J.P.Morgan PRIVATE BANK

2024

A strong economy *in a fragile world*

Mid-Year Outlook.

Foreword

At the start of the year, most forecasters anticipated rapidly falling inflation to allow central banks to embark on a series of rate cuts. Those were reasonable projections, a fair reading of the situation at hand.

But the economy has defied the forecasts. Inflation hasn't declined as quickly as many have hoped. Still, across a range of macro variables, the global economy looks remarkably strong.

The world is also at a delicate juncture. Geopolitical risk is real, and it is top of mind for investors large and small. They have a range of concerns. The potential for worsening global conflict. The unknown outcome—and unknown implications—of U.S. elections in November. Strains in the U.S.-China relationship. A widespread focus on national security, in traditional defense, energy sources, supply chains and cybersecurity.

Thus we title our *Mid-Year Outlook*, "A strong economy in a fragile world."

On the one hand, higher growth, higher bond yields and higher equity valuations. On the other hand, higher inflation, higher geopolitical risks and potentially higher taxes.

To prepare for the second half of the year, we draw on the experience of our Global Investment Strategy Group to help us identify both the risks and opportunities that our clients may face. In our view, clients can rely on equities to harness global growth, real assets to insulate against inflation, and bonds to provide income and mitigate risk if economic growth falters. AI is just getting started. The *Mid-Year Outlook* notes that it took 15 years for the personal computer to increase the economy's productivity; AI, we project, could do it in seven.

In short, we think positive forces can power markets forward in 2024 and beyond.

Whatever markets have in store, we rely on each other and on the relationships we have forged over time to deliver you our best. We are honored to stand by your side as your financial partner. Thank you for your continued trust and confidence in J.P. Morgan.

Sincerely,

David Frame
CEO, U.S. Private Bank

Martin Marron
CEO, International Private Bank

2024 Mid-Year Outlook
Key Takeaways

The economy is stronger than you think.
We think the global market rally should continue.

AI is just getting started.
The path is uncertain, but the impact could be massive.

Rates will be higher for longer, not forever.
Dislocations in interest-rate-sensitive sectors may not last.

The U.S. election will have global effects.
Don’t let them disrupt your plans.

Prepare for continued conflict.
Diversify, and consider investing in security, defense and infrastructure.

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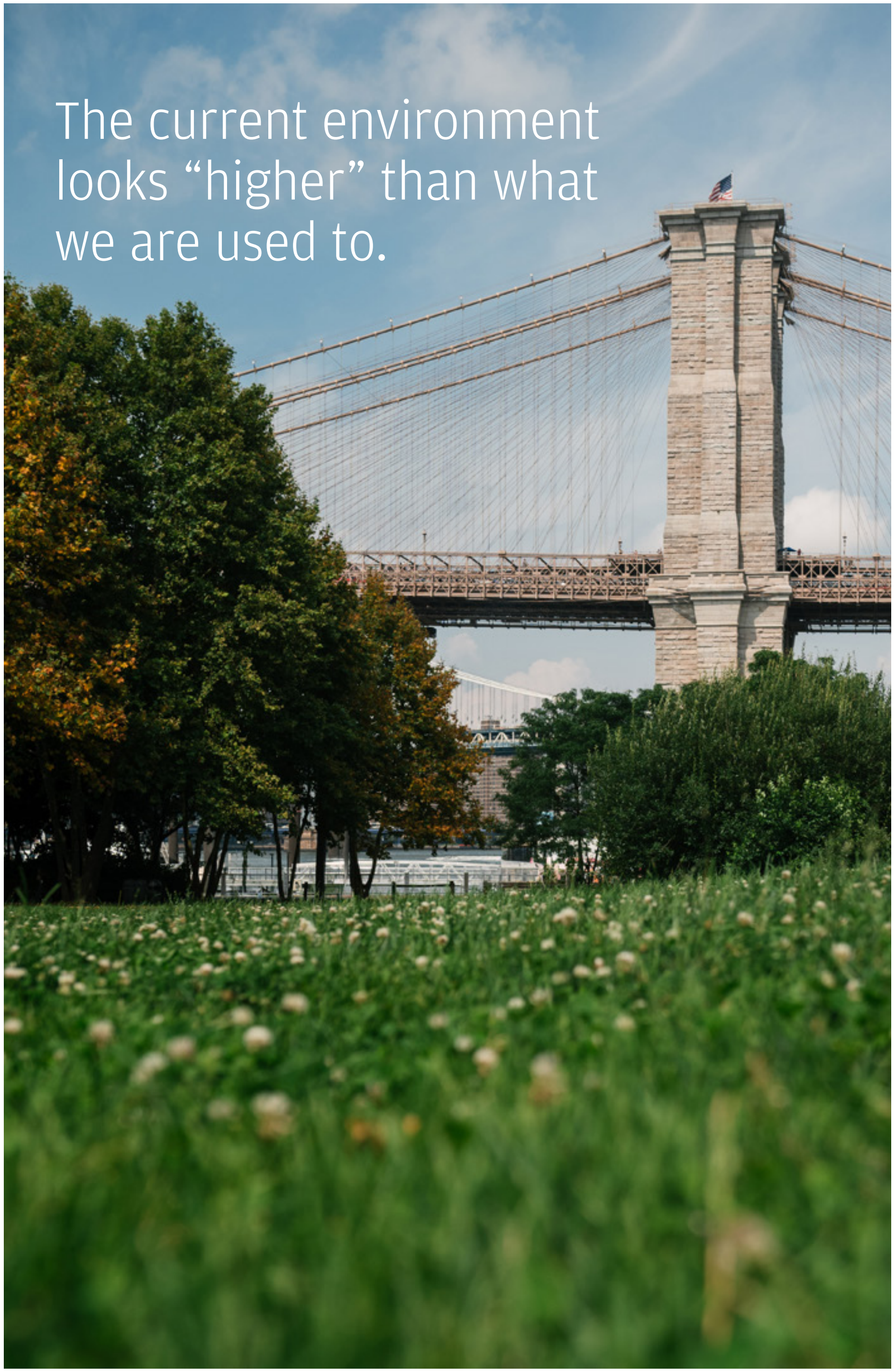
Not many saw it coming.

Global growth is defying the pressure of higher interest rates, proving stronger and more durable than most forecasters had expected. At the same time, stubborn inflation has spoiled market expectations for material rate cuts. Nonetheless, global equities have returned over 10% so far this year.

Over the past five months, economists have marked up their 2024 projections for global real GDP growth from about 2.5% to 3% and lowered forecasts for Federal Reserve (Fed) rate cuts from seven to just two. Once-skeptical investors and policymakers have come to acknowledge that the economy is not just resilient, it is actually quite robust. And over a long-term horizon, the potential economic impact of artificial intelligence (AI) could be substantial—perhaps even transformative.

In our *Mid-Year Outlook*, we take stock of the current environment.



Higher growth

Higher policy rates and bond yields

Higher equity valuations

In fact, a set of key market and macroeconomic variables (inflation excepted) across developed economies, from unemployment rates to yields on short-term government bonds, to corporate profit margins, look as healthy as they have in decades. We expect global equities will power portfolio returns through the rest of the year. At the same time, more onerous financing costs create the potential for attractive returns in credit, and discounts in mid-cap equities, real estate and private equity assets.

And yet...

WE SEE THE POTENTIAL FOR:

Higher inflation

Higher geopolitical risks

Higher taxes

We think clients should be fully invested—and also alert to the potential risks facing a strong global economy in a fragile world.

Geopolitical risk is top of mind for investors large and small. The possibility of worsening global conflict—whether a regional war in the Middle East or an intensification of what is already the biggest land war in Europe since World War II—cannot be dismissed out of hand. U.S. elections in November could have significant economic and market implications, which no one can predict with certainty. The relationship between the United States and China, the world's two largest economies and trading partners, seems to be in a state of inexorable decay.

A strong economy in a fragile world. That's the backdrop for investors as we approach mid-year 2024.

A strong economy

A basic health check shows that calling the global economy “resilient” undersells the strength we see.

In the United States, the recent trend in real growth has been around 3%, the unemployment rate has been below 4% for the last two years (a near-record streak), and inflation has fallen from its 2022 peak to a more tolerable (if above target) rate of around 3%. Elsewhere, European growth is perking up after an energy price and interest rate shock, while global manufacturing could finally be turning higher.

From a markets perspective, global equities rose 20% over the past year, and safe, short-term government bonds offer positive real yields—what’s not to like?

Higher growth in a strong economy

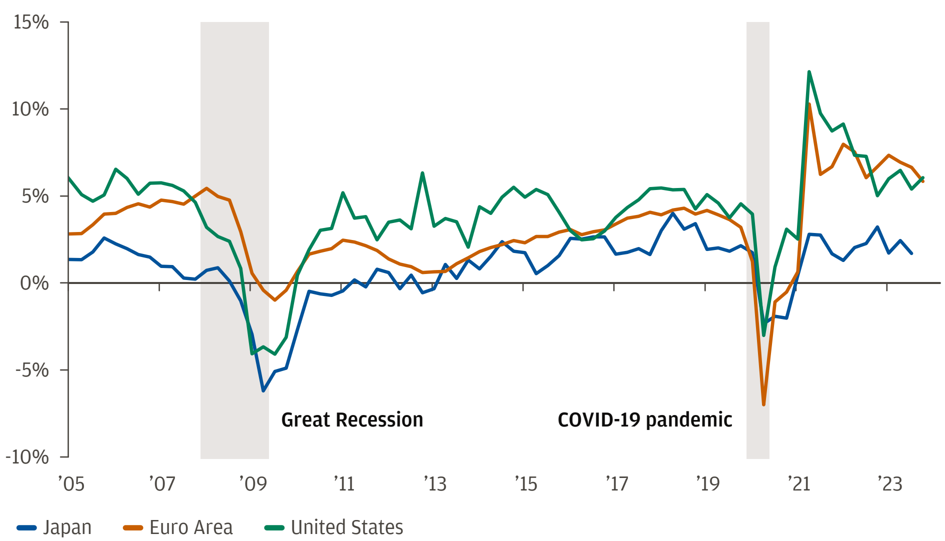
Consumers drive what looks to be a durable expansion

The higher growth story starts with the pandemic. Powerful fiscal and monetary stimulus, combined with economic reopening, jolted global growth to a blistering pace of over 15% in nominal terms in 2021. Now, after three years and with the end of a global central bank tightening cycle, growth has slowed to something like a 6.5% nominal pace. While nominal growth could slow further through the coming year, it will still likely settle at a higher pace than the one that characterized most of the 2010s.

Household income growth in Europe and the United States is nearly 6%, which has financed strong consumption. At the same time, elevated asset prices and record net wealth support confidence. That consumption is a boon for companies, which have rarely been better at turning sales into profits. In the United States, non-financial profit margins have reached nearly 18%, while in Europe and Japan, margins have doubled to 10% over the last decade. Without a material contraction in margins or earnings, it is difficult to envision the kind of broad-based worker layoffs that would put household incomes at risk.

Household incomes are growing, financing strong consumption

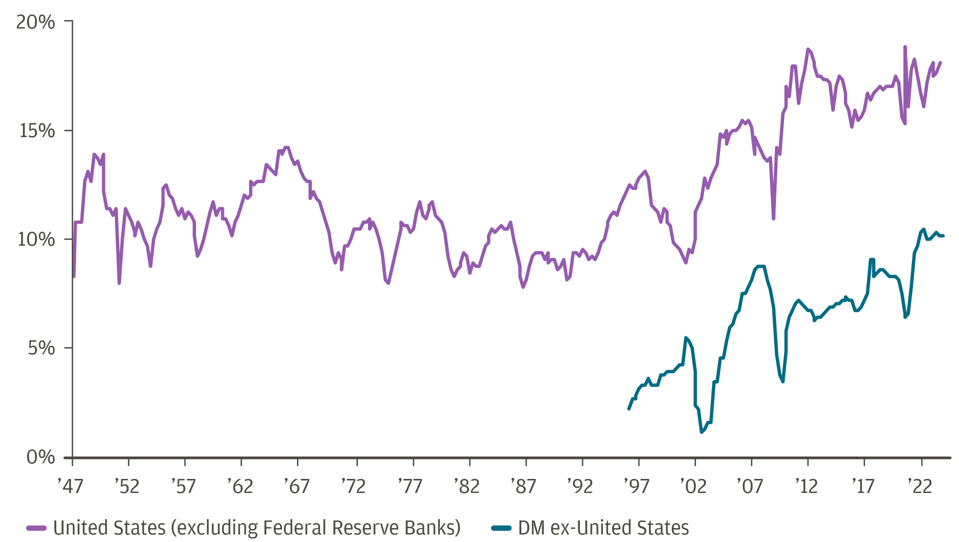
YoY %, total employee compensation growth



Sources: Organisation for Economic Co-operation & Development, NBER, Haver Analytics. Data as of March 31, 2024.

Companies have rarely been better at turning sales into profits

Non-financial corporate profits as a % of sales

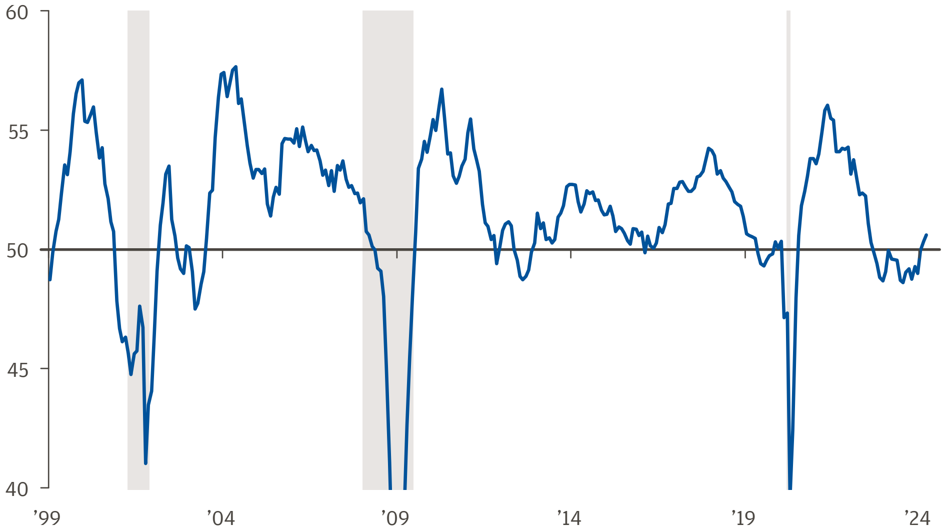


Sources: Federal Reserve Board, MSCI, J.P. Morgan. Data as of March 31, 2024.

Outside the United States, the growth outlook may be modestly improving. Global economic data is surprising to the upside, and the global manufacturing sector could be sputtering to life after a difficult year as firms restock now-depleted inventories. Even in China, economic data has stabilized despite the continued overhang from the real estate sector.

Global manufacturing is turning a corner

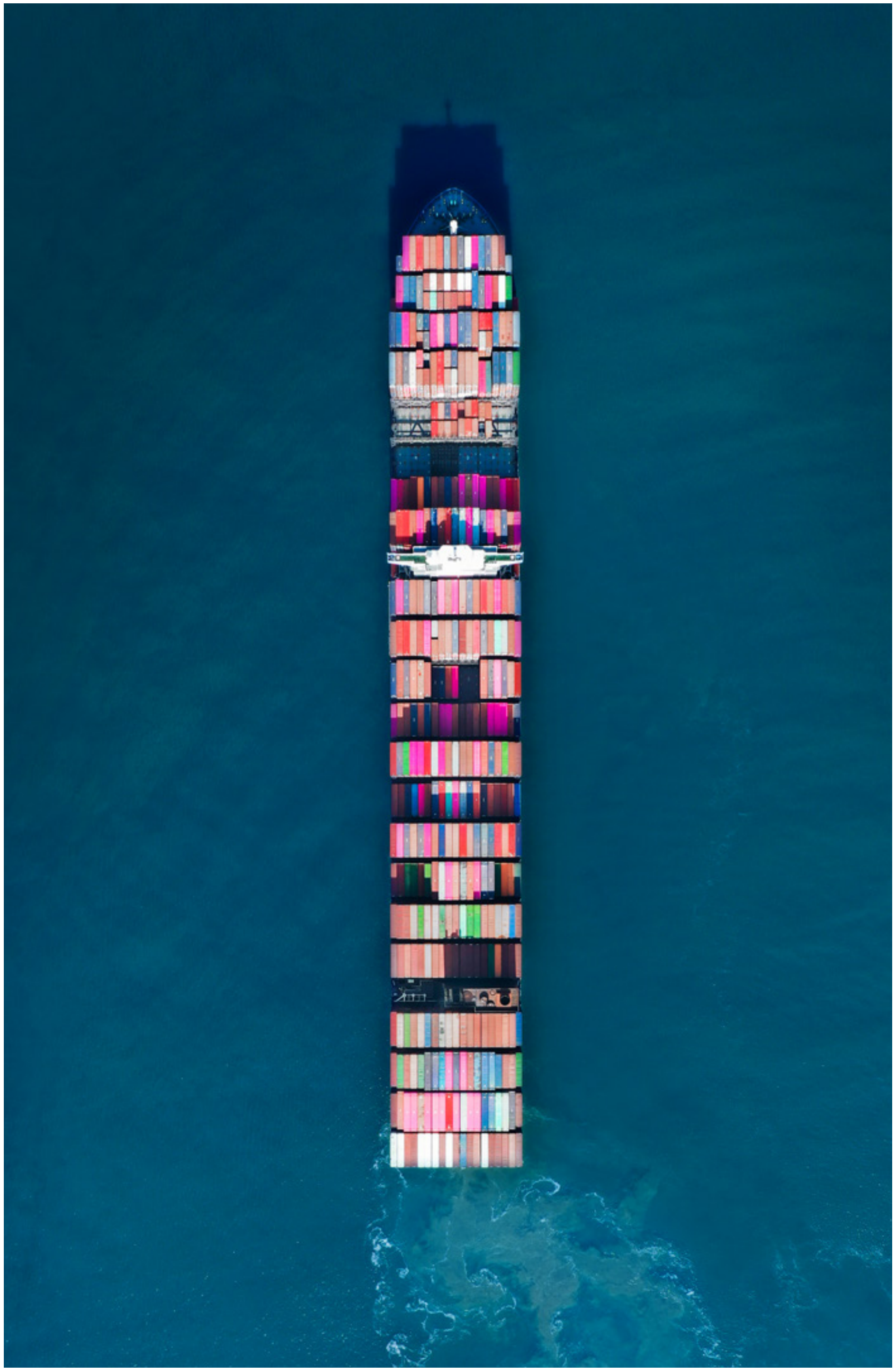
J.P. Morgan Global Manufacturing PMI (50+ = expansion)



Sources: J.P. Morgan, S&P Global, National Bureau of Economic Research, Haver Analytics.
Data as of April 30, 2024.

