Commentary | First Quarter 2023

Quarterly Market Update

PRIMARY CONTRIBUTORS

Dirk Hofschire, CFA
SVP, Asset Allocation Research

Jake Weinstein, CFA
Research Analyst, Asset Allocation Research

Andrew Garvey
Research Analyst, Asset Allocation Research

Azize Engin
Research Associate, Asset Allocation Research

Lisa Emsbo-Mattingly, CBE
Director of Asset Allocation Research

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Market Summary

Slowing Inflation Raised Hopes at End of a Jittery Year

After an abrupt rise in 2022, bond yields held steady during Q4 amid signs that rapid inflationary pressures were coming off the boil. The Federal Reserve and many other central banks further tightened monetary policy, and the U.S. and global economies faced rising recession risks. We believe the evolution of these trends defines the 2023 outlook, and valuation opportunities may appear within a still-volatile backdrop.

	MACRO	ASSET MARKETS
Q4 2022	• Slowing global growth continued amid signs of decelerating inflationary pressures.	• Most asset prices rose as interest rates stabilized and the dollar eased.
OUTLOOK	• The maturing global business cycle is confronting elevated recession pressures. • The U.S. is in the late-cycle expansion phase, but a descent into a mild recession appears likely in 2023. • China's lifting of COVID restrictions implies a cyclical uptick in 2023, although structural headwinds remain formidable. • The rate of inflation is set to materially slow, but persistent pressures may keep it more elevated than expected. • The Fed is closer to the end than the beginning of its hiking cycle, but global monetary tightening is dampening liquidity and adding to growth risks.	• The markets appear overly sanguine about how quickly and painlessly the Fed can pivot to easing monetary policy. • Slower liquidity growth, persistent inflation risk, slowing growth momentum, and greater monetary policy uncertainty raise the odds that market volatility will remain elevated. • Some of these challenging dynamics have been priced into markets in the form of much more attractive valuations, particularly in fixed income. • End-of-cycle positioning implies smaller cyclical tilts and readiness for opportunities; high levels of long-term portfolio diversification remain warranted.

Diversification does not ensure a profit or guarantee against a loss.

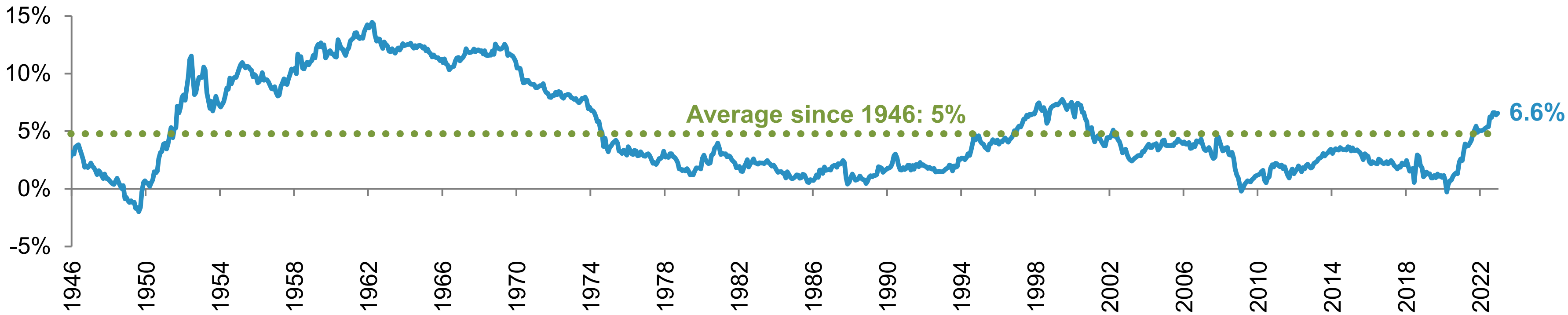
Year of Widespread Declines Ended with a Q4 Upswing

Asset prices staged a broad-based recovery in Q4, with non-U.S. stocks leading the gains amid a weaker dollar. Stable Treasury yields and tighter spreads boosted most fixed income sectors into positive territory. Nevertheless, almost all asset categories finished 2022 with double-digit percentage price declines, and commodities were one of the only bright spots during a year marked by the highest inflation in four decades.

	Q4 2022	2022		Q4 2022	2022
Commodities	2.2%	16.1%	U.S. Mid Cap Stocks	9.2%	-17.3%
Gold	9.8%	-0.3%	U.S. Large Cap Stocks	7.6%	-18.1%
High-Yield Bonds	4.0%	-11.2%	Emerging-Market Stocks	9.7%	-20.1%
Investment-Grade Bonds	1.9%	-13.0%	U.S. Small Cap Stocks	6.2%	-20.4%
Non-U.S. Developed-Country Stocks	17.3%	-14.5%	Non-U.S. Small Cap Stocks	15.8%	-21.4%
U.S. Corporate Bonds	3.4%	-15.3%	Real Estate Stocks	5.2%	-24.4%
Emerging-Market Bonds	7.4%	-16.5%	Long Government & Credit Bonds	2.6%	-27.1%

20-Year U.S. Stock Returns Minus IG Bond Returns Since 1946

Annualized Return Difference

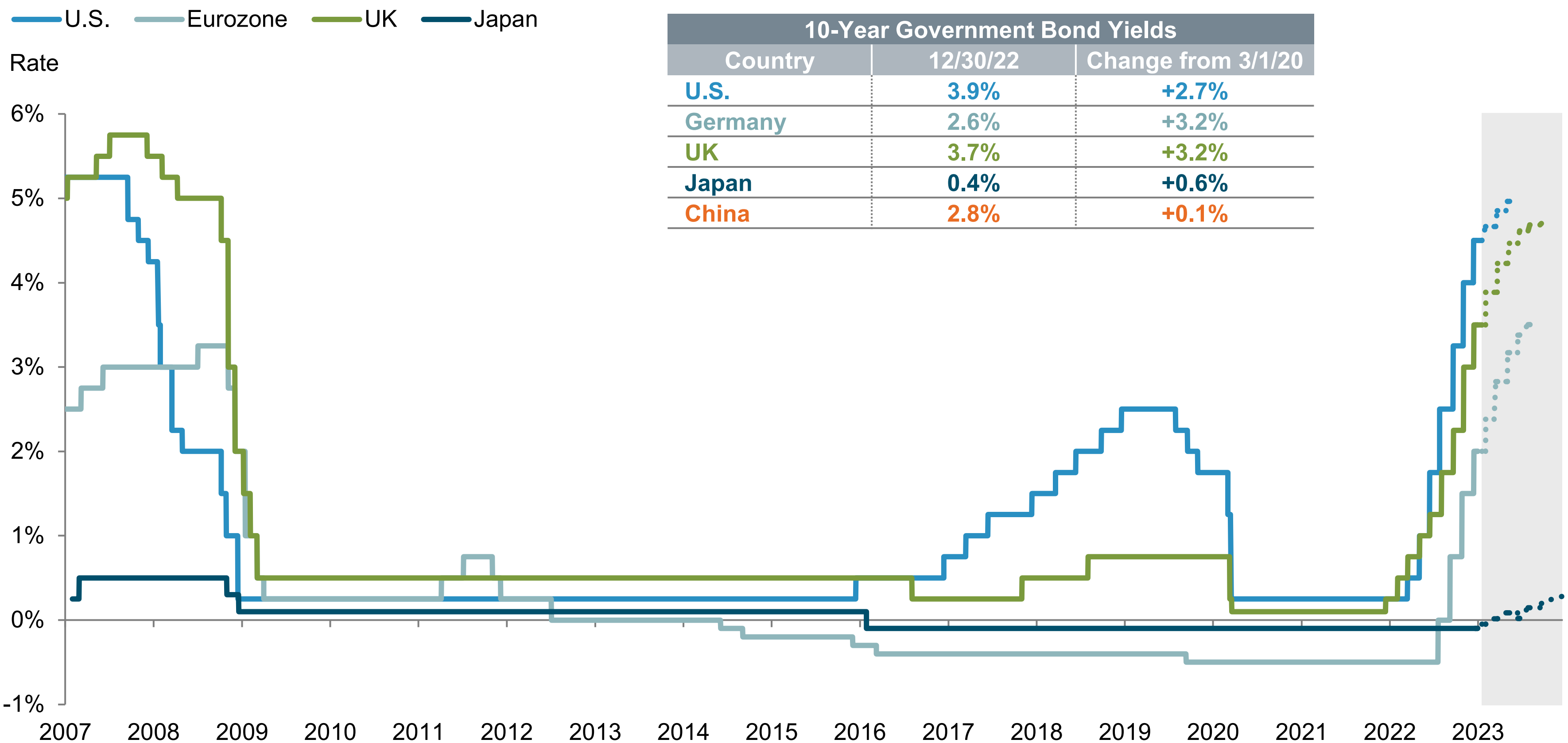


Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. IG: Investment grade. Assets represented by: Commodities—Bloomberg Commodity Index; Emerging-Market Bonds—JP Morgan EMBI Global Index; Emerging-Market Stocks—MSCI EM Index; Gold—Gold Bullion, LBMA PM Fix; High-Yield Bonds—ICE BofA High Yield Bond Index; Investment-Grade Bonds—Bloomberg U.S. Aggregate Bond Index; Non-U.S. Developed-Country Stocks—MSCI EAFE Index; Non-U.S. Small Cap Stocks—MSCI EAFE Small Cap Index; Real Estate Stocks—FTSE NAREIT Equity Index; U.S. Corporate Bonds—Bloomberg U.S. Credit Index; U.S. Large Cap Stocks—S&P 500®; U.S. Mid Cap Stocks—Russell Midcap® Index; U.S. Small Cap Stocks—Russell 2000® Index; Long Government & Credit Bonds—Bloomberg Long Government & Credit Index.
Source: Bloomberg Finance L.P., Haver Analytics, Fidelity Investments Asset Allocation Research Team (AART), as of 12/31/22.

Global Rate Hikes Marked Abrupt Shift from Zero-Rate Era

Aggressive monetary tightening by the world's major central banks continued during Q4, bringing global short-term interest rates to their highest levels in more than a decade. Japan remained an outlier by keeping its policy rate negative, but it raised the target for 10-year bond yields in a move that appeared to solidify the global trend away from the zero-rate era. Most investors expect the pace of rate hikes to slow in 2023.

Global Short-Term Policy Rates



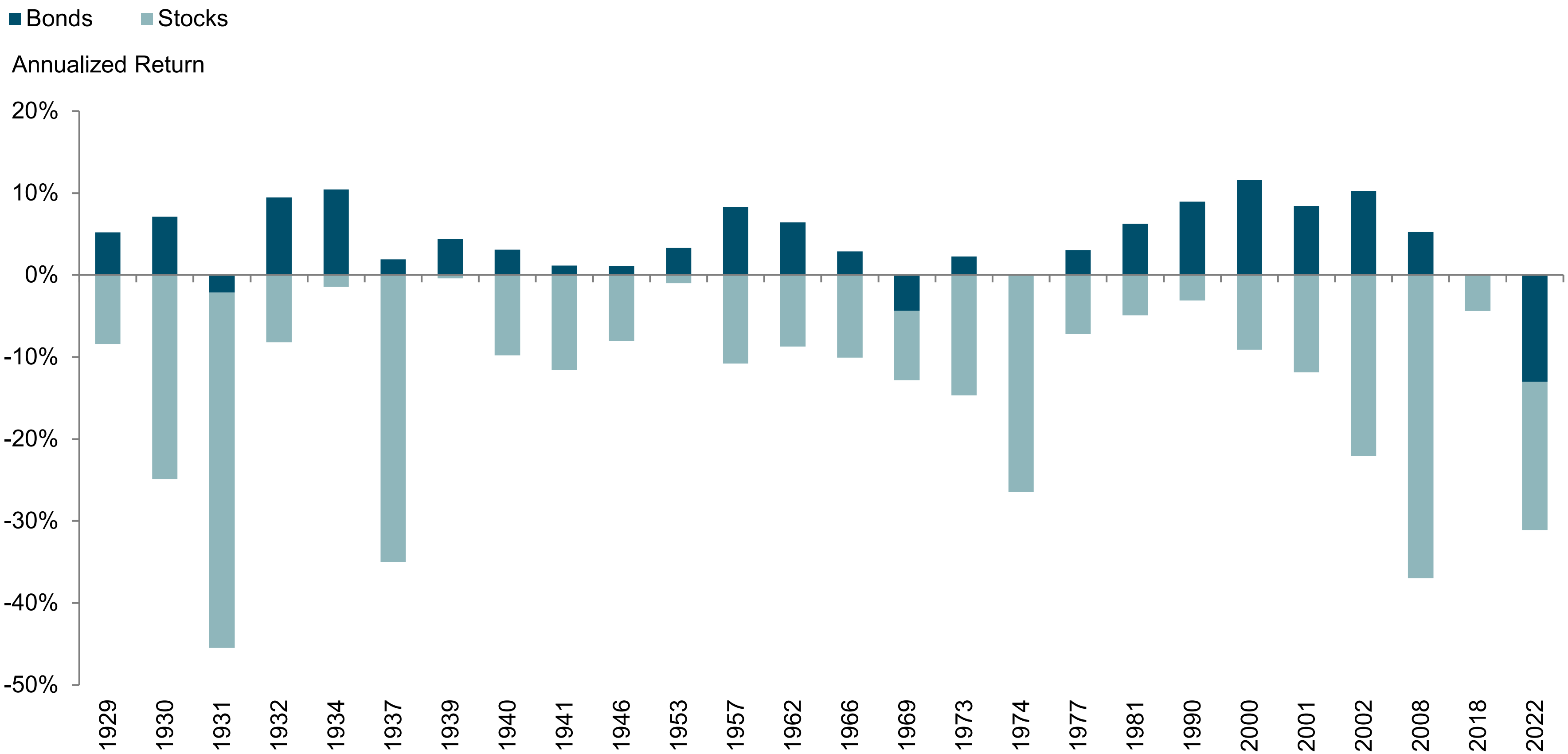
10-Year Government Bond Yields		
Country	12/30/22	Change from 3/1/20
U.S.	3.9%	+2.7%
Germany	2.6%	+3.2%
UK	3.7%	+3.2%
Japan	0.4%	+0.6%
China	2.8%	+0.1%

Dotted line in the shaded area represent market rate expectations using OIS swaps. They end at the peak expected policy rate by the market. Source: U.S. Federal Reserve Board, ECB, Bank of Japan, Bank Of England, Haver Analytics, Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

Historically Bad Year for Bonds as Diversifiers

In 2022, broad measures of the two largest U.S. asset categories—large cap stocks and investment-grade bonds—both posted double-digit losses for the first time in modern history (since 1926). Historically, the bond market often registered a gain during the calendar years that equity prices declined, making 2022 the most challenging year in history for portfolio diversification.

Equity and Bond Returns in Years When Equities Fell (1926–2022)

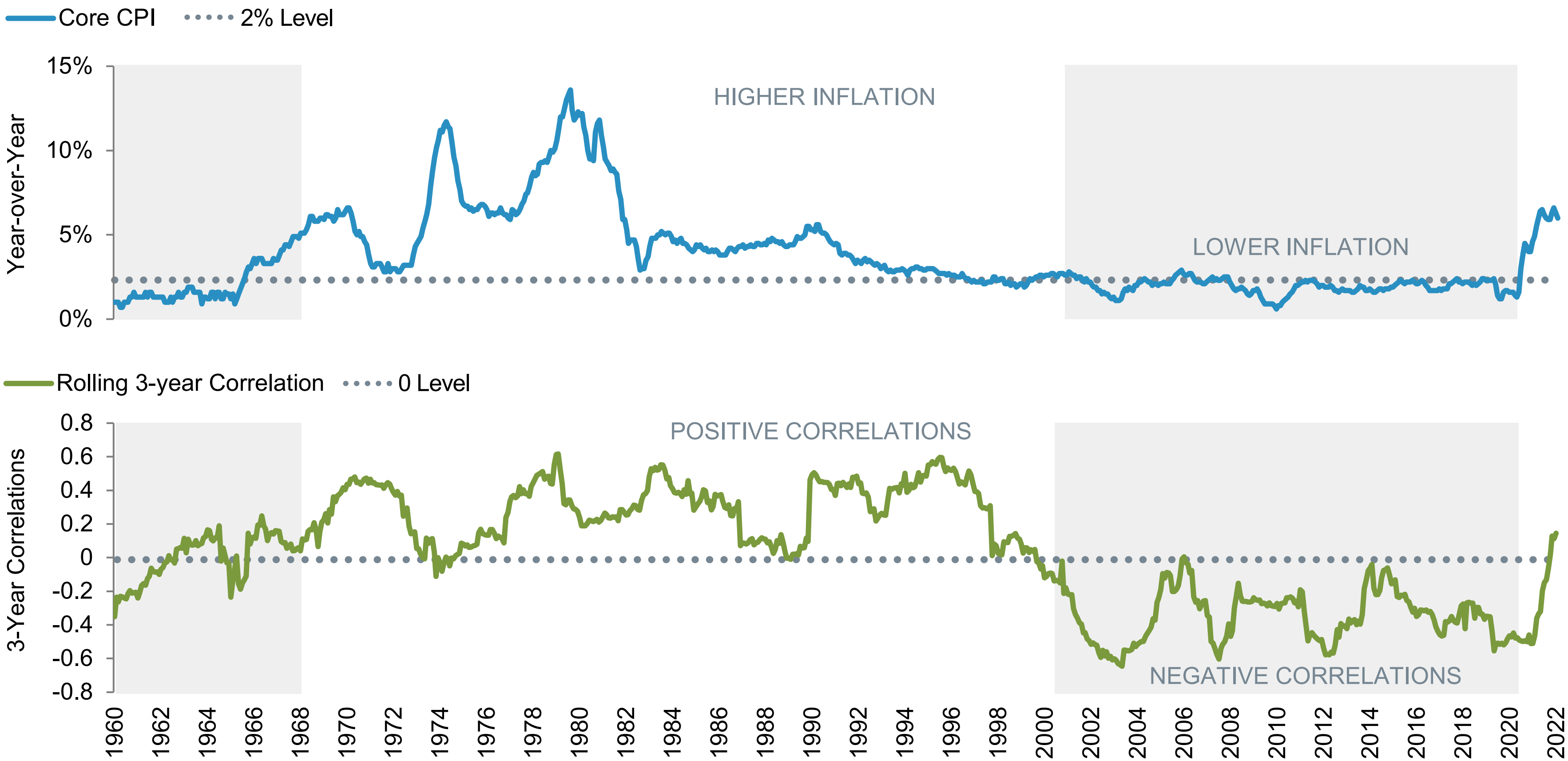


Past performance is no guarantee of future results. Diversification does not ensure a profit or guarantee against a loss. Fidelity Investments proprietary analysis of historical asset class performance is not indicative of future performance. Source: Fidelity Investments (AART), Haver Analytics, as of 12/31/22.

High Inflation Drives Positive Stock-Bond Correlations

Over the past 20 years, subdued U.S. core inflation averaged about 2% and facilitated an environment of negative correlations between U.S. stocks and Treasury bonds, leading to strong portfolio diversification. The 2022 backdrop was more akin to prior periods of high inflation, which caused rising interest rates, positive stock-bond correlations, and the lack of diversification between stocks and bonds.

Stock and Treasury Bond Correlations vs. Inflation

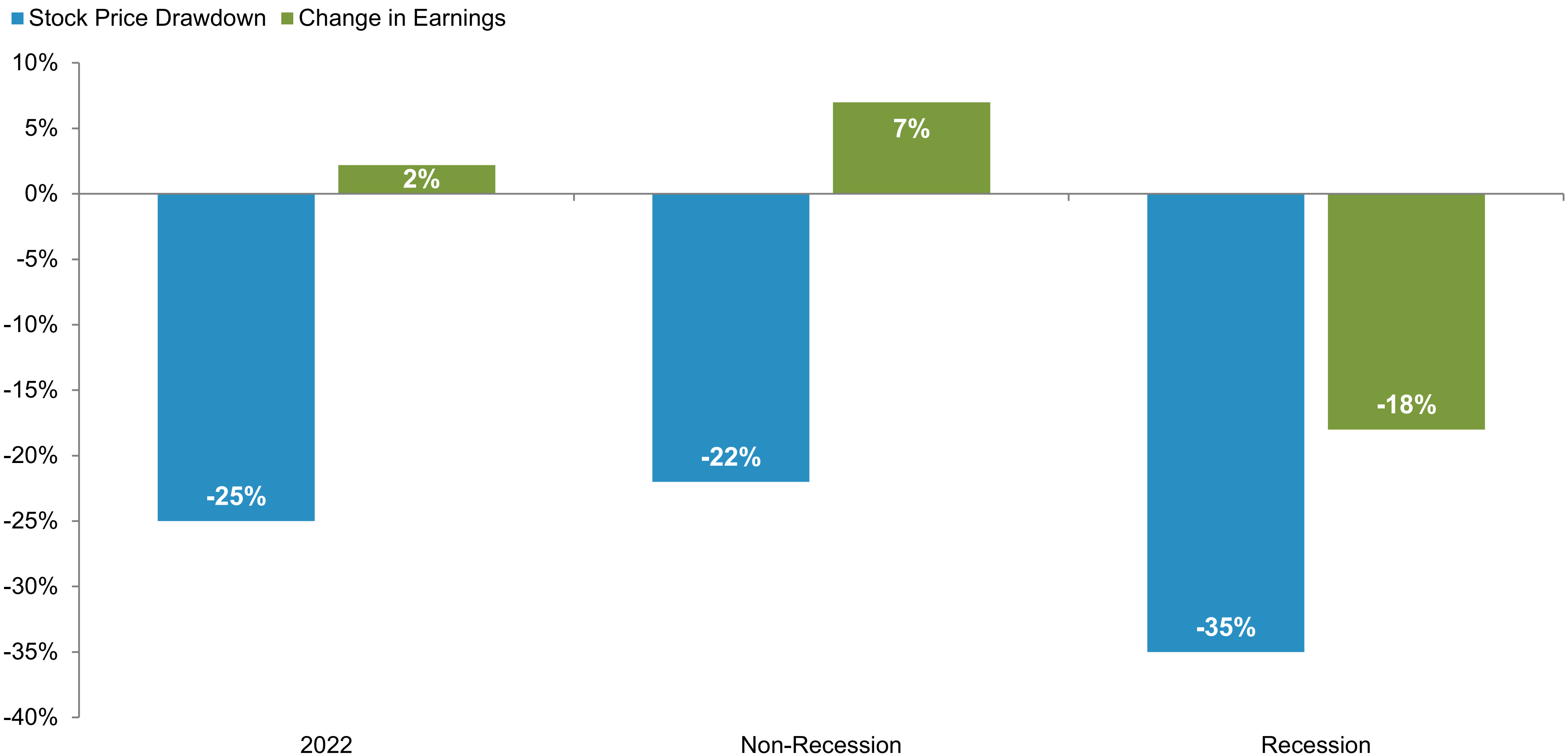


Past performance is no guarantee of future results. Diversification does not ensure a profit or guarantee against a loss. Fidelity Investments proprietary analysis of historical asset class performance is not indicative of future performance. Source: Bureau of Labor Statistics, Haver Analytics, Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

How Much Bad News Has the U.S. Bear Market Priced In?

