

An aerial photograph of a river delta, showing a network of water channels and land. A semi-transparent diagonal band, colored in shades of blue and purple, runs from the top left towards the bottom right, partially obscuring the landscape. The text is overlaid on this band and the background.

J.P.Morgan

PRIVATE BANK

Outlook 2023: See the potential

Weaker growth, stronger markets

Foreword

Every year presents unique challenges. In 2020, together we confronted a global pandemic and lockdown. In 2021, global economies slowly reopened as parts of the world returned to more normal patterns of life.

2022 has brought new headwinds, some we haven't seen in over 40 years.

As inflation proved more resilient than anticipated, rising to highs we haven't seen in decades, central banks aggressively raised rates to slow its progress. With both stocks and bonds suffering significant losses, 2022 delivered one of the worst years ever for balanced portfolios.

From a geopolitical perspective, Russia's invasion of Ukraine caused great human suffering and disrupted global markets.

To prepare for the year ahead, we rely on our world-class Global Investment Strategy Group to help us identify both the risks and opportunities that investors may face. Despite the headwinds to growth, they **see the potential** for stronger markets in 2023 and beyond.

In times like these, we rely on each other and on the relationships we have created over time. We are honored to stand by your side.

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

Highlights from the 2023 Outlook

- 1. The best in a decade.** A dramatic reset in valuations has, in our view, created the most attractive entry point for stocks and bonds in over a decade.
- 2. Bad news, good news.** The bad news: We think a recession is likely in 2023. The good news: Central banks should stop hiking and inflation will likely fall.
- 3. Bonds are back.** Core fixed income now offers the potential for protection, yield and capital appreciation.
- 4. Reversal of fortunes.** We expect mega-cap technology stocks to underperform and small cap stocks to outperform.
- 5. Real money.** The era of underinvestment in the real economy is over.

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Focus on your process

INVESTMENT PRODUCTS: • NOT FDIC INSURED • NO BANK GUARANTEE • MAY LOSE VALUE

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Out of the depths

Most things that could have gone wrong for investors did in 2022. Markets that entered the year with extended valuations buckled in the face of elevated inflation, an aggressive global rate hiking cycle, war in Ukraine and economic challenges in China.

Unusually, both stocks and bonds suffered big losses in 2022—one of the worst years ever for a balanced portfolio.

As we move into 2023, investors still have many difficult questions to consider.

How much further could interest rates rise?

When will inflation come back to earth?

Is a recession inevitable, and how bad could it get?

In this year's outlook, we evaluate the fallout from a historic global tightening cycle—higher interest rates will rein in inflation, but recessions are likely in the United States and Europe—and we assess the degree to which market pricing already reflects a future downturn.

Even as economic growth deteriorates, we think markets could stabilize in 2023.

Higher bond yields offer total return potential, and they could provide portfolios with valuable ballast during a downturn. Equity markets may remain challenged by weaker earnings growth, but stock prices now incorporate a substantial degree of future damage.

Precisely because markets are so battered, lower equity valuations and higher bond yields, in our view, mean that investors now enjoy the most attractive entry point for a traditional portfolio in over a decade. Already, market dislocations have appeared that investors can take advantage of. Those with capital to invest can find the potential for compelling returns across asset classes and risk levels.

As you design and revise your goals-based plan, that's welcome news indeed.

The consequences of global tightening

Policy rate hikes are having
their intended impacts.

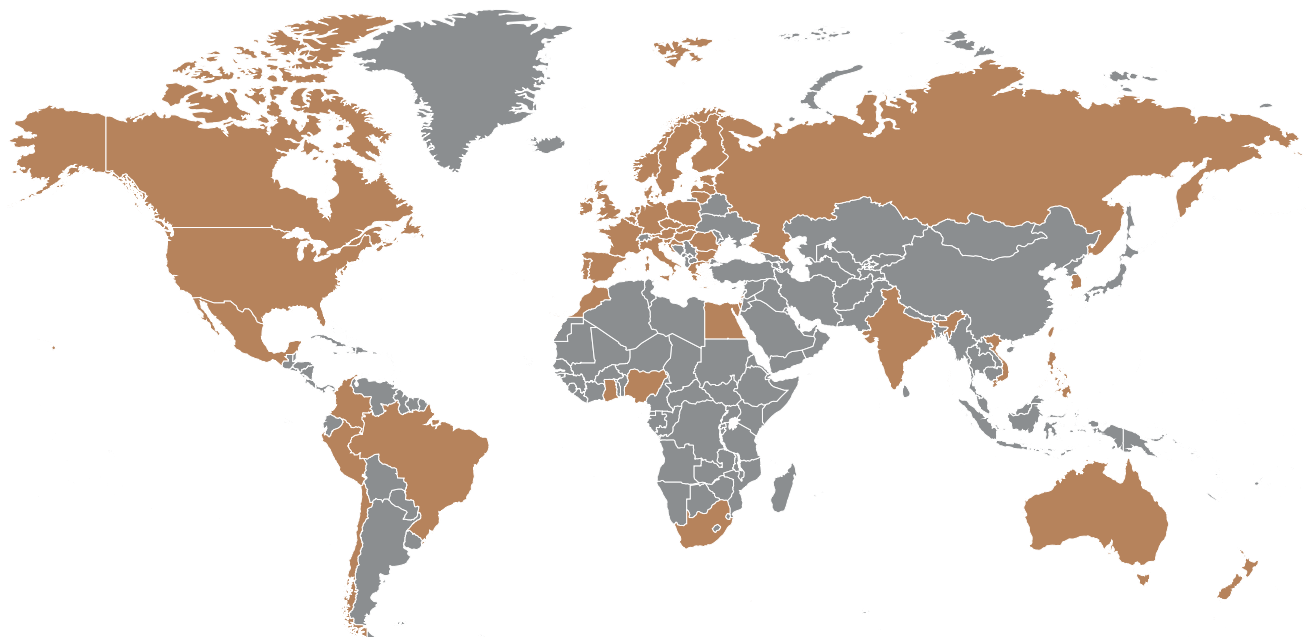
In 2022, central banks around the world launched an aggressive global rate hiking cycle to tame elevated inflation.

As of late 2022, 26 of the 31 central banks that we track were raising rates, up from just two at the start of 2021. The Federal Reserve (Fed) engaged in its most aggressive round of interest rate hikes in 40 years.

The European Central Bank (ECB) has been no less forceful, recently raising its policy rate by 0.75% to levels last seen before the global financial crisis (GFC). And the ECB seems set to keep raising rates despite the clear threats to growth.

After a little over a decade of low or negative policy rates, the campaign against inflation caused a historic rout in bond markets. The Barclays Global Aggregate Index is on track to lose over 10% in 2022, its worst year on record. Negative yielding debt (a pervasive feature of the post-GFC landscape) has disappeared everywhere except Japan.

CENTRAL BANKS RAISING INTEREST RATES



Source: FactSet. Data as of November 2022.

Across the global economy, many households and companies are facing suddenly higher borrowing costs.

In the United States, rates for new 30-year mortgages breached 7%, up from ~3.25% at the start of 2022, and housing affordability has fallen to its lowest level since 2007. The economic hit is even more notable in Australia, New Zealand, the United Kingdom and Canada, where 10%–20% of households will face higher payments on existing mortgages starting next year.

Inflation remains well above central bank targets, but we note a subtle shift in monetary policy. Central banks in Australia, Norway, Sweden, Switzerland and Canada have all moved to a slower pace of tightening. The Fed will likely follow suit to assess the effects of its tightening cycle—higher rates impact the economy with a lag.

The rate hiking campaigns will likely come to an end in 2023, but the historic pace of hikes has already posed serious risks to global economic growth.

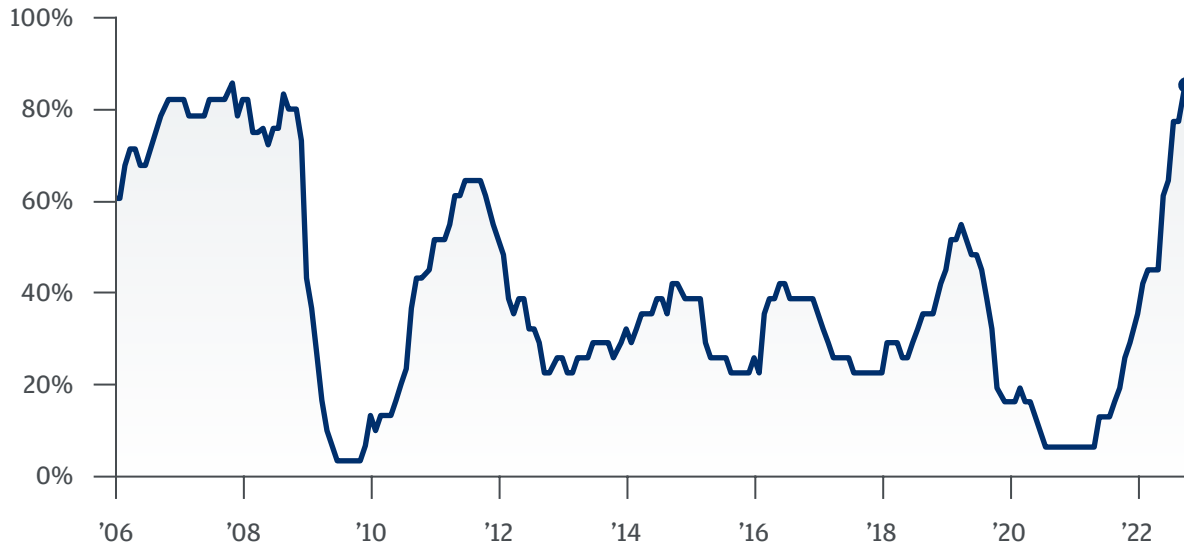


In the United States, rates for new 30-year mortgages breached 7%.