Businesses are also now more likely to invest for growth. CEO confidence is at the highest level in two years, corporate profits are strong, and improving credit conditions will likely result in more capital expenditures and hiring. Cyclical, interest-rate-sensitive sectors could also bounce back if monetary policy becomes more accommodative. Residential fixed investment (housing) is one of the most interest-rate-sensitive components of the economy. Output in the sector collapsed by almost 15% during the rate hiking cycle. Despite still-elevated interest rates, the sector has started to grow again.

Recession risk, in our view, is relatively subdued. But some investors are still worried that the growth backdrop will once again lead to unsustainable inflation and another round of destabilizing rate hikes from global central banks. While growth will likely keep inflation above central bank targets for the rest of year, we don't think it will necessitate another round of central bank rate hikes that put the business cycle at risk.



Higher inflation in a strong economy

Inflation likely settles between 2% and 3%

While global inflation has staged an impressive (and market-friendly) drop from nearly 8% to 3%, we see some signs that progress is slowing, especially in the United States. In the first quarter, core PCE prices (consumer prices excluding food and energy) rose at a close to 4% annual pace, the Employment Cost Index surprised to upside, and market-based measures of inflation expectations ticked higher.

In the second half of the year, we expect that U.S. inflation will downshift from the 4% annualized pace seen in the first quarter to below 3% by the end of the year.

We believe cyclical disinflation will be driven by cooling shelter inflation and wage growth. The leading indicators of rents suggest that the trend in the official shelter metrics should moderate this year. This should offset any bounce we see in goods prices, given inventory restocking and continued consumer demand. On the labor side, the balance between supply and demand has improved markedly from 2021 and 2022, and leading indicators of wage growth suggest that the first-quarter jump should reverse.

Based on our analysis, we believe U.S. inflation will likely settle into a 2%–3% range for the foreseeable future.

First, labor markets are still tighter than they were before the pandemic, which fuels stronger wage growth. Even as companies pay higher wages, they enjoy greater pricing power, and they are passing on higher prices to consumers.

Wage growth should slow in the coming months

Sources: Indeed Hiring Lab, Bureau of Labor Statistics, Haver Analytics. Data as of March 31, 2024.

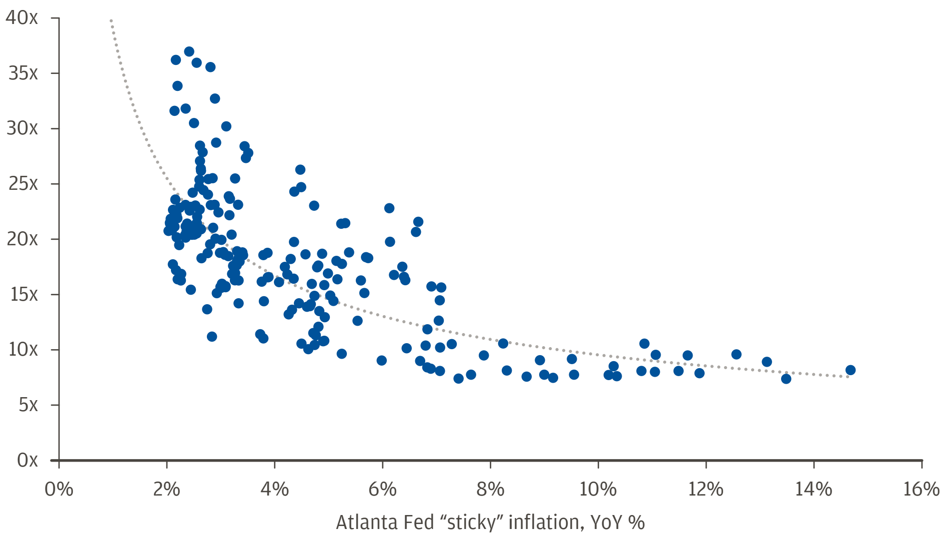
Second, commodity prices have moved higher. That partly reflects the impact of industrial policy and the energy transition, which have boosted demand more than supply. Commodity prices now also embed more geopolitical risk.

Finally, a shortage of housing across many developed economies will not be resolved for many years. That should put upward pressure on shelter costs in 2025 and beyond.

From an investor's perspective, 2%–3% inflation will likely be relatively benign. Based on our analysis of the last 60 years, 3% inflation has marked a key threshold. Below that level, equity market multiples tend to remain well supported, and the negative correlation between stocks and bonds is reliable.

Equity multiples tend to be supported when inflation is less than 3%

S&P 500 P/E multiples

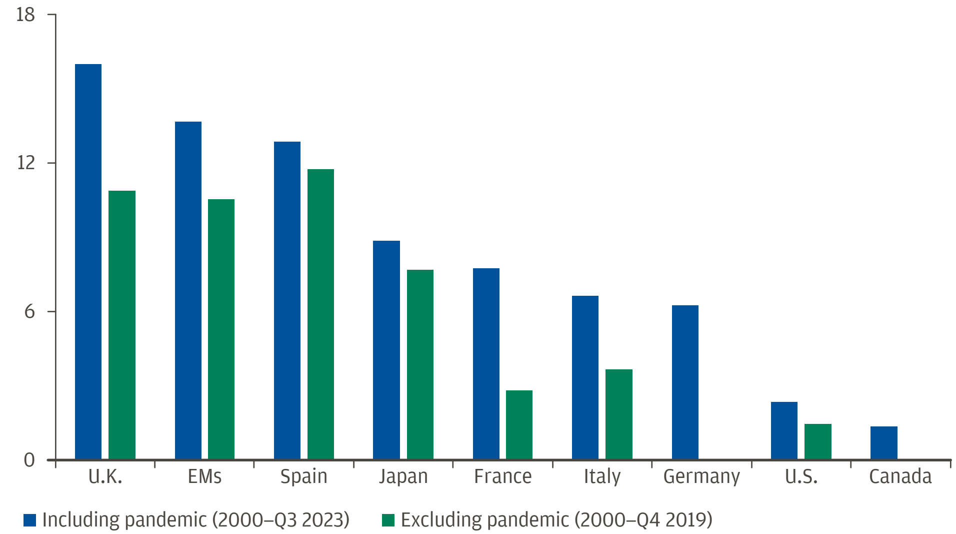


Sources: S&P and Atlanta Federal Reserve. Data as of September 30, 2023.

Of course, a new surge in energy prices—from, say, a regional war in the Middle East—would pose a key risk to our U.S. inflation outlook. How might higher energy prices "pass through" to the broader economy? We think it would take a sustained 50% rise in energy prices to boost non-energy inflation by 1%. A surge of that magnitude is unlikely, in our view, given OPEC's spare capacity, U.S. energy independence and the geopolitical risk premium that is likely already reflected in oil prices.

A surge in energy prices would pose a risk to our inflation outlook

Basis points pass-through to non-energy inflation from a 1% rise in energy inflation



Sources: Oxford Economics, Haver Analytics. Data as of December 31, 2023. EMs stand for emerging markets, which in this case includes eight countries: Brazil, Chile, Czech Republic, Hungary, Mexico, Peru, Poland, Romania. Note: A polynomial distributed lag model is utilized to estimate these energy pas-sthrough results. The dependent variable is CPI ex-energy inflation, and the independent variables are polynomials of energy inflation with lags up to and including four, and with polynomial orders up to and including two. A one-quarter lag of the dependent variable is also included as a control. The result is the sum of all the coefficients on the energy inflation variables. The model is estimated with quarterly data from 2000 to Q4 2019 for the excluding pandemic result, and to Q3 2023 for the including pandemic result.

European inflation is much more exposed to potential commodity price volatility, but price growth in the European Monetary Union has returned to more comfortable levels. Importantly, the inflation overshoot in Europe was much more driven by energy, food and supply shocks; it did not reflect tight labor markets and excess demand. European inflation seems on track to return to the European Central Bank's target around the end of the year.

Upside pressures could keep inflation above central bank targets, especially in the United States. That probably means higher policy rates and bond yields, but it also means stronger corporate earnings and demand for real assets. It is a constructive backdrop for multi-asset portfolios.

Higher policy rates in a strong economy

Policy rates in the United States will likely stay above the rate of inflation

At the start of 2024, investors were expecting a meaningful rate-cutting cycle. Globally, that seems to be getting underway. But now it seems like the Fed is in a holding pattern until inflation falls a bit further.

How might the Fed weigh its next move? We think the central bank is in a position of strength. So long as pressure doesn't build in the labor market, the Fed can sit tight and wait for shelter inflation data to improve. If growth does slow unexpectedly in a way that threatens a recession, the Fed can lower interest rates and stimulate activity in segments of the economy that would benefit most, notably residential real estate.

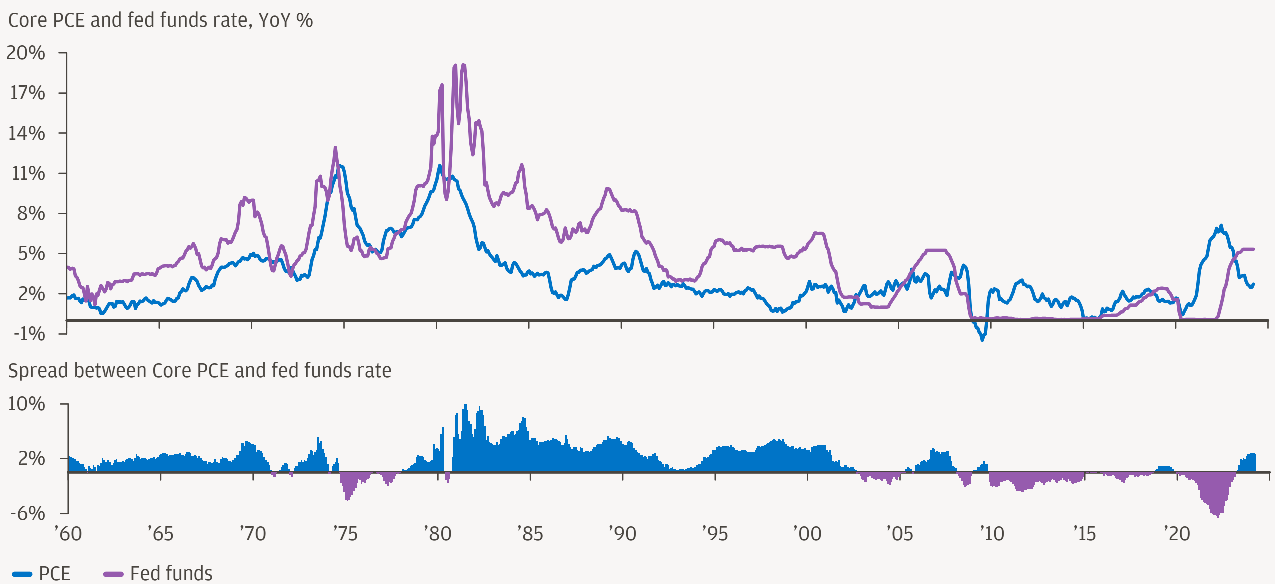
Without renewed pressure in the labor market, the case for further rate hikes seems relatively weak.

As we have noted, the U.S. labor market is much healthier than it was in 2022, in part because the labor supply was boosted by 700,000 more foreign-born workers in the first quarter. What's more, the leading indicators suggest a continued downward trend in wage growth.

Importantly, inflation expectations are tame. Surveys from both the New York Fed and University of Michigan for one-year ahead inflation expectations remain near 3%. Market-based metrics for longer-run inflation have been stable, near 2.5% for the last year.

When the Fed does eventually decide to cut rates, they will likely stay above the rate of inflation. That would be consistent with historical trends, as we illustrate in the chart below.

For most of modern financial history, policy rates have been above the rate of inflation



Sources: Bureau of Economic Analysis, Federal Reserve Board, Haver Analytics. Data as of March 31, 2024.

Whenever the Fed cutting cycle begins, investors will need to understand that we're in a very different rate environment. In the 2010s, the Fed embarked on unprecedented monetary policy easing. Policy rates remained well below the rate of inflation to help consumers and businesses repair their balance sheets after the global financial crisis. At the same time, economists theorized about "secular stagnation" and the death of inflation.

Those days are gone. The risk of elevated inflation is just as prevalent as the risk of recession, inflation volatility is more elevated, and private sector balance sheets are very healthy. For the rest of the year and into 2025, we think the environment for cash yields will be comparable to the 1990s, when policy rates were ~200 basis points (bps) higher than the rate of inflation. In this way, policymakers incentivize more saving relative to investment, which should help keep a lid on price growth.

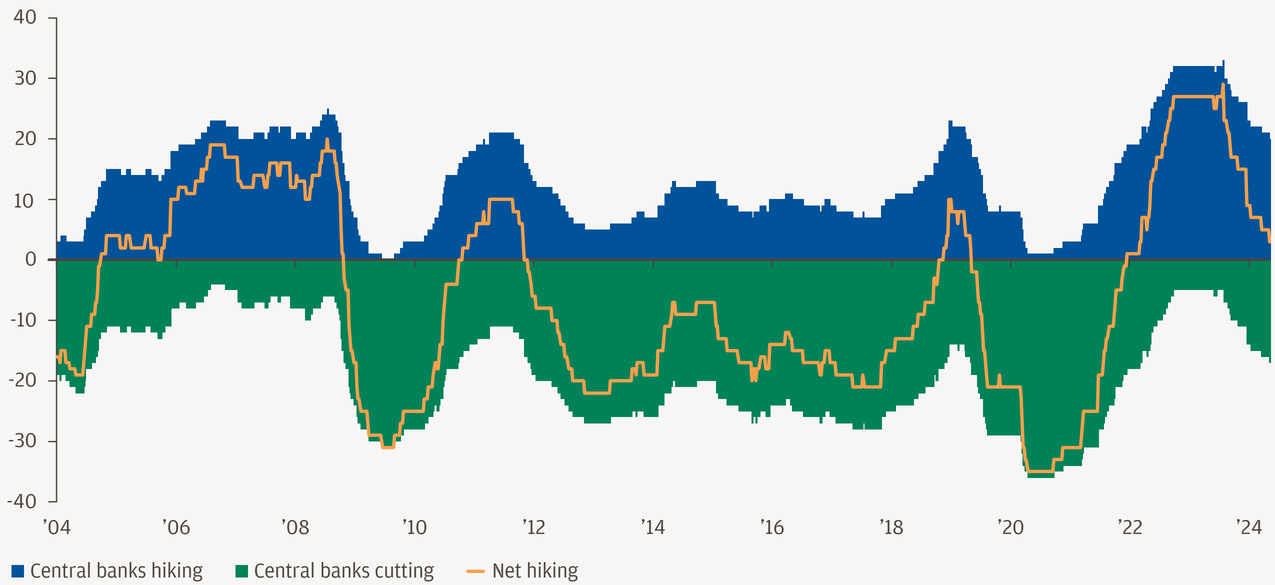
While the Fed's own rate-cutting cycle may be delayed, globally the tide has turned decisively from tightening. The Swiss National Bank has already started to lower interest rates, the first G-10 central bank to do so; and currently, 20 other central banks are cutting rates. The European Central Bank and the Bank of Canada kicked off the summer with rate cuts. Brazil's central bank has already lowered its policy rate from 13.75% last summer to 10.75% today, and some Latin American central banks have finished their easing cycles.

The outlier is the Bank of Japan. Japanese inflation and wage growth are finally starting to trend at a level that is consistent with the central bank's policy goals. Japan offers the lowest yields in the world (Japanese bill yields are still effectively 0%), which is putting pressure on the yen. The combination of healthier inflation and pressure on the currency points the Bank of Japan toward normalizing interest rates higher from here—even if its policy stance will remain supportive on balance.

This shift toward easing should support global risk assets, despite the fact that the global cutting cycle will be more staggered than the hiking cycle that started in 2021. This differentiation should also drive opportunity for hedge fund strategies that are benefiting from higher base rates. We also see potential opportunity in foreign exchange markets through the end of the year. Defensive, low yielding currencies such as the Swiss franc, Japanese yen and Chinese renminbi should remain under pressure, especially relative to the U.S. dollar.

The Fed is on hold, but global rate cuts are underway

\# of central banks with last move as a hike vs. cut



Sources: Individual central banks, Bloomberg Finance L.P. Data as of May 31, 2024.

Higher bond yields in a strong economy

Bond yields will hold at higher levels than the last decade

Fundamentally, sovereign bond yields reflect investor expectations of future central bank policy rates, the growth and inflation outlook, and a risk premium to incorporate everything else. Given our view of higher policy rates, continued global growth and sticky inflation, we believe bond yields of all maturities will likely trade in a higher range than they did in the post–global financial crisis (GFC) era.

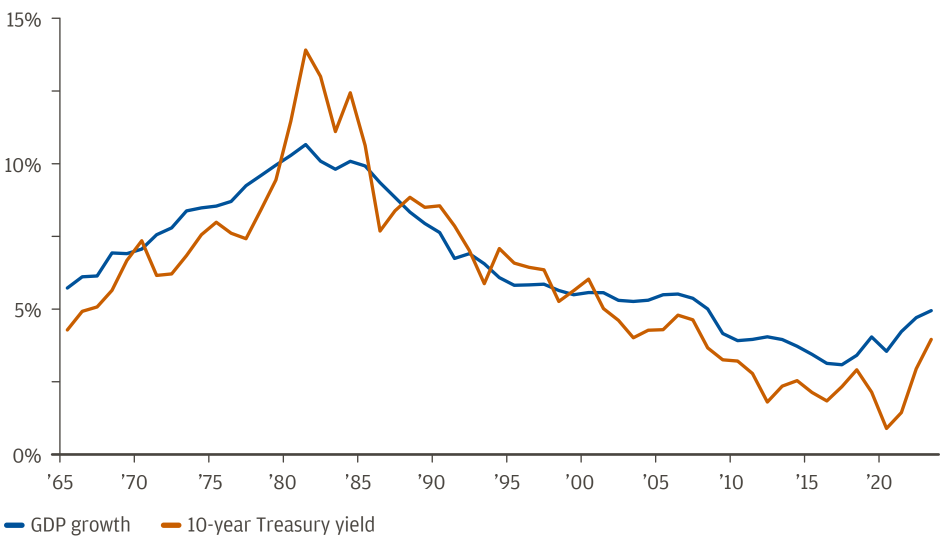
Yields on 10-year government bonds have a close relationship with nominal GDP growth. Today, nominal growth in the United States is above 5%. Expectations for central bank policy have also shifted. Recession risk is relatively low, and there is a risk of entrenched inflation, so the chances of a deep global central bank easing cycle seem low.