Historically, most bear markets (stock-price declines of 20% or more) coincide with recessionary contractions for the economy and corporate profits. Sometimes bear markets occur without a recession, which typically accompanies positive earnings growth and shallower stock-price declines. In 2022, stock prices and earnings expectations were somewhere in the range between historical recession and non-recession bear markets.

Median Stock-Price Drawdowns and Earnings Changes during Bear Markets (1872–2022)



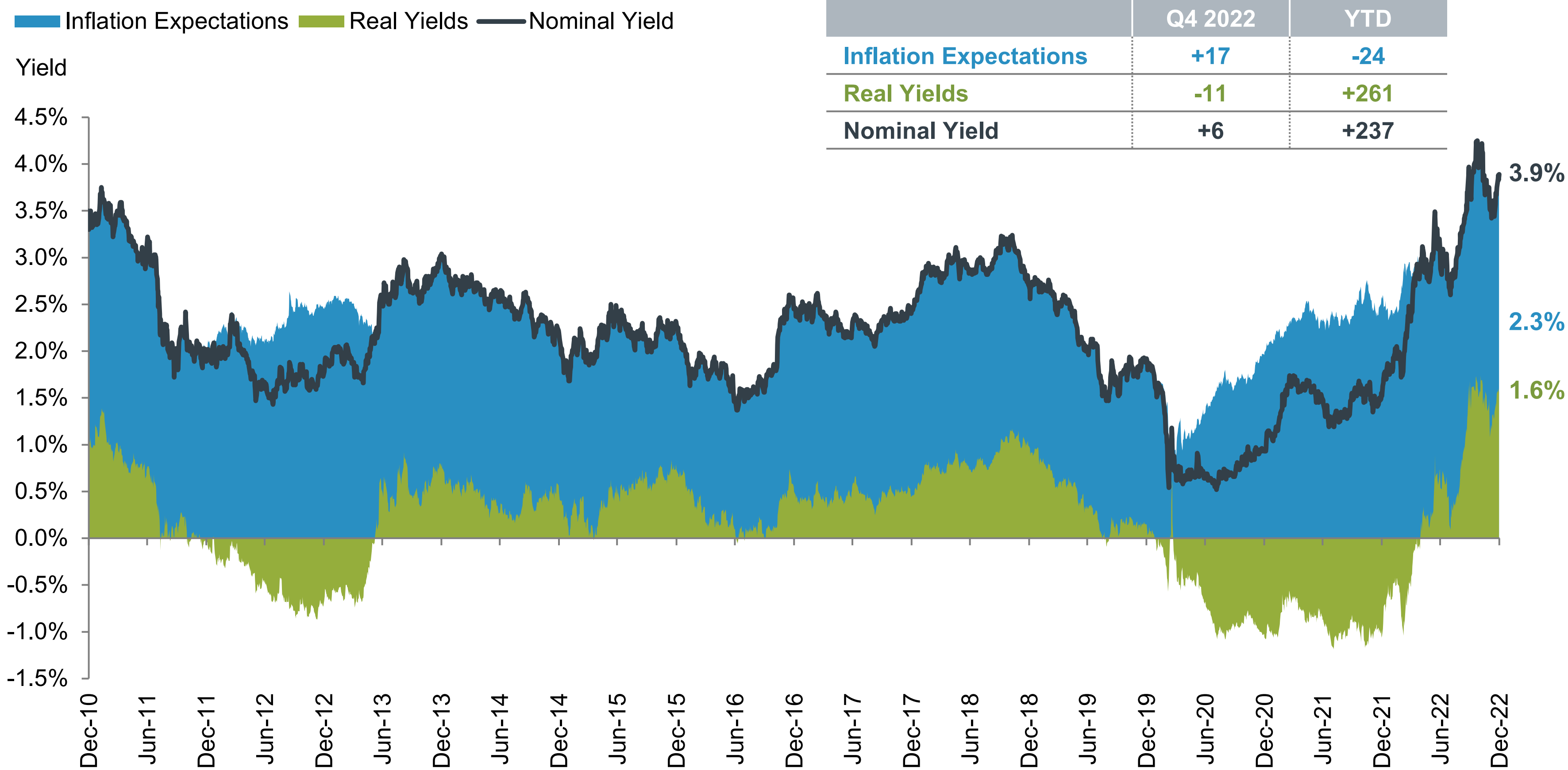
Price changes include intraday trading for the S&P 500 index. 2022 change in earnings is the consensus forecast for 2023. Source: NBER, FactSet, Bloomberg Finance LLC, Haver Analytics, as of 12/31/22.

Real and Nominal Bond Yields Near Multiyear Highs

Nominal 10-year Treasury bond yields were largely stable during Q4, but they ended 2022 near their highest level in more than a decade. The dramatic increase in real yields—the inflation-adjusted cost of borrowing—paused during Q4 but drove the upswing for the year as investors ratcheted up their expectations for the pace and magnitude of monetary tightening. Inflation expectations declined modestly during 2022.

SUMMARY

10-Year U.S. Government Bond Yields



Change in Yields (Basis Points)		
	Q4 2022	YTD
Inflation Expectations	+17	-24
Real Yields	-11	+261
Nominal Yield	+6	+237

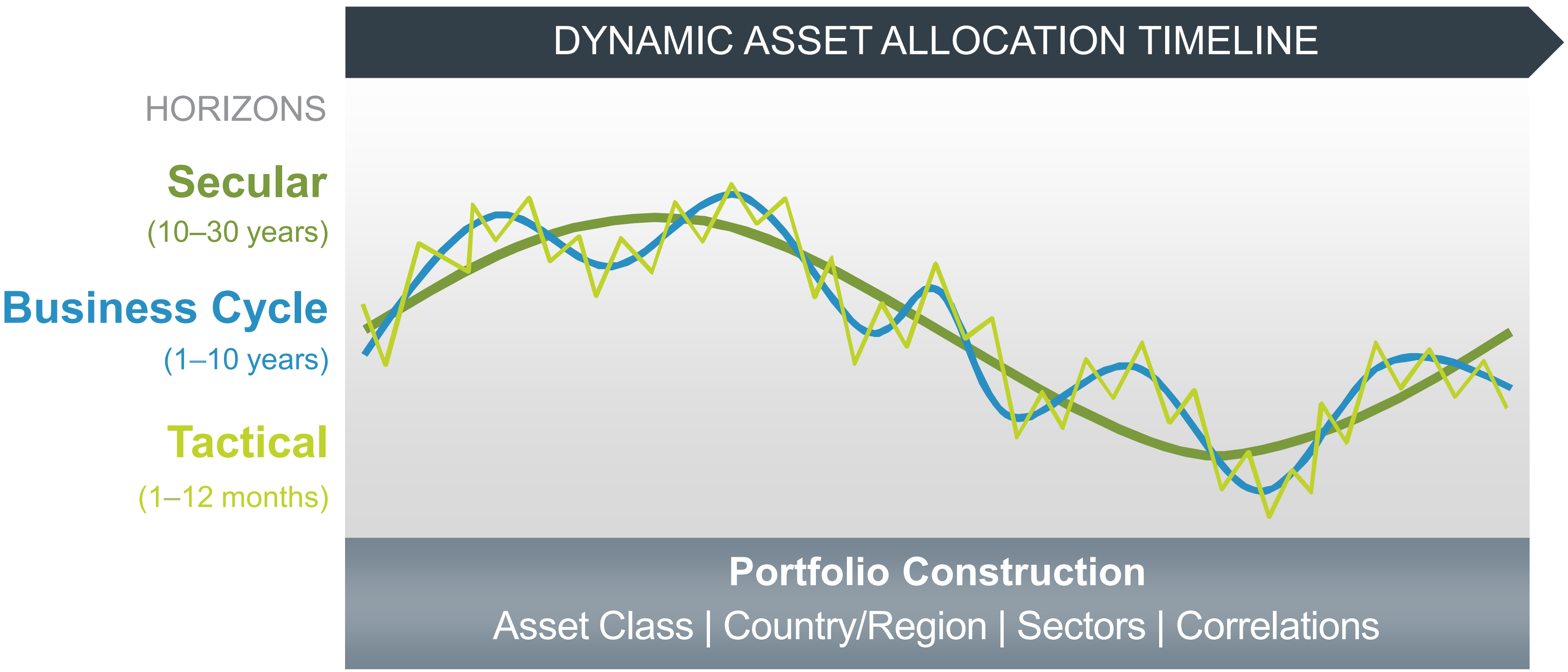
Source: Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

Fidelity INVESTMENTS

Economy/Macro Backdrop

Multi-Time-Horizon Asset Allocation Framework

Fidelity's Asset Allocation Research Team (AART) believes that asset-price fluctuations are driven by a confluence of factors that evolve over different time horizons. As a result, we employ a framework that analyzes trends among three temporal segments: tactical (short term), business cycle (medium term), and secular (long term).



For illustrative purposes only. Source: Fidelity Investments (AART), as of 12/31/22.

Elevated Global Recessionary Pressures to Begin 2023

Many major economies face maturing business-cycle trends due to persistent inflationary pressures, slowing industrial activity, and tightening monetary and financial conditions. The U.S. is in the late-cycle expansion phase, with a rising likelihood that a recession may be on the horizon in 2023. Europe has likely tipped into a recession, but China's lifting of COVID restrictions and policy stimulus offer hope for a 2023 upturn.

Business Cycle Framework

Cycle Phases

EARLY
- Activity rebounds (GDP, IP, employment)
- Credit begins to grow
- Profits grow rapidly
- Policy still stimulative
- Inventories low; sales improve

MID
- Growth peaking
- Credit growth strong
- Profit growth peaks
- Policy neutral
- Inventories, sales grow; equilibrium reached

LATE
- Growth moderating
- Credit tightens
- Earnings under pressure
- Policy contractionary
- Inventories grow, sales growth falls

RECESSION
- Falling activity
- Credit dries up
- Profits decline
- Policy eases
- Inventories, sales fall

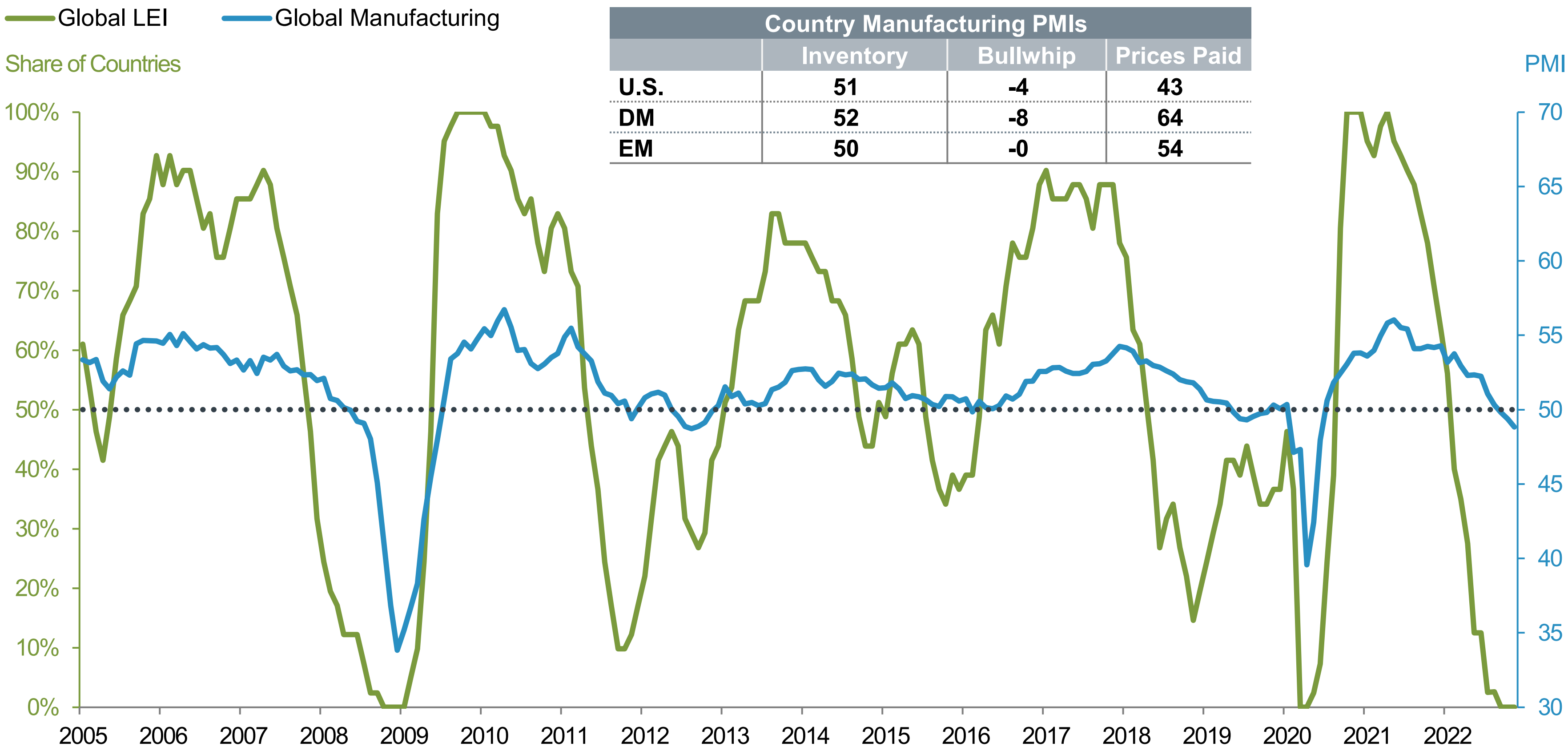
A growth recession is a significant decline in activity relative to a country's long-term economic potential. Note: The diagram above is a hypothetical illustration of the business cycle, the pattern of cyclical fluctuations in an economy over a few years that can influence asset returns over an intermediate-term horizon. There is not always a chronological, linear progression among the phases of the business cycle, and there have been cycles when the economy has skipped a phase or retraced an earlier one. Source: Fidelity Investments (AART), as of 12/31/22.

Global Industrial Cycle Continues to Deteriorate

Leading economic indicators across the world's largest economies slowed in the second half of 2022, suggesting weak global economic momentum at the start of 2023. Global manufacturing activity decelerated further in Q4, ending the year in slightly negative territory. With new orders slumping and inventories rising, this negative "bullwhip" effect is a leading signal of more slowing ahead.

Global Leading and Manufacturing Indicators

Country Manufacturing PMIs	Inventory	Bullwhip	Prices Paid
U.S.	51	-4	43
DM	52	-8	64
EM	50	-0	54

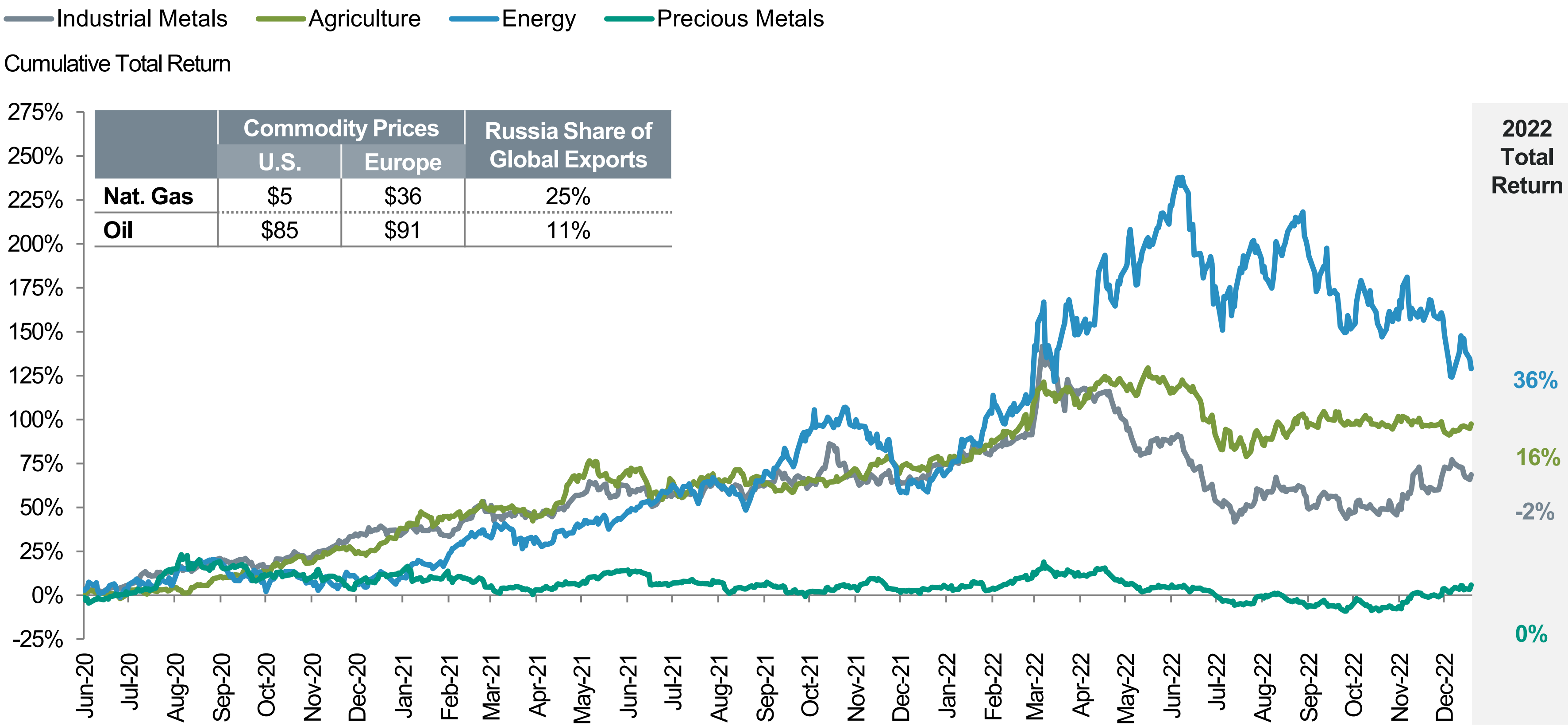


Global LEI: The percent of the world's 37 largest economies with rising Leading Economic Indicators over the past six months. PMI: Purchasing managers' index. Readings above 50 indicate expansion. EM: Emerging markets. DM: Developed markets. Bullwhip: New Orders PMI less Inventories PMI (numbers may differ do to rounding). Source: Markit, Institute for Supply Management, S&P Global, Haver Analytics, Fidelity Investments (AART), as of 11/30/22.

Commodity Prices: Cooling Demand, Supply Uncertainty

Amid fading growth momentum, commodity prices continued to drop in Q4 after reaching multiyear highs at midyear. The energy and agricultural sectors experienced the biggest 2022 price gains, as Ukraine-war disruptions presented supply challenges. Europe remains vulnerable to shortages due to its dependency on Russian natural gas, but warm weather and other factors pushed gas prices far below recent highs.