GLOBALLY COORDINATED TIGHTENING

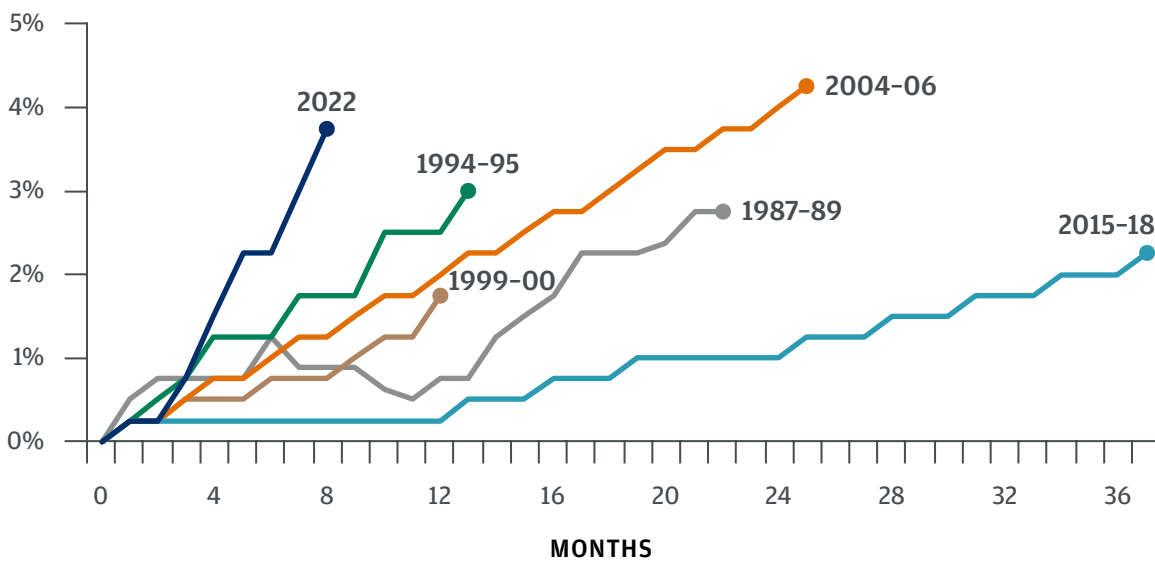
% of central banks whose last move was a hike



Source: FactSet. Data as of November 2022. Includes 31 central banks.

THE MOST AGGRESSIVE FED HIKING CYCLE IN FOUR DECADES

Change in fed funds rate since hiking began, ppts



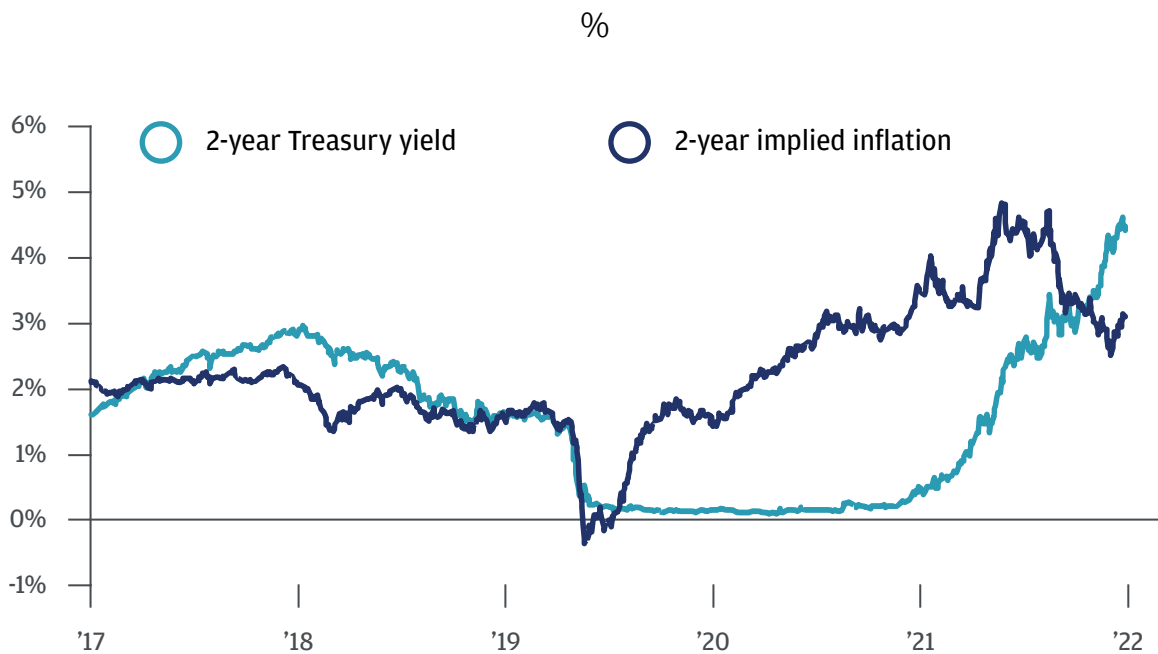
Source: Bloomberg Finance L.P. Data as of November 2022

Higher rates will likely rein in growth

In many economies, monetary policy is now restricting growth.

In the United States, most members of the Fed's Federal Open Market Committee think a "neutral" policy rate that neither restrains nor stimulates economic growth is around 2.5%. That's well below the current policy rate. Several Fed governors have argued for a pause in rate hikes in the first quarter of 2023, concerned they could go too far in their efforts to control inflation.

INTEREST RATES ABOVE EXPECTED INFLATION



Source: Bloomberg Finance L.P. Data as of November 2022.

Markets seem to agree that interest rates are restrictive. Most yield curves are deeply inverted, and Treasury rates at most tenors are trading above the expected rate of inflation over the same period.

Higher interest rates are meant to slow the economy in part by discouraging companies and households from borrowing. So far, they are doing just that.

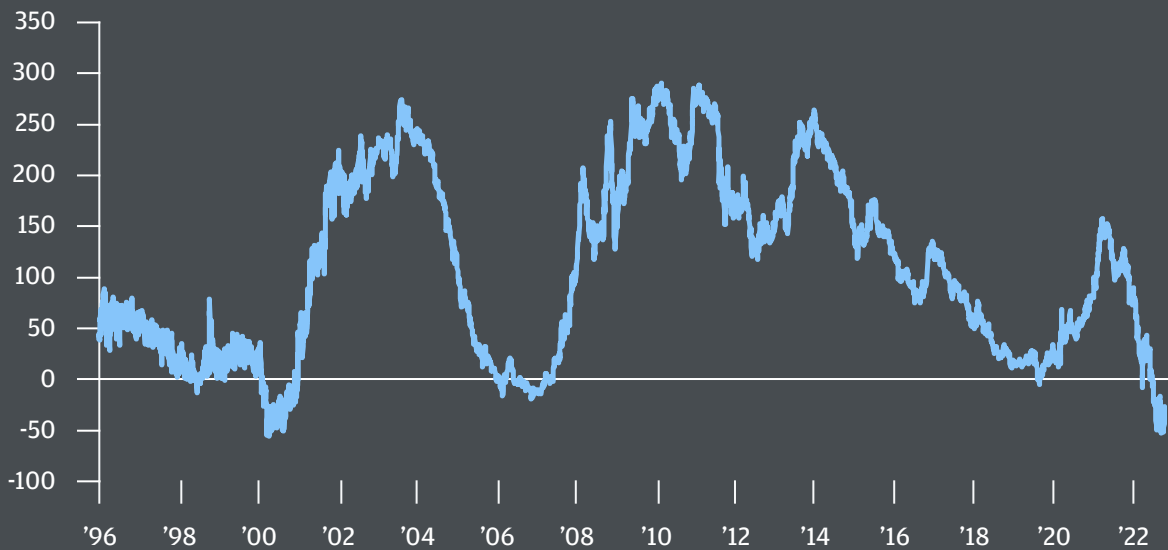
Activity in interest rate-sensitive sectors such as real estate has already declined dramatically. Instead of moving or refinancing mortgages to build new additions, homeowners are sitting tight. Capital markets are likewise dormant as companies balk at higher financing costs. Globally, issuance of corporate debt is down ~80%, and initial public offerings are USD600 billion lower than they were in 2021.