Both theory and practice suggest to us that bond yields are likely to remain elevated, to say nothing of the risks of excessive government debt issuance that increases supply, or of a commodity price shock that could raise inflation expectations. We see some risks to the upside. But we do believe the turn in global monetary policy means that bond yields have already seen their peaks for this cycle.

For investors, the higher range for bond yields should be comforting. When we do have a cyclical downturn, price appreciation from core bonds should help to offset declines in riskier assets. Indeed, we maintain full duration positions in multi-asset portfolios.

U.S. longer-term bond yields fluctuate around GDP

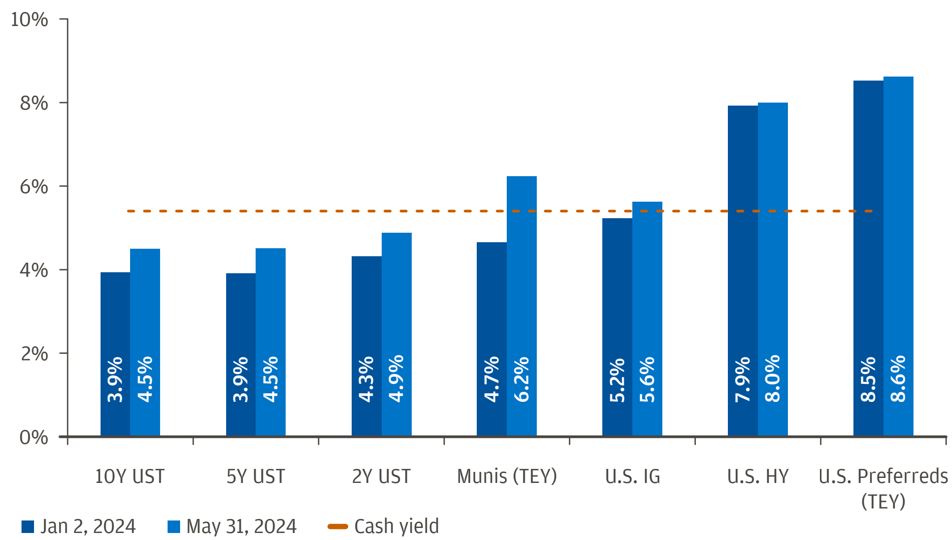
U.S. GDP 10-year % change annualized, 10-year Treasury yield



Sources: Federal Reserve Board, Bureau of Economic Analysis, Haver Analytics. Data as of March 31, 2024.

Investment grade and municipal bonds now broadly outyield cash

Yield %



Source: Bloomberg Finance L.P. Data as of May 31, 2024.

Tactically, investors do not have to extend into longer-maturity or higher-risk securities to earn attractive returns. Indeed, U.S. investment grade corporate bonds that mature within three years yield over 5.5%. In Europe, bonds with similar credit quality and maturities yield just below 4%.

Downgrade risk for high-quality issuers seems relatively low to us. Among non-financial companies in developed markets, corporate net interest paid as a percentage of cash flow is at historically low levels.[1] At the same time, credit ratings have never been higher: Over half of the U.S. investment grade bond index is rated A or above, a record.[2]

All-in yields for U.S. municipal bonds are near 10-year highs, and the recent sell-off is finally presenting an opportunity for more attractive valuations. The tax efficiency, stability, and income provided by the asset class makes it the anchor of many U.S. investor bond portfolios.

Higher rates offer investors attractive income, and we could even see some modest price appreciation driven by declining interest rates in the latter half of the year. And, as we've noted, if the growth outlook darkens, we think high-quality bonds will offer an ample offset to potential equity volatility, especially since we believe the negative correlation between stocks and bonds will reassert itself so long as inflation continues to settle.

In short: Core bonds can do their jobs in investment portfolios.

Credit markets in a strong economy

The risk-reward profile may be compelling

Strong economic growth and elevated interest rates mean that it is a good time to be a lender by deploying capital in credit markets. Today, we are focused on a few strategies with important differences in their risk and return potential.

Yields are in the high single digits in riskier parts of liquid fixed income markets such as certain high yield bonds.

High yield bonds can generally be a valuable component of multi-asset portfolios. Indeed, high yield bonds have returned nearly 3% year-to-date relative to negative year-to-date performance for core and municipal bonds. Despite spreads that are at their tightest levels in five years, all-in yields are upwards of 8%, and the overall default outlook is relatively benign. In fact, high yield bonds could withstand spread widening of ~75 bps or an increase in the default rate to 4.4% from less than 3% today and still deliver returns in line with Treasury bills.

Global fixed income investors should also see the potential for attractive income and risk-adjusted returns in segments of securitized credit (e.g., bonds backed by auto loan payments), and pockets of European and emerging market investment grade and high yield.

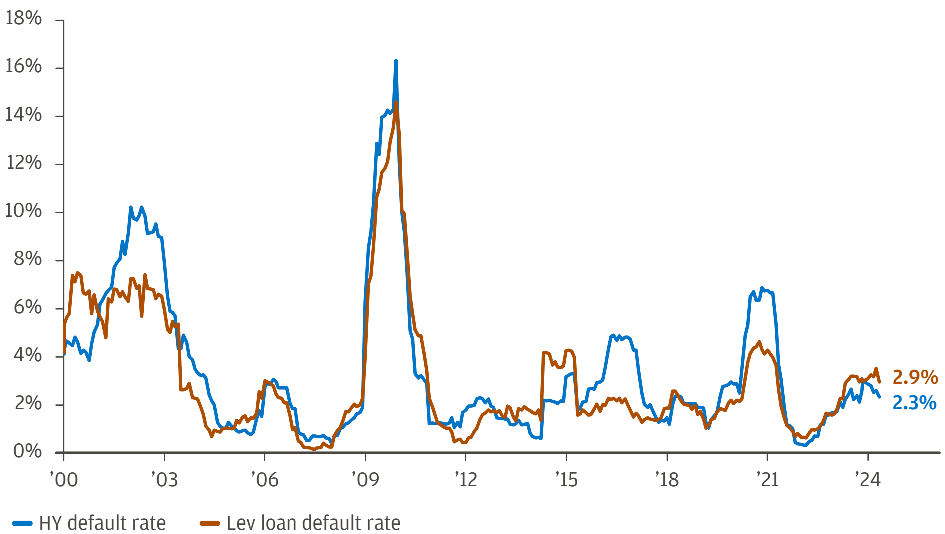
Preferred stocks and hybrids have even greater excess yields above risk-free rates than high yield, and their high share of qualified dividend income coupon payments increases tax efficiency for U.S. investors. We prefer to stick with higher-quality financial and utility issuers. Current tax-equivalent yields are over 8%, with only 3.5 years of interest rate duration.

Direct lending remains a focus for us. In our view, today's pricing, with current yields to worst of 11%+ (5%+ base rates and 6%+ spreads), more than compensate investors for potential default losses. Those yields also compare favorably to the ~8% yields on offer in public high yield markets and the 9% yields on leveraged loans.

1 JPMorgan Flows and Liquidity, Nikolaos Panigirtzoglou, April 3, 2024.
2 JPMorgan Daily Credit Strategy, Eric Beinstein, April 23, 2024.

Despite higher rates, corporate defaults have stabilized

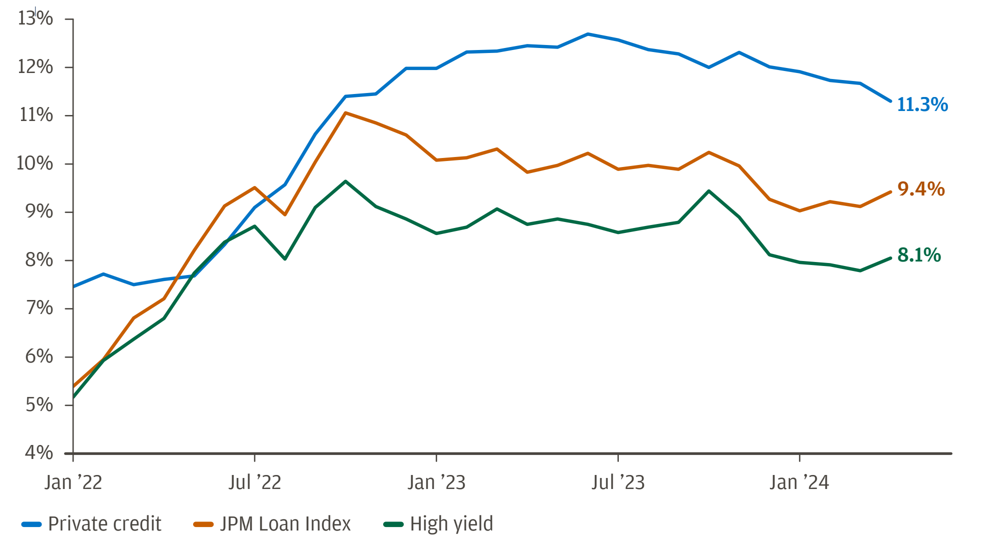
High yield and leveraged loan default rate, %



Sources: J.P. Morgan, Pitchbook Data, Inc. Data as of April 30, 2024.

Recent direct loan deals offer yields well above their public high yield counterparts

Yield, %



Source: Bloomberg Finance L.P. Data as of April 30, 2024.

While we are broadly positive on extended credit, not all borrowers are created equal. More recently, we have seen higher rates challenge smaller corporate borrowers with maturing loans. Indeed, the default rate for leveraged loans has risen to 3%, which could present an opportunity for specialized credit investors. When a company's loan is about to mature, one of three scenarios plays out. In the first, the company either pays off or refinances the loan. In the second scenario, the company defaults, declares bankruptcy, and then restructures or liquidates.

Today's investment opportunity lies in the third scenario.

Many companies cannot refinance their loans at terms that are similar to their existing debt agreements. Indeed, the median interest coverage ratio for private companies that borrow in leveraged loan markets has deteriorated from 2x in 2021 to 1.5x today. But instead of defaulting on a loan and declaring bankruptcy, the company and its creditors can renegotiate their agreement. These "amend and extend" transactions increased by 10x in 2023 from 2022, a sign that higher rates have started to bite.

Credit investors that provide the capital necessary to finance these transactions can earn an additional "complexity premium" above already attractive spreads.

While traditional lenders are still sidelined, and the cost of money is elevated, it's a good time to be a new lender. As we assess the credit landscape, we see many opportunities to potentially generate yields from the high single digits to the mid-teens.

Higher equity prices and valuations in a strong economy

Large-cap equities should benefit from stronger earnings growth and inflation pass-through

Perhaps our most controversial view is that equity valuations should remain well supported in a higher growth, higher inflation environment. Conventional wisdom tells us that higher bond yields should decrease equity valuations because the rate at which investors discount future cash flows into today's dollars is higher than it would be if bond yields were lower. Here's why we take a different view.

Equities can benefit during inflationary environments because companies can raise their prices while keeping their costs under control. As we have noted, amid the highest inflation period since 1980, profit margins in developed economies are near their widest levels in history. That reflects the power of mega caps whose business models proved resilient to elevated inflation and rising interest rates.

Further, history suggests that equities return nearly 15% per year on average when inflation runs between 2% and 3%. Even when inflation runs between 3% and 4%, average annual returns are over 8%.

The inflation hedge that equities can provide will be more valuable to investors in a higher growth, higher inflation environment than it was in the post-GFC period. We believe the current market backdrop much more closely resembles the 1990s, when policy rates were high and stable, the yield curve was flat, and increased productivity and investment pushed stock prices higher.

When investors consider the relative valuation between stocks and bonds, they often compare the earnings yield on stocks (the inverse of the price/earnings ratio) to the yield on 10-year Treasury bonds.[3] For most of the 2010s, bond yields were much lower than the S&P 500's earnings yield, which implied that safer bonds traded at a large premium to equities.

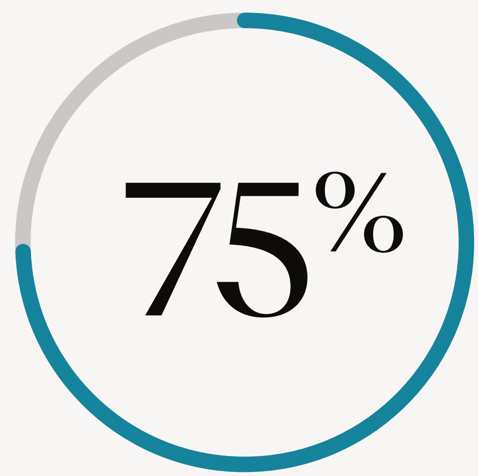
This made sense for the environment. The biggest risk to bonds (inflation) was very low during the 2010s. Investors also worried about the economy slipping into recession (the big risk case for equities), given a weaker growth backdrop. Thus investors perceived bonds to be much less risky than stocks. Today's investing backdrop is quite different. The risk of recession and the risk of further inflation are much more balanced.

3 The earnings-to-price ratio effectively derives a yield for the stock market that assumes every dollar of corporate earnings is paid as a coupon.
4 Michael Goldstein. Market Valuation: A Deal Breaker. Empirical Research Partners, 2024.

If you compare today's environment to the post-GFC period, you might think stocks are quite expensive relative to bonds. But look back several decades and the picture changes.

Today, as in the 1990s, we think stocks can maintain elevated valuations despite higher bond yields. More specifically: We believe the earnings yield should be close to the 10-year Treasury yield. That implies a 20x forward price-to-earnings ratio if the 10-year bond yield is 5%. From there, earnings growth should power stock markets to new highs.

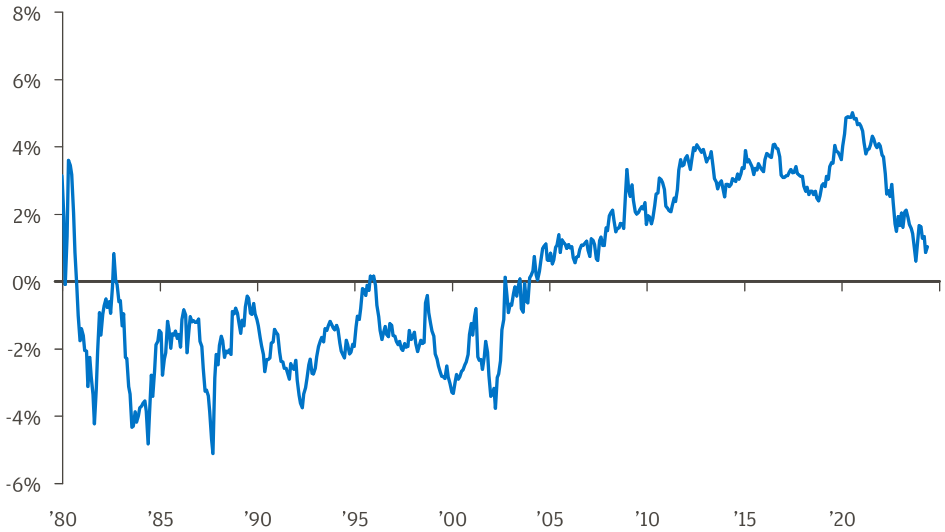
Beyond relative valuations, other important factors underpin elevated equity valuations. The return on equity for the S&P 500, a measure of how efficiently companies generate income for shareholders, is now 19%, five percentage points above the long-term average. Further, companies in the index return around 75% of their annual earnings directly to shareholders through dividends and buybacks, double the average from 1977 to 2003.[4]



Percentage of annual earnings that companies in the S&P 500 Index return to shareholders through dividends and buybacks.

Is the equity risk premium back to the 1990s?

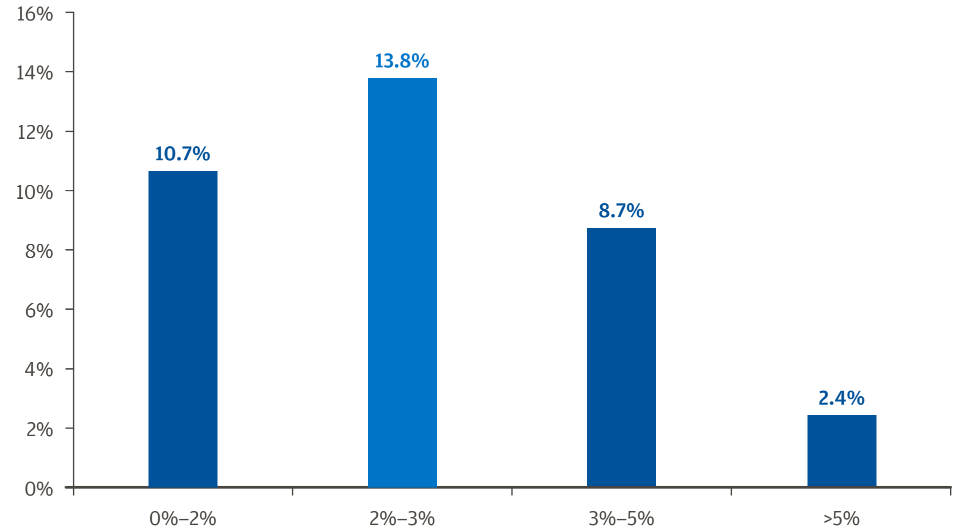
U.S. equity risk premium (S&P 500 earnings yield – 10yr UST yield), %



Source: Bloomberg Finance L.P. Data as of March 31, 2024. Equity risk premium represented by S&P 500 earnings yield minus 10yr U.S. Treasury yield.

Equities can thrive in most inflation regimes

S&P 500 YoY performance in different inflation regimes (1950–2024)



Sources: J.P. Morgan, Bureau of Labor Statistics, Bloomberg Finance L.P. Data as of March 31, 2024.

When investors own large-cap equities, they own a stake in the future profits of large-cap companies. Equity valuations should remain elevated so long as the outlook for profit growth and shareholder return remains as solid as it is today.

In short, it looks to be a very attractive environment for equity investors.

Across global stock markets, we are positive on European equities, given the global growth inflection. European companies are also exhibiting increasingly shareholder-friendly practices, something they share with Japanese corporations (we explore both trends in our *Global Perspectives*). Further, investors can find opportunities in Mexico, given nearshoring trends, while Brazilian equities offer an interesting combination of stable economic fundamentals with discounted valuations: The MSCI Brazil Index currently trades at a 7.5x forward price-to-earnings ratio.

In the United States, high-single-digit earnings growth should push markets to new highs through the end of 2024 and beyond.

On a sector basis, we focus on technology, consumer discretionary, healthcare and industrials. The tech sector has the best earnings growth prospects, with mid-teens growth likely over the next several quarters relative to high single digits for the broad market. The consumer sector should benefit from the end of the inventory overhang that developed as consumption shifted from goods to services during the post-COVID reopening. Healthcare earnings growth is swinging from -20% in 2023 to +8% this year, and the sector can access secular trends such as weight loss drugs (GLP-1s).