Commodity Index Returns



	Commodity Prices		Russia Share of Global Exports
	U.S.	Europe	
Nat. Gas	$5	$36	25%
Oil	$85	$91	11%

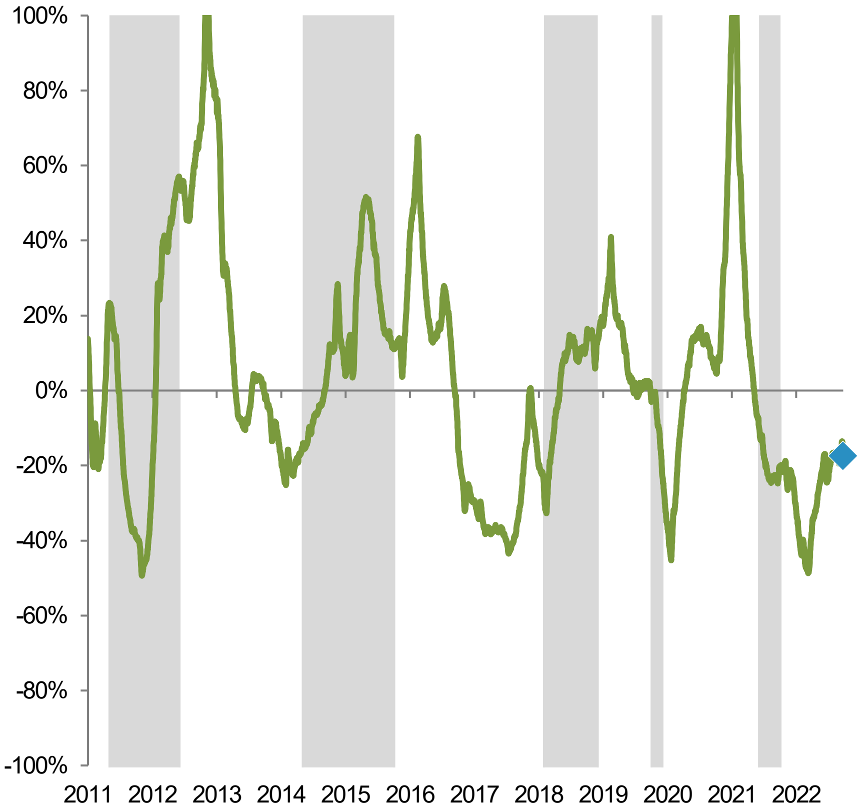
TABLE: Natural gas prices measured as $/mmbtu. Oil prices measured as $/bbl. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Returns represented by Bloomberg Commodity Total Return Sub-indexes (Bloomberg Industrial Metals Subindex Total Return Index, Bloomberg Agriculture Subindex Total Return Index, Bloomberg Energy Subindex Total Return Index, and the Bloomberg Precious Metals Subindex Total Return Index.) Source: World Bank, JP Morgan, Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

China: COVID and Policy Easing Spark Cyclical Hope

China's abrupt relaxation of COVID restrictions may create a jagged economic pattern in the near term as infection rates rise, but it also creates a higher probability of a cyclical upturn in services and consumption activity in 2023. Additional policy easing should also support a cyclical uptick after a prolonged slump, but China continues to face many structural challenges, including an overbuilt and overleveraged property sector.

China: Property Sales Transactions

Year-over-Year (%)



China: Other Trends

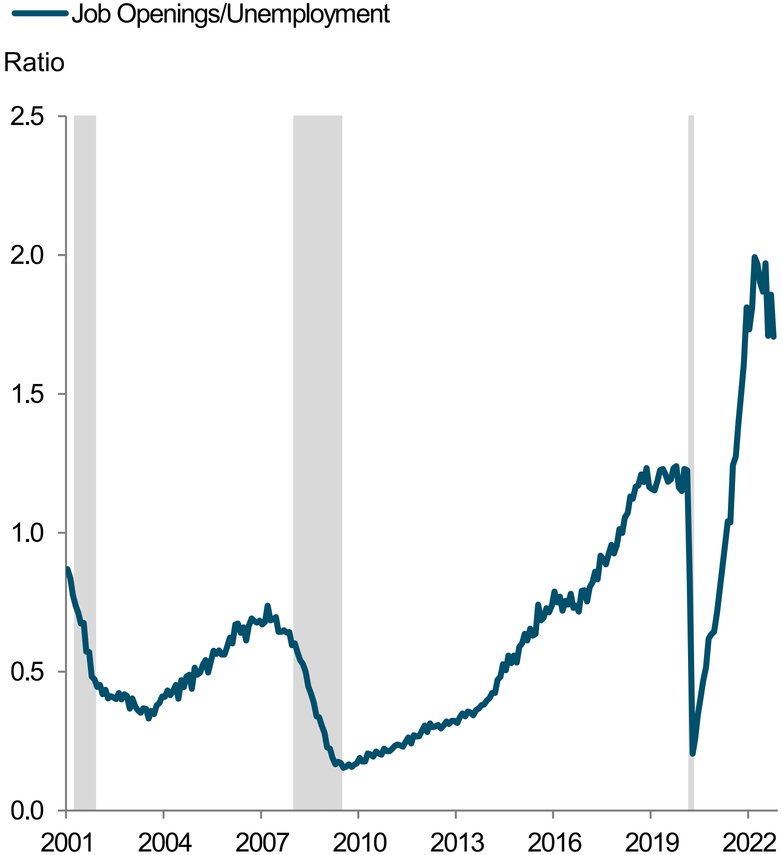
Positive	Negative
COVID policy relaxation	Rising infection rate
Monetary policy easing	Geopolitical risk
Fiscal policy support and infrastructure investments	Regulatory risk (focus on "common prosperity")
Property sector easing (fewer home buying restrictions)	Structural imbalances (excess leverage, aging demographics)
Policy easing in manufacturing and consumption sectors (tax cuts, EV subsidies)	

Three-month moving average of property transactions for commercial and residential housing measured by 1,000 square meters of floor space sold. Gray bars represent growth recessions as defined by AART. Source: National Bureau of Statistics, People's Bank of China, Fidelity Investments (AART), as of 12/21/22.

Labor-Market Conditions Easing but Still Tight

Labor markets showed signs of cooling as 2022 drew to a close. Job openings dropped from all-time highs, although there remained many more unfilled openings than unemployed workers. Several long-term trends may keep labor conditions tighter than usual, including demographic factors, such as slower working-age population growth and aging demographics that lead to lower labor-force participation rates.

U.S. Unemployment and Job Openings



Secular Influences on U.S. Labor Markets

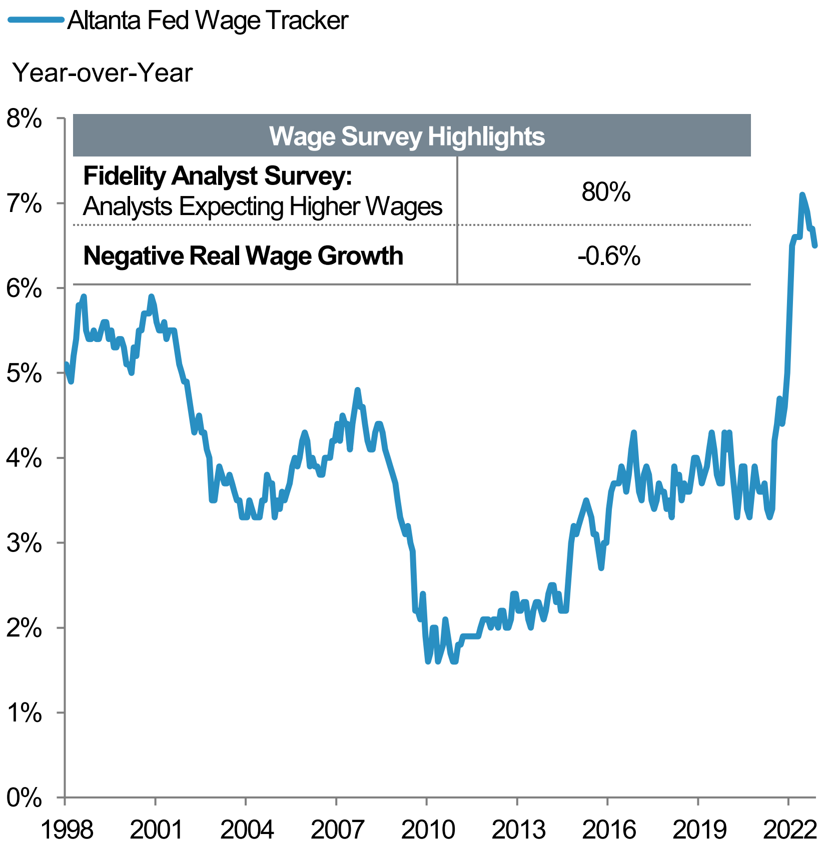
Secular Factors	Long-Term Trends
RESTRAINED SUPPLY	
Demographics	• Aging population: Lower participation rate • Slower working-age population growth
Immigration	• Slower pace of inbound migrant workers
Income Gains for Lower Tiers	• Higher wages lead to reduced hours, fewer multiple job workers
Health Headwinds	• Long COVID • Rising disabilities, deaths of despair[1]
INCREASED DEMAND	
Onshoring/ Reshoring	• Increased demand for domestic manufacturing workers
Fiscal Policy	• Multiyear spending on infrastructure, manufacturing, clean energy, etc.
Employer Hoarding	• Higher threshold for layoffs?

LEFT: Shaded areas denote U.S. Recession. Source: Bureau of Labor Statistics, NBER, Haver Analytics, Fidelity Investments (AART), as of 12/31/22. **RIGHT:** 1) Deaths of despair refers to deaths related to substance abuse or suicides. Source: Fidelity Investments (AART), as of 12/31/22.

Consumers in Decent Shape but Facing More Headwinds

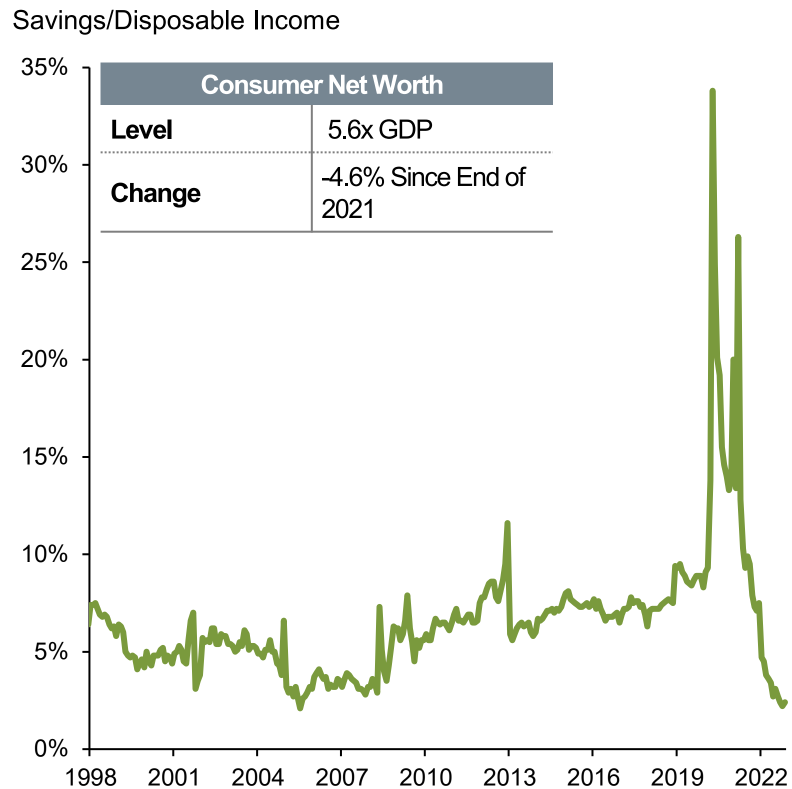
Strong employment markets boosted nominal wage growth to multi-decade highs during 2022, but wage gains slowed toward the end of the year. Meanwhile, high inflation kept real wage growth negative, causing consumers to use more of their income to cover spending and dropping savings rates to near all-time lows. Household net worth neared record highs, but lower asset prices hurt consumer balance sheets in 2022.

U.S. Wage Growth



Wage Survey Highlights	
Fidelity Analyst Survey: Analysts Expecting Higher Wages	80%
Negative Real Wage Growth	-0.6%

U.S. Savings Rate



Consumer Net Worth	
Level	5.6x GDP
Change	-4.6% Since End of 2021

LEFT: Year-over-year 3-month moving average weighted overall wage tracker. **TABLE:** Fidelity Analyst Survey: Quarterly survey of equity and fixed income analysts who cover companies in different sectors and regions. Real Wage: Wage tracker growth minus CPI-U year-over-year change. Source: Federal Reserve Bank of Atlanta, Haver Analytics, Fidelity Investments (AART), as of 12/31/22. **RIGHT:** Source: Bureau of Economic Research, Haver Analytics, Fidelity Investments (AART), as of 12/31/22

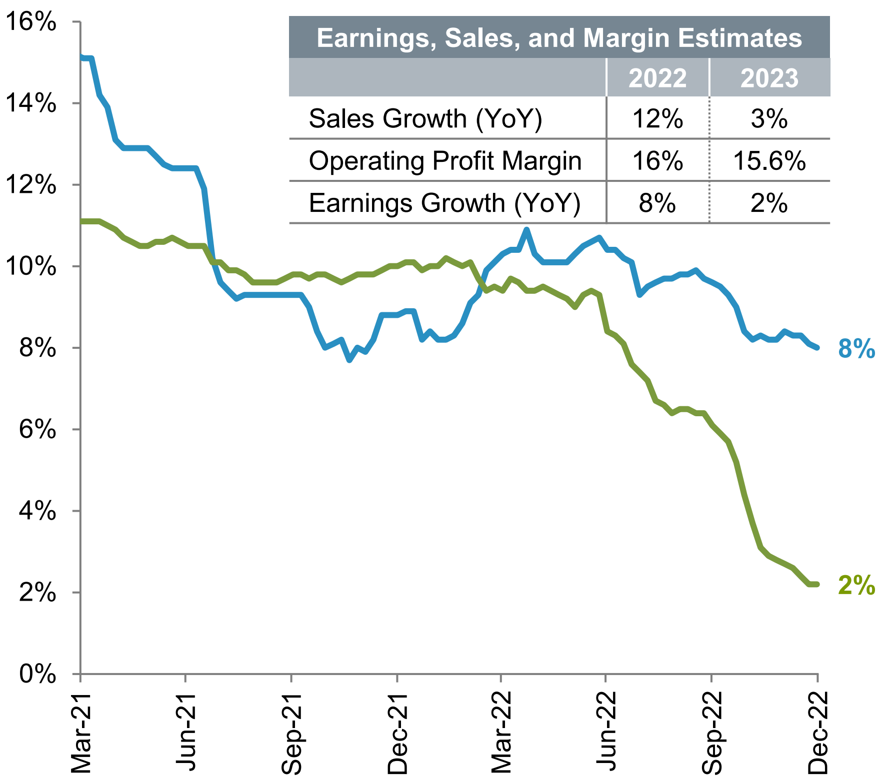
Sales and Profit Growth Revised Lower; Margins Are Key

During a typical late cycle, top-line sales tend to hold up, but rising input costs reduce profit margins and pressure earnings growth. Despite rising costs in 2022, profit growth and margins remained strong. Rising profit-margin pressure may be a challenge in 2023, and market expectations for sales and profits were revised down during Q4 to low-single-digit growth.

S&P 500 Earnings Growth Expectations

2022 2023

Year-over-Year

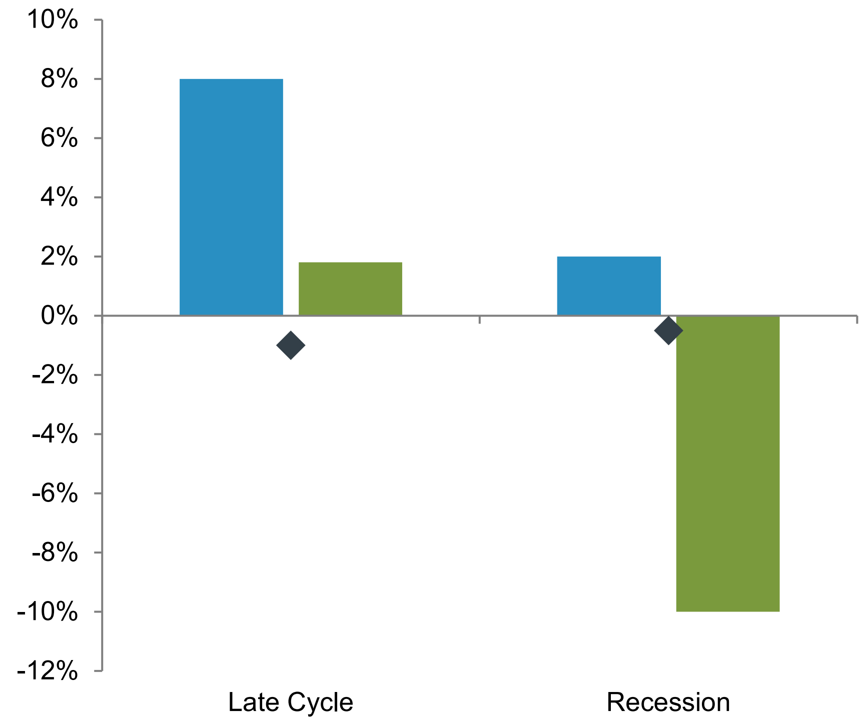


Earnings, Sales, and Margin Estimates	2022	2023
Sales Growth (YoY)	12%	3%
Operating Profit Margin	16%	15.6%
Earnings Growth (YoY)	8%	2%

Business Cycle Averages (1950–2020)

Sales Growth Earnings Growth Profit Margins (Ppts Change)

Year-over-Year

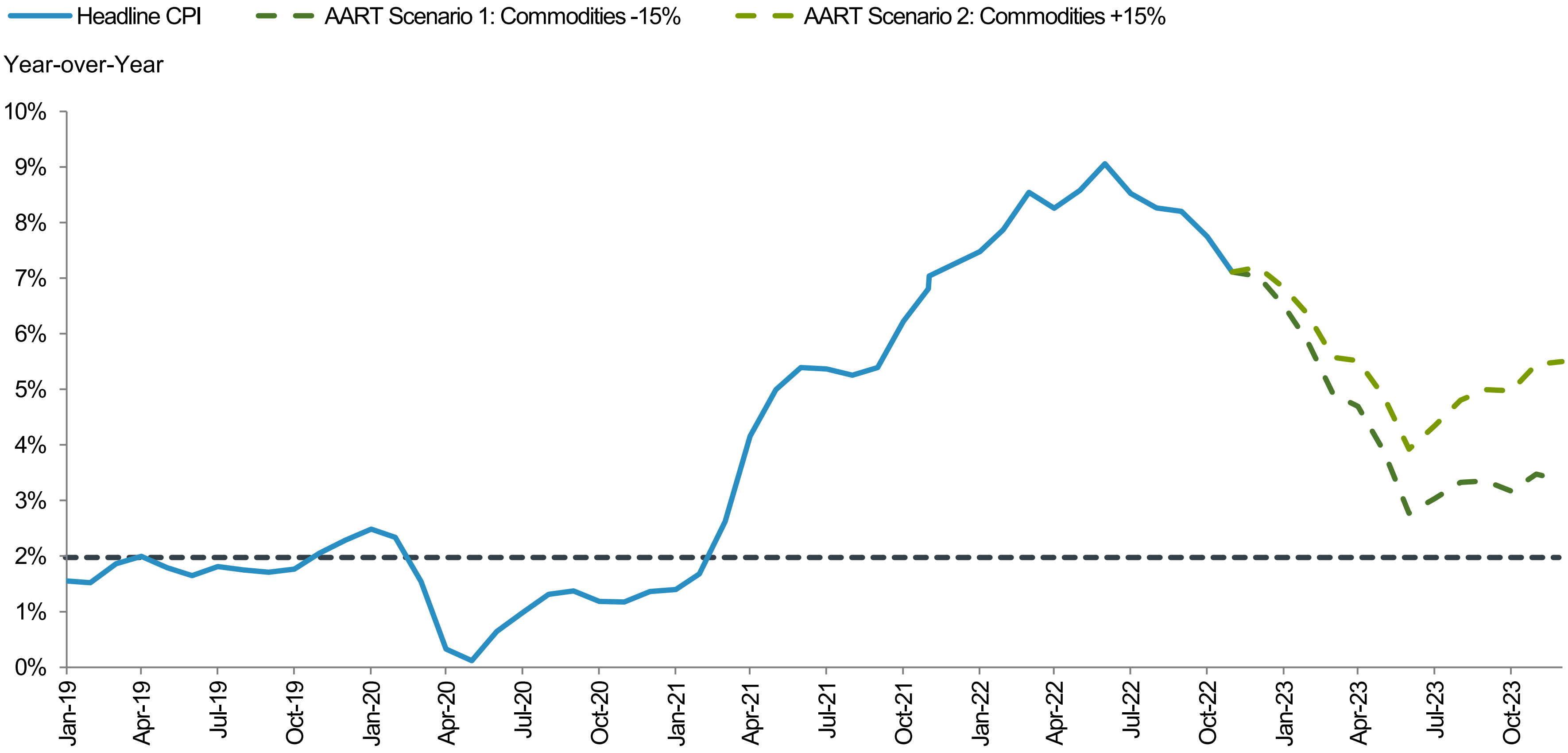


LEFT: Street estimates. Source: Bloomberg Financial LP, Fidelity Investments (AART), as of 12/31/22. **RIGHT:** Ppts: percentage points. Source: Bureau of Economic Analysis, Fidelity Investments (AART), as of 12/31/22.

Inflation to Moderate Further; Commodities a Wild Card

U.S. consumer inflation rates decelerated to about 7% year over year in the second half of 2022 after hitting a midyear, multi-decade peak above 9%. We believe the moderating trend will continue in 2023, but it may be difficult to return to the stable, low-inflation environment of the past two decades. Energy prices dropped off their recent highs, but continued uncertainty in the commodity markets broadened the range of our estimates.