Because most financial transactions and trade are denominated in dollars, a strong USD (itself a function of Fed rate hikes and the war in Ukraine) adds another source of resistance for global economic activity. In addition, increased volatility in capital markets could reduce corporate confidence and dampen investment and hiring plans.

Given the lagged effects of higher rates, we expect weakness from housing, capital markets and technology to spread in 2023.

TREASURY YIELD CURVE IS DEEPLY INVERTED

Spread between 2-year and 10-year Treasury yields, basis points



Source: Bloomberg Finance L.P. Data as of November 2022.



Labor markets will likely soften

While the unemployment rate is low and jobs growth is still healthy in the United States, demand for labor may be past its peak.

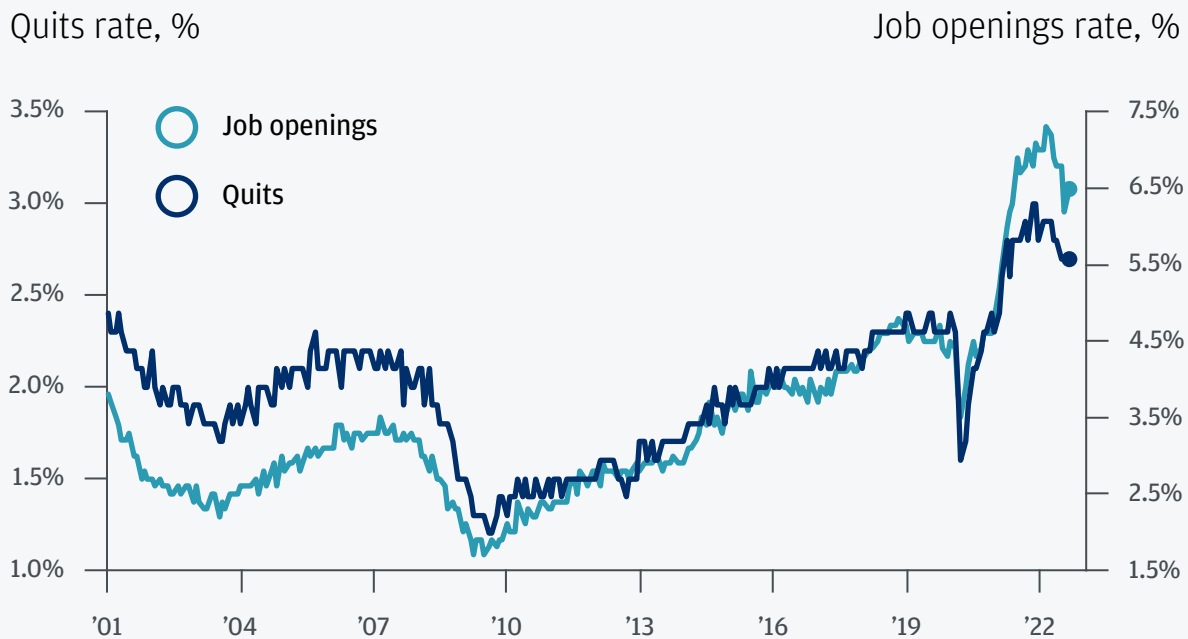
Both the job openings rate and the quits rate have declined, albeit to elevated levels. Average hourly earnings seem to have hit their high-water mark and are now rising at a ~4.5% pace. Corporate earnings reports also suggest moderating labor demand and cost pressure.

These data points signal that the Fed is getting its desired effect of lower demand for workers. But success is far from assured, and turning points in the labor market are difficult to identify in real time.

As demand erodes and corporate profit margins deteriorate, more companies will likely freeze hiring or lay off workers to cut costs. Many companies that were darlings of the social-distancing era (e.g., Amazon, Peloton and Meta) have done so already.

We expect the unemployment rate to rise in 2023 as higher rates broadly slow the economy.

DEMAND FOR LABOR PAST THE PEAK



Sources: Bureau of Labor Statistics, Haver Analytics. Data as of September 2022.

UNEMPLOYMENT RATE NEAR RECORD LOWS

U.S. unemployment rate, %



Sources: Bureau of Labor Statistics, Haver Analytics. Data as of October 2022.

A bumpy path back to trend inflation



We see evidence that inflation is on track to fall, but how far and how fast? The data has improved on several fronts: global supply chains, commodities and goods prices.

Supply chain pressures—the result of excess demand for goods during the pandemic—have largely eased. Delivery times as measured by Purchasing Manager Index (PMI) surveys have fallen to average levels. Shipping costs have collapsed by around 70% from their peaks.

In the commodities sector, the picture is mixed across economies, but prices generally look to be heading lower. Global industrial commodities prices are down more than 35% from their highs and are negative on a year-over-year basis. Prices for oil and natural gas likewise seem past their peaks, though geopolitical factors play a key role here. War in Ukraine leaves Europe grappling with a precarious energy supply.

↓ 70%

Shipping costs have collapsed by around 70% from their peaks.

↓ 35%

Global industrial commodities prices are down more than 35% from their highs.

Meanwhile, the United States is the top global producer of energy. In addition, the strong U.S. dollar helps to temper price increases for imported goods.

Still, services inflation remains stubbornly high, a reflection of tight labor markets. The U.S. official rent and owners' equivalent rent inflation, which accounts for roughly one-third of overall U.S. inflation measures, will probably stay elevated (though private measures suggest that rent increases are decelerating rapidly). Given the signals from private measures, we are looking for softer rental inflation readings by the middle of next year.

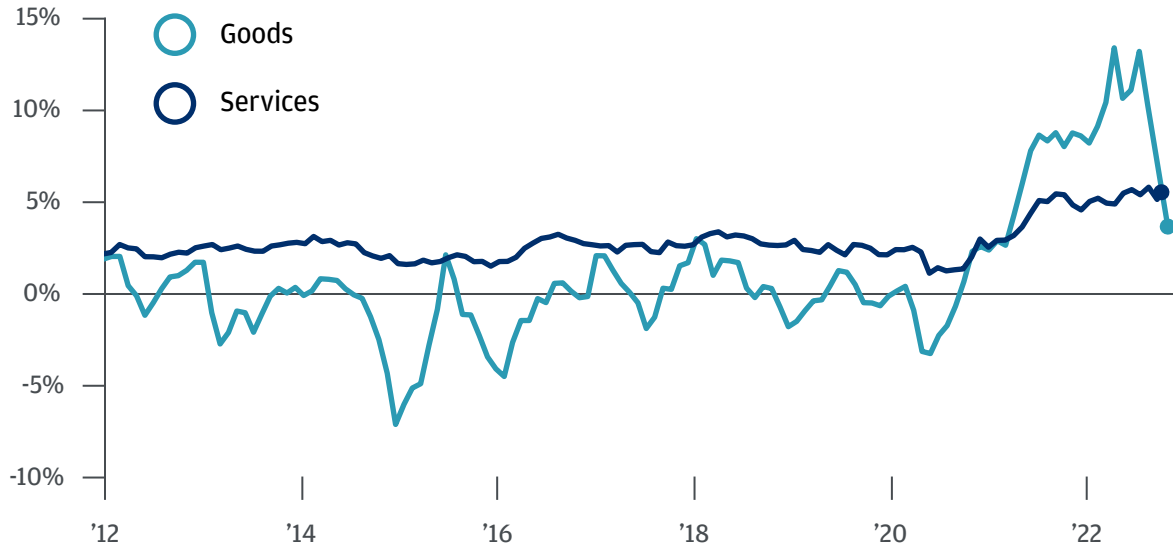
Globally, we think inflation will continue its downward trajectory throughout 2023, reaching levels consistent with most central bank targets by 2024.

Weaker growth, softer labor markets and falling inflation will likely lead to the end of the global rate hiking cycle in 2023. Investors may at first glance welcome the news. But historical evidence suggests that the real economy suffers the greatest damage after interest rates have already risen.



