Ireland. Ultimately owned by Citigroup Inc., New York, USA.

Citibank Europe plc, Luxembourg Branch, registered with the Luxembourg Trade and Companies Register under number B 200204, is a branch of Citibank Europe plc. It is subject to the joint supervision of the European Central bank and the Central Bank of Ireland. It is furthermore subject to limited regulation by the Commission de Surveillance du Secteur Financier (the CSSF) in its role as host Member State authority and registered with the CSSF under number B00000395. Its business office is at 31, Z.A. Bourmicht, 8070 Bertrange, Grand Duchy of Luxembourg. Citibank Europe plc is registered in Ireland with company registration number 132781. It is regulated by the Central Bank of Ireland under the reference number C26553 and supervised by the European Central Bank. Its registered office is at 1 North Wall Quay, Dublin 1, Ireland.

This document is communicated by Citibank (Switzerland) AG, which has its registered address at Hardstrasse 201, 8005 Zurich, Citibank N.A., Zurich Branch, which has its registered address at Hardstrasse 201, 8005 Zurich, or Citibank N.A., Geneva Branch, which has its registered address at 2, Quai de la Poste, 1204 Geneva. Citibank (Switzerland) AG and Citibank, N.A., Zurich and

Geneva Branches are authorised and supervised by the Swiss Financial Supervisory Authority (FINMA).

In Jersey, this document is communicated by Citibank N.A., Jersey Branch which has its registered address at PO Box 104, 38 Esplanade, St Helier, Jersey JE4 8QB. Citibank N.A., Jersey Branch is regulated by the Jersey Financial Services Commission. Citibank N.A. Jersey Branch is a participant in the Jersey Bank Depositors Compensation Scheme. The Scheme offers protection for eligible deposits of up to £50,000. The maximum total amount of compensation is capped at £100,000,000 in any 5-year period. Full details of the Scheme and banking groups covered are available on the States of Jersey website www.gov.je/dcs, or on request.

Citi may offer, issue, distribute or provide other services in relation to certain unsecured financial instruments issued or entered into by BRRD Entities (i.e., EU entities within the scope of Directive 2014/59/EU (the BRRD), including EU credit institutions, certain EU investment firms and / or their EU subsidiaries or parents) (BRRD Financial Instruments).

In various jurisdictions (including, without limitation, the European Union and the United States) national authorities have certain powers to manage and resolve banks, broker dealers and other financial institutions (including, but not limited to, Citi) when they are failing or likely to fail. There is a risk that the use, or anticipated use, of such powers, or the manner in which they are exercised, may materially adversely affect (i) your rights under certain types of unsecured financial instruments (including, without limitation, BRRD Financial Instruments), (ii) the value, volatility or liquidity of certain unsecured financial instruments (including, without limitation, BRRD Financial Instruments) that you hold and / or (iii) the ability of an institution (including, without limitation, a BRRD Entity) to satisfy any liabilities or obligations it has to you. In the event of resolution, the value of BRRD Financial Instruments may be reduced to zero and or liabilities may be converted into ordinary shares or other instruments of ownership for the purposes of stabilisation and loss absorption. The terms of existing BRRD Financial Instruments (e.g., date of maturity or interest rates payable) could be altered and payments could be suspended.

There can be no assurance that the use of any BRRD resolution tools or powers by the BRRD Resolution Authority

or the manner in which they are exercised will not materially adversely affect your rights as a holder of BRRD Financial Instruments, the market value of any investment you may have in BRRD Financial Instruments and/or a BRRD Entity's ability to satisfy any liabilities or obligations it has to you. You may have a right to compensation from the relevant authorities if the exercise of such resolution powers results in less favourable treatment for you than the treatment that you would have received under normal insolvency proceedings. By accepting any services from Citi, you confirm that you are aware of these risks.

In Canada, Citi Private Bank is a division of Citibank Canada, a Schedule II Canadian chartered bank. References herein to Citi Private Bank and its activities in Canada relate solely to Citibank Canada and do not refer to any affiliates or subsidiaries of Citibank Canada operating in Canada. Certain investment products are made available through Citibank Canada Investment Funds Limited ("CCIFL"), a wholly owned subsidiary of Citibank Canada. Investment Products are subject to investment risk, including possible loss of principal amount invested. Investment Products are not insured by the CDIC, FDIC or depository insurance regime of any jurisdiction and are not guaranteed by Citigroup or any affiliate thereof.

This document is for information purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any securities to any person in any jurisdiction. The information set out herein may be subject to updating, completion, revision, verification and amendment and such information may change materially.

Citigroup, its affiliates and any of the officers, directors, employees, representatives or agents shall not be held liable for any direct, indirect, incidental, special, or consequential damages, including loss of profits, arising out of the use of information contained herein, including through errors whether caused by negligence or otherwise.

CCIFL is not currently a member and does not intend to become a member of the Canadian Investment Regulatory Organization ("CIRO"); consequently, clients of CCIFL will not have available to them investor protection benefits that would otherwise derive from membership of CCIFL in the CIRO, including coverage under any investor protection plan for clients of members of the CIRO.

Bahrain: IN BAHRAIN, CITI PRIVATE BANK OPERATES UNDER SPECIFIC APPROVAL ISSUED ON THE BASIS OF

CITIBANK, N.A., BAHRAIN BRANCH'S BANKING LICENSE

Marketing and distribution of Investment Funds to clients in Bahrain requires Notification to the Central Bank of Bahrain and will be limited to UHNWI as defined below. Minimum investment subscription criteria will apply for products for all subscriptions for Bahrain domiciled clients.