Inflation Estimates under Different Commodity Price Scenarios

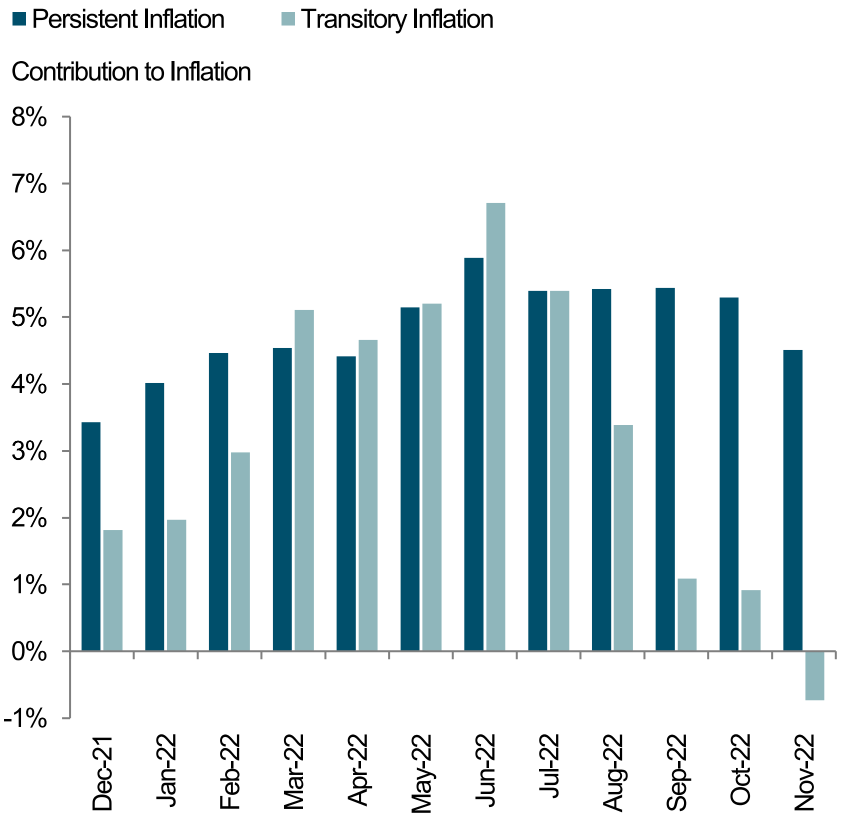


CPI: Consumer Price Index. Commodity prices are represented by the Bloomberg Commodity Index (BCOM) and their hypothetical changes over the next year are assumed to occur equally throughout the year. Source: Bureau of Labor Statistics, Bloomberg, Haver Analytics, Fidelity Investments (AART), as of 11/30/22.

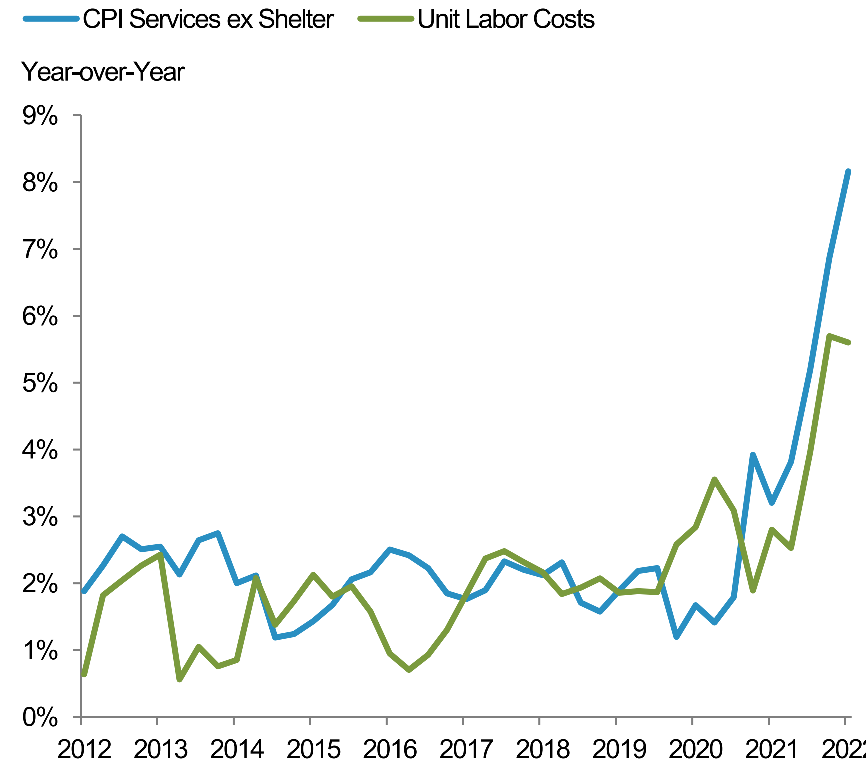
Inflation Drivers Peaked but Remain Stubbornly Persistent

Many inflation pressures that tend to be less persistent, such as supply-chain disruptions, slowed significantly in recent months. However, categories where price increases tend to be more persistent and more reliant on demand-side factors account for the bulk of current inflation drivers. If tight labor markets continue to boost unit labor costs, inflation in services sectors may linger for longer than investors expect.

Persistent vs. Transitory Inflation Contribution



Services Inflation vs. Unit Labor Costs

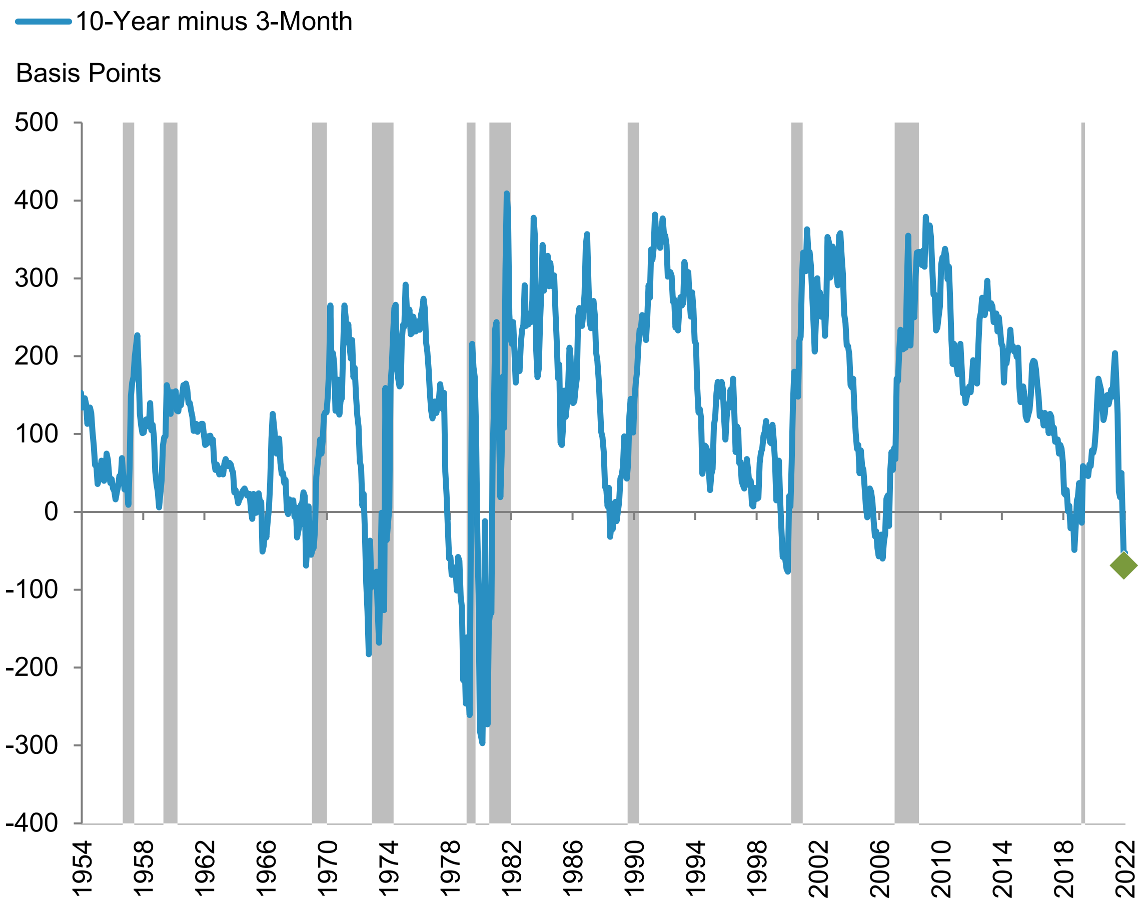


CPI: Consumer Price Index. **LEFT:** Contribution to expected CPI indicates the expected contribution to Year-over Year CPI over the next six months. Persistent Categories include areas where, historically, inflation has taken longer to dissipate, such as Housing and Food & Beverages. Series are 6-month averages at an annualized rate. Source: Bureau of Labor Statistics, Haver Analytics, Fidelity Investments (AART), as of 11/30/22. **RIGHT:** Source: Bureau of Labor Statistics, Bloomberg, Fidelity Investments (AART), as of 9/30/22.

Inverted Yield Curve Is a Reliable Recession Indicator

Our preferred yield curve—the 10-year less 3-month Treasury yield—inverted during Q4 as the Fed continued to hike short-term rates. Historically, the yield curve has been a reliable leading indicator of economic weakness and, on average, inverted during the late cycle one year before recession. However, the timing of recession after curve inversions is uncertain and variable, ranging between four and 21 months historically.

Treasury Yield-Curve Spread



Yield-Curve Inversions since 1950 (10-year minus 3-month)

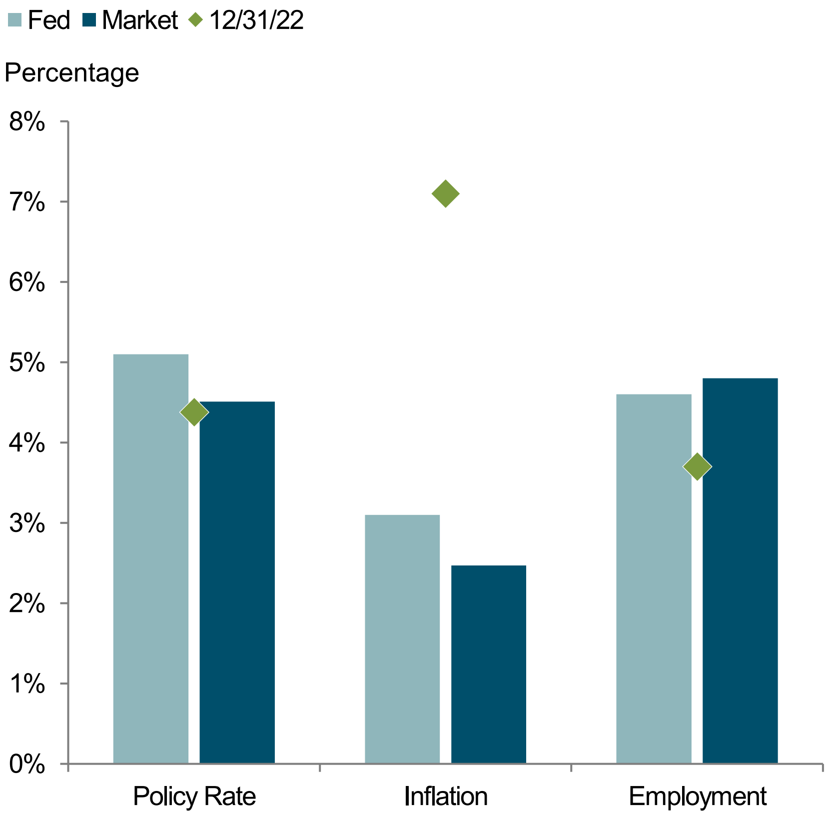
Occurred before the last 8 recessions
Occurred twice without a recession (1966,1998)
Peak inversion ranged from 35 to 373 basis points
Recessions started 4 to 21 months after, averaging ~1 year
-53 bps as of 12/31/22

Bps: basis points. Shaded areas denote U.S. recession. Source: U.S. Federal Reserve Board, NBER, Haver Analytics, Fidelity Investments (AART), as of 12/31/22.

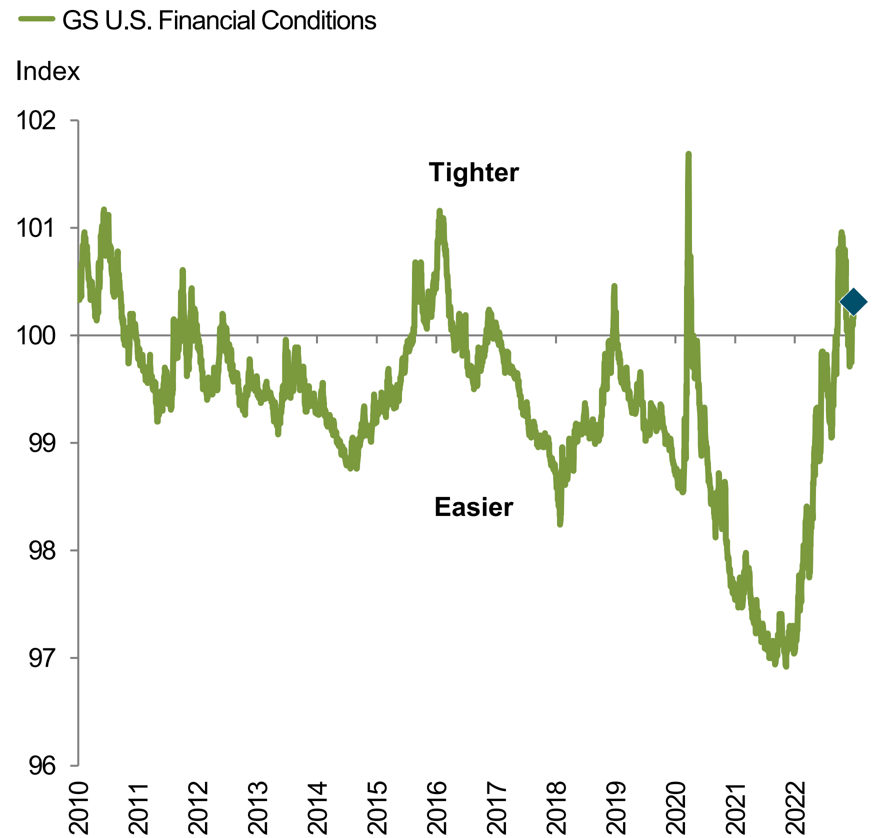
Rate Hikes May Be Nearing End, but Easing Not Imminent

In its December forecast, the Fed signaled plans to end its hiking cycle in 2023 amid lower inflation and higher unemployment. Market expectations project a lower inflation rate and higher unemployment rate in 2023, with a Fed pivot toward easing policy in the second half of the year. We believe the Fed's policy rate may remain higher for longer than the market expects, with the degree of financial-condition tightening a key swing factor.

Federal Reserve vs Market 2023 Expectations



Financial Conditions

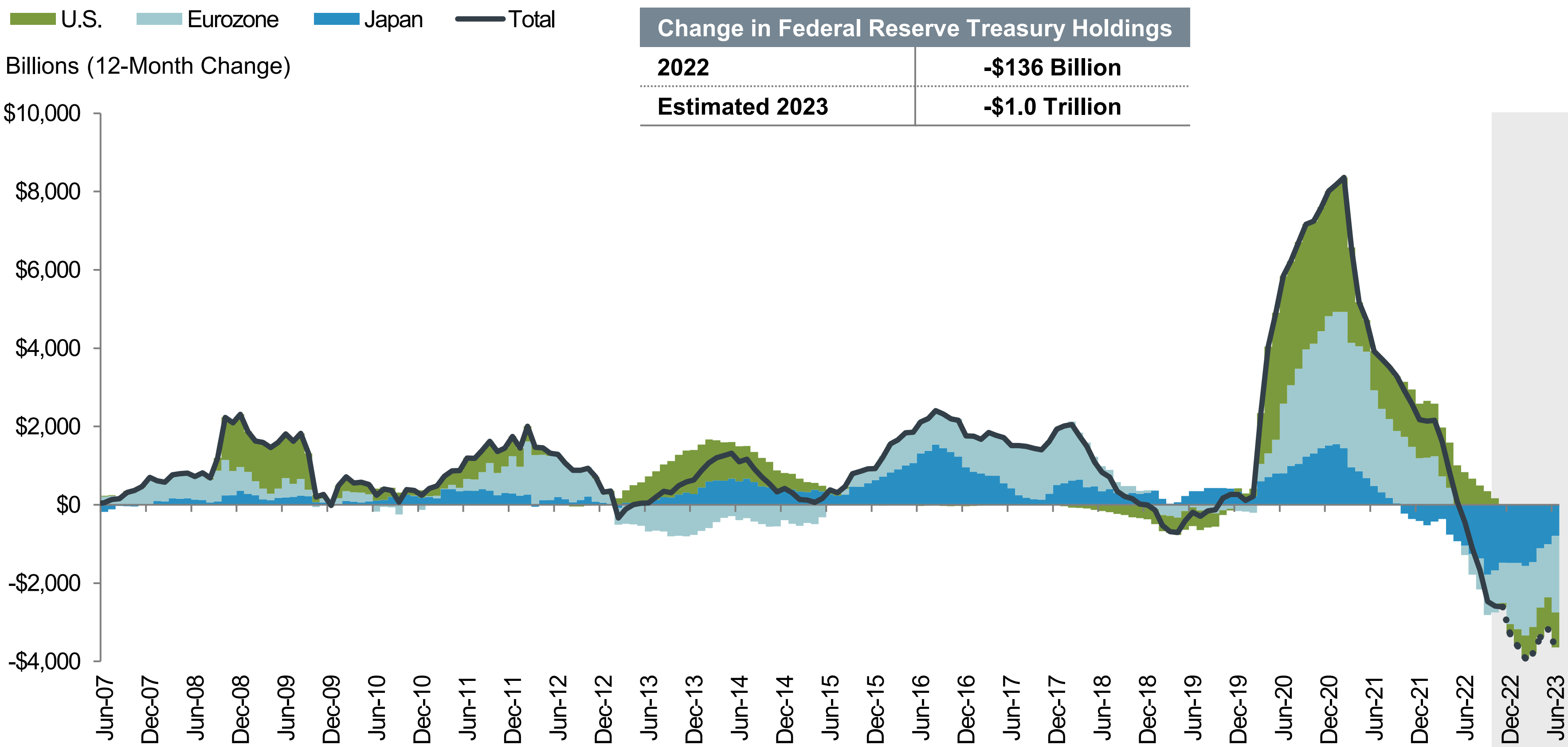


LEFT: Fed values from December Summary of economic projections, inflation: PCE. Market Policy and Inflation based on forward swaps, Employment: Contributor Composite view from Bloomberg Economic Forecasting. Source: Bloomberg Financial L.P., Federal Reserve Board, Fidelity Investments (AART), as of 12/31/22. **RIGHT:** GS: Goldman Sachs. Source: Bloomberg Financial L.P., Goldman Sachs, Fidelity Investments (AART), as of 12/31/22.

Central Bank Tightening Implies a Liquidity Headwind

Global central banks have pivoted toward monetary tightening with at least 28 central banks having raised interest rates to combat inflation. The Fed plans to do more QT in 2023 than in 2022, the European Central Bank expects to start QT in 2023, and the Bank of Japan recently increased yield targets on its Yield Curve Control policy. Weakening global liquidity conditions may contribute to elevated market volatility.

Central Bank Balance Sheets



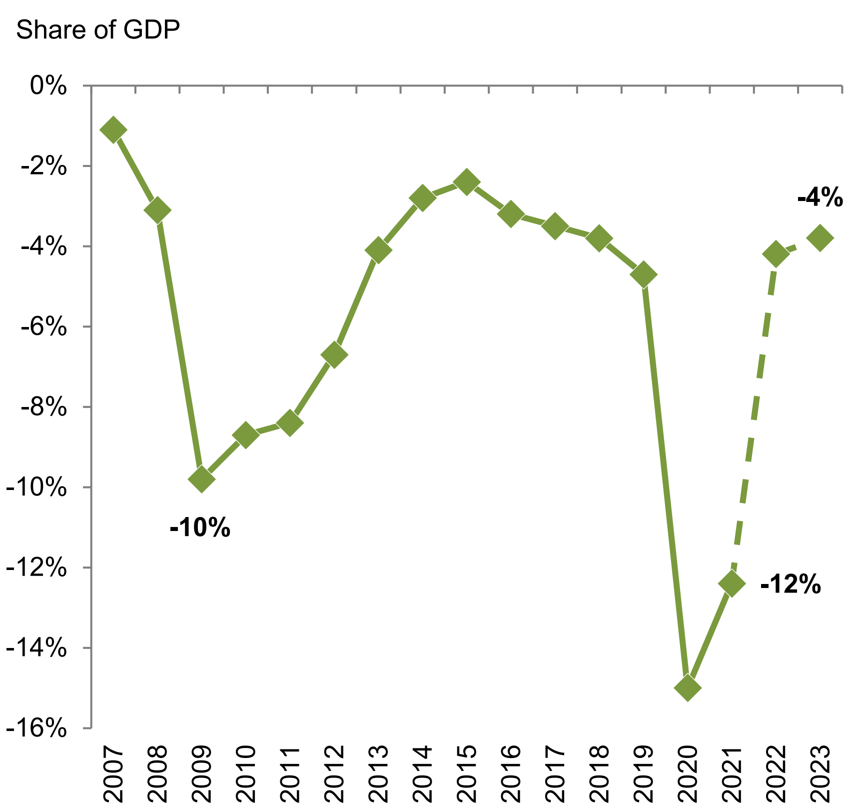
Change in Federal Reserve Treasury Holdings	
2022	-$136 Billion
Estimated 2023	-$1.0 Trillion

CHART: Gray bar to the right represents projected balances. QT: Quantitative Tightening. Dashed line and shaded area represent estimates based on the U.S. Federal Reserve's Quantitative Tightening guidance during 2022, the European Central Bank starting 15 billion euro of quantitative tightening in February 2023 and redeeming Targeted Long-Term Refinancing Operations throughout 2023 based on expected loan maturities, and the Bank of Japan purchasing assets at an average of prior six months. Source: Federal Reserve, Bank of Japan, European Central Bank, Haver Analytics, Fidelity Investments (AART), as of 11/30/22. **TABLE**: Source: U.S. Federal Reserve Board, Fidelity Investments (AART), as of 12/31/22.