GOODS PRICE INFLATION IS FALLING WHILE SERVICES PRICE INFLATION REMAINS STICKY

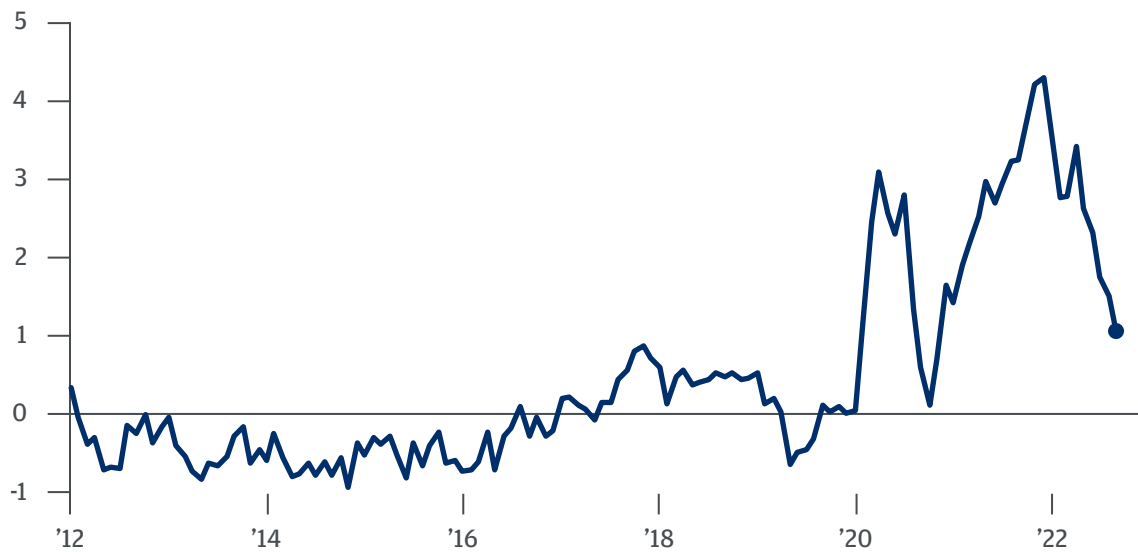
U.S. PCE, 6-month % change annualized



Source: Bureau of Economic Analysis. Data as of September 2022.

THE GLOBAL SUPPLY CHAIN IS RAPIDLY CLEARING

Global Supply Chain Pressure Index, 0 = normal



Sources: New York Fed, Haver Analytics. Data as of September 2022.

Weakness across the global economy

There's virtually no place to hide:
Across regions and sectors, the
global economy faces an array of
challenges to growth.

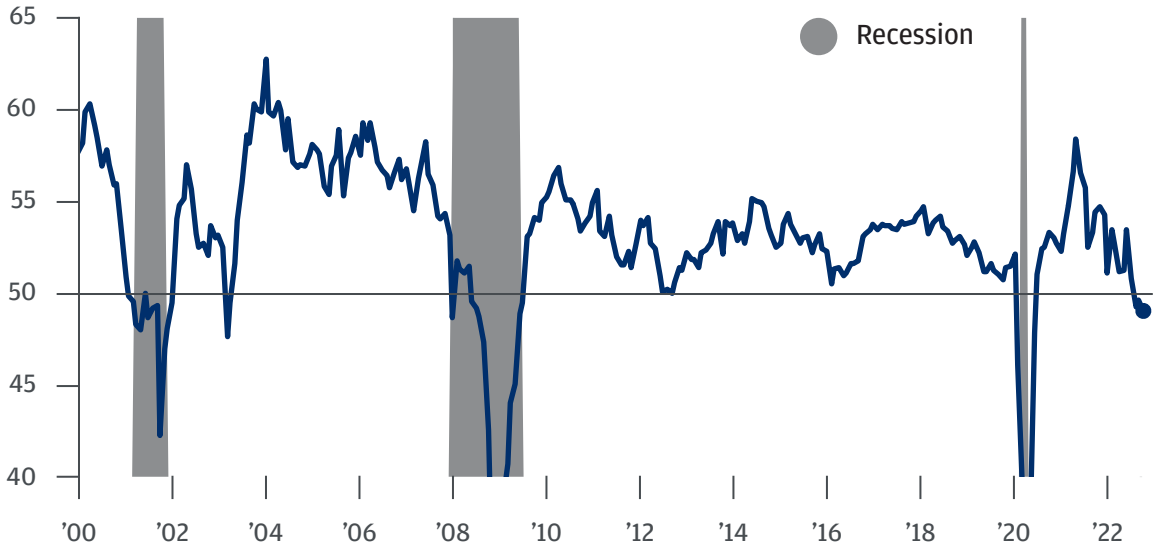
The economic challenges that dominated 2022—elevated inflation, tightening financial conditions, energy disruptions, weakening growth in China—won't vanish overnight.

We expect friction in the global economy to continue to build.

A monetary policy-induced recession in the United States seems more likely than not in 2023, while Europe appears likely to face a more difficult environment characterized by stagnant growth and elevated inflation. China's path will be determined by policymakers' commitment to zero COVID, while Latin America may be a relative bright spot.

GLOBAL ACTIVITY SURVEYS SIGNAL SLIGHT CONTRACTION

Global PMIs, 50+ = expansion



Sources: J.P. Morgan, S&P Global, Haver Analytics. Data as of October 2022.



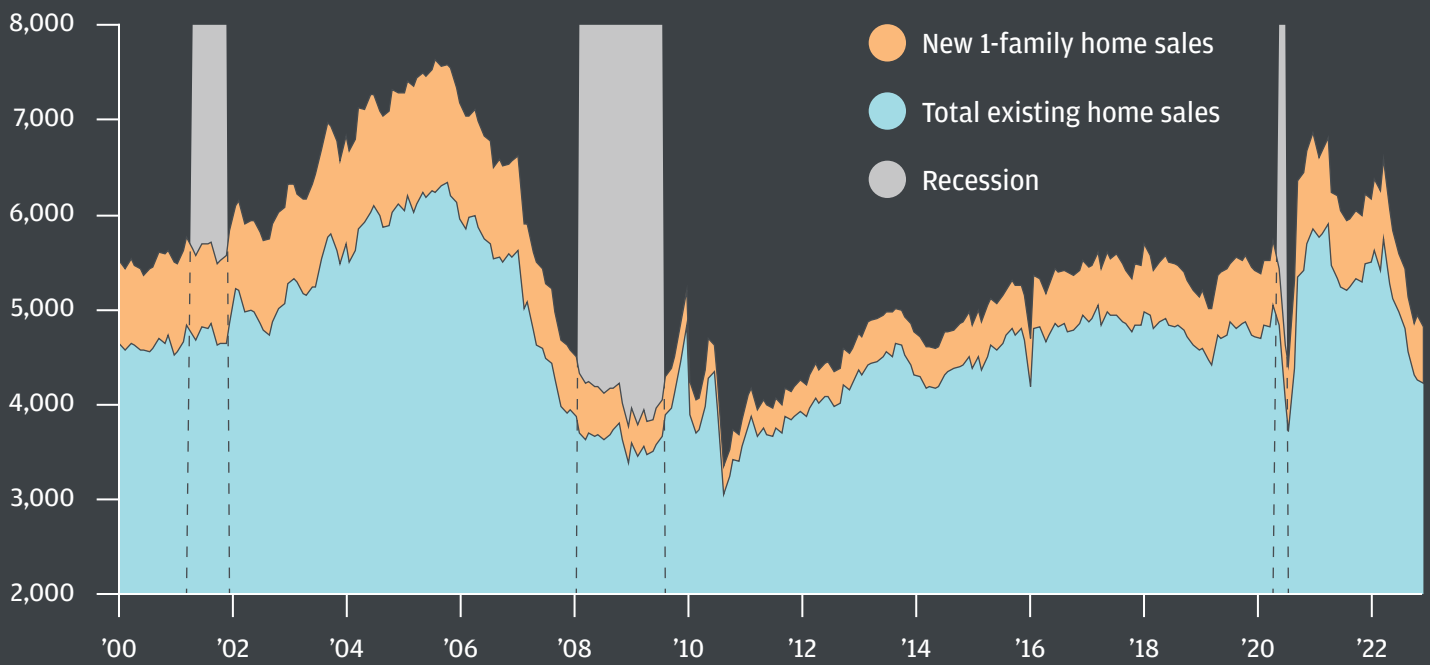
United States: Recession more likely than not

While growth in the United States has been relatively resilient, we think it is only a matter of time before debt defaults pick up and workers lose their jobs.

Typically, tightening cycles first impact interest rate-sensitive sectors. Later, they lead to job losses across the economy—sometimes even 12-18 months after rates reach restrictive levels. We expect to see more job cuts in the technology, residential real estate and manufacturing sectors.