Ultra-high net worth investors are:

- (a) Individuals who have a minimum net worth (or joint net worth with their spouse) of USD 25 million or more
- (b) Companies, partnerships, trusts or other commercial undertakings, which have financial assets available for investment of not less than USD 25 million; or
- (c) Governments, supranational organisations, central banks or other national monetary authorities, and state organisations whose main activity is to invest in financial instruments (such as state pension funds).

CITIGOLD/CITIGOLD PRIVATE CLIENT MARKET SPECIFIC DISCLOSURES

Hong Kong: This communication is distributed in Hong Kong by Citibank (Hong Kong) Limited ("CHKL") and/or Citibank, N.A., Hong Kong Branch ("CBNA HK", Citibank, N.A. is organized under the laws of U.S.A. with limited liability). CHKL and CBNA HK provide no independent research or analysis in the substance or preparation of this communication. Although information in this communication has been obtained from sources believed to be reliable, CHKL and CBNA HK do not guarantee its accuracy or completeness and accept no liability for any direct or consequential losses arising from its use.

This communication is for general information only, is not intended as a recommendation or an offer or solicitation for the purchase or sale of any products or services and should not be relied upon as financial advice. The information herein has not taken account of the objectives, financial situation or needs of any particular investor. Any person considering an investment should consider the suitability of the investment having regard to their objectives, financial situation and needs, and should seek independent advice before making an investment decision. You should obtain and consider the relevant product terms and conditions and risk disclosure statement, and consider if it's suitable for your objectives, financial

situation or needs before making any investment decision. Investors are advised to obtain independent legal, financial and taxation advice prior to investing. Investments are not deposits, are not protected by the Deposit Protection Scheme in Hong Kong and are subject to investment risk including the possible loss of the principal amount invested.

This communication does not constitute the distribution of any information in any jurisdiction in which it is unlawful to distribute such information to any person in such jurisdiction.

CHKL does not provide discretionary portfolio management services.

Singapore: This communication is distributed in Singapore by Citibank Singapore Limited ("CSL") to selected Citigold/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this communication. Please contact your Citigold/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this communication. Investment products are not insured under the provisions of the Deposit Insurance and Policy Owners' Protection Schemes Act of Singapore and are not eligible for deposit insurance coverage under the Deposit Insurance Scheme.

This communication is for general information only and should not be relied upon as financial advice. The information herein has no regard to the specific objectives, financial situation and particular needs of any specific person and is not intended to be an exhaustive discussion of the strategies or concepts mentioned herein or tax or legal advice. Any person interested in the strategies or concepts mentioned herein should consult their independent tax, legal, financial or other advisors, as appropriate. This communication does not constitute the distribution of any information or the making of any offer or solicitation by anyone in any jurisdiction in which such distribution or offer is not authorized or to any person to whom it is unlawful to distribute such information or make any offer or solicitation.

Before making any investment, each investor must obtain the investment offering materials, which include a description of the risks, fees and expenses and the performance history, if any, which may be considered in connection with making an investment decision. Interested

investors should seek the advice of their financial adviser about the issues discussed herein as appropriate. Should investors choose not to seek such advice, they should carefully consider the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's investment objectives and assess whether the investment product is suitable for themselves. Although information in this document has been obtained from sources believed to be reliable, CSL does not guarantee its accuracy or completeness and accept no liability for any direct or consequential losses arising from its use.

CSL does not provide discretionary portfolio management services.

UAE: This document is distributed in UAE by Citibank, N.A. UAE. Citibank N.A. UAE is licensed by UAE Securities and Commodities Authority ("SCA") to undertake the financial activity as Promoter under license number 602003.

Citibank N.A. UAE is registered with Central Bank of UAE under license numbers BSD/504/83 for Al Wasl Branch Dubai, 13/184/2019 for Mall of the Emirates Branch Dubai, BSD/2819/9 for Sharjah Branch, and BSD/692/83 for Abu Dhabi Branch.

This is not an official statement of Citigroup Inc. and may not reflect all of your investments with or made through Citibank. For an accurate record of your accounts and transactions, please consult your official statement. Before making any investment, each investor must obtain the investment offering materials, which include a description of the risks, fees and expenses and the performance history, if any, which may be considered in connection with making an investment decision. Each investor should carefully consider the risks associated with the investment and make a determination based upon the investor's own particular circumstances, that the investment is consistent with the investor's investment objectives. At any time, Citigroup companies may compensate affiliates and their representatives for providing products and services to clients.

United Kingdom: This document is distributed in the U.K. by Citibank UK Limited and in Jersey by Citibank N.A., Jersey Branch.

Citibank UK Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. Our firm's Financial Services Register number is 805574. Citibank UK Limited is a company limited by shares registered in England and Wales with registered address at Citigroup Centre, Canada Square, Canary Wharf, London E14 5LB, Companies House Registration No. 11283101.

Citibank N.A., Jersey Branch is regulated by the Jersey Financial Services Commission. Citi International Personal Bank is registered in Jersey as a business name of Citibank N.A. The address of Citibank N.A., Jersey Branch is P.O. Box 104, 38 Esplanade, St Helier, Jersey JE4 8QB. Citibank N.A. is incorporated with limited liability in the USA. Head office: 399 Park Avenue, New York, NY 10043, USA.

© 2023 Citigroup Inc. Citi, Citi and Arc Design and other marks used herein are service marks of Citigroup Inc. or its affiliates, used and registered throughout the world.