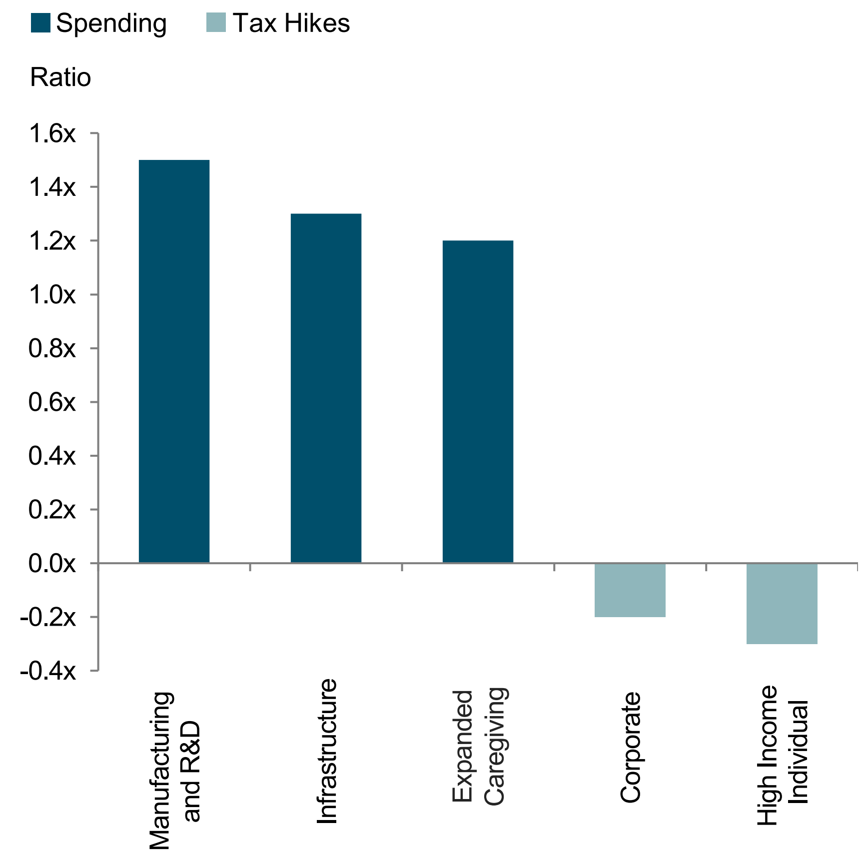
Fiscal Policy Likely to Be Relatively Neutral Post-Midterms

After a large contraction in the government deficit in 2022, fiscal-drag headwinds are giving way to a more neutral year-over-year deficit picture for 2023. Big changes in fiscal policy appear unlikely after the midterm elections resulted in a divided Congress. The increase in multiyear public investments in manufacturing and infrastructure—which typically have a higher multiplier effect on near-term growth—represents a mix shift.

U.S. Fiscal Deficit



Fiscal Multipliers



LEFT: Dashed line projection represents deficit baseline from the CBO. Source: Congressional Budget Office, Haver Analytics, Fidelity Investments (AART), as of 5/31/22. **RIGHT**: R&D: Research and development. Multipliers are rough estimates of how much a dollar of spending or tax changes would impact GDP based on historical averages. Sources: Congressional Budget Office, Fidelity Investments (AART), as of 12/31/22.

Outlook: Market Assessment

Fidelity's Business Cycle Board, composed of portfolio managers across a variety of global asset allocation strategies, believes the inflation and monetary backdrop contribute to uncertainty and risks to the economic and capital markets outlook. Some members believe fixed income categories offer more value, and most members have reduced active risk and believe security selection may present opportunities.

Business Cycle

U.S. in late-cycle phase with moderate recession risk

Non-U.S. cycles are becoming de-synchronized, and China's path of reopening is a source of uncertainty

Risks

The Fed may not ease policy as quickly as reflected in fixed-income markets

Corporate earnings are challenged by slowing growth and monetary tightening

Asset Allocation Implications

The late-cycle phase warrants smaller active allocation positions

Fixed income valuations provide an improved risk-reward trade-off

Some members increased exposure to asset classes that may provide diversification in a cyclical slowdown

Emphasize a focus on diversified and disciplined investment strategies

For illustrative purposes only. Diversification does not ensure a profit or guarantee against a loss. Source: Fidelity Investments (AART), as of 12/31/22.

Asset Markets

Tough Year for Almost Everything Ended on a High Note

Almost all asset categories posted positive gains in Q4 but negative returns for 2022. Commodities, energy and utility stocks, and Latin American equites, were the year's exceptions, finishing in positive territory and benefiting from the more inflationary environment. All fixed-income categories ended down for the year with more interest-rate sensitive sectors—such as long-duration government bonds—suffering the biggest losses.

U.S. Equity Styles Total Return

	Q4 2022	2022
Value	12.2%	-8.0%
Mid Caps	9.2%	-17.3%
Large Caps	7.6%	-18.1%
Small Caps	6.2%	-20.4%
Growth	2.3%	-29.0%

U.S. Equity Sectors Total Return

	Q4 2022	2022
Energy	22.7%	65.4%
Utilities	8.6%	1.6%
Consumer Staples	12.7%	-0.6%
Health Care	12.8%	-2.0%
Industrials	19.2%	-5.5%
Financials	13.6%	-10.6%
Materials	15.0%	-12.3%
Real Estate	3.8%	-26.2%
Info Tech	4.7%	-28.2%
Consumer Discretionary	-10.2%	-37.0%
Communication Services	-1.4%	-39.9%

International Equities and Global Assets Total Return

	Q4 2022	2022
ACWI ex-USA	14.3%	-16.0%
Canada	7.4%	-12.9%
EAFE	17.3%	-14.5%
Europe	19.3%	-15.1%
Japan	13.2%	-16.6%
EAFE Small Cap	15.8%	-21.4%
Latin America	5.7%	8.9%
Emerging Markets	9.7%	-20.1%
EM Asia	10.8%	-21.1%
EMEA	5.8%	-28.3%
Commodities	2.2%	16.1%
Gold	9.8%	-0.3%

U.S. Equity Factors Total Return

	Q4 2022	2022
Yield	13.8%	-3.8%
Low Volatility	10.5%	-10.1%
Size	9.4%	-10.8%
Value	10.2%	-14.1%
Momentum	4.7%	-18.9%
Quality	7.5%	-19.3%

Fixed Income Total Return

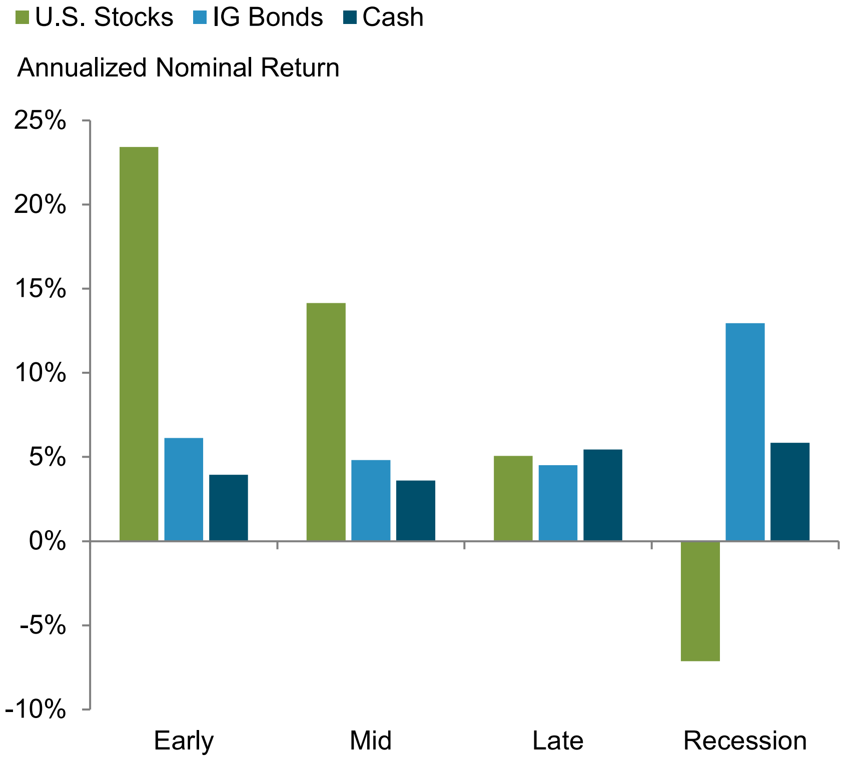
	Q4 2022	2022
Leveraged Loan	2.7%	-0.6%
ABS	0.8%	-4.3%
Agency	0.7%	-7.9%
Municipal	4.1%	-8.5%
CMBS	1.0%	-10.9%
High Yield	4.0%	-11.2%
MBS	2.1%	-11.8%
TIPS	2.0%	-11.8%
Treasuries	0.7%	-12.5%
Aggregate	1.9%	-13.0%
Credit	3.4%	-15.3%
EM Debt	7.4%	-16.5%
Long Govt & Credit	2.6%	-27.1%

EAFE: Europe, Australasia, and the Far East. EM: Emerging markets. EMEA: Europe, the Middle East, and Africa. For indexes and other important information used to represent above asset categories, see Appendix. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. Sector returns represented by S&P 500 sectors. Sector investing involves risk. Because of its narrow focus, sector investing may be more volatile than investing in more diversified baskets of securities. Source: Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

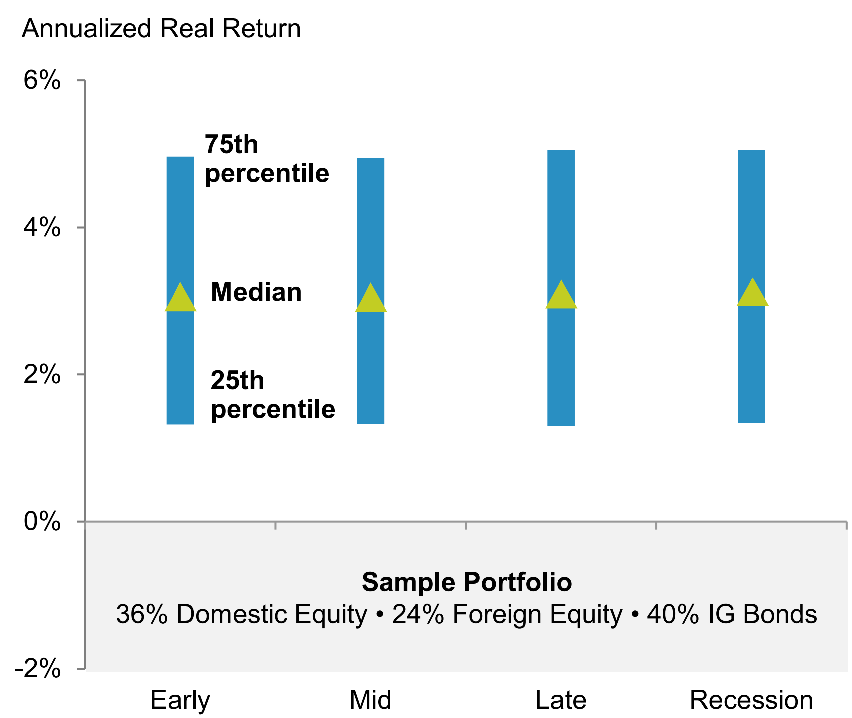
Business Cycle Important but Dissipates in the Long Run

The business cycle can be a critical determinant of asset performance over the intermediate term. Stocks have consistently outperformed earlier in the cycle, whereas bonds tend to outperform during recessions. While we believe a business cycle approach to actively managed asset allocation can add value, portfolio returns are expected to even out over the long term (20 years), regardless of the starting point of the cycle phase.

Asset Class Performance by Cycle Phase (1950–2020)



20-Year Portfolio Return Distribution by Cycle Phase Starting Point

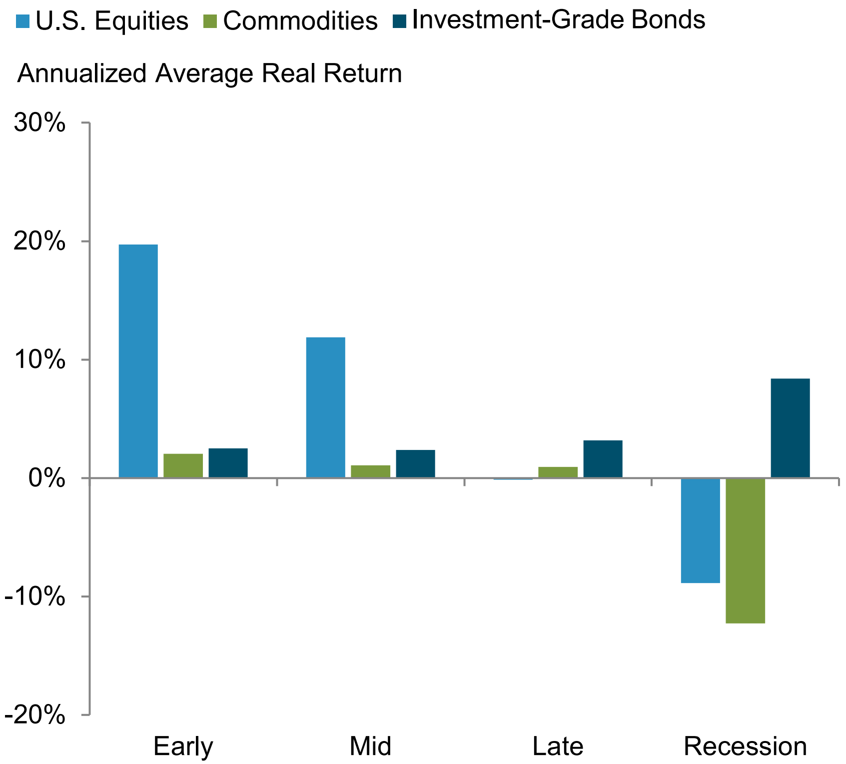


For illustrative purposes only. Past performance is no guarantee of future results. Diversification does not ensure a profit or guarantee against a loss. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Fidelity proprietary analysis based on Monte Carlo simulations using historical index returns. Domestic Equity—Dow Jones U.S. Total Stock Market Index; Foreign Equity—MSCI ACWI ex USA Index; Investment-Grade (IG) Bonds—Bloomberg U.S. Aggregate Bond Index. Source: Fidelity Investments, Morningstar, Bloomberg Finance L.P., as of 12/31/22.

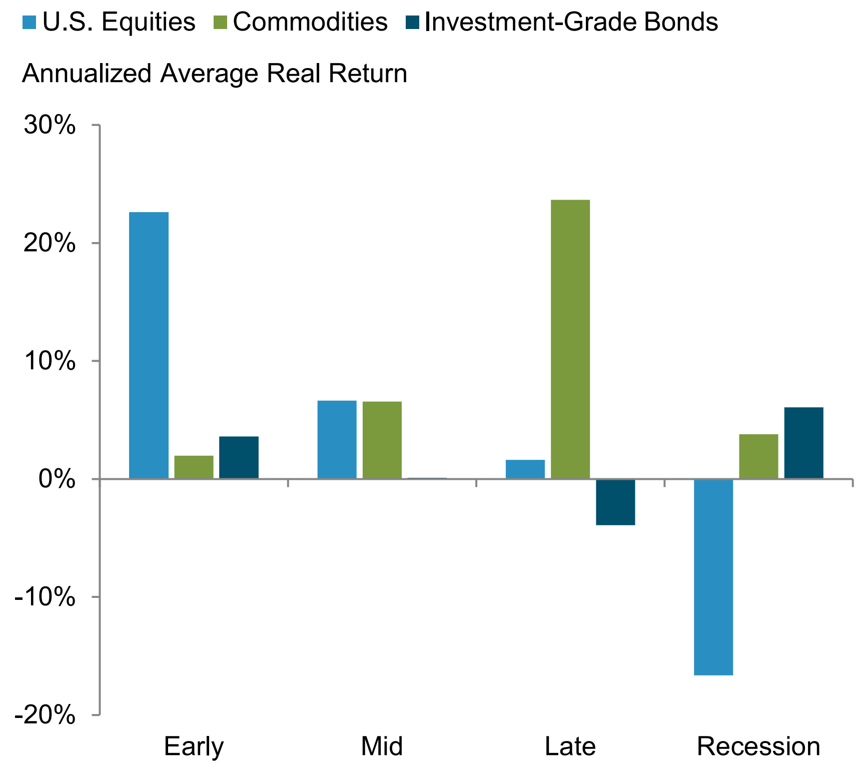
What High Inflation Implies for a Maturing Business Cycle

Unlike recent business cycles, high inflation has taken root. Historically, during high-inflation regimes, commodities tended to perform better than bonds during late-cycle expansion. However, fixed income tended to outperform once recession risk became dominant. Tilting a portfolio toward more-defensive exposures during recessions may provide diversification benefits regardless of the inflation regime.

Real Returns in Low-Inflation Regimes (1950–2020)



Real Returns in High-Inflation Regimes (1950–2020)



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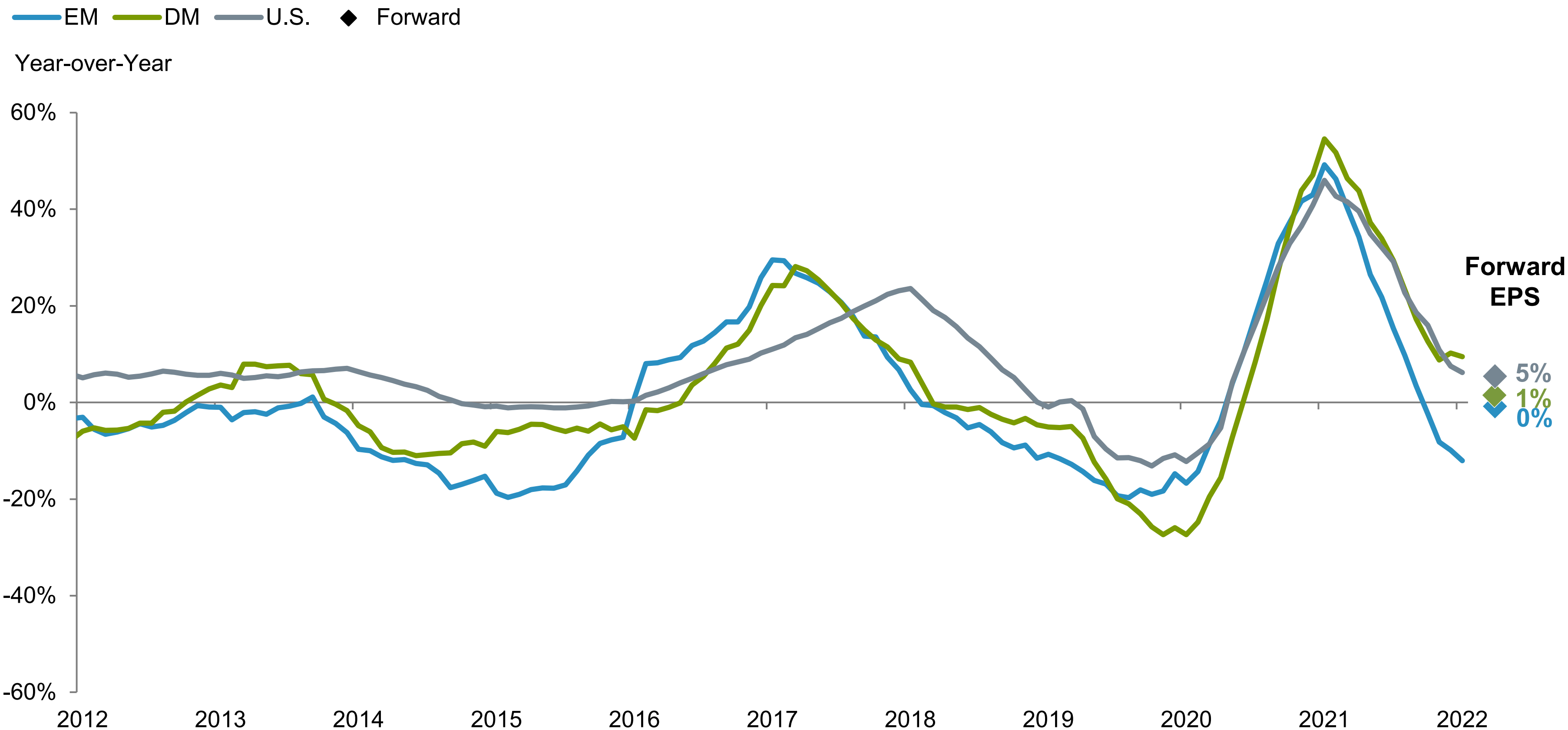
Fidelity INVESTMENTS

Global Earnings Growth Deceleration

Global earnings growth continued to slow in Q4, coming back to earth after a decade-high spike during the 2021 profit recovery associated with economic reopening. Emerging markets suffered a profit decline in 2022 amid weaker results from China. Global earnings growth expectations for the next 12 months are relatively muted across the entire world.