INTEREST RATE-SENSITIVE HOUSING GETTING HIT

Seasonally Adjusted Annual Rate (SAAR), thousands of units



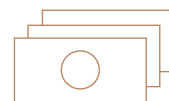
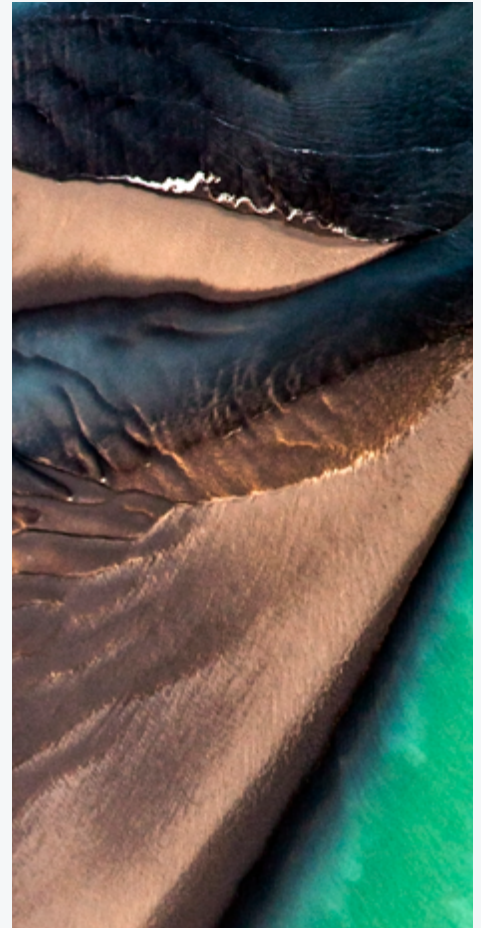
Sources: National Association of Realtors, Census Bureau. Data as of October 2022.

Importantly though,
we don't expect
a downturn
anything like the
Great Recession.

Financial, corporate and household
sectors are well capitalized today,
which they decidedly were not
during the financial crisis.

For example, the banking system has a loan-to-deposit ratio
of ~70% versus 100% prior to the financial crisis. Corporates
and households are currently running a more robust surplus
(total income less total spending) than they have been prior
to any recession since 1950.

In short, a U.S. recession is likely on its way, but we don't
think it will be a crisis.



Corporates and
households are currently
running a more robust
surplus than they
have been prior to any
recession since 1950.

China: Ongoing property and COVID woes

In China, the fallout from the collapsing property sector and the government's commitment to zero COVID policies could continue to rein in GDP growth.

Exports are running above pre-COVID rates, but building sales and new construction growth are plummeting and as of yet show no signs of a turn. Recent policy announcements signal more government support, but we will be looking for confirmation from the data.

Chinese policymakers are directing investment to infrastructure development. Yet the modest growth impulse has been thwarted by the stop-start cycle of COVID lockdowns as well as the troubled property sector. Through 2023, we may see a slow pivot toward reopening, but it will likely be staggered and careful.

For now, at least, we expect a government focus on economic stability, not stimulus. We see no quick rebound in Chinese growth.



Reopening will likely be staggered and careful.



Government will likely focus on economic stability, not stimulus.

Europe: On the brink of a downturn

By any measure, Europe's economic situation looks bleak, even though growth has held up better than many would have expected.

The war in Ukraine simultaneously pushes up inflation, reduces real incomes, weakens external finances and challenges the credibility of the ECB's 2% inflation target.

Additional rate hikes to battle inflation will inevitably depress growth, and bond markets do not seem likely to endorse large-scale fiscal support programs.

Many supply chains have been disrupted, and business and household confidence has rarely been weaker. The end of the war would bolster the economy, and would certainly improve business and consumer sentiment, but we are unable to include such a scenario in our base case for 2023.



Indeed, reliance on Russian energy poses a critical risk to economic output.

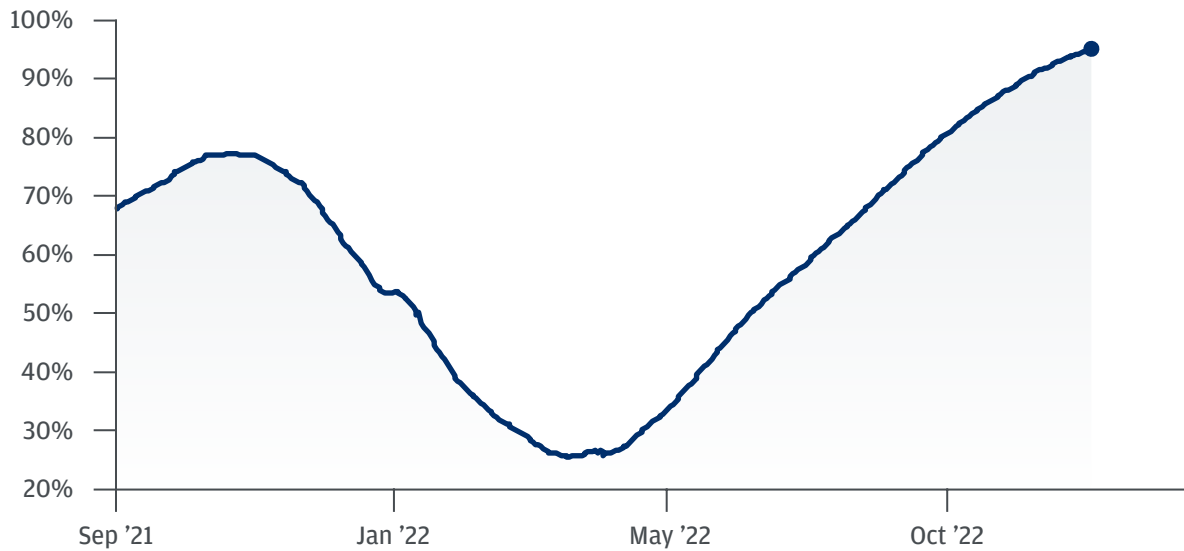
90%

Even though European policymakers have ramped up natural gas storage levels to ~90% of total capacity, futures prices still suggest a precarious situation through next year and beyond. Winter weather, which has so far been mild, will likely determine whether the industrial sector will need to curtail production to ensure that households have heat and electricity.



EUROPEAN NATURAL GAS STORAGE IS NEARLY FULL...

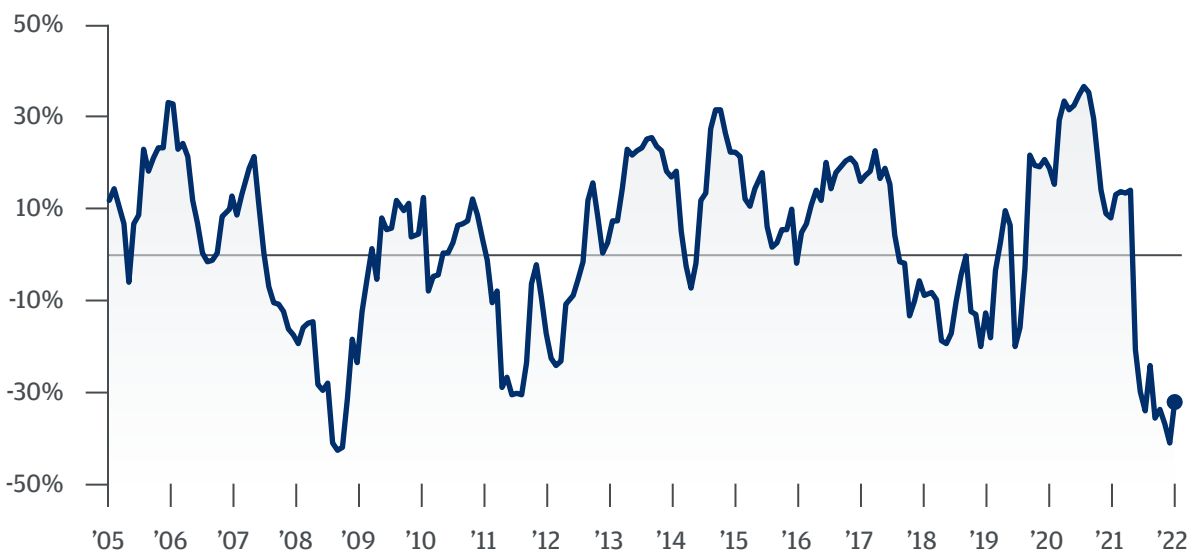
Natural gas storage, % full



Source: Bloomberg Finance L.P. Gas Infrastructure Europe. Data as of November 2022.

...BUT ECONOMIC SENTIMENT IS TERRIBLE

Sentix Euro Area Economic Expectations/Sentiment Index, % balance



Sources: sentix GmbH, Haver Analytics. Data as of November 2022.

Latin America: A (relative) bright spot



For nearly two years, Latin America has outperformed other emerging and developed markets both in terms of growth and market performance.

Despite the aggressive Fed tightening cycle, major currencies in the region strengthened in 2022. The Brazilian real and Mexican peso rose 9% and 5.5%, respectively.

Latin American central banks were among the first to start hiking rates in 2021. By the end of 2022, most were able to pause, and it's possible they could start lowering rates by the middle of 2023. This would provide an important tailwind for Latin America's equity markets, which are trading at some of their lowest valuations over the last 15 years.

If monetary policy does ease, we don't think exchange rates will suffer. That's because real rates (especially in Brazil) are among the highest in the world.

Latin America will not escape the effects of a weakening global economy. But it should be relatively sheltered by its significant exposure to the commodities sector.

Politics pose the main risk to Latin America's economies. If public spending gets out of hand, fiscal stability could be called into question.