On the other hand, we want to continue to avoid companies with upcoming debt maturities (their shares have underperformed the market by 10% this year). Similarly, we look to steer clear of unprofitable companies. In fact, stocks of companies that aren't expected to be profitable until after 2026 have fallen by an average of 28% so far this year.[5]

We believe global equities should be able to power portfolios through higher growth, inflation and interest rates through the second half of 2024.

5 David Kostin. U.S. Weekly Kickstart. Goldman Sachs, 2024.

Cross-market opportunities

Higher rates can be tough for some businesses, households and asset classes. But those stresses create investment opportunities—if you know where to look. The Fed's "higher for longer" stance has extended the opportunity we see in real estate, private equity, and U.S. small- and mid-cap equities. But it may only last until a material rate-cutting cycle gets underway.

Commercial real estate: Re-engaging with the asset class after a turbulent adjustment

While commercial real estate (CRE) was hit hard by COVID and the subsequent reset in interest rates, the damage to investor perceptions (exacerbated by incomplete media coverage) of the asset class was likely worse.

Higher rates weighed on valuations. Migration out of cities and the rise of work-from-home challenged the viability of offices. The brief yet turbulent banking crisis that occurred in the spring of 2023 increased worries about credit availability.

In publicly traded equity markets, real estate has been the worst-performing sector since the end of 2021, underperforming the rest of the market by 35%. At the same time, property prices, as measured by the National Council of Real Estate Investment Fiduciaries (NCREIF), are down between 10% and 20% from 2022 peaks.

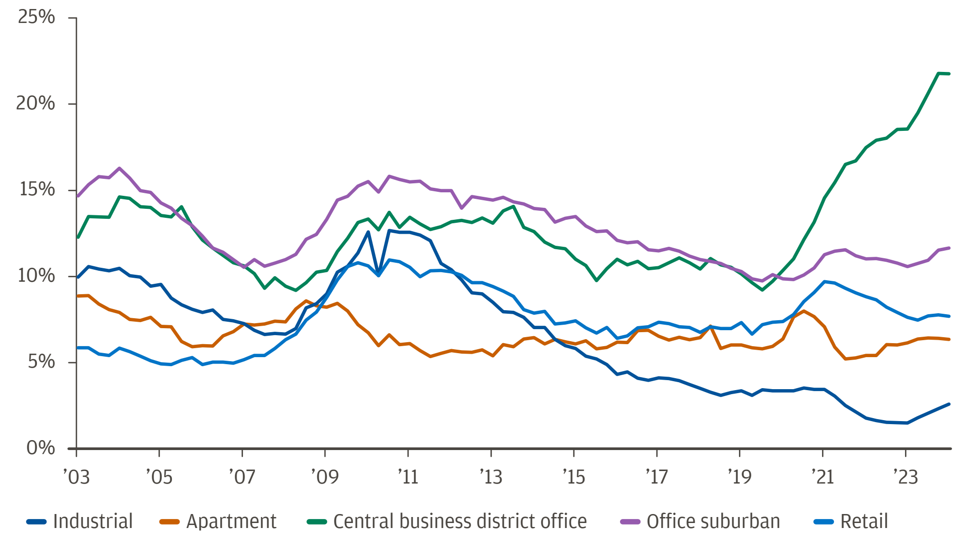
But we believe it is now time to allocate to the sector after a turbulent adjustment. We point to a few key reasons:

Most importantly, the fundamentals for real estate sectors outside of office remain supportive.

Vacancy rates in retail, apartments and industrial properties are all stable. Central business district office vacancies are historically high but show tentative signs of stabilization. Interestingly, suburban office vacancies have outperformed their downtown peers.

Except for the office sector, vacancy rates look stable

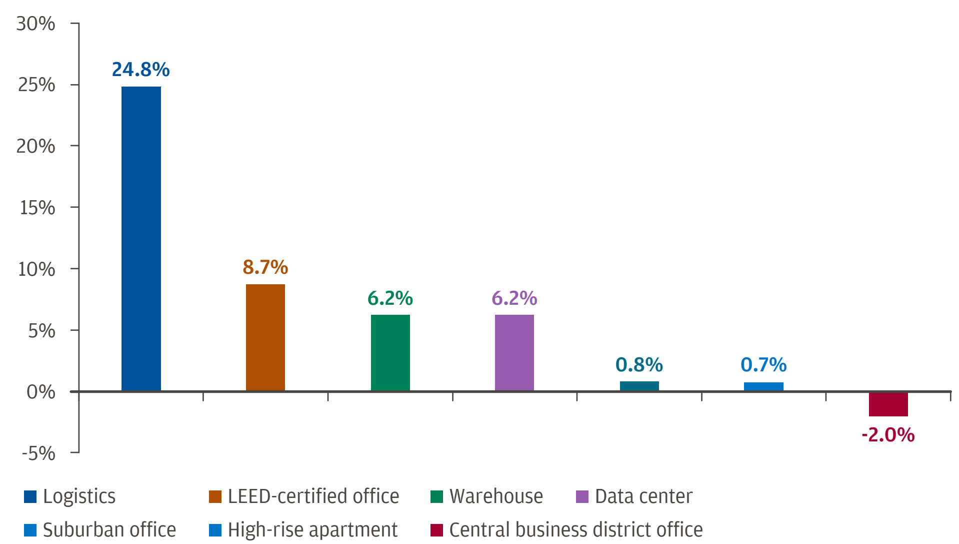
CRE vacancy rate %, SA



Source: NCREIF. Data as of March 31, 2024.

Sector fundamentals remain supportive outside of office and multi-family

Change in rental income per sq. ft. since 2022 Q4



Sources: CoStar, Goldman Sachs Investment Research. Data as of March 31, 2024.

Credit conditions are also improving. The office sector is the only property type with rising delinquency and special servicing rates. Trends in hospitality, retail, multi-family and industrial are either stable or improving.

Surprisingly, bank commercial real estate loans outstanding have grown over the last year, while primary issuance in commercial mortgage-backed securities markets was 3x higher in Q1 2024 versus Q1 2023. These green shoots in financing markets suggest that CRE will be able to muddle through the $1.5 trillion of loans that mature over the next two years (assuming that rates are near the peak for this cycle).

Finally, rent growth has been strong from the end of 2022. The only two property types with negative rent growth are mid-rise apartments and central business district offices. Logistics, data centers, warehouses, business travel–oriented hotels and newly constructed LEED-certified office buildings have all been able to grow rental incomes by greater than 5%.[6]

Real estate is not a monolith, and different sectors face very different headwinds and tailwinds. Going forward, we are most interested in sectors that will benefit from secular trends. Examples include data centers, student housing and logistics. In particular, the housing sector should continue to benefit from a powerful secular theme—a significant shortage of single- and multi-family homes. We estimate the U.S. housing shortage at somewhere between 2 million and 2.5 million units. That shortfall won't disappear anytime soon, as higher rates have constrained new construction and raised the cost of buying a home.

This environment supported the rental market, especially single-family rentals. At the same time, new multi-family housing starts have fallen 33% from 2022 peaks, which should eventually support multi-family property prices as well.

Commercial real estate is at a turning point, in our view. Investors may find value in the asset class, which can provide uncorrelated income and inflation hedge to investment portfolios.

> The estimated United States residential real estate shortage is between 2 million and 2.5 million homes.

6 Lotfi Karoui. US CRE, one year later: Volatile, dispersed, but not systemic. Goldman Sachs, 2024.

Private equity: Re-emerging after a challenging period

Like the real estate sector, the private equity industry is re-emerging after a challenging period. Higher interest rates have hit the asset class on two fronts. First, debt, the key ingredient for leveraged buyout transactions, is at once costlier and harder to acquire because demand for public leveraged loans has dried up. Second, it has become more difficult to monetize investments. IPOs and private equity exit transactions are down ~50% from 2021 peak levels. Another constraint: Some potential sellers are reluctant to transact at valuations below the high-water marks from 2021.

As a result, net cash flow for limited partner investors in private equity funds has been negative for two years in a row for the first time since the global financial crisis. One risk for investors in existing private equity funds is that valuations could be further pressured by higher interest rates, and distributions remain weak due to tepid deal volume.

But we think some of the headwinds are starting to abate, creating an interesting backdrop for new investment in the asset class. Higher public market equity valuations should lead to increased appetite for IPOs, while stability in interest rates (and eventually rate cuts) should spur deal activity.

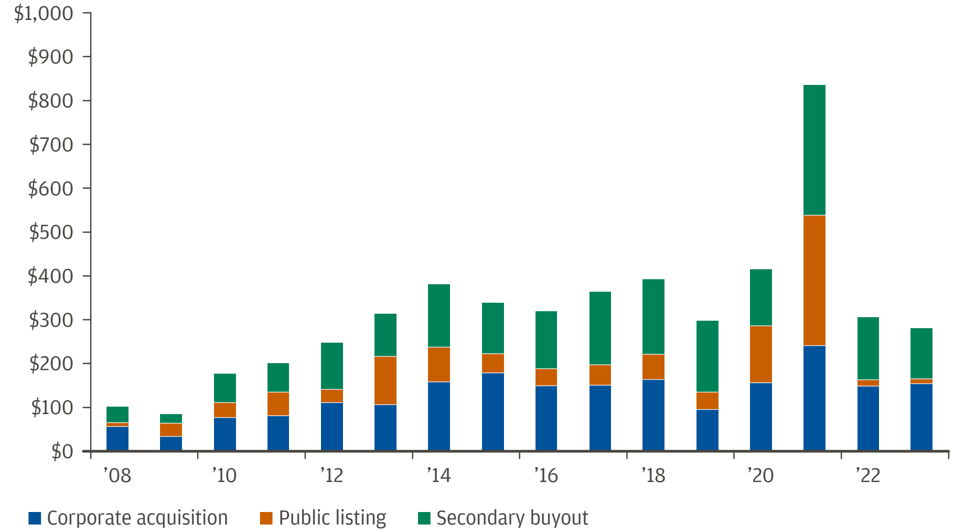
For now, we are focused on partnering with managers with a proven track record of driving value through organic growth and operational efficiencies without an over-reliance on leverage. We find the greatest range of opportunities investing in industries that benefit from secular trends. At the top of that list: technology, defense, healthcare and the energy transition.

So long as traditional private equity exits remain difficult to access, we would expect to see continued record deal flow in secondary private equity markets, where funds buy existing assets out of other private equity fund portfolios. Typically, buyers of secondary private equity assets require a discount to the current holding value of the asset in exchange for providing liquidity. Sellers have been willing to accept discounts in exchange for the ability to raise capital for new investments. Secondary private equity deals also provide institutional investors with the opportunity to rebalance their private investment portfolios on a more regular basis.

What's more, investors in secondary private equity funds can benefit from buying assets that are "seasoned." In other words, investors can expect to receive distributions faster than they would from a traditional primary fund because

Private equity exits are challenged by elevated interest rates

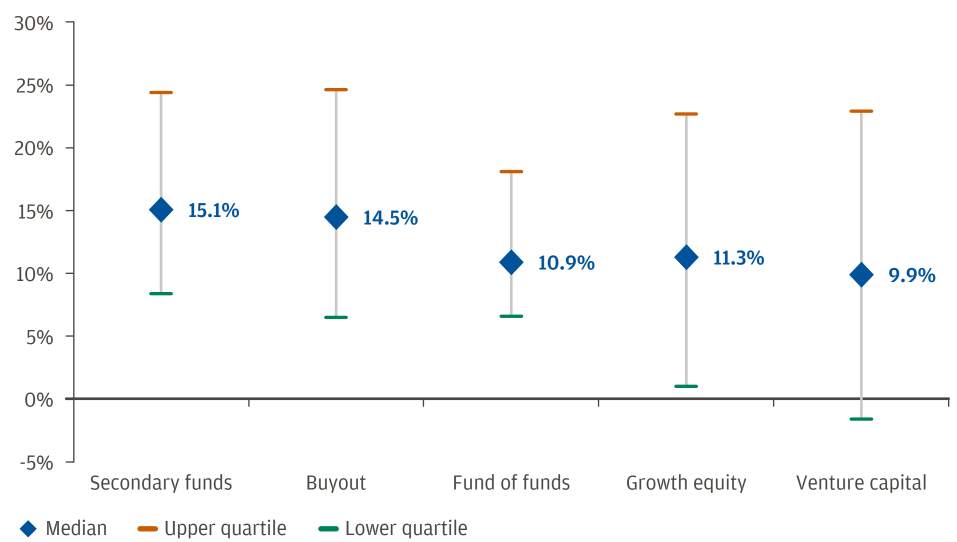
USD billlions



Sources: PitchBook, J.P. Morgan Asset Management. Data as of December 31, 2023.

Secondary private equity funds have generated consistently strong returns

Net IRRs by strategy, % (20-year investment horizons from 1978 to 2023)



Source: Cambridge Associates. Data as of 2023.

investments are closer to "realization" (the end of the investment cycle). Finally, investors in secondary private equity funds can diversify across both initial investment years and managers. Historically, across the subsets of private investment strategies, secondary private equity funds not only generated the highest median net internal rates of return (IRRs) (15% over the last 20 years), but also the narrowest dispersion of outcomes between top- and bottom-quartile managers.

In addition, we see a growing opportunity to acquire "legacy" assets out of funds that are more than 10 years old and winding down—a segment of the private equity market that could grow to $1 trillion by 2025.[7] Discounts in this space can be as large as 50%, and monetization is expected within two or three years.

For all these reasons, secondary private equity funds offer investors attractive potential returns. We think the benefits of secondary private equity investing—which are themselves the knock-on effects of a higher rate environment—can deliver potential returns that are more consistent than traditional private equity returns and above public market equivalents for sophisticated investors that understand the liquidity trade-offs.

Quality small- and mid-cap stocks

Traditionally, small- and mid-cap (SMID) companies feel the sting of higher interest rates more than their large-cap counterparts. As rates rose dramatically in 2022, many smaller companies struggled.

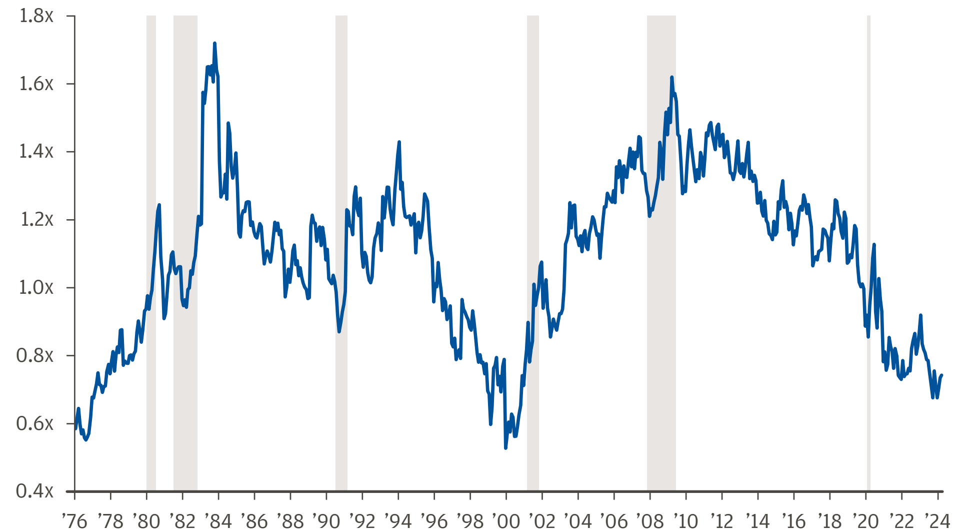
Today, U.S. small-cap companies dedicate over 30% of their EBITDA (earnings before interest, taxes and amortization) to servicing debt, up from 20% before central banks started raising rates. S&P 500 companies, in contrast, spend less than 10% of EBITDA on debt service. Not surprisingly, then, small-cap stocks have underperformed large-cap stocks by over 15% (cumulatively) over the last two years.

While a valuation discount for indebted SMID stocks seems reasonable, today's near-record discount between the highest-quality SMID stocks does not. This discount persists even though the top tier of SMID companies (as measured by free cash flow margin) are competitive with their large-cap peers. As a result, this could be an interesting entry point to build a portfolio of actively managed, attractively valued, high-quality SMID companies. We believe allocating around ~5%–10% of an investor's overall equity portfolio to SMID stocks, assuming appropriate time horizon and risk tolerance, can be be additive to risk-adjusted returns.

> In these three markets—real estate, private equity, SMID companies—the trajectory of interest rates will be key. If interest rates stay higher for longer, it likely means continued stress. But the flipside of stress is opportunity. If inflation falls faster than expected, allowing for a material rate-cutting cycle, the opportunities may not last for long.

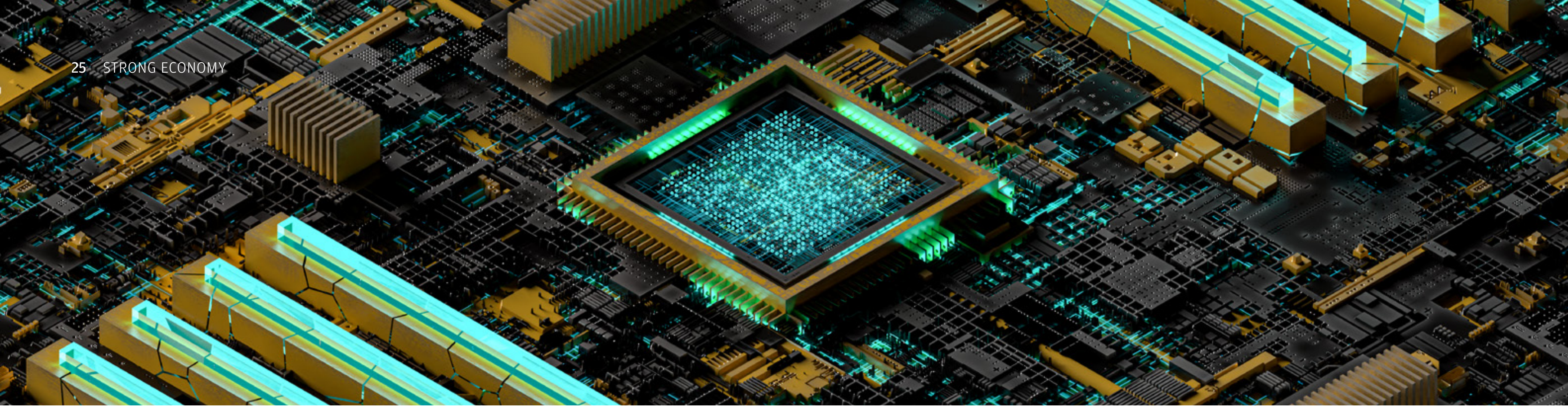
A near-record discount for small-cap stocks may offer an opening

Top-quintile of free cash flow margins, forward P/E ratio relative to the same cohort in large-cap stocks*



Source: Empirical Research Partners. Data as of April 30, 2024. *Note: Capitalization-weighted data, small-capitalization stocks (ex-commodities & biotech).