Global EPS Growth (Trailing 12 Months)

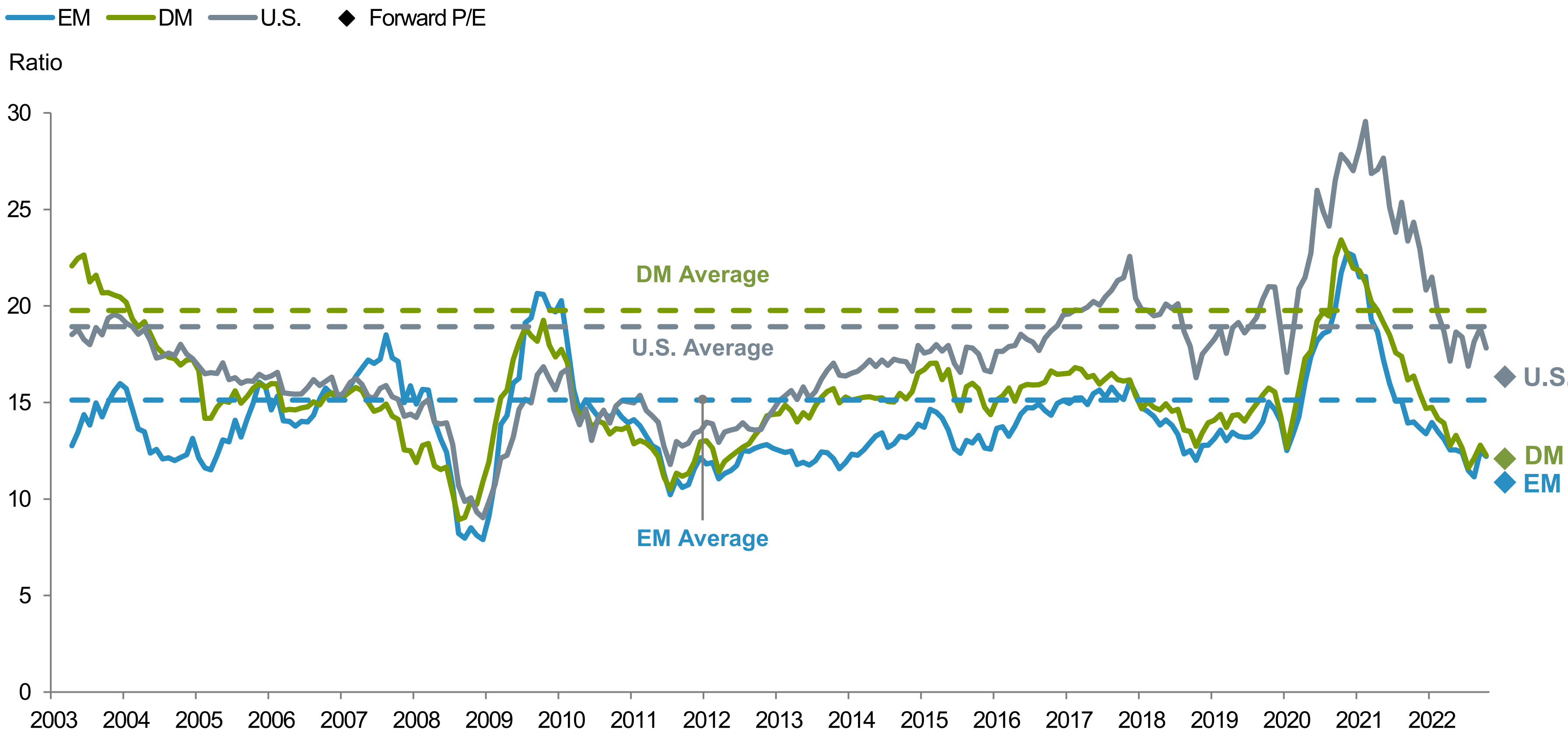


Past performance is no guarantee of future results. DM: Developed markets. EM: Emerging markets. EPS: Earnings per share. Forward EPS: Next 12 months' expectations. Indexes: DM—MSCI EAFE Index; EM—MSCI Emerging Markets Index; U.S.—S&P 500. Source: MSCI, Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

Valuations Compressed; Non-U.S. Equities More Attractive

The broad 2022 equity sell-off caused valuations for all categories of global stocks to fall from their elevated 2021 levels. The trailing, one-year price-to-earnings (PE) ratios for all major categories of global equities—U.S., non-U.S. developed markets, and emerging markets—are below their long-term averages, with emerging markets and non-U.S. developed markets appearing the most attractive.

Global Stock Market P/E Ratios



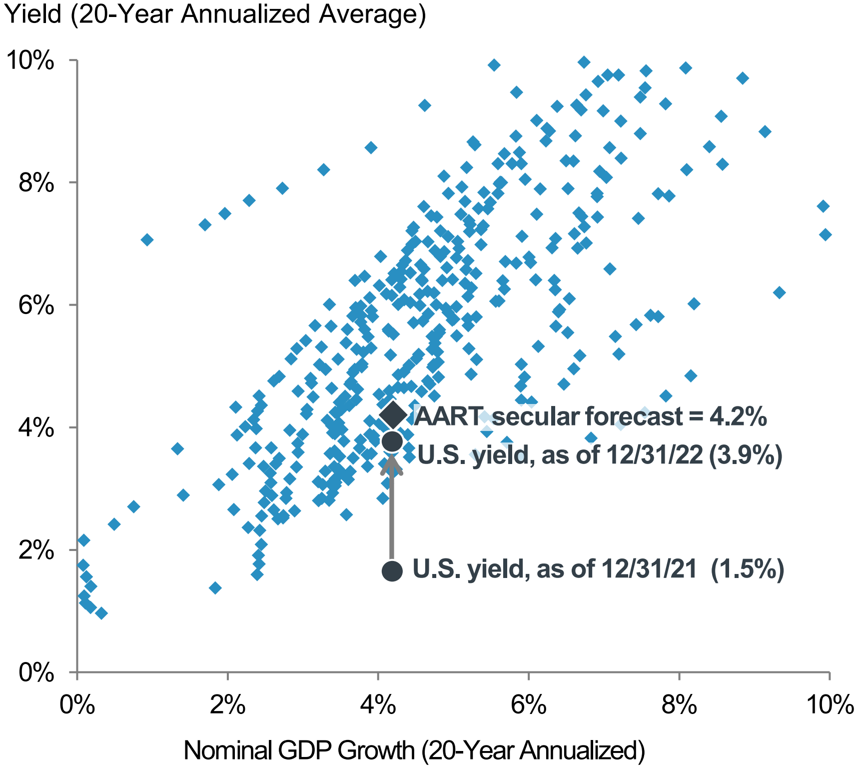
DM: Non-U.S. developed markets. EM: Emerging markets. Chart includes Trailing 12-month P/Es. Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Price-to-earnings (P/E) ratio (or multiple): Stock price divided by earnings per share, which indicates how much investors are paying for a company's earnings power. Long-term average P/E includes data from 9/30/95 to 9/30/22. Indexes: DM—MSCI EAFE Index; EM—MSCI Emerging Markets Index; U.S.—S&P 500. Source: Factset, Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22.

Fidelity INVESTMENTS

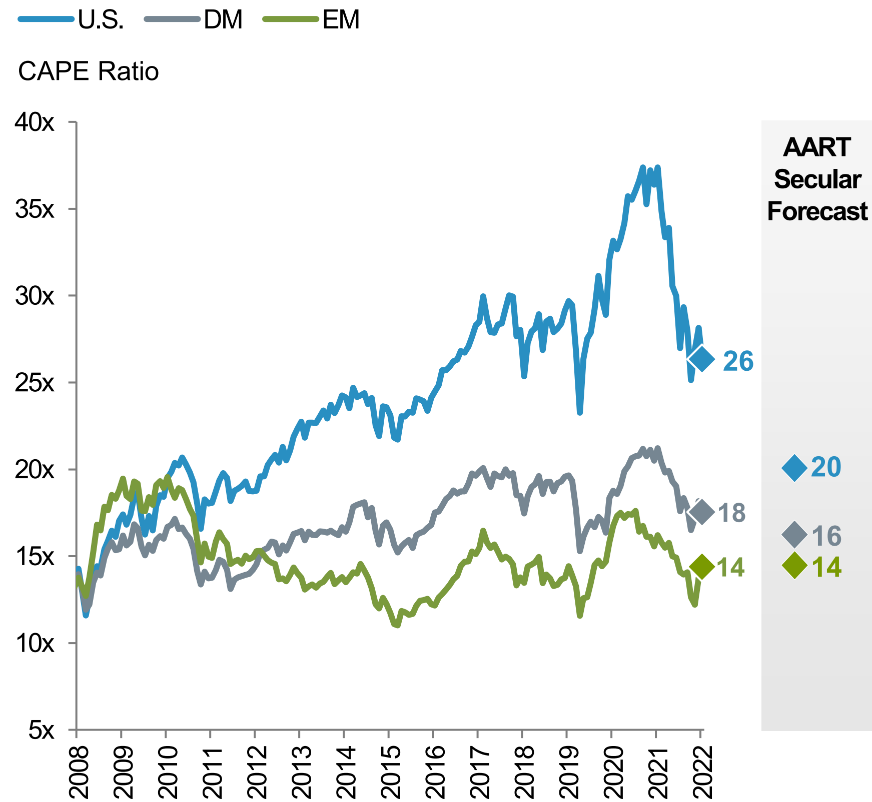
Valuations Much Improved: Opportunities Ahead?

A silver lining to 2022's sell-off is a more attractive entry point for long-term stock and bond returns. Ten-year Treasury yields moved closer to our secular forecast of 4.2%, a huge improvement from nearly a record low yield at the end of 2021. Equity valuations improved across all regions, with cyclically adjusted price-to-earning ratios for non-U.S. markets providing more attractive opportunities based on our secular expectations.

10-Year Sovereign Bond Yields vs. GDP



Equity Valuations

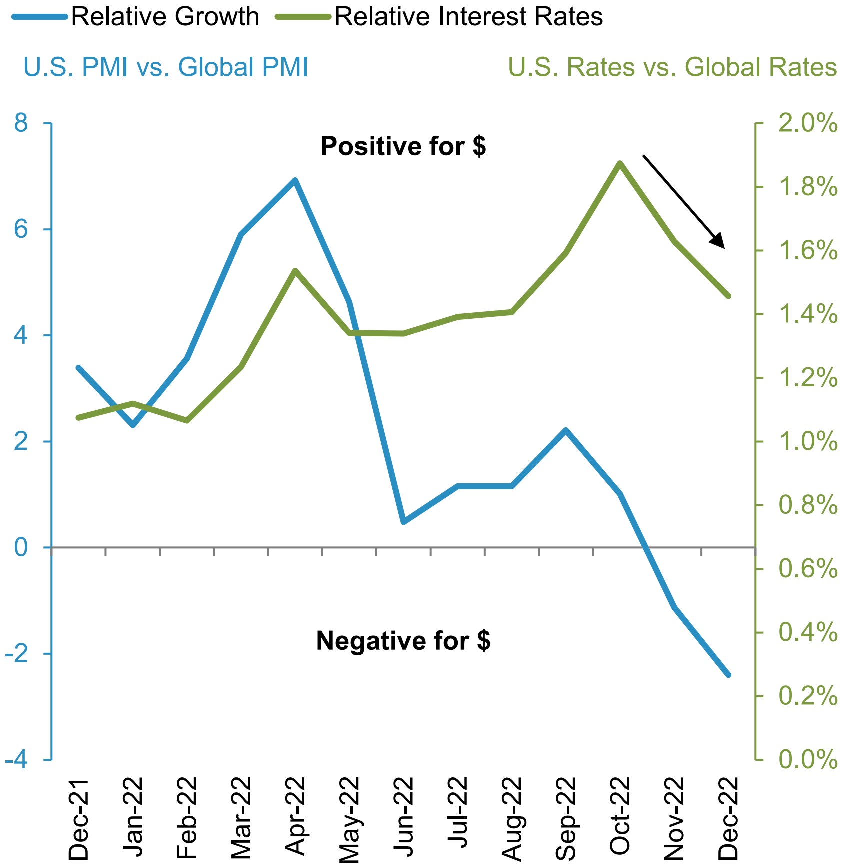


Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. **LEFT:** Highlighted dots are U.S. 10-year Treasury bond yields. AART secular forecast refers to an estimate for U.S. nominal GDP (4.2%). Source: Official Country Estimates, Haver Analytics, Fidelity Investments (AART), as of 12/31/22. **RIGHT:** DM: Developed markets. EM: Emerging markets. Price-to-earnings (P/E) ratio (or multiple): Stock price divided by earnings per share, which indicates how much investors are paying for a company's earnings power. Cyclically adjusted earnings are 10-year averages adjusted for inflation. Source: FactSet, countries' statistical organizations, MSCI, Fidelity Investments (AART), as of 12/31/22.

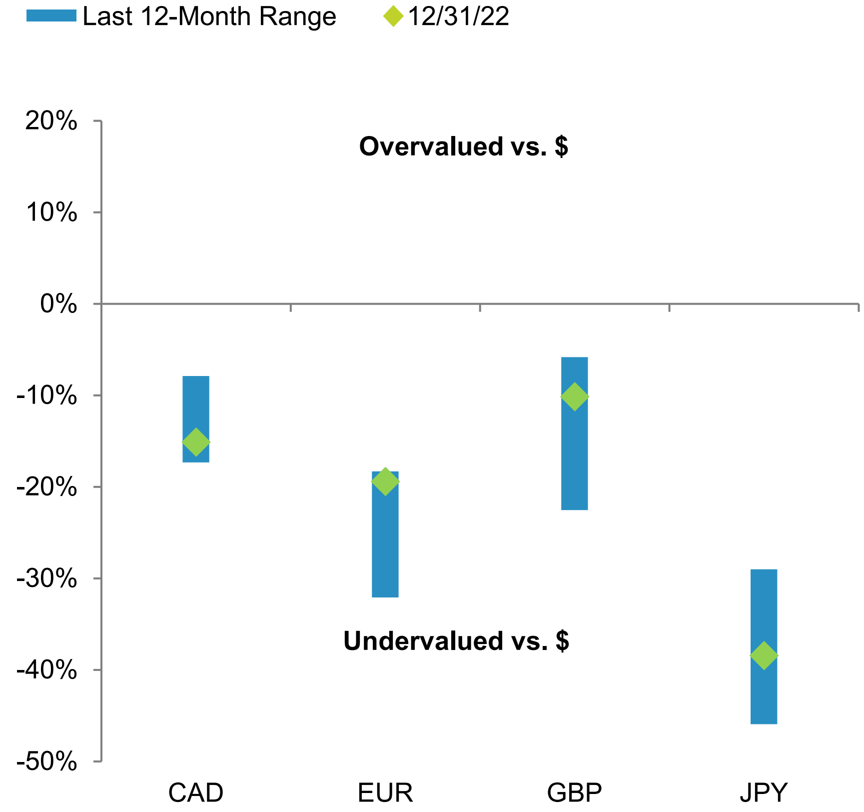
Strong-Dollar Drivers Faded, Other Currencies Attractive

After hitting a multi-decade high in Q3 2022 against most major currencies, the U.S. dollar fell back during Q4. Cyclical drivers of dollar strength—including stronger U.S. relative growth and rising U.S. real bond yields compared to other major countries—reversed course. On a longer-term basis, fundamentals and valuations appear favorable for non-U.S. currencies, particularly the Japanese yen.

Growth and Yield Influences on U.S. Dollar



FX Valuation: Purchasing Power Parity (PPP)

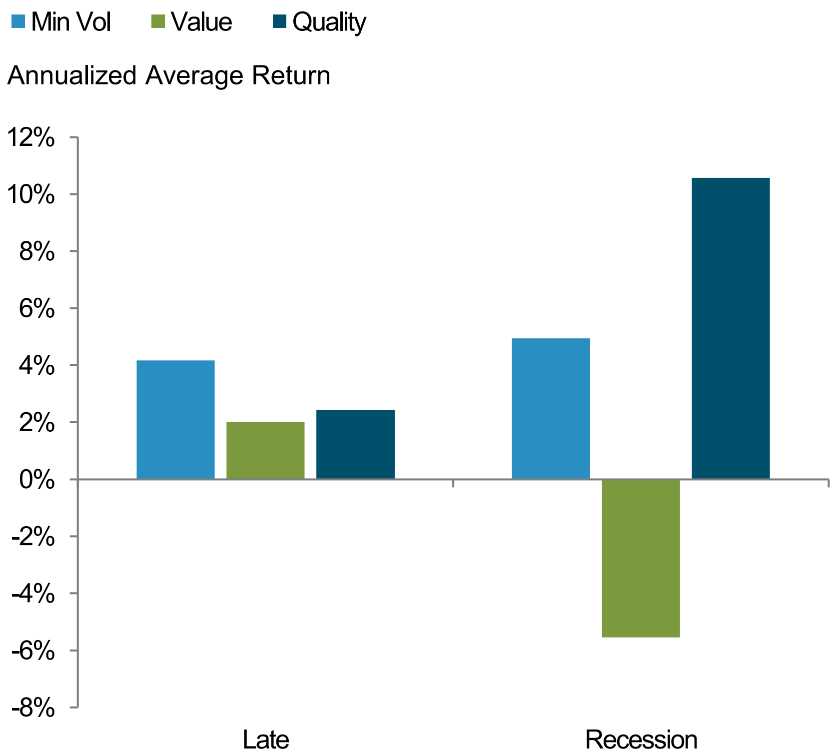


LEFT: PMI: Purchasing Managers Index of manufacturing activity. Global rates are government bond yields calculated using an equity-market capitalization weighted index of developed-market countries. Sources: Bloomberg, Fidelity Investments, Haver Analytics, Markit, and MSCI, as of 12/31/22. **RIGHT:** Sources: Haver Analytics and Fidelity Investments, as of 12/31/22.

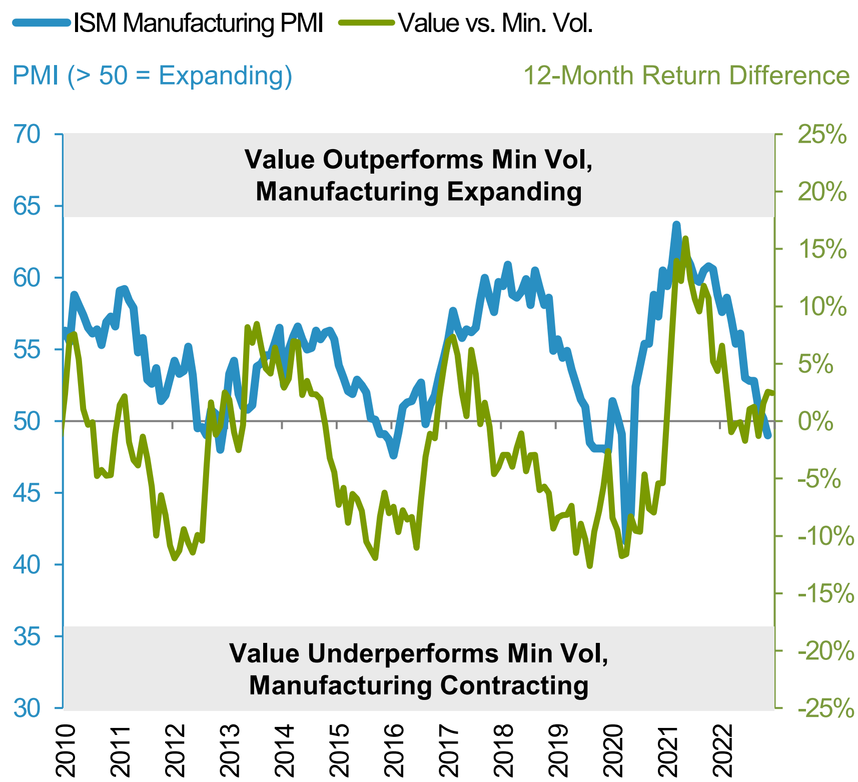
Decelerating Growth May Support Min Vol Factor

Historically more-defensive factors like min vol tends to outperform as manufacturing activity moderates, overall growth decelerates, and late-cycle dynamics take hold. The defensive min vol factor, in addition to quality, also tends to outperform the market during recessions.

Factor Returns vs. Market through Cycle (1995–2022)



Relative Performance vs. Manufacturing Cycles



For illustrative purposes only. Past performance is no guarantee of future results. Diversification does not ensure a profit or guarantee against a loss. It is not possible to invest directly in an index. See Appendix for important index information. **LEFT**: Market—MSCI USA Index; Min Vol—MSCI USA Minimum Volatility Index, Value–MSCI USA Value Index. Source: Bloomberg Finance L.P., Fidelity Investments (AART), as of 12/31/22. **RIGHT**: Min Vol—MSCI USA Minimum Volatility Index, Value–MSCI USA Value Index. Source: Institute for Supply Management, Bloomberg Finance L.P., Haver Analytics, Fidelity Investments (AART), as of 12/31/22.

Business Cycle Approach to Equity Sectors

A disciplined business cycle approach to sector allocation seeks to generate active returns by favoring industries that may benefit from cyclical trends. Economically sensitive sectors historically have performed better in the early- and mid-cycle phases of an economic expansion. Meanwhile, companies in defensive sectors with relatively more stable earnings growth have tended to outperform in weaker environments.