Valuation resets

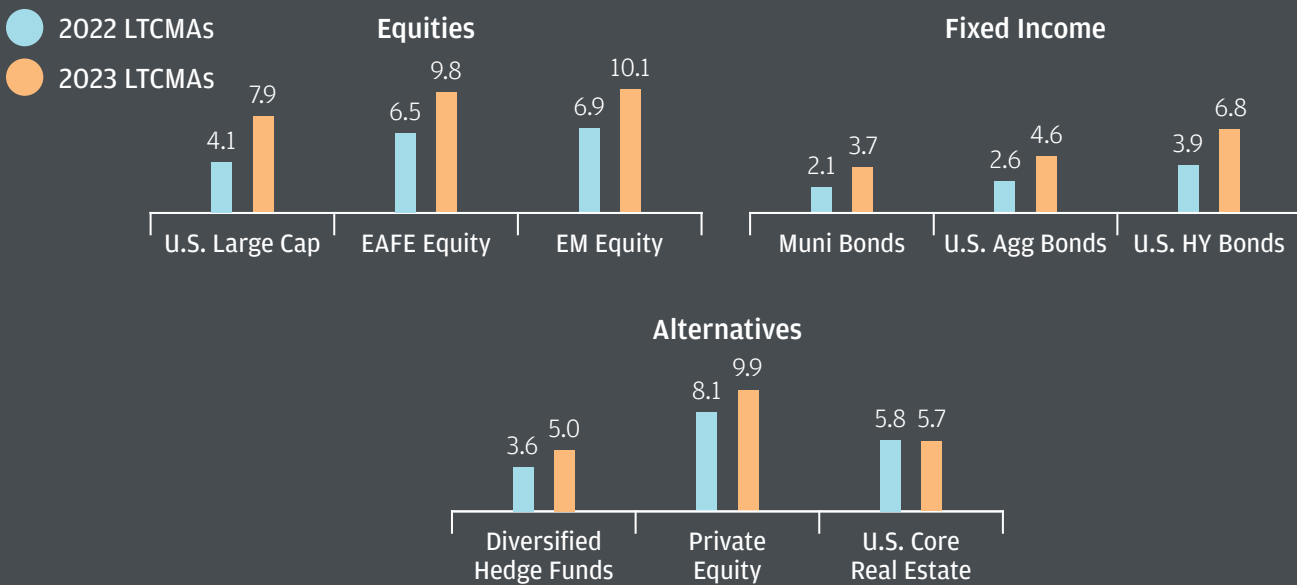
It's a good time to
put capital to work.

Here’s what the bear market of 2022 has delivered:

As noted, a dramatic reset in valuations—higher yields, lower stock multiples—has, in our view, created the most attractive entry point for a traditional portfolio of stocks and bonds in over a decade. In fact, our long-term outlook for returns across asset classes are materially higher than they were just last year.

LONG-TERM CAPITAL MARKET ASSUMPTIONS PRESENT FAVORABLE EXPECTED RETURNS

Forecasted annual return over the next 10-15 years, %



Source: J.P. Morgan Asset Management. Data as of September 30, 2022.

For 2023, we think investors can focus on two central questions:

What assets might help protect my portfolio through a recession?

Our answer: Core bonds.

How much future damage to cash flows and corporate earnings do risk assets already reflect?

Our answer: Substantial risk—but likely not all.

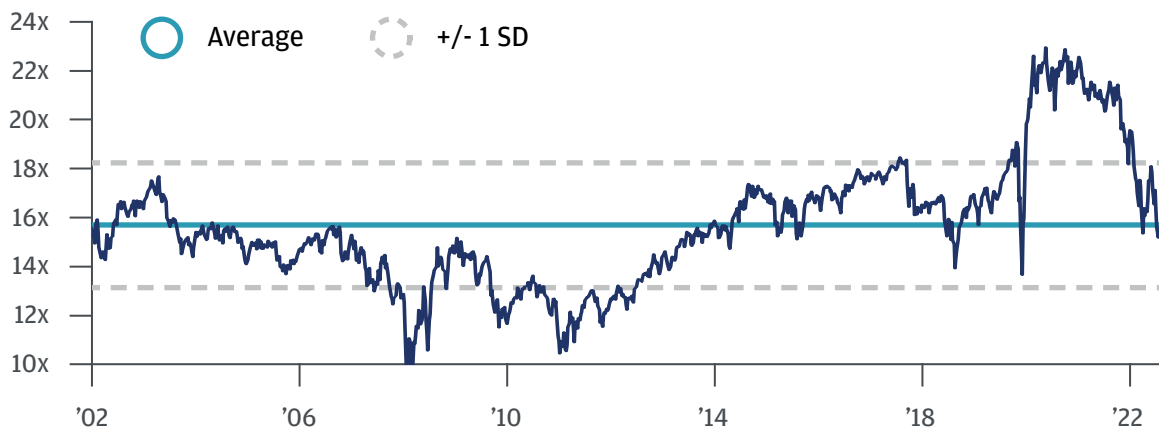
We think investors can now find opportunity in core bonds, preferred equities, small- and mid-cap stocks, and infrastructure and transportation assets.

Through 2023, as markets shift to reflect the economic weakness we expect, more opportunities in sectors such as real estate and large-cap equities will likely appear.

In the following sections, we assess risks and opportunities across asset classes.

U.S. EQUITY VALUATIONS NEAR LONG-TERM AVERAGE

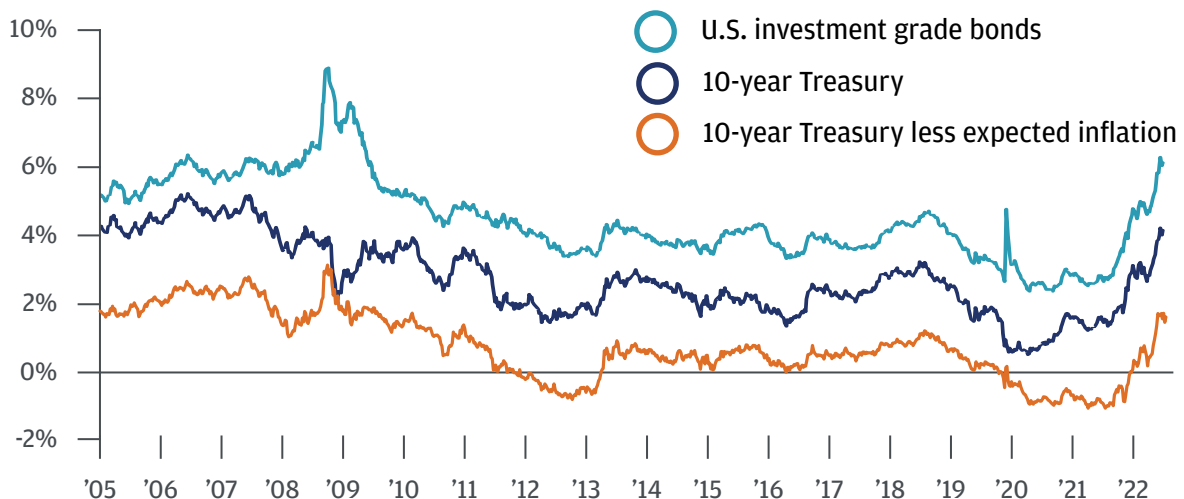
S&P 500 NTM P/E ratio



Source: Bloomberg Finance L.P. Data as of November 2022. Note: It is not possible to invest directly in an index.

BOND YIELDS AT THEIR HIGHEST LEVELS IN A DECADE

Yield, %



Source: Bloomberg Finance L.P. Data as of November 2022. Note: Investment grade bonds proxied by the JULIY Index. It is not possible to invest directly in an index.

Bonds:

Potential for yield,
protection and capital
appreciation

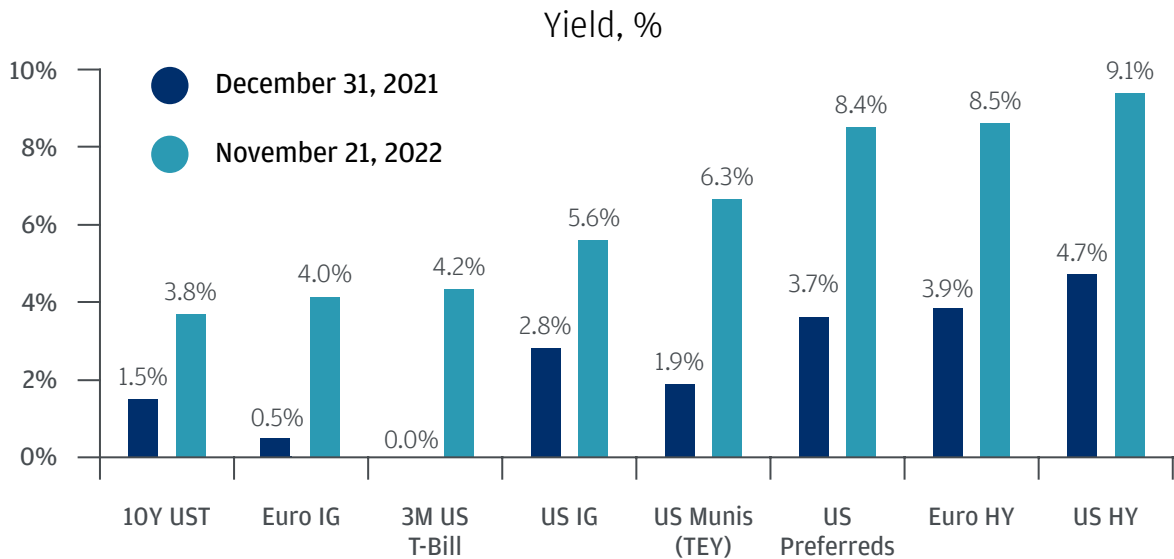
STRONGER MARKETS

Only a few quarters ago, traditional fixed income faced a serious challenge: It provided neither compelling levels of income nor adequate protection against an economic downturn. Today, with Treasury, corporate and municipal bond yields at their highest levels in a decade, both income and portfolio ballast are once again on offer.