7 Preqin. March 2023.



The AI revolution

It's just getting started

Artificial intelligence (AI) has already catalyzed a wave of excitement, investment and earnings growth. We want to invest for the long term across the value chain. By the end of the 2020s, evidence of AI's boost to productivity could start appearing in the economic data. The productivity gains could be even greater than the combined impact of the personal computer and the internet.

In his shareholder letter, our Chairman and CEO Jamie Dimon likened AI to the steam engine, electricity and the personal computer. To understand how the AI revolution might play out, we considered those historical precedents.

Productivity benefits don't show up overnight. It took more than 60 years for the steam engine to deliver any observable economy-wide productivity benefit. With each subsequent technological innovation, the time to observe productivity growth declines. If that pattern holds, we should expect to see AI's benefits in the official economic statistics by the end of the decade.

This means AI's economic impact could be felt in half the time it took for the PC and internet to deliver economic benefits.

How big a productivity boost might we see? To try to answer this question, we modified an International Monetary Fund (IMF) framework that isolates the potential jobs that could be displaced by AI. Using IMF assumptions about the duration and scale of job displacement, we can generate an upside estimate of the potential productivity boost from AI.[8]

If we assume that half of the vulnerable jobs in the United States are automated away over the next 20 years, then the cumulative productivity gain would be nearly 18%, or $7 trillion beyond the current Congressional Budget Office (CBO) projection for GDP. For reference, the cumulative productivity gain from the personal computer and the internet was just under 13% over a similar time horizon.

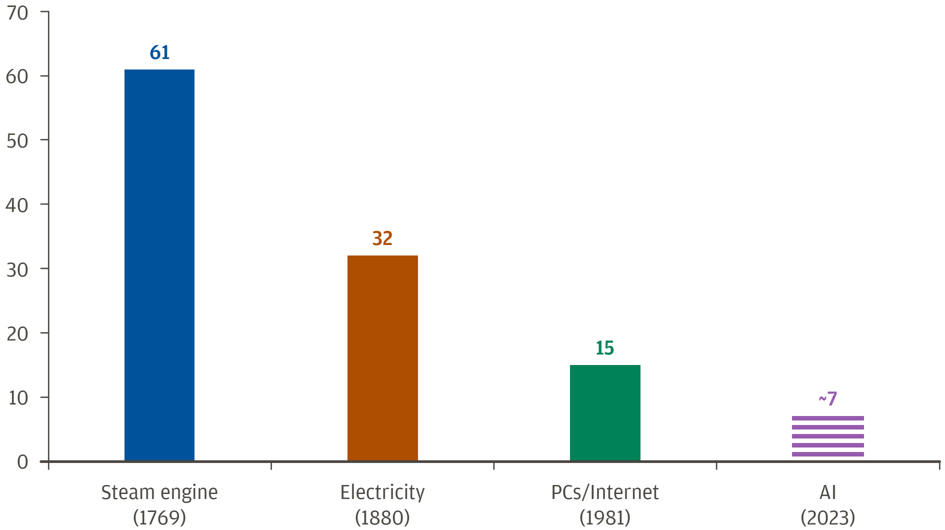
But what happens to the workers that are at risk of being replaced by AI? Though job displacement may be acute for workers in specific industries and regions, overall technological improvements will likely create more jobs than it will destroy.

The U.S. farm sector is a good example of shifting employment trends. In 1950, nearly 15% of all jobs in the United States were related to farming. Today, that share is less than 1.5%. It seems likely that the global workforce will adapt to changing sources of labor demand, and the companies that have a demonstrated ability to retain and upskill existing employees should benefit.

8 To be specific, the IMF has calculated that about 30% of U.S. jobs are potentially vulnerable to AI displacement, falling into the category of "high exposure, low complementarity." We assume that half of these jobs (15% of the U.S. workforce) are displaced by AI over the next 20 years and that the pace of displacement follows a Sigmoid function (i.e., the classic "S curve"). In doing so, we are effectively shrinking the total hours worked in the economy from this displacement, which results in a mechanical rise in labor productivity assuming output remains unchanged. Mauro Cazzaniga, Florence Jaumotte, Longji Li, Giovanni Melina, Augustus J. Panton, Carlo Pizzinelli, Emma Rockall, and Marina M. Tavares, Gen-AI: Artificial Intelligence and the Future of Work, International Monetary Fund, January 2024.

Even the optimists may underestimate the speed of AI's productivity gains

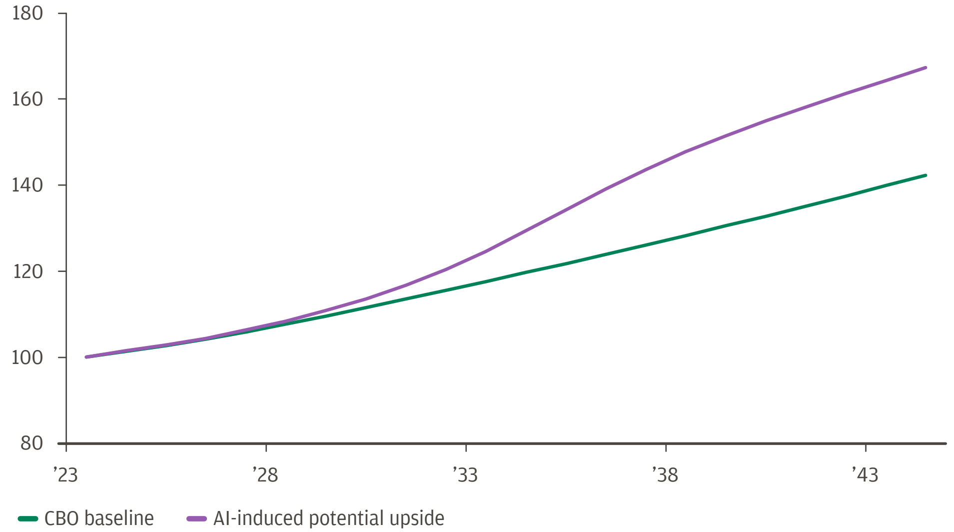
Years from innovation to productivity growth



Sources: U.S. Census Bureau, Business Trends and Outlook Survey, J.P. Morgan. Data as of November 2023.

The CBO's current projection could be misjudging AI's potential productivity gains

Indexed at 100 for 2023, U.S. labor productivity



Sources: IMF, J.P. Morgan. Data as of January 31, 2024. Note: CBO baseline calculated using real GDP projection divided by number of hours worked. AI induced potential upside projected assuming 15% of jobs will be replaced by AI in the next 20 years, which is half of what the IMF suggested in research.

Of course, these estimates are imprecise. The adoption of AI will face many headwinds, including concerns around the supply of advanced semiconductors, legal and regulatory issues, potentially limited power and energy resources for data centers, and the ability of firms to optimize potential use cases. Public policy focused on job training and transition for vulnerable workers will likely be needed to mitigate the pain and upheaval from job displacement. Stakeholders will need to evaluate the costs and benefits of sharply higher energy and water use required for AI computing. Finally, companies will have to balance new use cases for AI with responsible governance.

It may take some time for the benefits of AI to appear in traditional economic data. But we can see the AI revolution is already impacting corporate behavior, investment and earnings. Though less than 5% of U.S. firms are actively using AI (according to Census Bureau data), companies accounting for 50% of the S&P 500's market cap have mentioned AI on earnings calls. Governments around the world are also massive potential untapped users of AI applications.

Among publicly traded companies, the first round of winners are closely linked to semiconductor manufacturing and cloud computing—the digital and physical infrastructure that powers AI technology. Nvidia, the leading producer of graphic processing units that power large language models, has seen its earnings rise more than 400% since the end of 2021. Just two companies, Alphabet and Microsoft, increased capital expenditures by $10 billion in the first quarter of 2024, a staggering three-quarters of the entire increase in S&P 500 capex.[9]

However, investors are starting to appreciate that this infrastructure buildout will be relatively broad both because adoption will increase and because AI workloads require substantially more energy than traditional computing. Estimates suggest that using ChatGPT requires up to 10x more power than a traditional web search. Further, it seems likely that data centers will be the largest contributor to U.S. power demand growth through the end of this decade.

9 Michael Goldstein. Capital Spending Growth Accelerates: An Early Warning Sign? Empirical Research Partners, 2024.

Indeed, industrial production in electrical equipment has already surged back to mid-2000s levels and seems set to rise further. So far in 2024, companies that provide heating, cooling, electrical equipment and real estate for data centers have outperformed.

Beyond the beneficiaries of the digital and physical infrastructure build-out, we are focused on investing in companies that could benefit from either a boost to productivity (from industries such as consumer goods, financials, transportation and energy), a boost to revenue (software, robotics, applications) or both (manufacturing, healthcare). The potential use cases for AI span across almost every industry.

Firing on all cylinders: AI is likely to increase revenue sources, reduce time to market and lower costs

Sector applications of AI

Healthcare	Financials	Advertising & Digital Content	Retail & Freight	Energy & Industrials	Customer Service	Business Intelligence
Smart implants (ex: hip & knee)	AI thematic fund offerings	Marketing efficiency	3D shopping & product try on	AI tools for pipelines	Customer analytics	Developer tools & assisted code
Medical imaging	New trade pricing tools	Enhanced ad targeting	Sidewalk robots for deliveries	Geological models	Insurance claims & records	AI-related consulting
Pathology detection	Generate client portfolio reviews	Recommendation engine	Supply chain efficiency	AI-enabled microgrid tools	Transcribe & summarize	Integrated smart home interface
Personalized medicine	Automated trade prices, execution	Higher ad conversion	Inventory management	Energy usage analytics	Client onboarding	Automate back office tasks
Identify biomarkers	AI portfolio management	Ad auction dynamics	Demand prediction	Energy trading enhancements		Fraud prevention & protection
New drug development	Increase trading velocity	Content creation	Truck routing capabilities	Labor scheduling		Cybersecurity capabilities
Analysis of genomic data	Product cross-selling	Customized travel itineraries	Higher fleet utilization	Reservoir optimization		Risk assessment & management
Physician point of service tools		Video game development	Autonomous fleet networks	Leak detection & track emissions		Accelerated data analysis
						Predictive modeling

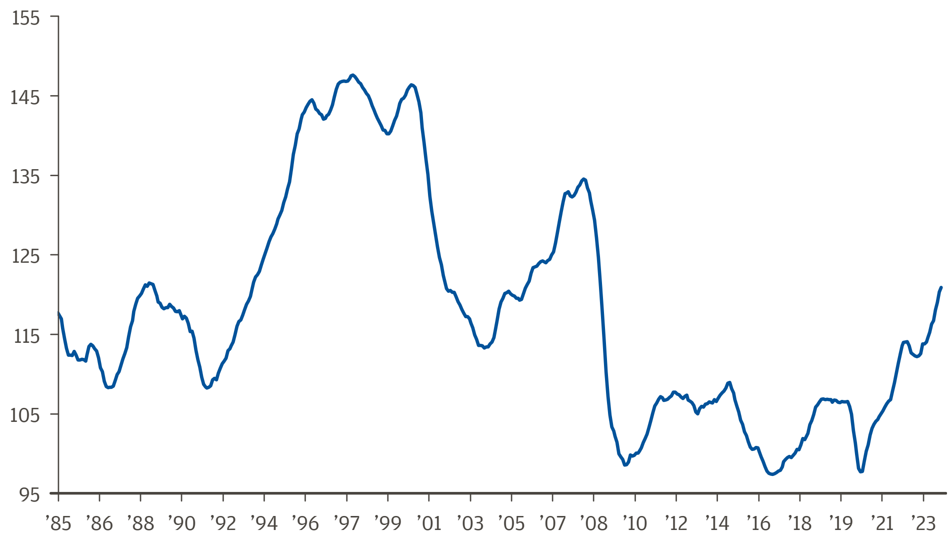
Sources: J.P. Morgan, Morgan Stanley. Data as of March 31, 2024.

In the private markets, we expect to find investment opportunities in younger companies that are developing applications that will make AI technology useful to businesses and consumers, or those that are innovating with "edge AI" where computations take place at the source of the data (e.g., a smartphone, car, medical device or industrial machine) rather than in the cloud. Many of these companies probably don't even exist yet.

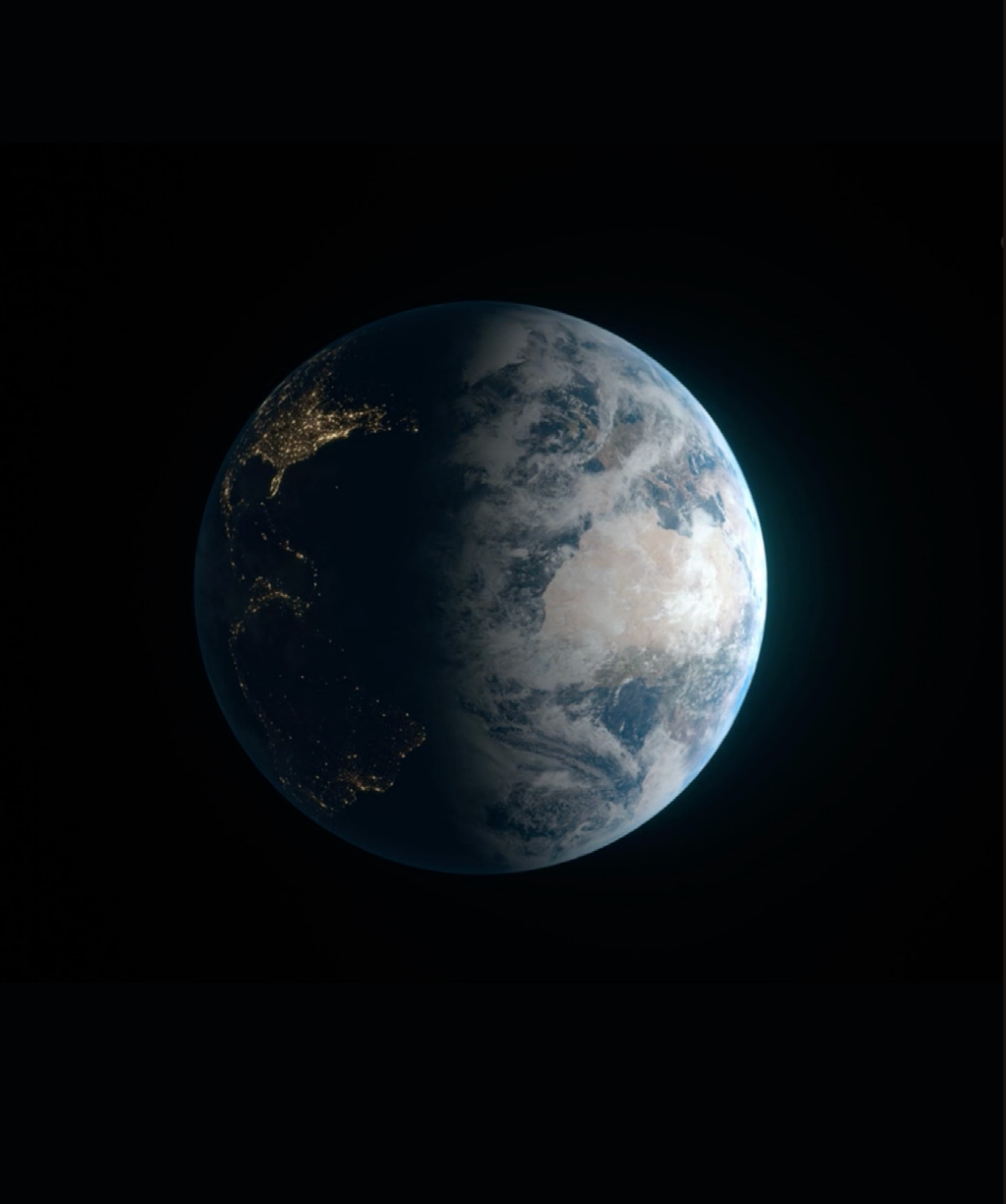
We believe investors should approach the AI revolution with a patient, long-term mindset, building exposure to potential beneficiaries across sectors and geographies in the public and private spaces. It is difficult to overstate the potential opportunity.

AI's substantial and growing demand for power sources supports electrification

Electrical equipment production, indexed to 100 in 2017, 6-month moving average



Sources: Federal Reseve Board, Haver Analytics. Data as of April 30, 2024.



A fragile world

While our market and economic outlook is constructive, we acknowledge two big sources of uncertainty—the U.S. election and geopolitical risk.

U.S. election

It will likely be market friendly, but with higher personal tax rates over the medium term

For the first time since 1892, the two primary candidates in the upcoming presidential election have both been president and have both already campaigned against one another. From an investor's perspective, we'd point out that markets performed well during both candidates' terms in office.

From Donald Trump's election in 2016 to election day 2020, U.S. large-cap equities delivered an annual return of 15.6% (versus a long-term average of nearly 9%). From Joe Biden's election in 2020 to today, U.S. large-cap equities posted a 12.4% annual return. Those two periods had no shortage of policy, economic and social uncertainty. But in the end, economic and earnings fundamentals drove equity markets higher, and the president had a relatively minor influence over market returns. We expect more of the same for the next four years.

That said, each candidate is likely to enact very different policies in five critical areas (taxes, tariffs, energy, healthcare and regulation). From a global market perspective, the most important potential stance may be Trump's floated proposal to tariff all goods imports at a rate of up to 10%.

U.S. election policy proposals—what might we expect?

Potential stances on key issues

Key issues	Potential Biden stance	Potential Trump stance
Taxes	Possible partial extension of 2017 tax cuts. Greater chance of higher taxes on wealthy individuals and corporations.	Aim to extend 2017 tax cuts with partial offsets from reduced government spending.
Tariffs	Continuation of tough on China status quo.	Intend to increase tariffs on trading partners, especially China.
Defense	Likely steady emphasis on alliances and multilateralism.	Potential push for more self-reliance from NATO members.
Energy	Aim to reduce emissions and increase energy efficiency. Raise taxes on the fossil fuel industry.	Aim to increase traditional energy production by drilling on federal land and extending pipelines.
Healthcare	Aim to protect and build on Affordable Care Act.	Aim to undo Affordable Care Act.
Regulation	Heightened regulation of energy, technology and financial services.	Aim to reduce regulation of energy and financial services.

Sources: Tax Foundation, J.P. Morgan. Views as of April 30, 2024.