Business Cycle Approach to Sectors

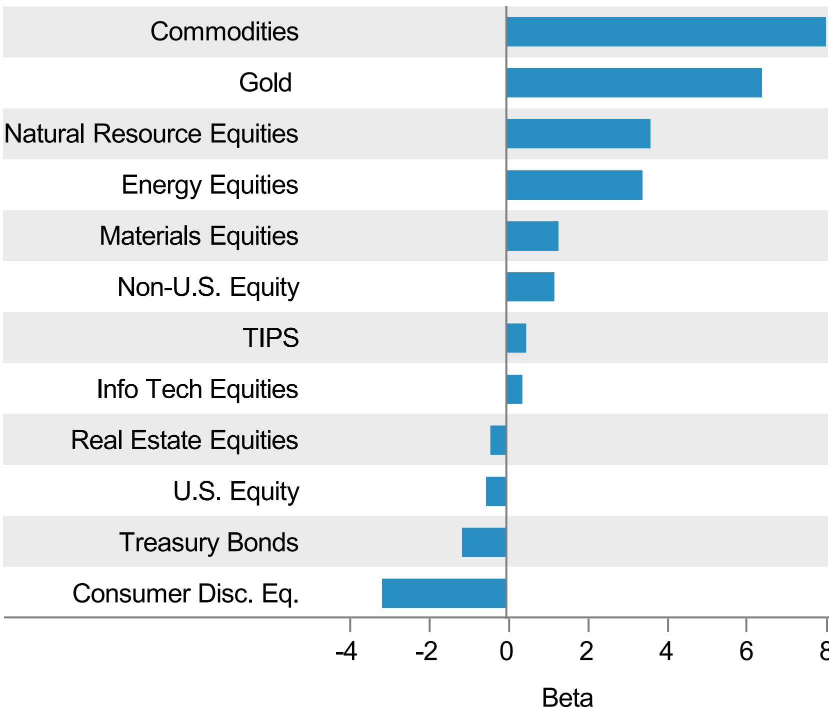
Sector	EARLY CYCLE Rebounds	MID CYCLE Peaks	LATE CYCLE Moderates	RECESSION Contracts
Financials	+			-
Real Estate	++	-	+	--
Consumer Discretionary	++		--	
Information Technology	+	+	-	--
Industrials	++			--
Materials	+	--		-
Consumer Staples	--	-	+	++
Health Care	--			++
Energy	--		++	--
Communication Services		+		-
Utilities	--	-	+	++
	Economically sensitive sectors have tended to outperform, while more defensive sectors have tended to underperform.	Making marginal portfolio allocation changes to manage drawdown risk with sectors may enhance risk-adjusted returns during this cycle.	Defensive and inflation-resistant sectors have tended to perform better, while more cyclical sectors underperform.	Since performance generally has been negative during recessions, investors should focus on the most defensive, historically stable sectors.

Past performance is no guarantee of future results. Sectors as defined by GICS. White line is a theoretical representation of the business cycle as it moves through early, mid, late, and recession phases. Green- and red-shaded portions above respectively represent over- or underperformance relative to the broader market; unshaded (white) portions suggest no clear pattern of over- or underperformance. Double +/– signs indicate that the sector is showing a consistent signal across all three metrics: full-phase average performance, median monthly difference, and cycle hit rate. A single +/– indicates a mixed or less consistent signal. Return data from 1962 to 2021. Source: Fidelity Investments (AART), as of 12/31/22.

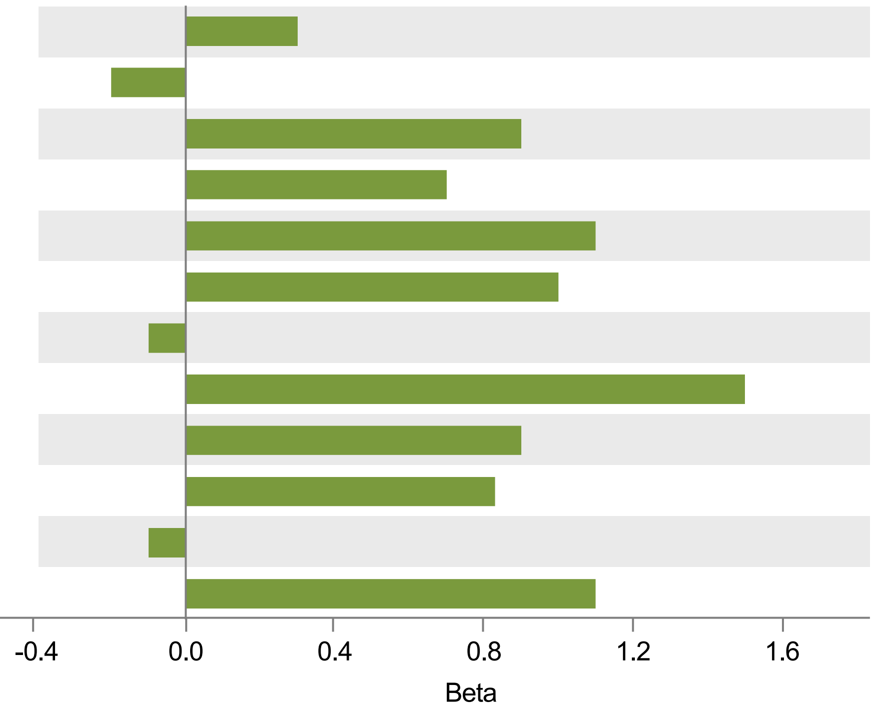
Inflation-Sensitive Assets Can Help Provide Diversification

The potential for a sustained period of higher inflation presents risks for a multi-asset portfolio. Inflation-resistant assets, including commodities and commodity-producer equities, can help hedge against surprise increases in inflation while providing potential for capital appreciation in a high nominal-growth environment. Inflation-hedging fixed-income assets, such as TIPS, have provided better diversification than Treasury bonds.

Return Sensitivity to Inflation Surprises (1972–2022)



Return Sensitivity to Growth Surprises (1972–2022)

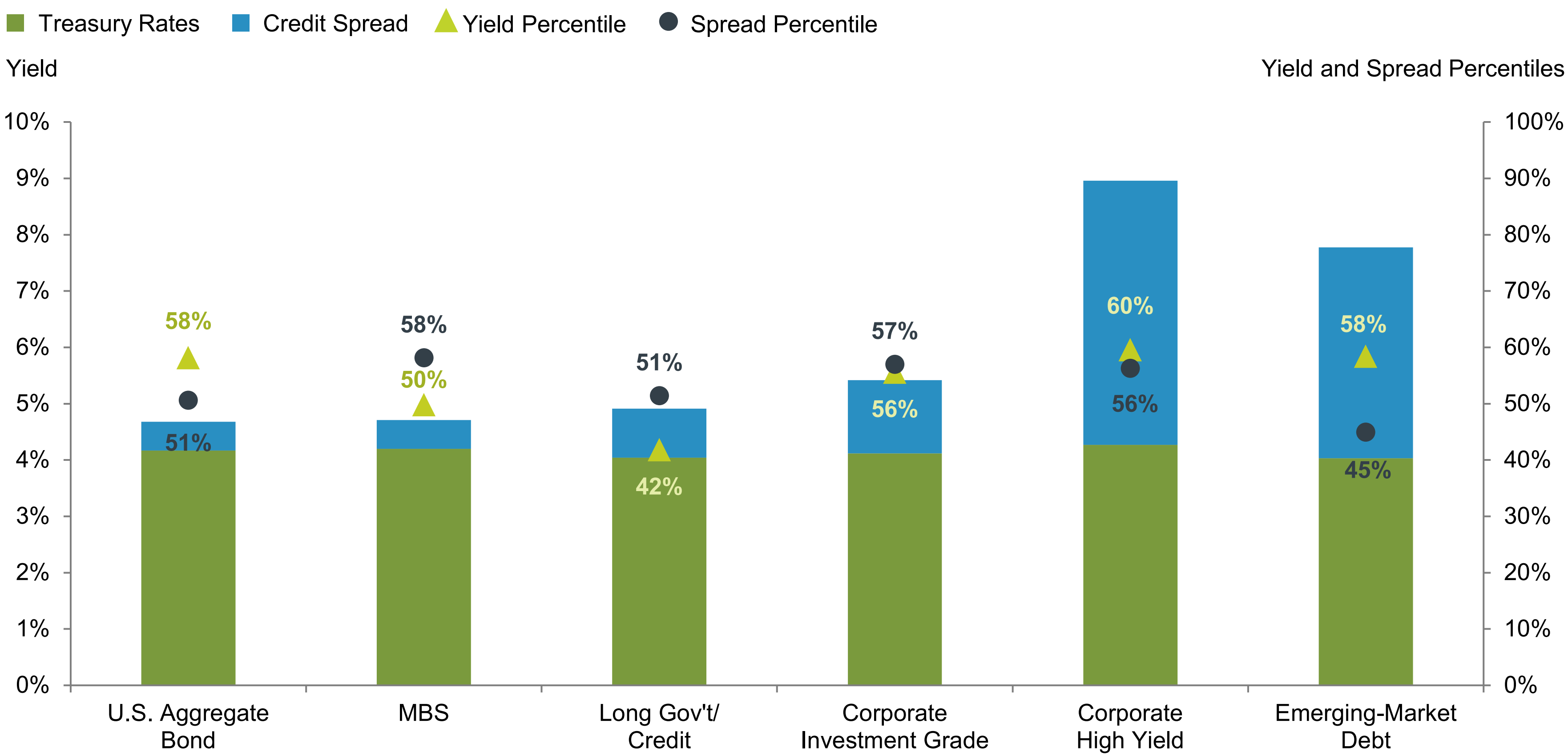


Past performance is no guarantee of future results. Diversification does not ensure a profit or guarantee against loss. Inflation sensitivity measured relative to CPI, an index that tracks the percentage change in the price of a specified "basket" of consumer goods and services. Growth sensitivity measured relative to the Purchasing Manager's Index (PMI) that shows the prevailing trends in the manufacturing and service sectors. Beta is a measure of a variable's sensitivity (response) relative to changes (volatility) in a reference (benchmark), which has a beta of 1. Indexes: U.S. Equity—Dow Jones U.S. Total Stock Market Index℠; Non-U.S. Equity (EM+DM)--MSCI ACWI ex USA Index; Commodities—Bloomberg Commodity Index Total Return℠. Commodity sectors represent categories within the Bloomberg Commodity Index Total Return℠. Equity sectors represent categories within MSCI as defined by the Global Industry Classification Standard (GICS®). See Appendix for index definitions and other important information. Source: Bureau of Labor Statistics, Fidelity Investments; data 1/1/72 through 2/28/22

Fixed-Income Valuations More Attractive to Begin 2023

Both Treasury yields and credit spreads rose during 2022 across all major bond categories. During Q4, credit spreads tightened somewhat across all categories to end the year close to their respective historical averages. After many years of extremely low bond yields, fixed-income assets now offer relatively better income with more attractive valuations.

Fixed Income Yields and Spreads (1993–2022)



Past performance is no guarantee of future results. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Percentile ranks of yields and spreads based on historical period from 1993 to 2022. MBS: Mortgage-backed securities. Treasury rates different across asset classes due to different duration for each index. Source: Bloomberg Finance L.P., Bank of America Merrill Lynch, JP Morgan, Fidelity Investments (AART), as of 12/31/22.

Long-Term Themes

Challenging Secular Trends Turbocharged by Pandemic

We believe the longstanding regime of investment-friendly political and economic conditions is under increasing duress. Many secular trends that suggest rising long-term risks have been exacerbated during the pandemic, including record-high debt and inequality, extraordinary monetary and fiscal policies, and rising de-globalization pressures. Inflation, policy, and profit risks warrant high levels of strategic diversification.

Broad Secular Changes	Secular Factors	Pre-Pandemic Trends	Pandemic Impact
Unprecedented Accumulation of Debt	Debt	Record high levels	Even higher
	Monetary policy	Financial repression Tolerance for higher inflation	Even more extreme
Rising Populist Demands	Fiscal policy	Large deficits	More public spending, higher multiplier
Geopolitical Instability	De-globalization pressures	Goods/labor disinflation ending	Even greater: Supply-chain shocks, self-sufficiency motivation
Anti-Globalization Pressure	Inequality	Record high levels	Wages/labor share rising
Widespread Aging Demographics	Aging demographics	Elderly people spend less (reducing demand) and work less (reducing supply)	Older workers leave labor force

RESULTS

- Inflation Risk
- Policy Risk
- Financial Fragility
- Profit-Margin Pressures
- Higher Nominal Growth
- Shows Need for Strategic Diversification

Diversification does not ensure a profit or guarantee against a loss. Source: Fidelity Investments (AART), as of 9/30/22.

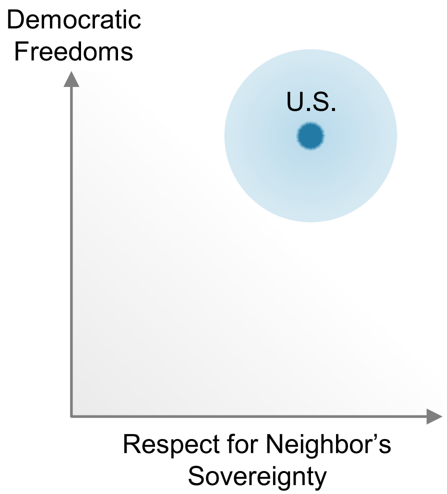
Geopolitical Risk: More Great Powers, Less Stability

The Ukraine war is a stark reminder that we've shifted to a secular environment of higher geopolitical risk. The distribution of power among the world's great powers determines the structure of the world order, and in recent decades, we enjoyed a stable, unipolar backdrop under U.S. global dominance. Today, power has become more evenly distributed among a number of countries, leaving the backdrop inherently more unstable.

UNIPOLAR

Very Stable

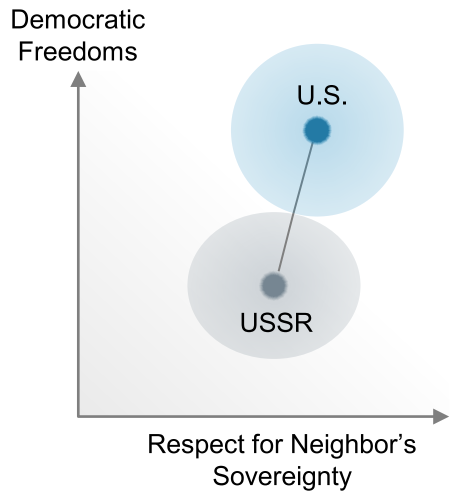
1990s–Early 21st C.



BIPOLAR

Pretty Stable

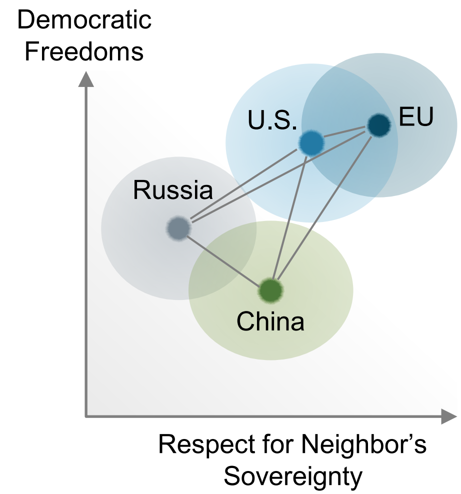
1960s–1980s



MULTIPOLAR

Unstable

Today

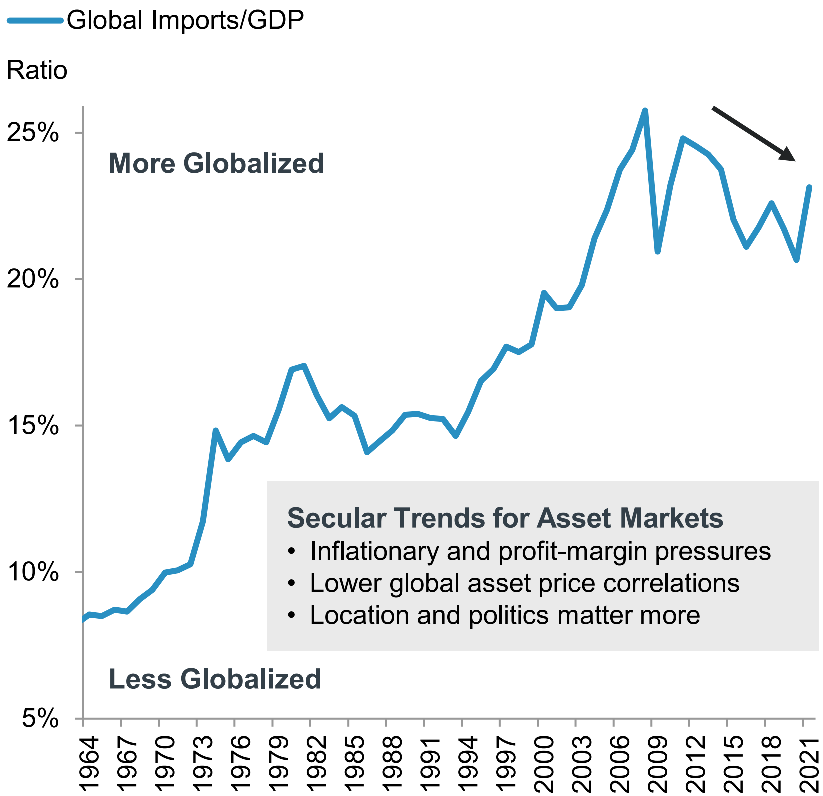


Source: Fidelity Investments (AART), as of 12/31/22.

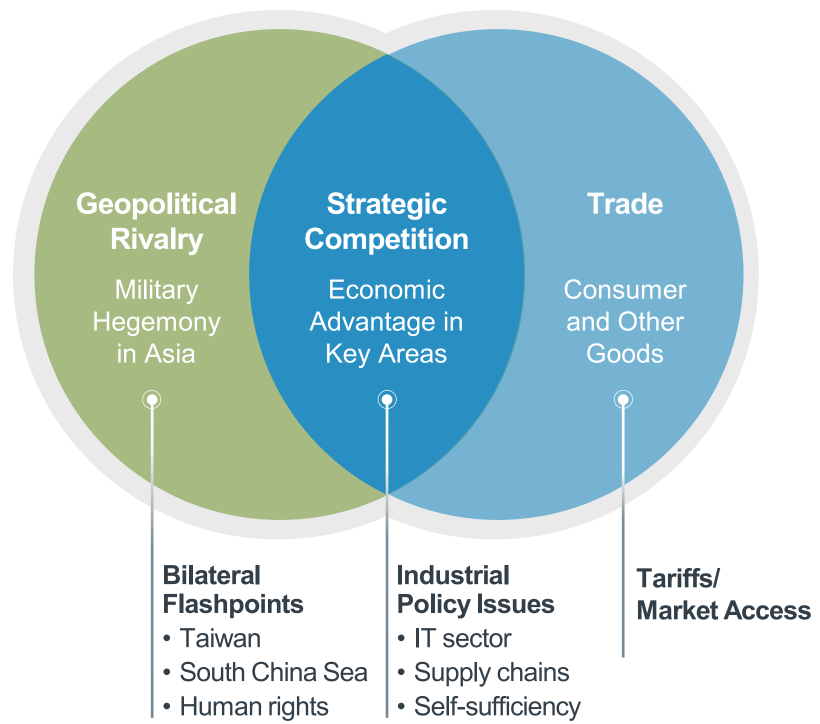
Geopolitical Risk at the Center of Deglobalization Trend

After decades of rapid global integration, economic openness has stalled in recent years. The deepening U.S.–China rivalry creates friction at the center of the globalized trading system, and it implies continued political risk for commercial activities, such as the bipolarization of the tech industry. The more domestic politics and location matter, the greater the potential benefits and active opportunities from global asset diversification.

Trade Globalization



U.S.–China Relationship



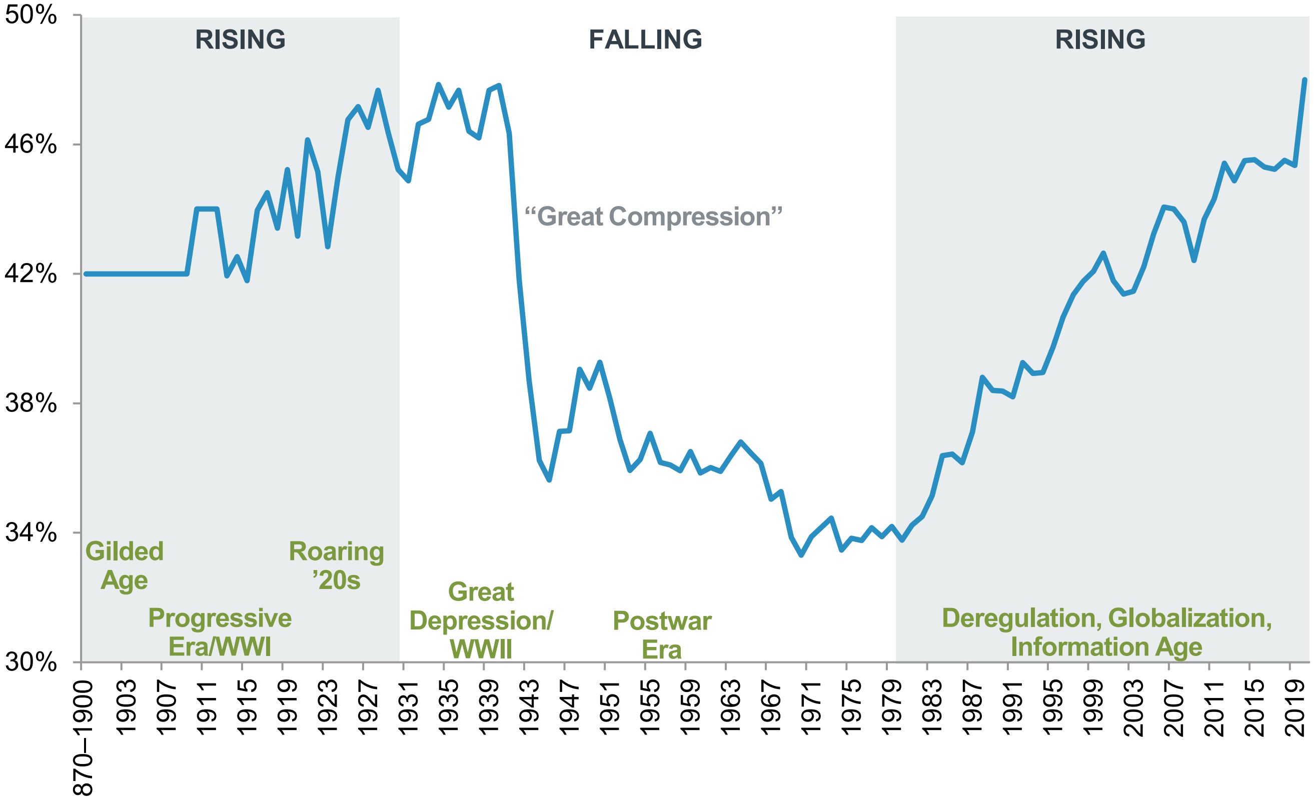
Diversification does not ensure a profit or guarantee against a loss. Source: International Monetary Fund (IMF), World Bank, Haver Analytics, Fidelity Investments (AART), as of 12/31/22.