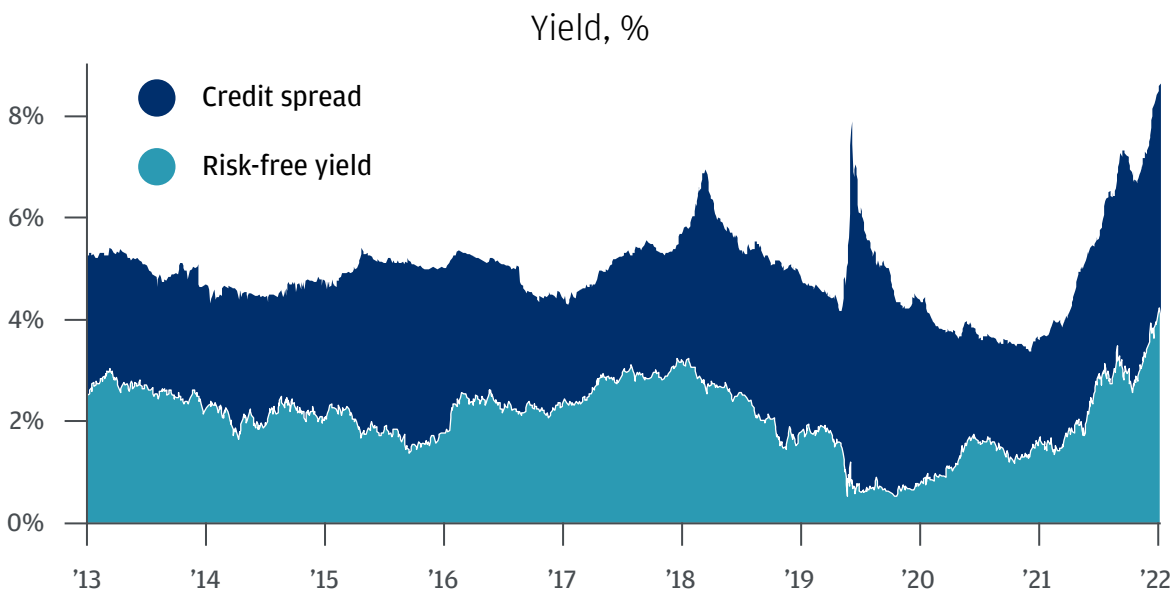
That’s a change that all investors should pay attention to.

Current yields in many parts of the fixed income complex are now equivalent to historical equity returns. This could give investors an opportunity to reach their goals while taking less risk. As interest rates fall in a recession, longer-duration core fixed income (e.g., investment-grade corporates or municipal bonds) could provide potential total returns well into the teens.

YIELDS ACROSS THE FIXED INCOME LANDSCAPE



PREFERRED EQUITY YIELDS



Sources: Top chart: J.P. Morgan Private Bank, Bloomberg Finance L.P. TEY = Tax-Equivalent Yield. Note: Investment Grade represented by J.P. Morgan JULI, Munis by the Bloomberg Muni Bond Index, Preferreds by ICE BofA US High Yield Inst. Capital Securities Index, and Broad HY by J.P. Morgan Domestic HY Index. Data as of November 2022

Source: Bottom chart: Bloomberg Finance L.P. Data as of November 2022. Note: Investment grade bonds proxied by the JULIY Index. Risk-free yield proxied by the U.S. 10-year Treasury yield.

In fact, market pricing suggests that short-term interest rates will remain above 3.1% for the better part of the next decade. We believe that outcome is unlikely, and think investors should lock in elevated yields now.

Moving beyond core fixed income, potential returns and risks are greater when we consider less creditworthy issuers or securities that are subordinate in the capital structure.

As we assess the asset class, the high yield bond market is pricing in a deceleration in economic growth and deterioration in credit quality, but not yet an outright recession. Even so, its all-in yield of nearly 10% offers an attractive alternative to equity exposure even after accounting for potential losses from default.

Meanwhile, preferred equities could be interesting for some investors. They display characteristics of both fixed income (prices are determined in part by interest rates) and equities (they react to changing perceptions about corporate earnings). Both rising rates and concerns about economic growth sparked a ~20% drawdown in these securities so far this year.

We like the entry point for preferred equities. Unlike high yield bonds, default risk is more limited, given that investment grade companies are the most common issuers. What's more, prices could rebound if yields decline. U.S. taxpayers also benefit from the qualified dividend income tax treatment of the coupons.



Stocks:

Focused on
quality, looking for
entry points

STRONGER MARKETS

No one knows precisely when stock markets will bottom. But a ~20% decline in stocks is relatively rare and has historically presented the best entry points for investors with medium- to long-term time horizons. This cycle should be no different.

In 2023, we believe equities are well positioned to deliver positive returns. Any material decline from current levels could represent a good buying opportunity.

Turning first to the U.S. market, analysts do seem a little too optimistic in projecting earnings growth of nearly 7.5% for the S&P 500 in 2023. We are penciling in flat-to-negative earnings growth in light of a weakening economic backdrop.

But earnings expectations are just one part of the equation. In the United States, as inflation subsides, the tightening cycle nears its end and rates hit their ceiling, we expect equity valuations to expand.

Together those two factors should deliver modest positive returns for the S&P 500 next year. Clearly, taming inflation is a prerequisite for stock market gains.

We could see some rotation in market sectors. Investors may move back into interest rate-sensitive sectors (such as real estate and reasonably priced technology) as bond yields peak, and exit cyclical sectors that could be at risk if markets price in greater risk of recession.

The picture is mixed across regions. Although current valuations in Europe and China seem attractive, we think U.S. dollar-based investors should wait for a clearer turn lower in the dollar and a turn higher in the global manufacturing cycle before boosting their non-U.S. equity exposures. We may get the chance, as the U.S. dollar looks very stretched relative to historical valuations.



We believe equities will deliver positive total returns in 2023.



Emerging markets outside of China could offer some interesting trading opportunities. Brazilian equities seem attractive on a valuation basis, and we like South Korea's exposure to the semiconductor industry. Over the longer term, structural trends such as food scarcity and reliance on oil (despite progress toward the clean energy transition) will likely offset idiosyncratic risks in regions such as the Middle East and Latin America.

As the cycle progresses, we may find an opportunity to add to most emerging markets in 2023.

On a regional basis, we prefer U.S. stocks, which tend to be more insulated from global downturns.

On a sector level, we prefer healthcare. Revenues aren't as cyclical as they are in other sectors, and valuations seem reasonable. We also see opportunity in quality, cash flow-generating tech and tech-related companies that were hit by higher interest rates. Industrial companies provide some inflation protection and benefit from the tailwind of global infrastructure and defense investment. Dividend growth and value companies could be well positioned, given the uncertain macro environment and higher interest rates.

A trend that we think will continue into 2023: Underperformance of the mega-cap tech leaders of the last cycle relative to the broad market.

We also think investors should now consider small- and mid-cap companies.