The markets that could be most sensitive to political outcomes

Small- and mid-cap equities

which would likely welcome the prospect of less onerous regulations

The U.S. dollar

which would likely strengthen if tariffs become more likely

Clean energy and traditional energy

which would likely react to the potential for continued subsidies or increased oil production

We think a risk for investors is that neither candidate is likely to be fiscally conservative. The U.S. federal debt and deficit picture will likely deteriorate further. This could increase bond market volatility in the near term. Over a longer period, higher taxes will be needed to help reduce the federal debt burden. The U.S. federal debt is already 100% of GDP, and the CBO estimates that ratio will soar to 120% in the next 10 years. U.S. government interest expense could rise to $900 billion this year, or nearly 3% of GDP.[10] At the same time, U.S. federal government tax collections equal less than 30% of GDP, the lowest share among the G-10 economies.

Finally, if the Tax Cuts and Jobs Act (TCJA) expires after 2025 as scheduled (a possible scenario if leaders in Washington under split-party control cannot reach agreement), the top-tier marginal tax rate will increase to 39.6% (from 37% today), and the lifetime estate and gift tax exemption will be cut in half to about $7 million per person ($13.61 million today).

10 Alec Phillips, Tim Krupa. US Economics Analyst: The Fiscal Outlook: Not Good, But a Little Better. Goldman Sachs, 2024.

Investor focus on tax efficiency

If higher U.S. tax rates seem inevitable (which they do), then U.S. investors should place a premium on tax efficiency not only in their investment portfolios, but across their entire balance sheets. We call this practice “tax-aware wealth management.”

U.S. taxpayers can keep more of what they earn in markets through asset location, tax loss harvesting, smart withdrawals, integrated planning techniques and sophisticated borrowing.

Turning first to asset location, we think U.S. taxpayers should focus on placing tax-efficient assets such as equities, municipal bonds, preferred stock and private equity in taxable accounts. Tax loss harvesting strategies can amplify after-tax returns in taxable accounts. Tax “inefficient” assets that generate the bulk of their return from interest income or short-term capital gains (think private credit, some hedge funds and high yield bonds) would be best placed in tax-deferred accounts, such as a IRAs or, potentially, low-cost variable annuities.

Being thoughtful about “where” to hold certain investments can add up to substantial tax savings for investors.

Tax-aware wealth management includes a range of planning approaches that may be even more powerful than asset location. Accelerating taxable income prior to the expiration of the lower TCJA tax rates (think Roth conversions), could be a prudent strategy depending on your situation. Donating long-term appreciated stocks to charity provides a double tax benefit: avoiding any taxes on embedded gains and offering a deduction to your other taxable income. For those with taxable estates, gifting to your family through annual or lifetime exclusions can have a material impact on an after-tax basis, as it moves future growth off your balance sheet.

Finally, borrowing can also act as a strategic lever to bridge lumpy cash flows (avoiding taxable events and maintaining market exposure). Alternatively, if it is structured properly, the interest paid on borrowing may serve as a deduction and offset to taxable investment income.

In short: Don’t let the election derail your long-term plan. Focus on what you can control.

Geopolitics and the potential for global conflict present the second key risk to markets in the latter half of 2024.

Geopolitics: The risk is real—and so too is the investment opportunity

Geopolitical events and market returns

First, investors should remember that geopolitical events very rarely leave a lasting negative impact on U.S. large-cap equity markets (as research from our Chairman of Market and Investment Strategy Michael Cembalest has shown).[11] This is why properly diversified long-term investment portfolios are typically well insulated from destabilizing events, such as wars, invasions, terrorist attacks, coups, referendums and assassinations of political leaders.

11 J.P. Morgan, Michael Cembalest, Eye on the Market, Nov. 14, 2023, Appendix.

We examined 36 such events since the beginning of World War II. We found that six-month and 12-month forward returns after these events are identical to the average returns during periods when there was no notable geopolitical event.

That said, geopolitics can have profound market impacts at the local level. For example, German small-cap equities have materially underperformed their German large-cap and global peers, largely because of Russia's invasion of Ukraine and the subsequent disruption of energy supplies.

> One takeaway: Investors who have concentrated exposure probably have more to fear from geopolitical risks than investors in globally diversified portfolios.

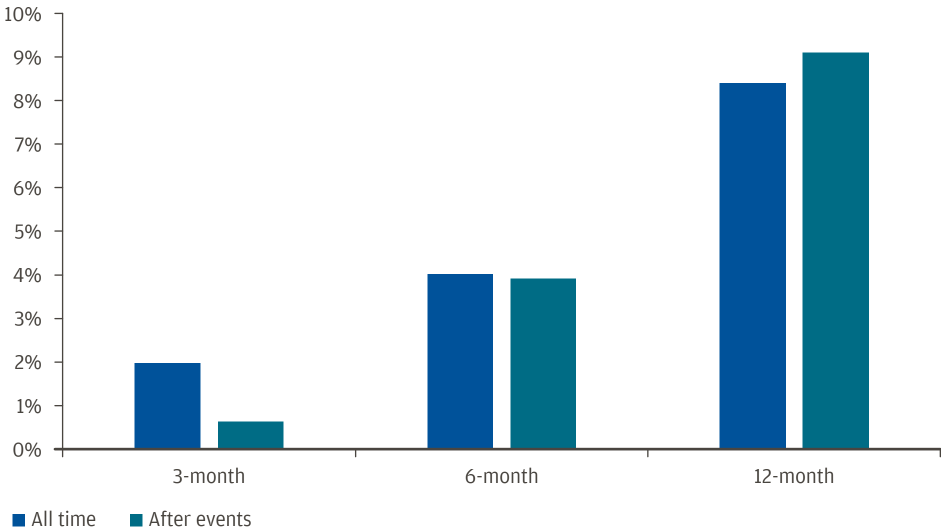
For more tactical investors looking for a hedge, gold and crude oil stand out. These assets tend to rally in the short-term window prior to and including a geopolitical event. Also, after the geopolitical event passes, these hedges tend to decline in value as investors exhale and move back into risk assets.

This pattern underscores the need to actively manage these exposures, which are often best expressed through options and other derivatives. In the near term, we see very strong return prospects for gold. This reflects the commodity's geopolitical risk premium and demand from global central banks that want to diversify their reserve holdings away from the U.S. dollar. Tactical investors should take note.

Markets will likely continue to be wary of further conflict, but we do not believe these risks will derail our overall view. Diversification can help mitigate geopolitical risk for most investors.

Large-cap equities have been insulated from shocks

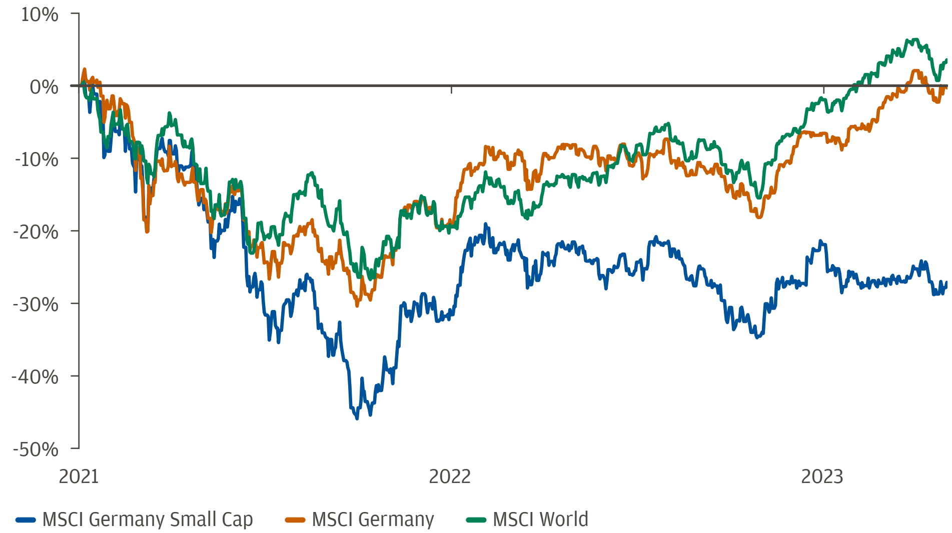
Average S&P return and geopolitical events, %



Sources: S&P, Haver Analytics. Data as of December 31, 2023.

Geopolitical events can have acute local impacts

Cumulative performance since January 2022, %



Source: Bloomberg Finance L.P. Data as of April 30, 2024.

Beyond acute geopolitical risk, we do believe many large and economically significant countries will have a durable interest in bolstering their national security in three important areas:

01 Defense

02 Supply chains

03 Energy

These are long-term global trends that will require a strategic approach from investors.

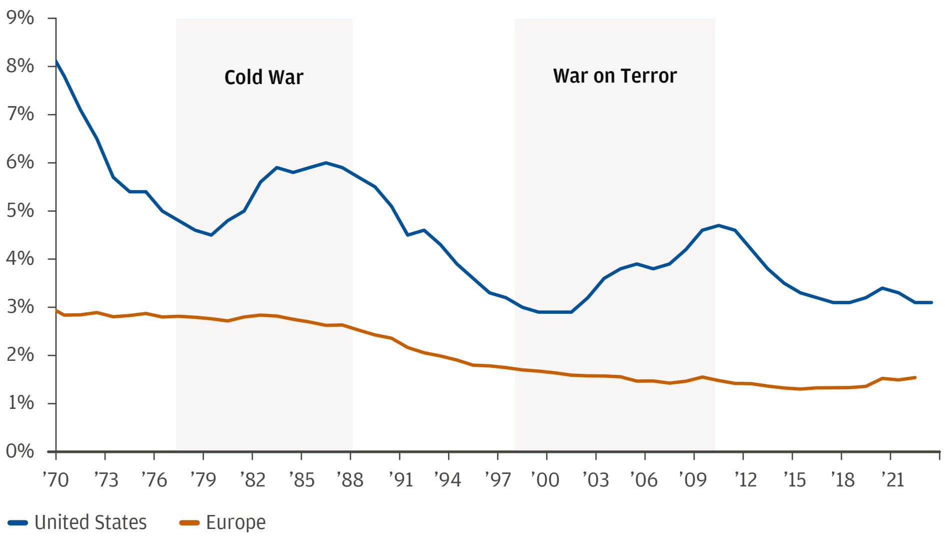
Defense

U.S. defense spending as a share of GDP is at post-WWII lows despite the inexorable rise in global conflict. Only 12 NATO countries are currently meeting their obligations on defense spending; seven more are expected to increase their spending this year. We believe this decades-long decline will likely reverse.

At the same time, governments, corporations and households need to protect against cyber threats. Cybersecurity breaches now occur almost daily, and the associated damages have risen with the frequency of attacks. The average cost of a single data breach has climbed from $3.62 million in 2017 to $4.45 million in 2023—a 23% increase. Governments and corporations will need to continue to increase cybersecurity spending. While it already represents 12% of corporate technology budgets, that share is likely to grow throughout the rest of the decade.

Geopolitical risks have catalyzed decade-long defense spending cycles

U.S. defense spending as a % of GDP



Sources: U.S. Congressional Budget Office, World Bank, Haver Analytics. Data as of December 2023.

Supply chains

One could argue that the U.S.-China trade war that began in 2018 was the opening salvo of a more concerted effort by policymakers to influence global trade and diversify sources of critical goods and materials away from China.

During the pandemic, supply chain fragility challenged company operations and helped push inflation higher. Today, supply chains are considerably more resilient. Some post-pandemic supply chain shifts have benefited countries such as Mexico, Vietnam and India. Still, policymakers continue to focus on sources of supply for goods that are critical to national security.

Notably, China is still the largest source of U.S. advanced technology product imports at more than $165 billion annually. We continue to expect further trade frictions around advanced technology products, which may result in broader tariffs and further shifts at the expense of Chinese companies.

In addition, governments will likely work to continue to incentivize domestic production of products such as semiconductors and batteries. The Inflation Reduction Act (IRA), designed for this purpose, has already sparked a surge in the construction of manufacturing facilities in the United States.

Energy

Russia's invasion of Ukraine compromised European access to natural gas, and the energy transition necessitates investment in domestic production of renewable energy. We expect spending on clean energy technology to more than double by 2030, to $4.6 trillion. Energy infrastructure (e.g., power plants and energy storage) and transportation (e.g., pipelines, liquified natural gas carriers) will continue to pull in new investment.

This trend, in conjunction with the Inflation Reduction Act and AI revolution, bodes well for domestic infrastructure, energy and power assets. Indeed, since the IRA passed, announced investments in U.S. clean energy have reached $473 billion—representing about 152 new (or expanded) solar, wind and battery manufacturing facilities.

As in AI, investing in these arenas will require a combination of public and private equity allocations. As we've discussed, these are long-term strategic investment trends requiring a patient commitment of capital.

CONCLUSION

Geopolitical fragility, **economic strength.**

Even as inflation remains sticky, other market and macroeconomic variables across developed economies look remarkably solid. Companies have shrugged off higher rates. Earnings are poised to grow. Labor markets find supply and demand in a reasonable balance.

Markets will likely find renewed momentum in a robust global economy. We expect global equities will drive portfolio returns through the rest of the year. And if global growth stumbles, bonds can provide portfolio ballast. Investors should feel confident that assets should be able to do their jobs for long-term, goals-based, investment portfolios.

A strong economy in a fragile world. All in all, it’s a healthy backdrop for investors as they prepare for the second half of 2024.

Global Perspectives

WE HIGHLIGHT THREE AREAS OF OPPORTUNITY FOR GLOBAL INVESTORS:

01 Companies are buying back stock, the consumer is healthy—it's a new chapter for Corporate Europe.

02 Latin America supplies critical raw materials for the energy and digital transitions—and investors have multiple ways to potentially benefit.

03 Amid an escape from deflation and corporate reform, Japanese equities offer a compelling opportunity.

We believe the global equity rally will continue to broaden through 2024, to new regions (beyond the United States) and market caps (beyond the mega-cap darlings).

Europe

Writing a new chapter for Corporate Europe

In the depths of the global financial crisis and the sovereign debt crisis a few years later, many European companies slashed their dividends. Shareholders weren't happy, but there was not much they could do about it. Flash forward to early 2024. European lenders and companies across sectors determined that their balance sheets were strong enough to distribute capital to shareholders.

Make no mistake: It's a new chapter for Corporate Europe. Companies have become far more shareholder-friendly. The key evidence, even more than rising dividends: Companies are buying back their stock. Buybacks have long been a feature of U.S. markets, bolstering U.S. equity outperformance over the years. But the practice has traditionally been far less common on the Continent. At the same time, European net equity issuance has swung negative, another boon to shareholders.

The trend toward shareholder-friendly corporate management—underappreciated by market participants—joins forces with improving economic fundamentals in the Eurozone. The consumer is healthy, bolstered by rising wages. The outlook for corporate profits is positive. Finally, interest rates look set to decline, providing a tailwind for consumers and businesses. By year-end, we will likely have seen more rate cuts from the ECB than the Fed.

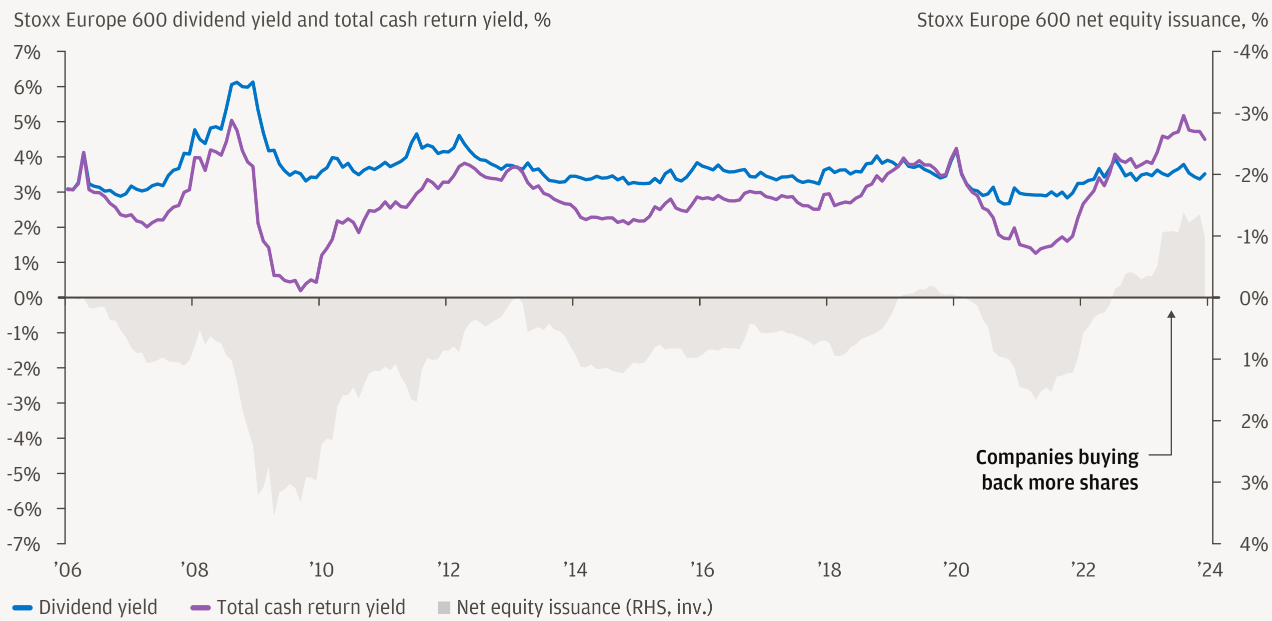
It all adds up to a supportive environment for European equities. It also affirms our view that the global equity rally will continue to broaden through 2024, to new regions (beyond the United States) and market caps (beyond the mega-cap darlings).

Optimistic European equity forecasters have been burned in the past, of course, as European stocks failed to live up to expectations. But we think European markets are at an inflection point, for structural and cyclical reasons. Shareholder-friendly corporate management represents a major structural shift. And because cyclical sectors dominate European markets, a pro-cyclical catalyst such as a rate cut could spark new investor interest in the region.

Structural shift: Shareholder-friendly corporates

One chart captures the essence of the structural change:

Breaking with tradition: Share buybacks are on the rise



Sources: Datastream, Haver Analytics, Goldman Sachs Investment Research, J.P. Morgan. Data as of February 29, 2024.

For decades, European corporates struggled with anemic economic growth and weak balance sheets, dependent on a fragile banking sector. Year after year, companies issued equity as virtually back-to-back crises pummeled businesses and markets. In response, many global investors pared their European exposures. Often they didn't look back.

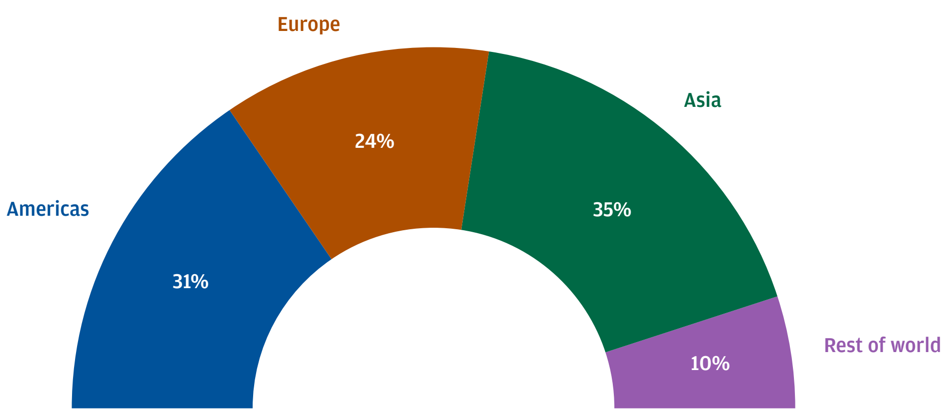
But in more recent quarters, investors have come to appreciate the shareholder-friendly changes. (A similar shift is occurring in Japan, as we discuss in a companion *Global Perspectives* article.)

From an investor's point of view, a stock buyback signals corporate confidence, an alignment of management and shareholder interests. Since buybacks reduce the number of shares in the market, they create a more favorable balance of supply and demand for investors.

Finally, we expect investors to increasingly recognize that leading European companies, the region's "national champions," sell to a truly global consumer base. They tend to benefit from a global economy that has weathered a higher interest rate environment better than many had expected. We think the European economy will remain resilient over the coming year.

A global customer base powers Europe's "National Champions"

2023 revenue exposure of Europe's National Champions by region



Sources: Company reports, Bloomberg Finance L.P., J.P. Morgan. Data as of December 31, 2023. Note: European National Champions refers to Safran, Scheider Electric, LVMH, Hermes, Ferrari, Novo Nordisk and ASML.

The economy is growing—and so are real wages

Across sectors and companies, improving economic fundamentals offer the potential for stronger economic growth, and in turn, rising revenues and profits.

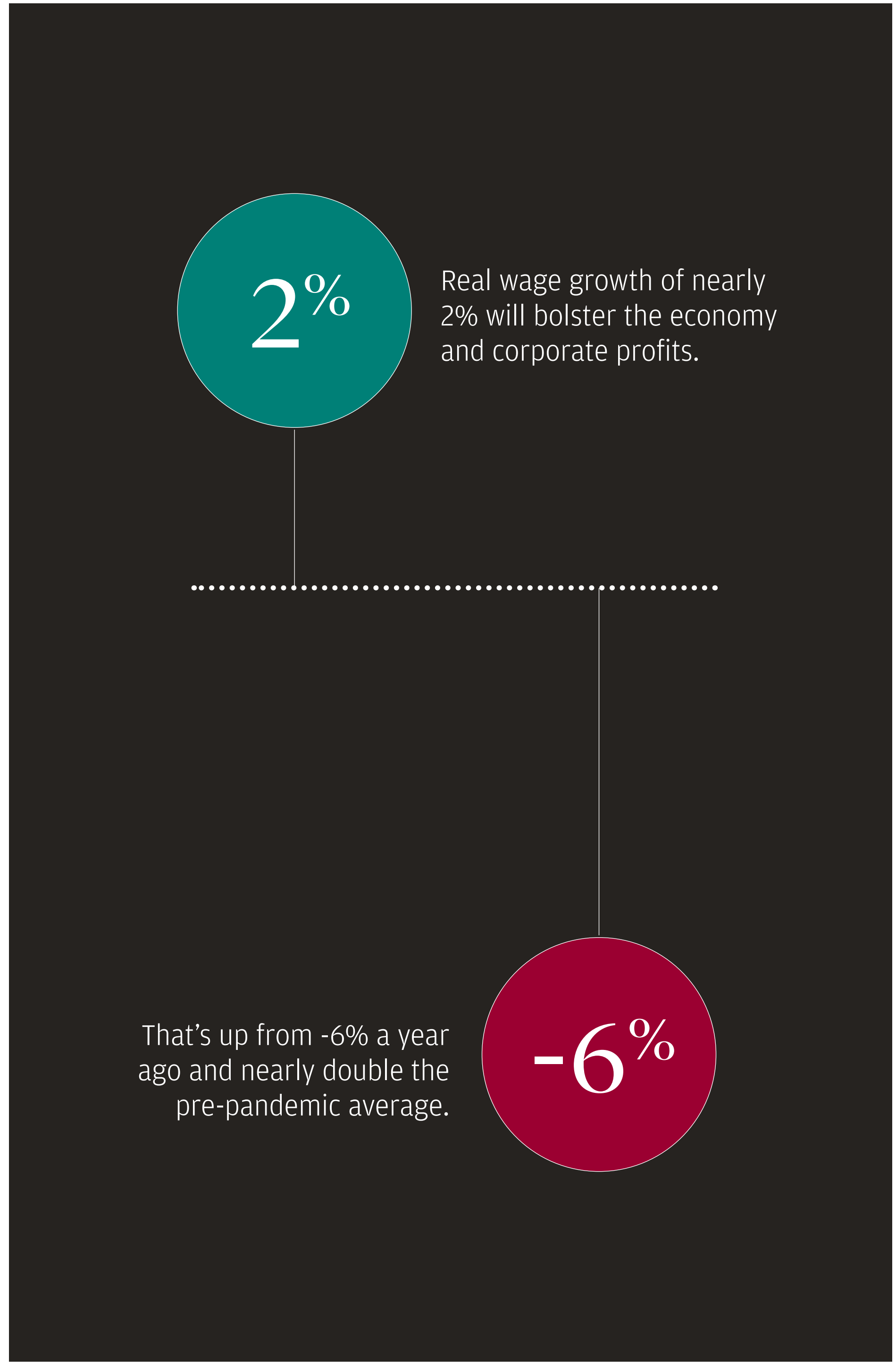
Eurozone GDP in Q1 expanded by 0.5% year-over-year, up from essentially zero growth in 2H 2023. The composite euro area Purchasing Managers' Index (PMI) rose to 50.3 in March, the first time the survey has been in expansionary territory since May 2023.[12] We expect that Eurozone growth will accelerate toward 1% by the end of 2024.

What's more, real wage growth of nearly 2% will bolster the economy and corporate profits. That's up from -6% a year ago and nearly double the pre-pandemic average. Consumers have money to spend.

Finally, we note a fading drag from tighter financial and lending conditions. In the latest ECB lending survey, the net number of banks reporting a tightening of lending standards fell to zero for the first time in four years.

We acknowledge risks to our outlook. Competition from Chinese manufacturers poses a meaningful threat to European companies. Chinese electric vehicle carmaker BYD, for example, could prove a tough rival to German auto manufacturers.

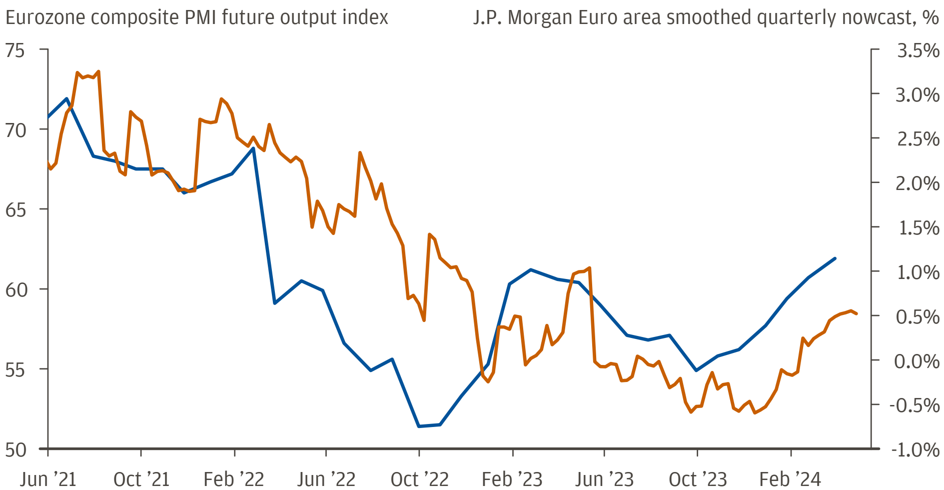
12 S&P Global, Bloomberg Finance L.P. Data as of April 2024.



Then there are geopolitical risks. Russia's invasion of Ukraine and subsequent energy crisis heightened the risks of Europe's dependence on energy imports. Conflict in the Red Sea has strained shipping routes, increasing costs for energy commodities.

Since the Middle East accounts for about a third of global oil production, escalating tensions in the region could prove destabilizing. In particular, a disruption of oil shipping in the critical Strait of Hormuz could push oil prices, and overall inflation, higher. Concerns remain regarding the region's ability to diversify energy supply away from foreign oil, especially as European automakers struggle to sell electric vehicles at a competitive price.

European growth fundamentals look poised to strengthen



Sources: J.P. Morgan, S&P Global, Bloomberg Finance L.P. Data as of April 2024. Note: J.P. Morgan smoothed quarterly nowcast analyzes all macroeconomic data for a country to output an annualized quarterly GDP growth.

A broadening equity rally

For quite some time, investors have been well served by an overweight to U.S. equities. We think that approach still makes sense over the long term. But especially as the equity rally broadens to new regions, improving economic fundamentals and shareholder-friendly corporate management in the Eurozone offer the potential for attractive returns in 2024 and beyond. Investors will want to take notice.

Latin America

Strong demand, scarce supply: Unearthing profits from critical raw materials

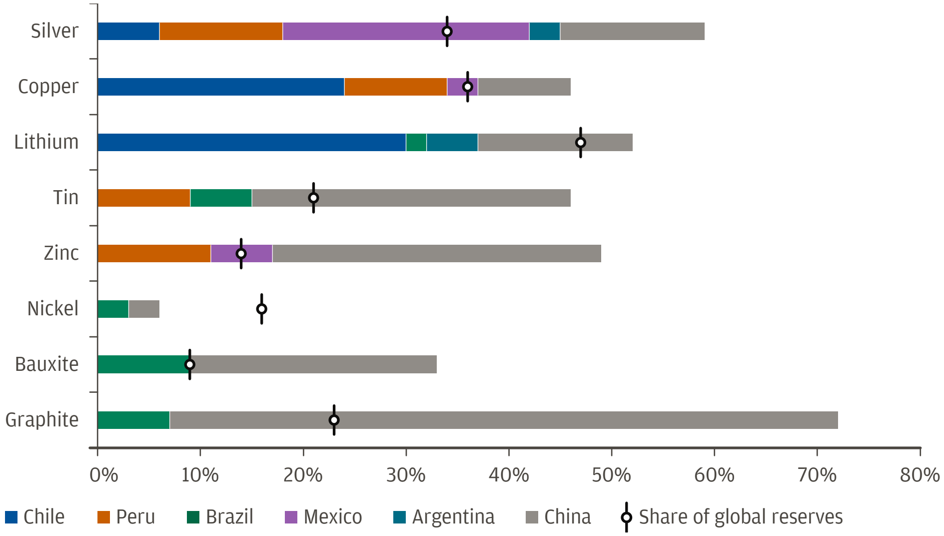
Electric vehicle (EV) owners know the drill—the anxious search for a nearby charging station and not much time to spare. They may also understand that lithium, a key element in the manufacture of EV batteries, has been in painfully short supply.

Here's what is less well known: A wide range of raw materials crucial to the energy and digital transitions (including the rise of AI), and to security broadly defined (national security, cybersecurity, energy security), is concentrated in a handful of countries in Latin America.

Chile and Peru produce 40% of the global copper supply, while Chile and Argentina supply 32% of the world's lithium. Vital raw materials (notably copper, lithium, cobalt and nickel) are in strong and growing demand, and relatively short supply.

A few countries control a substantial share of key mineral reserves

Latin America's share in the production and reserves of selected minerals, %



Sources: Mineral Commodity Summaries, U.S. Department of the Interior, U.S. Geological Survey.
Note: Numbers are estimates. Data as of December 31, 2022.

The investment implications of Latin America's dominant role are far-reaching. The opportunity set includes foreign direct investment in the region, the shares of global mining giants and publicly listed companies that benefit from economic activity in the region.

Latin America has long capitalized on its natural resources and mining accounts for most of the major countries' trade balances. We believe the secular opportunity offered by the digital and energy transitions increases the potential for further export growth.

Surging demand

Copper and lithium may be the two most important raw materials for these transitions. Copper plays a key role in solar, hydro and wind energy systems. And in AI, it's a game-changer: An AI data center requires three times as much power as a traditional data center, according to a recent report by J.P. Morgan Investment Bank, and will thus need much more copper. Demand for lithium looks set to accelerate, given its essential function in batteries for EVs and energy storage systems (8.9 kilograms—a significant amount—of the raw material makes its way into the average EV).[13]

By any measure, demand for key raw materials is accelerating at a rapid clip, and the pace will only quicken with the digital and climate transitions. The International Energy Agency (IEA) projects that electricity consumption from data centers, AI and cryptocurrency could double by 2026. According to estimates from J.P. Morgan Investment Bank, this growth rate could imply an additional 3% in copper requirements—in other words, a 3% increase beyond what is factored into current demand expectations.

The energy agency also calculates that in a net-zero scenario, lithium demand would be expected to reach 717 kilotons (kt) by 2030 versus supply of a mere 485kt.

Prices look set to rise. BloombergNEF estimates that copper prices could jump 20% by 2027. Fortune Business Insights estimates that the global lithium market, valued at $22.2 billion in 2023, is anticipated to grow to $26.9 billion in 2024 and $134 billion by 2032.

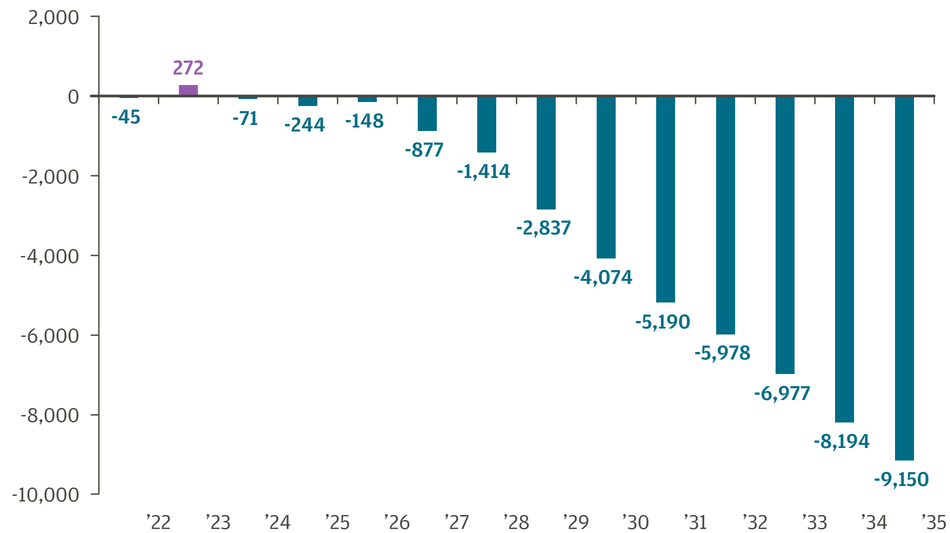
Tightening supply

Surging demand will exacerbate an already tight mineral supply expected for the coming decade.

For a variety of reasons (including a lack of infrastructure, greater demand for higher quality in refined products and political pushback to new projects), global production of several key minerals has grown at a relatively slow pace.

Growing demand for copper confronts limited supply

Global copper supply shortfall estimates, kt



Sources: J.P. Morgan, CRU, Wood Mackenzie, BGRIMM, World Bank, OECD, Bloomberg New Energy Finance, Auto manufacturer guidance, governmental agencies, IA. Analysis as of April 20, 2024.

13 IEA. Data as of March 2024.

Spotlight on security

The gap between supply and demand of key raw materials exacerbates security concerns for both public policymakers and corporate executives. For example, of the 50 minerals identified as critical by the Department of Interior's U.S. Geological Survey, the United States is 100% reliant on imports for 12 of them. It is 50% reliant for the next 29. As of 2023, the United States sourced the majority of these minerals from China.

Procuring a secure supply of lithium is now a top concern for technology companies and vehicle manufacturers across Asia, Europe and the United States. One result: Strategic alliances and joint ventures have been made between manufacturers (mineral consumers) and mining companies to ensure makers have a reliable and diversified base of suppliers.

Unlike Russia, say, another major source of raw materials for the energy and digital transitions, Latin America is seen as "friendly" territory to Western buyers.

Moreover, incentives under the U.S. Inflation Reduction Act (IRA) encourage manufacturers to source critical materials and/or assemble components in North America (which includes Mexico) or free trade partners. According to the Mexican Automotive Industry Association, the number of Mexico-made EVs exported to the United States each year has nearly doubled from 2021 to 2023, as automakers leverage partial tax credits from the IRA when these vehicles are sold in the United States.

Investment implications

The global mining sector presents perhaps the most direct way to access raw materials critical to the energy, digital and security transitions. We think market participants may underestimate the sustainability of mining company earnings and cash flows.

As a cyclical sector, mining could benefit from a recovery in global manufacturing as well as any stabilization in the Chinese economy. And on the manufacturing front, some mining companies have made headway in lowering their carbon emissions and managing water scarcity risks in Latin American countries.

For global investors, Latin America's equity markets currently offer solid earnings and attractive valuations, both relative to global peers and their own histories. Latin American stocks trade at a 9x 12-month forward P/E versus a 10-year average of 12x. Latin America now ranks as the world's least expensive equity region.[14]

Latin American equities may also enjoy the tailwind that comes from falling interest rates. Central banks in Latin America have already cut policy rates nearly 200 bps on average, leaving an additional 300 bps in potential cuts through 2024 and 2025.

In addition, increasing exports could spur economic growth in the region and help boost profits for Latin American companies.

Investors may choose to focus specifically on the global mining sector, or more broadly across capital markets. With either approach, they can find a wide range of opportunities to benefit from Latin America's role supplying critical raw materials for the energy and digital transitions.

14 Bloomberg Finance L.P. Data as of May 20, 2024.

Asia

Japanese stocks: This time is different

Many investors thought the day would never come. But after decades of economic malaise, Japan is finally escaping its deflationary spiral as inflation and nominal economic growth move higher. At the same time, corporate reforms are forcing a fundamental change in how companies treat shareholders. Compelled by new regulations to focus on improving efficiency and profitability, companies seem to be returning more value to shareholders than ever before.

The macro backdrop is compelling. As China's economy continues to face headwinds and the broader geopolitical backdrop looks increasingly fraught, Japan stands out as an island of relative stability. In Asia, it is among the economies least reliant on Chinese demand, its economic conditions are improving, and policy is supportive.