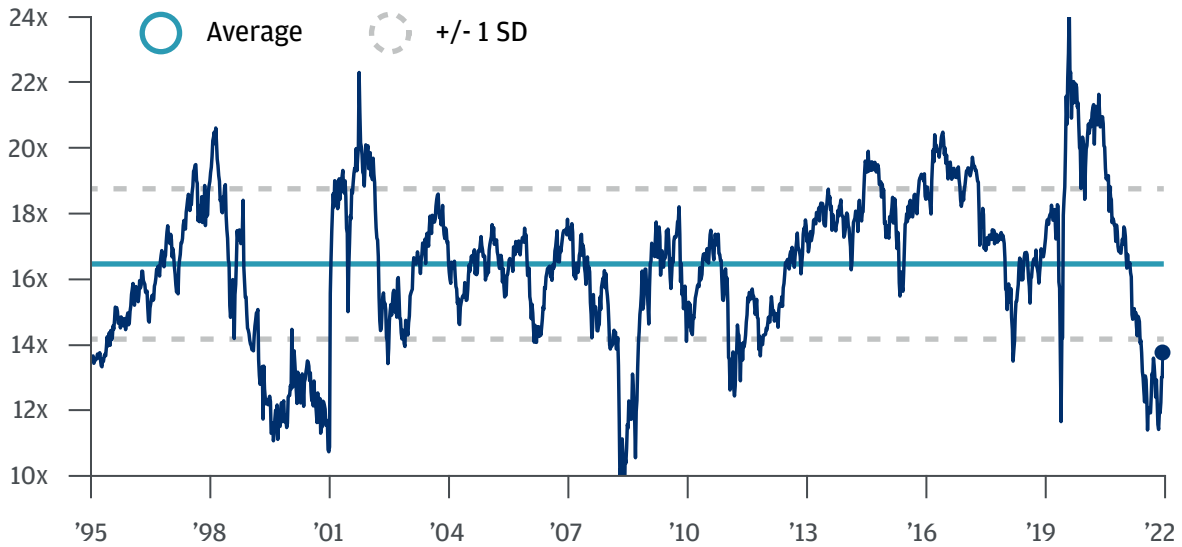
Generally, smaller companies tend to grow faster than large caps, benefit from merger and acquisition activity, and could be somewhat insulated from a more stringent regulatory environment.

Valuations have fallen to recessionary levels and may already reflect a material decline in earnings. During recessions, small- and mid-cap companies only underperform large-cap stocks by ~5%, and they outperform large-cap stocks by 30% in the first year of the recovery. We think the time to add is now.

As the year progresses, we will be on the lookout for other dislocated pockets of the market.

MID-CAP EQUITY VALUATIONS TRADING NEAR TROUGH LEVELS

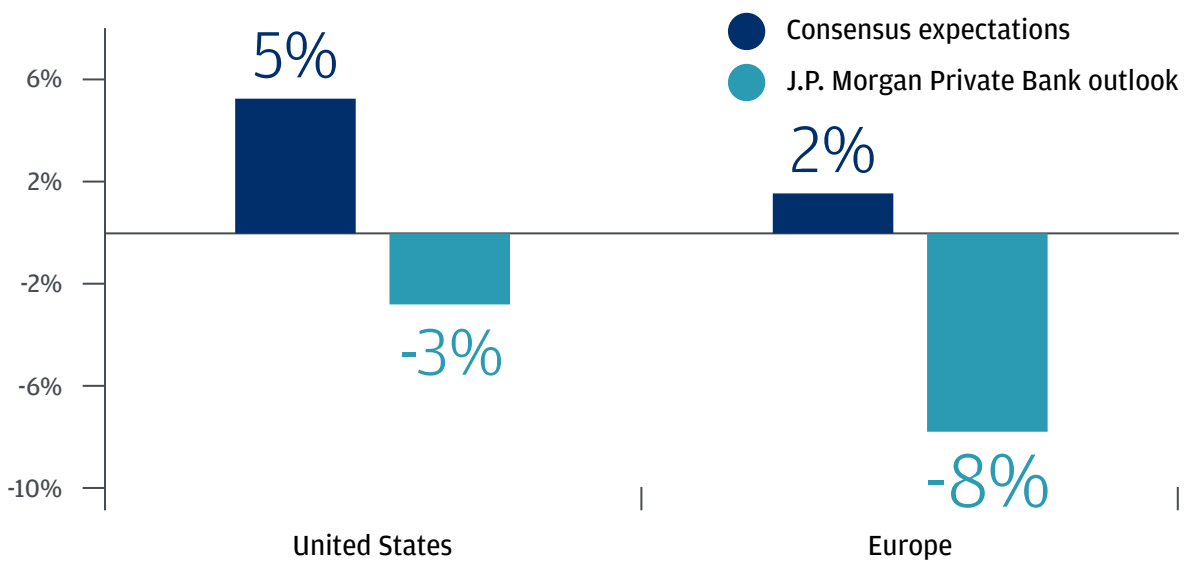
S&P 400 NTM P/E ratio



Source: Bloomberg Finance L.P. Data as of November 2022. Note: It is not possible to invest directly in an index.

CONSENSUS SEEMS TOO OPTIMISTIC ON EARNINGS GROWTH

2023 expected year-over-year change in earnings per share (EPS)



Sources: FactSet, J.P. Morgan Private Bank. Data as of October 2022. Note: It is not possible to invest directly in an index.

Alternatives:

Potential for excess
returns, benefit
from long-term
economic shifts

Once-booming private markets have started to feel the strain that is all but inescapable in public markets.

Growth equity funds, real estate vehicles and private credit managers have all experienced varying degrees of markdowns on their assets, and more seem likely.

On the other hand, other alternative investments such as hedge funds that focus on rates, currencies and cross-asset correlations had a banner year and proved their worth as portfolio diversifiers. In 2023, gold may serve a similar purpose as the dollar and real interest rates find their peaks.



More immediately, the drought of public capital market activity in 2022 means that private market investors can earn a premium for providing both debt and equity financing. Companies that were planning on an initial public offering in 2022 or 2023 are holding back, given the valuation reset. Instead, many of these firms are turning to private investors for bridge capital, and private lenders can now demand higher interest rates from potential borrowers.

Similarly, secondary private equity offerings, which have historically demonstrated higher net IRRs (internal rates of return) with more limited manager dispersion than other types of private equity investments, could provide an opportunity to acquire discounted assets from owners who are willing to accept a markdown in exchange for immediate liquidity.

Supply in this area has increased because some institutional investors need to sell illiquid assets to maintain their proper allocations, given the sell-off in both stocks and bonds this year.



Going forward, we may also see distressed opportunities in real estate and credit as the growth backdrop deteriorates.

As we move into 2023 and beyond, we think there will be a renewed focus on stability and security across the global economy. The pandemic and shifting geopolitical risks have raised acute issues in areas such as supply chain resilience, access to energy, food and other natural resources, and traditional and digital security.

Real assets such as infrastructure, transportation and the energy transition create a wide range of possibilities for both public and private investors.

Many sectors, such as residential real estate (U.S. housing stock has been underbuilt by ~1.5 million homes), shipping (there are only 111 active large shipyards today versus 320 in 2008), and natural resources (large-cap energy capex is down 60% since 2015) have seen a decade of underinvestment that curtails capacity. The investment shortfall presents opportunity for both yield and total return, though cyclical risks should be taken into account.



Europe will likely need to redesign its energy infrastructure and supply chain, which should benefit not only natural gas producers and transporters, but also accelerate the green energy transition. Nuclear energy may even start to become a more acceptable option.

Across the global economy, critical infrastructure will continue to provide investors with steady income streams under a wide variety of macroeconomic conditions.

All in all, we rely on private investments to add diversification benefits to portfolios, to target market inefficiencies in opportunistic areas, and to drive attractive returns relative to public benchmarks. Our outlook for 2023 makes those qualities even more valuable.

Europe

Will likely need to redesign its energy infrastructure and supply chain.

Real Assets

Many sectors within real assets have seen a decade of underinvestment.

Focus on your process

2022 tested the resolve of many investors. Equity markets experienced one of their worst drawdowns on record. Bonds not only failed to protect portfolios from the equity sell-off, but they suffered their steepest losses in decades.

But better days lie ahead. We believe markets could stabilize even as the economy worsens in 2023. The global reset in valuations is presenting investors with a broader range of viable options to help achieve their goals.

Most importantly, we encourage you to focus on your process: Define and revisit financial goals; then design investment portfolios with the potential to reach them.

Speak with your J.P. Morgan team to see how you might turn that potential into your reality.

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Commodities

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The **MSCI World Index** is a free float-adjusted 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 **Standard and Poor's 500 Index** is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries. The index was developed with a base level of 10 for the 1941-43 base period.

The **Standard & Poor's 400 Index** provides investors with a benchmark for mid-sized companies. The index, which is distinct from the large-cap S&P 500, is designed to measure the performance of 400 mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment.

The **STOXX Europe 600 Index (SXXP Index)** is an index tracking 600 publicly traded companies based in one of 18 EU countries. The index includes small cap, medium-cap and large-cap companies. The countries represented in the index are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Holland, Iceland, Ireland, Italy, Luxembourg, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The **MSCI Emerging Markets Index** captures large- and mid-cap representation across 23 emerging Markets (EM) countries. With 834 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The **MSCI China Index** captures large- and mid-cap representation across China H shares, B shares, Red chips and P chips. With 144 constituents, the index covers about 85% of this China equity universe.

The **CSI 300** is a capitalization-weighted stock market index designed to replicate the performance of the top 300 stocks traded on the Shanghai Stock Exchange and the Shenzhen Stock Exchange.

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