Structural shifts in corporate governance combined with a positive macro outlook are making Japanese equities among the most interesting investment opportunities globally. Investors have taken notice. In 2023, the Nikkei Index gained 30% in local currency terms, beating the S&P 500 and finally surpassing Japan's 1989 bubble high. Factoring in currency depreciation, Japanese equities still returned 22% in U.S. dollar terms.[15]

And yet on a relative basis, global investors still barely own Japanese stocks. With estimates at about 4% of global equity portfolios, global investors are underweight Japan relative to its weight in global equity benchmarks such as the MSCI World Index. We think this underweight positioning could soon close.

Here are three key reasons investors may want to consider boosting their allocation to Japanese stocks.

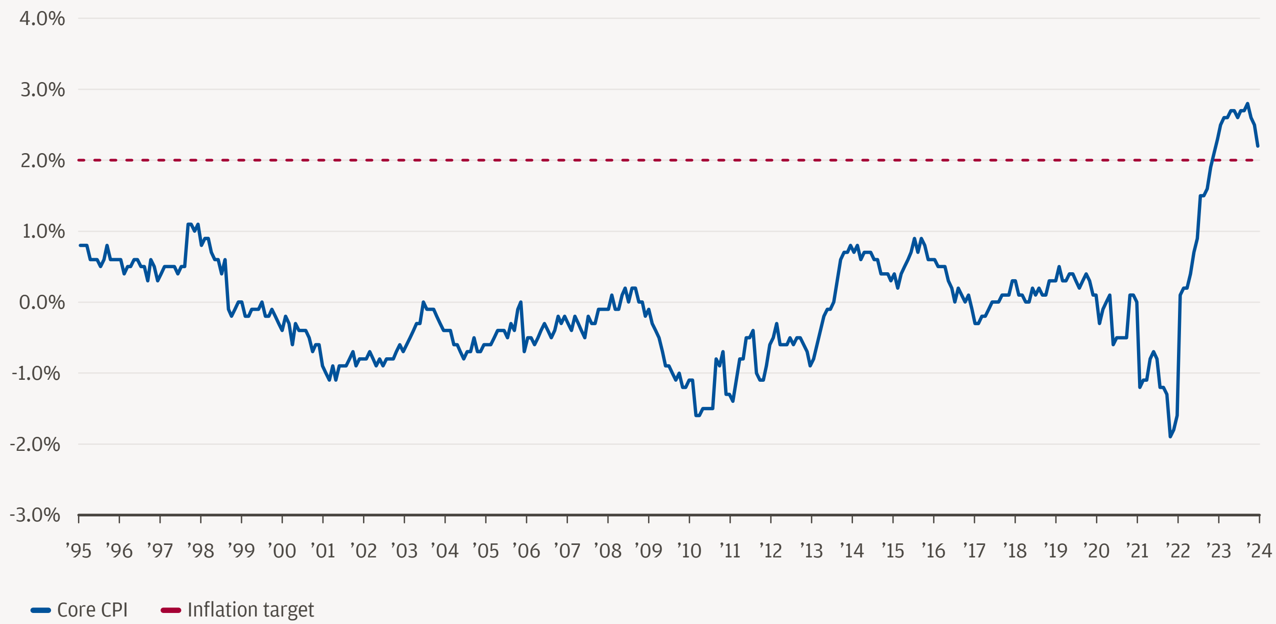
Welcoming inflation

Japan is on the cusp of defeating what had seemed an entrenched deflationary spiral. That's no small achievement: Deflation can have a pernicious grip on an economy. As businesses and consumers expect prices to fall, they put off spending, and economic activity continues to weaken. This was essentially Japan's fate for two decades.

Then prices took off amid COVID-related shortages, and activity reignited when the Japanese economy reopened. And in Japan, inflation is a breath of fresh air—a welcome sign that the economy is normalizing at long last.

Japan's inflation signals an economy normalizing at long last

Japan Core CPI, year-on-year, %



Sources: Ministry of Internal Affairs and Communications, Haver Analytics. Data as of April 2024.

15 Bloomberg Finance L.P. Data as of December 31, 2023.

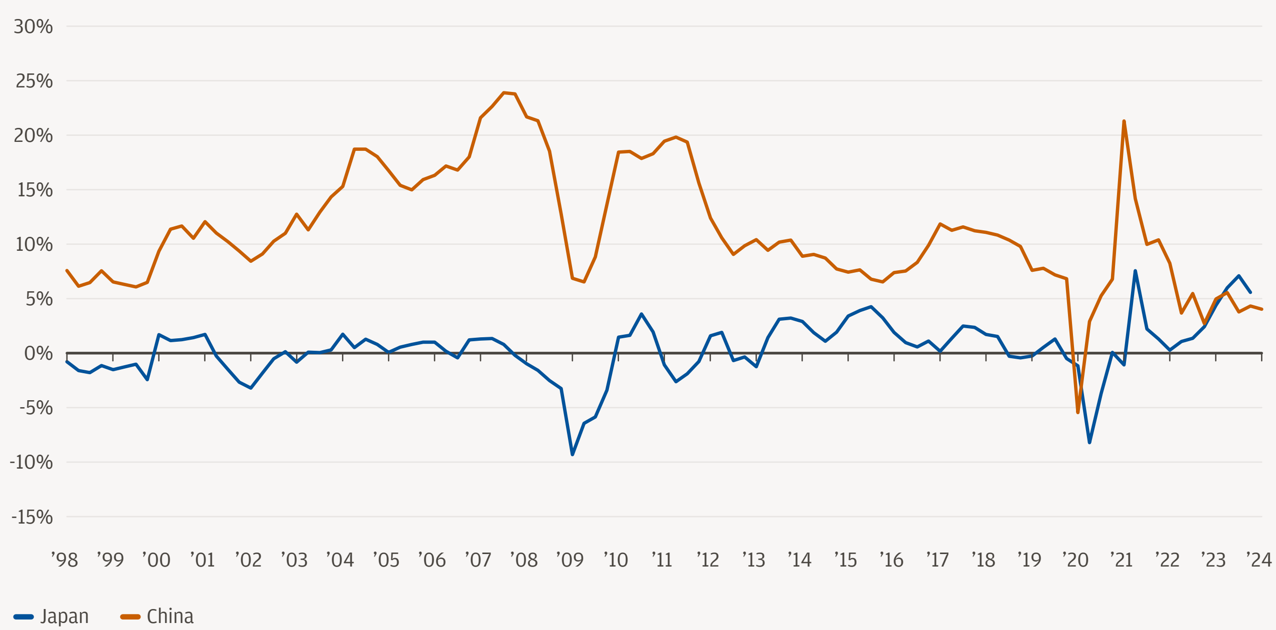
Economic normalization is driving a virtuous cycle of rising profits, wages, property prices, and, importantly, consumer and market confidence. As higher prices feed into stronger revenues, which in turn leads to higher wages, this virtuous cycle can reverse decades of stagnation.

One example of this structural shift: Japan's nominal growth outpaced China's for the first time in over 30 years.

Going forward, as Japan's economy normalizes and China's enters a period of structurally weaker growth and inflation, the growth gap between the two Asian giants can shrink.

For the first time in over 30 years, Japan's nominal growth outpaced China

Nominal GDP growth, year-on-year, %



Sources: Cabinet Office of Japan, China National Bureau of Statistics, Haver Analytics. Data as of Q1 2024.

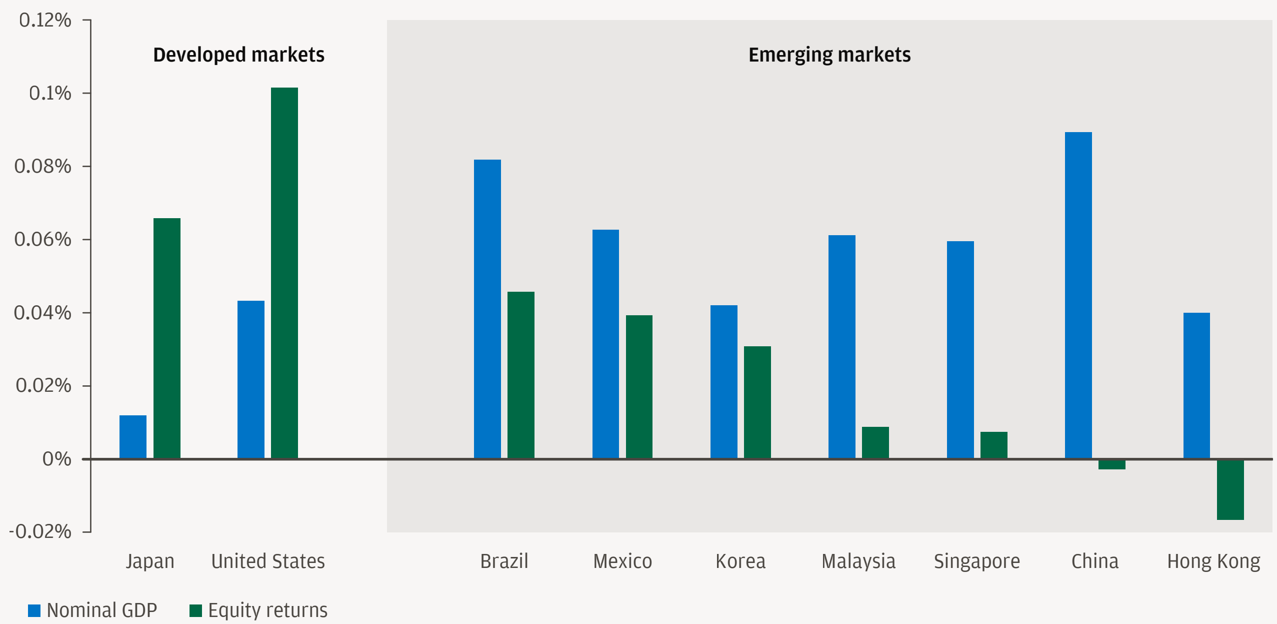
A new era in corporate governance

In Japan's capital markets, a major shift is underway. Reforms implemented by the Tokyo Stock Exchange (TSE) have pushed Japanese companies to change the basic relationship between corporations and their shareholders. The goal: to improve corporate governance and ultimately shareholder returns.

Just as the shift from deflation to reflation can have a profound impact on the economy, reforms aimed at improving corporate governance can have a profound impact on shareholder returns. Consider the relationship between economic growth and corporate earnings. In many economies with weak corporate governance, earnings lag economic growth, often by a considerable distance. Companies may dilute shareholder value by issuing more shares, increasing wasteful spending or otherwise making business decisions that erode per share profits. As a result, shareholder returns in many emerging market economies have underperformed their developed market counterparts despite years of high economic growth.

Equity investors need to consider the relationship between economic growth and corporate earnings

Annualized nominal GDP growth vs. local equity index price returns, local currency, %, 2009–2023



Sources: National sources, Bloomberg Finance L.P., Haver Analytics. Data as of Q4 2023.

American corporates serve as a useful example. The U.S. economy has grown more slowly than many other major economies over the past decade. Yet corporate earnings (and thus returns) have outpaced economic growth by a wide margin. A key reason (of course, there are notable exceptions) is that U.S. companies aim to create economic value and to then return that value to shareholders. Corporate governance largely explains why shareholder returns of U.S. companies have far outpaced returns of companies in faster-growing economies.

Japanese companies are now moving closer to the U.S. model. Reforms implemented by the TSE are changing the governance culture and forcing Japanese companies to focus more on profitability. The result: Earnings for Japanese companies, which have already outperformed the underlying economy, are expected to improve even further and lead the developed world at about 11%–13% this year. This suggests the potential for a meaningful upside on Japanese stock prices.

Supply chains and geopolitics

Japan is in a unique position in Asia. It is:

- **Among the economies least reliant on Chinese demand**
- **An important player in the semiconductor supply chain**
- **A beneficiary as foreign companies seek to build supply chain resiliency**

Japan budgeted ¥4 trillion for semiconductor and digital industry investments over 2021–23 per the Japanese Ministry of Finance, a larger share of GDP when compared with U.S. efforts to build out its own domestic supply of semiconductors.

Semiconductor manufacturer TSMC is a good example of the supply chain story. As the company looks to diversify its manufacturing out of Taiwan, it announced plans to build a plant in the United States. While the project has been beset with delays, TSMC has built and is now fully operating a new facility in Japan. This success has led it to unveil plans for further expansion in Japan.

On the geopolitical front, Japan looks well positioned to manage some of the gathering storms. Given the risk of rising trade frictions under a new U.S. administration, Japan's role as a U.S. ally and its crucial role in the global supply chain, we think Japan can chart a clear economic path. We note, however, that Japan relies on imports for the vast majority of its energy, which could prove a challenge if oil prices spike.

Conclusion

Despite the recent rally in Japanese equities, we think transformational shifts across Japan's economy and markets can continue creating opportunities for investors. In our view, share prices do not yet fully reflect the market's full potential. Although Japanese stocks have been trading in the midrange of their valuations over the past 15 years, global positioning remains underweight Japanese equities. We think multiples could move higher as global investors come to appreciate the structural shifts underway.

Optimistic forecasts have faltered in the past. We acknowledge the risk that Japan's virtuous economic cycle could stall before it takes off. But after decades of economic malaise and markets that went largely ignored by global investors, we think the outlook is bright. Now is the time to revisit the investment case for Japan.

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IMPORTANT INFORMATION

All market and economic data as of May 2024 and sourced from Bloomberg Finance L.P. and FactSet unless otherwise stated.

The information presented is not intended to be making value judgments on the preferred outcome of any government decision or political election.

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It is not possible to invest directly in an index.

INDEX DEFINITIONS

The **Bloomberg USAgg Index** is a broad-based flagship benchmark that measures the investment grade, U.S. dollar–denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate pass-throughs), ABS and CMBS (agency and non-agency).

The **Bloomberg U.S. 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 prerefunded bonds.

The **Citi Economic Surprise Indices** measure data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected, and a negative reading means that data releases have been worse than expected.

The **Consumer Price Index (CPI)** is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

Core PCE is a measure of prices that people living in the United States, or those buying on their behalf, pay for goods and services. Food and energy are left out to make underlying inflation easier to see, due to their common price swings.

The **Employment Cost Index (ECI)** measures the change in the hourly labor cost to employers over time. The ECI uses a fixed “basket” of labor to produce a pure cost change, free from the effects of workers moving between occupations and industries, and includes both the cost of wages and salaries and the cost of benefits.

The **MSCI Brazil Index** is designed to measure the performance of the large- and mid-cap segments of the Brazilian market.

The **MSCI Developed Markets Small Cap Indices** offer an exhaustive representation of this size segment by targeting companies that are in the Investable Market Index but not in the Standard Index in a particular developed market. The indices include Value and Growth style indices and industry indices based on the Global Industry Classification Standard (GICS®).

The **MSCI EM Latin America Index** is a free-float weighted equity index. It was developed with a base value of 100 as of December 31, 1987.

The **MSCI Germany Index** is a free-float weighted equity index. It was developed with a base value of 100 as of December 31, 1998.

The **MSCI World Index** is a free-float adjusted SPX market capitalization-weighted index that is designed to measure the equity market performance of developed markets. The index consists of 23 Developed Market country indexes.

The **Nikkei 225 Index** comprises 225 stocks selected from domestic common stocks in the first section of the Tokyo Stock Exchange, excluding ETFs, REITs, preferred equity contribution securities, tracking stocks (on subsidiary dividend), etc., other than common stocks.

The **S&P 500®** is widely regarded as the best single gauge of large-cap U.S. equities and serves as the foundation for a wide range of investment products. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

KEY RISKS

The price of equity securities may rise or fall due to the changes in the broad market or changes in a company’s financial condition, sometimes rapidly or unpredictably. Equity securities are subject to “stock market risk,” meaning that stock prices in general may decline over short or extended periods of time.

Investment in alternative investment strategies is speculative, often involves a greater degree of risk than traditional investments, including limited liquidity and limited transparency among other factors, and should only be considered by sophisticated investors with the financial capability to accept the loss of all or part of the assets devoted to such strategies.

Private investments are subject to special risks. Individuals must meet specific suitability standards before investing. This information does not constitute an offer to sell or a solicitation of an offer to buy. As a reminder, hedge funds (or funds of hedge funds), private equity funds, real estate funds often engage in leveraging and other speculative investment practices that may increase the risk of investment loss. These investments can be highly illiquid, and are not required to provide periodic pricing or valuation information to investors, and may involve complex tax structures and delays in distributing important tax information. These investments are not subject to the same regulatory requirements as mutual funds; and often charge high fees. Further, any number of conflicts of interest may exist in the context of the management and/or operation of any such fund. For complete information, please refer to the applicable offering memorandum. Securities are made available through J.P. Morgan Securities LLC, Member FINRA, and SIPC, and its broker-dealer affiliates.

Investments in commodities may have greater volatility than investments in traditional securities. The value of commodities may be affected by changes in overall market movements, commodity index volatility, changes in interest rates, or factors affecting a particular industry or commodity, such as drought, floods, weather, livestock disease, embargoes, tariffs and international economic, political and regulatory developments. Investing in commodities creates an opportunity for increased return but, at the same time, creates the possibility for greater loss.

Bonds are subject to interest rate risk, credit and default risk of the issuer. Bond prices generally fall when interest rates rise.

Investors should understand the potential tax liabilities surrounding a municipal bond purchase. Certain municipal bonds are federally taxed if the holder is subject to alternative minimum tax. Capital gains, if any, are federally taxable. The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax (AMT).

Preferred investments share characteristics of both stocks and bonds. Preferred securities are typically long dated securities with call protection that fall in between debt and equity in the capital structure. Preferred securities carry various risks and considerations which include: concentration risk; interest rate risk; lower credit ratings than individual bonds; a lower claim to assets than a firm's individual bonds; higher yields due to these risk characteristics; and "callable" implications meaning the issuing company may redeem the stock at a certain price after a certain date.

Small-capitalization companies typically carry more risk than well-established "blue-chip" companies since smaller companies can carry a higher degree of market volatility than most large-cap and/or blue-chip companies.

International investments may not be suitable for all investors. International investing involves a greater degree of risk and increased volatility. Changes in currency exchange rates and differences in accounting and taxation policies outside the United States can raise or lower returns. Some overseas markets may not be as politically and economically stable as the United States and other nations. Investments in international markets can be more volatile.

Derivatives may be riskier than other types of investments because they may be more sensitive to changes in economic or market conditions than other types of investments and could result in losses that significantly exceed the original investment. The use of derivatives may not be successful, resulting in investment losses, and the cost of such strategies may reduce investment returns.

Tax loss harvesting may not be appropriate for everyone. If you do not expect to realize net capital gains this year, have net capital loss carryforwards, are concerned about deviation from your model investment portfolio, and/or are subject to low income tax rates or invest through a tax-deferred account, tax loss harvesting may not be optimal for your account. You should discuss these matters with your investment and tax advisors.

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