Policy Shift toward Addressing Record-High Inequality

After decades of rapid technological change and policies that concentrated economic gains in the upper tiers, income inequality has reached a 100-year high. Political trends are shifting toward policy changes aimed at reducing inequality, directionally similar to the postwar "Great Compression" era. This may include broad public investments, a more progressive tax regime, and greater support for low- and middle-income workers.

U.S. Income Inequality

Top 10% Earners' Share of Total Income



Modern Era Policies (1980–Present)

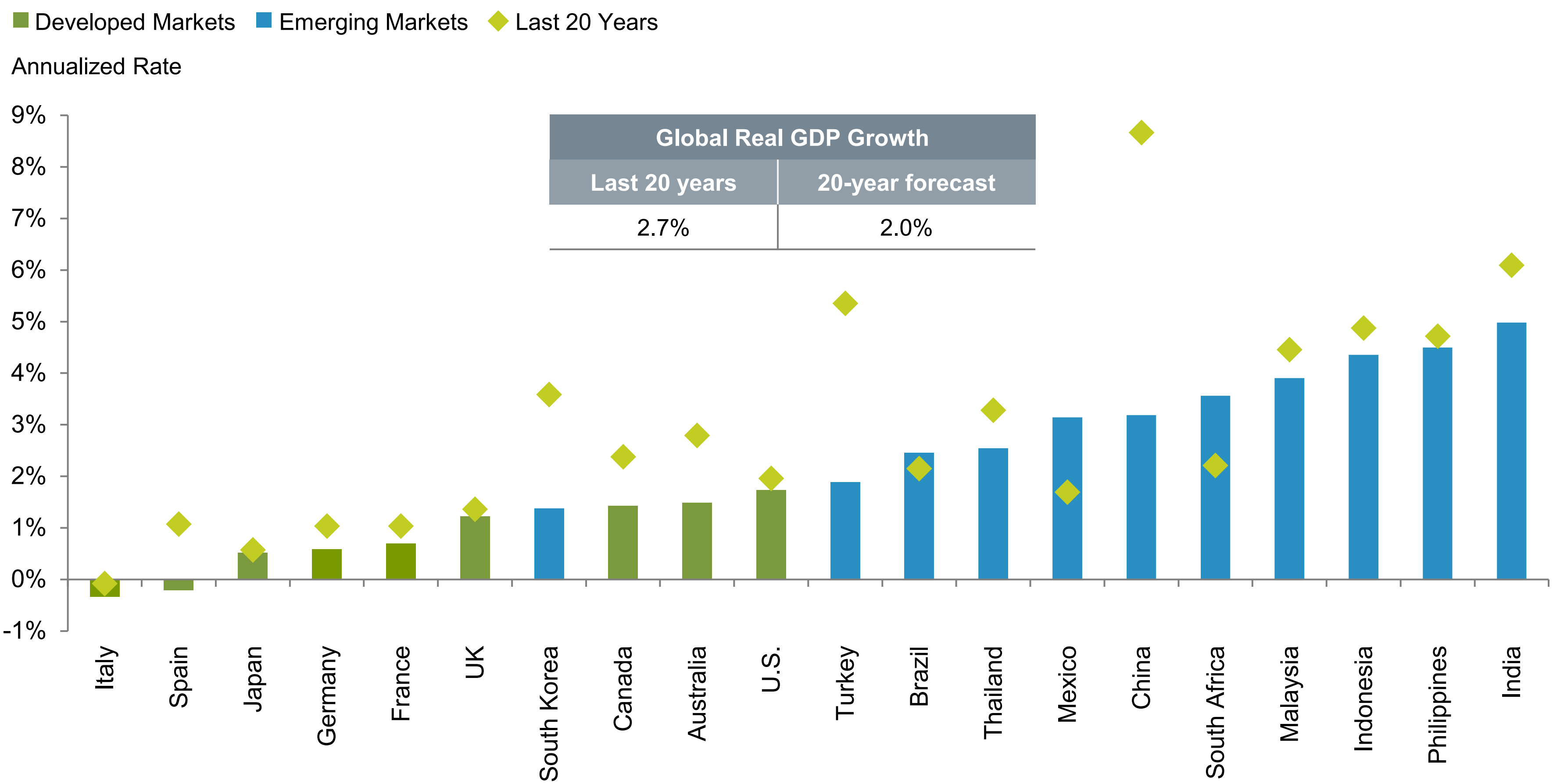
- Rapid globalization, immigration
- Corporate power, de-unionization
- Less-progressive tax rates
- Declining public investment
- Easy monetary policy
- High costs for education, health care
- Oligopolistic markets

Source: World Inequality Database, T. Piketty Capital and Ideology HUP 2020, Fidelity Investments (AART), as of 12/31/20.

Secular Forecast: Slower Global Growth, EM to Lead

Slowing labor-force growth and aging demographics are expected to tamp down global economic growth over the next two decades. We expect GDP growth in emerging markets to outpace that of developed markets over the long term, providing a relatively favorable secular backdrop for emerging-market equity returns.

Real GDP 20-Year Growth Forecasts vs. History



Global Real GDP Growth	
Last 20 years	20-year forecast
2.7%	2.0%

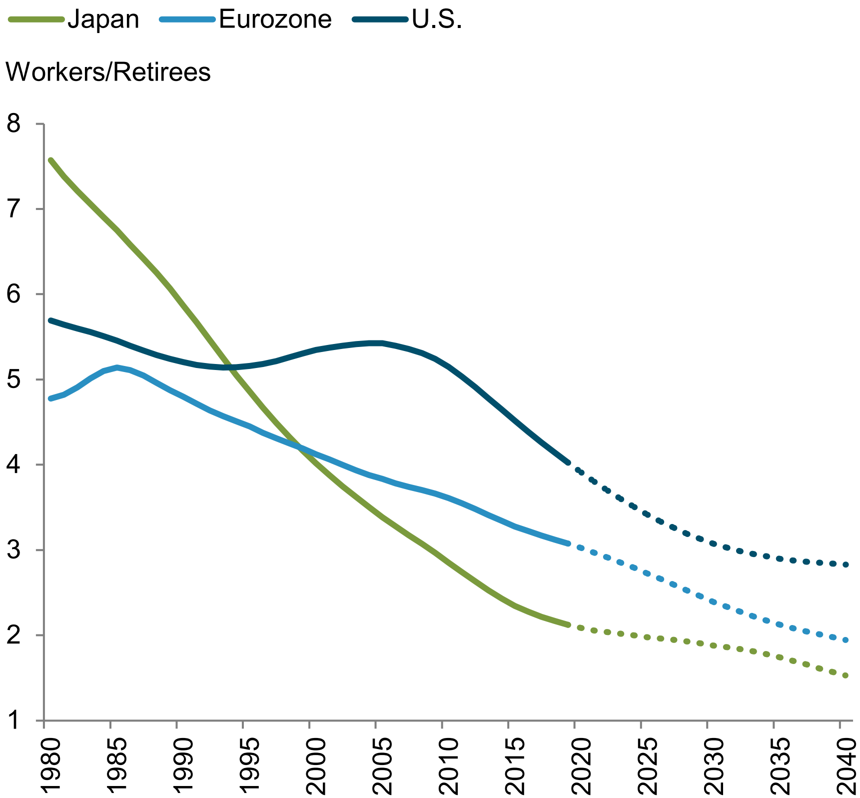
Past performance is no guarantee of future results. EM: Emerging markets. GDP: Gross domestic product.
Source: OECD, Fidelity Investments (AART), as of 5/31/22.

Unprecedented Debt Levels amid Aging Demographics

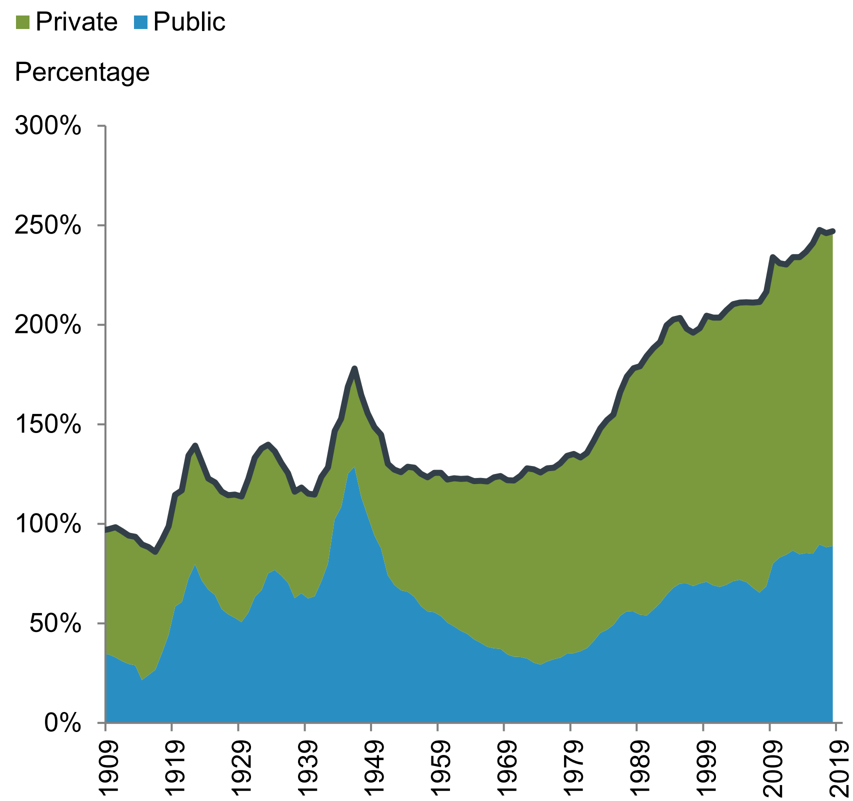
Most major economies face deteriorating demographic trends. With fewer new workers to support a growing number of retirees, greater fiscal pressures are ahead due to rising spending on pensions and health care. The dramatic worldwide rise in public and private debt in recent decades has been sustained by extraordinary monetary accommodation, leaving the system more dependent than ever on low interest rates.

LONG-TERM

Demographic Support Ratio



Global Debt as a Share of GDP



LEFT: The demographic support ratio is calculated as the number of workers (15–64 years old)/number of retirees (65 and older). Dotted line represents a projection. Source: United Nations, Haver Analytics, Fidelity Investments (AART), as of 10/31/19.
RIGHT: Source: Bank of International Settlements, International Monetary Fund, Maddison Project, Fidelity Investments (AART), and the Jordà-Schularick-Taylor Macrohistory Database, compiled by Oscar Jordà, Moritz Schularick, and Alan M. Taylor, as of 12/31/19.

Fidelity INVESTMENTS

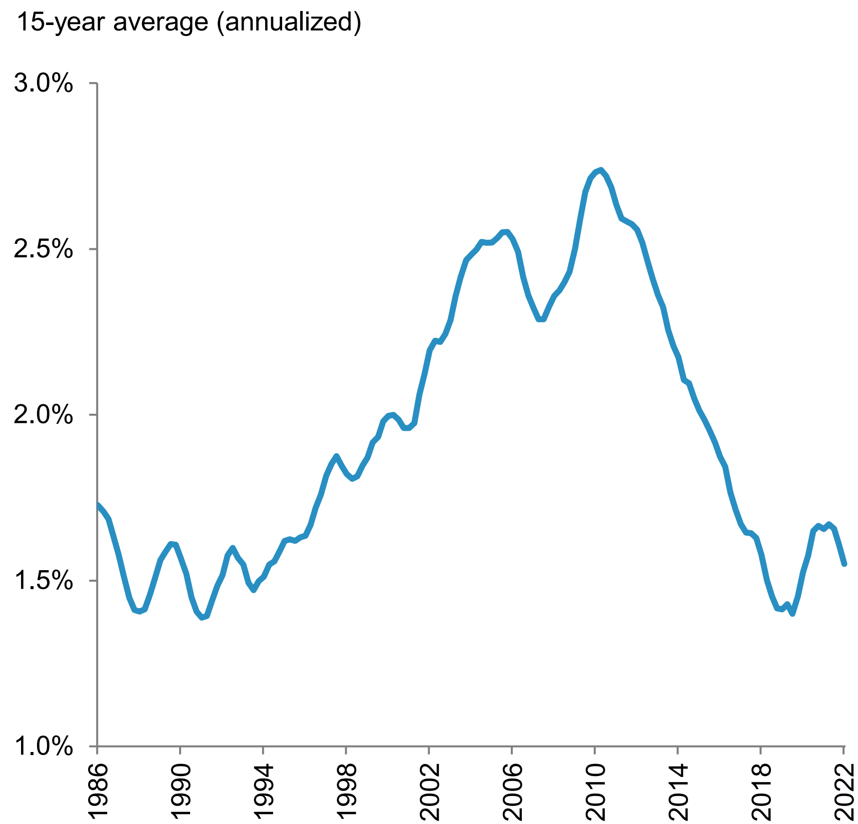
Higher Secular Inflation Risks

Several long-term trends have become more inflationary in recent years, raising the odds that we've entered a secular high-inflation regime. These factors include supply-side pressures from deglobalization, fiscal and monetary policies inclined toward excessive accommodation, and decelerating long-term productivity rates. In the past decade, labor productivity growth has remained stuck in one of its lowest ranges in modern history.

Possible Secular Impact on Inflation

Secular Factors	Long-Term Trends	Risks to Inflation
Policy	Fed tolerates higher inflation	↑
	More-stimulative fiscal policy	↑
Peak Globalization	• More-expensive goods & labor	↑
	• Geopolitical friction	↑
Aging Demographics	Older adults:	
	• Spend less (reducing demand)	↓
	• Work less (reducing supply)	↑
Technological Progress	More robots, Amazon effect	↓
	Declining long-term productivity	↑
Climate Change	More-volatile weather, supply damage	↑
	Greater innovation/R&D in clean energy	↓

U.S. Labor Productivity Growth



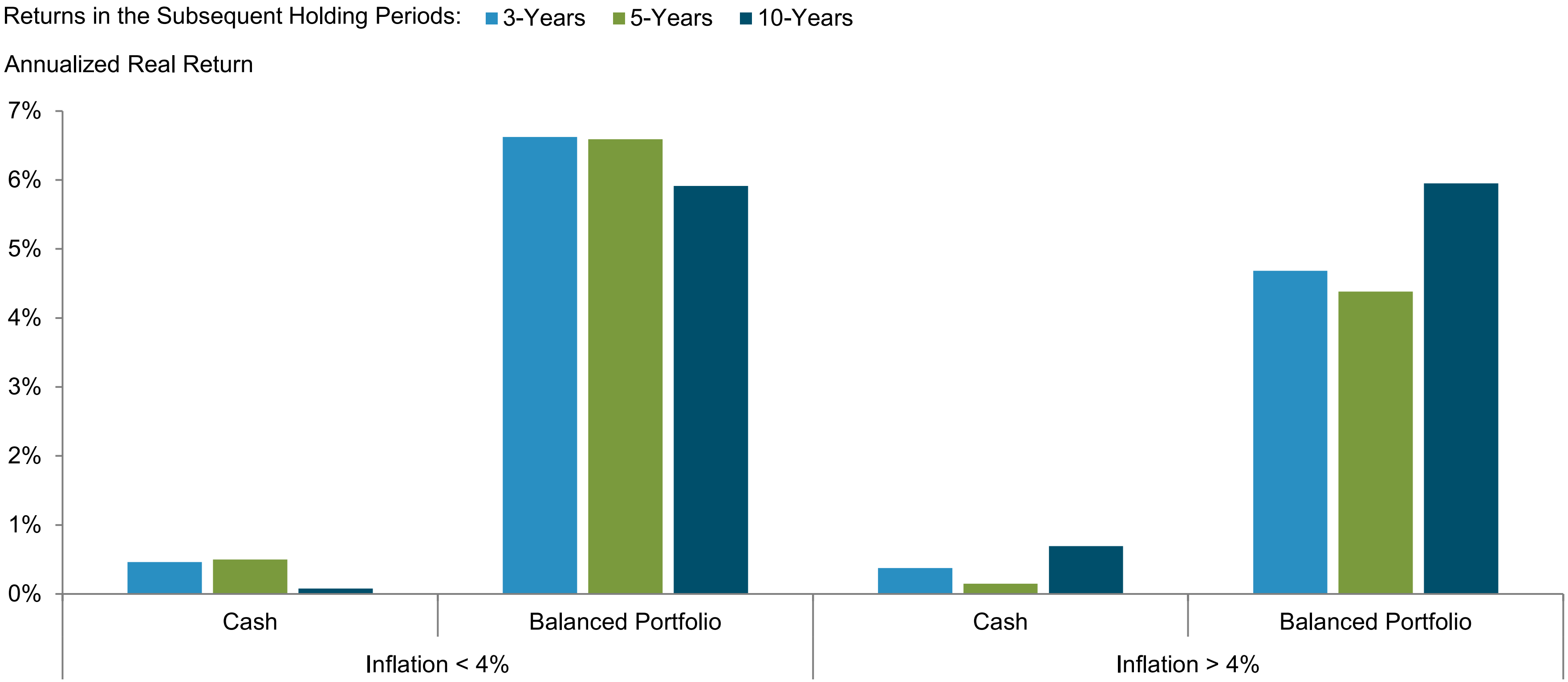
LEFT: Diversification does not ensure a profit or guarantee against a loss. Source: Fidelity Investments (AART), as of 11/30/22. **RIGHT**: U.S. Nonfarm Business Sector Output Per Hour. Sources: Bureau of Labor Statistics, Fidelity Investments (AART), as of 11/30/22.

Diversification Important Even Starting in High Inflation

Periods of high inflation tend to lead to greater volatility and a challenging market landscape. Historically, however, fleeing to cash once inflation was already high failed to provide better returns over medium- and long-term holding periods. Over the past century, holding a balanced, diversified portfolio when inflation had already hit 4% (or above) far surpassed cash returns over the subsequent 3- to 10-year periods.

LONG-TERM

Real Returns to Diversified Portfolio vs. Cash Starting in Different Inflation Periods (1926–2022)



Past performance is no guarantee of future results. Diversification does not ensure a profit or guarantee against a loss. It is not possible to invest directly in an index. Balanced Portfolio: 42% Domestic Equity—Dow Jones U.S. Total Stock Market Index; 18% Foreign Equity—MSCI ACWI ex USA Index; 35% Investment-Grade (IG) Bonds—Bloomberg U.S. Aggregate Bond Index, 5% Cash—Bloomberg 1-3 Month T-Bills. Inflation: 12-Month rolling CPI-Urban Index. Returns are calculated starting in inflation period but include all subsequent periods for their holding horizon. Source: Bureau of Labor Statistics, Haver Analytics, and Fidelity Investments (AART). Asset class total returns are represented by indexes from the following sources: Fidelity Investments, Bloomberg, ICE BofA, and a Fidelity Investments proprietary analysis of historical asset class performance, which is not indicative of future performance, as of 4/30/22.

Fidelity INVESTMENTS

Performance Rotations Underscore Need for Diversification

The performance of different assets has fluctuated widely from year to year, and the magnitude of returns can vary significantly among asset classes in any given year—even among asset classes that are moving in the same direction. A portfolio allocation with a variety of global assets illustrates the potential benefits of diversification.

Periodic Table of Returns

2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
56%	32%	35%	35%	40%	5%	79%	28%	8%	20%	39%	28%	5%	21%	38%	0%	36%	38%	43%	16%
47%	26%	21%	33%	16%	-20%	58%	27%	8%	19%	34%	14%	3%	18%	30%	-2%	31%	20%	29%	-8%
39%	21%	14%	27%	12%	-26%	37%	19%	4%	18%	33%	13%	1%	18%	26%	-2%	26%	18%	27%	-11%
37%	18%	12%	22%	11%	-34%	32%	18%	4%	18%	32%	12%	1%	12%	22%	-3%	26%	18%	26%	-13%
31%	17%	7%	18%	7%	-36%	28%	17%	2%	16%	23%	11%	1%	12%	15%	-4%	26%	14%	25%	-14%
31%	11%	5%	16%	6%	-36%	27%	16%	2%	16%	19%	6%	0%	11%	15%	-4%	22%	8%	17%	-16%
29%	11%	5%	12%	5%	-37%	26%	15%	0%	16%	7%	5%	-4%	9%	13%	-9%	22%	8%	15%	-18%
28%	9%	5%	11%	2%	-38%	20%	15%	-4%	15%	3%	3%	-4%	8%	9%	-11%	18%	6%	11%	-20%
24%	8%	4%	9%	-1%	-38%	19%	12%	-12%	11%	-2%	-2%	-5%	7%	8%	-11%	14%	3%	5%	-20%
19%	7%	3%	4%	-2%	-43%	18%	8%	-13%	4%	-2%	-4%	-15%	3%	4%	-11%	9%	-3%	-2%	-24%
4%	4%	2%	2%	-16%	-53%	6%	7%	-18%	-1%	-10%	-17%	-25%	2%	1%	-14%	8%	-8%	-3%	-29%

Legend

- Commodities
- Value Stocks
- High-Yield Bonds
- Investment-Grade Bonds
- Foreign-Developed Country Stocks
- 60% Large Cap 40% IG Bonds
- Large Cap Stocks
- Emerging-Market Stocks
- Small Cap Stocks
- REITs
- Growth Stocks

Past performance is no guarantee of future results. Diversification/asset allocation does not ensure a profit or guarantee against a loss. It is not possible to invest directly in an index. All indexes are unmanaged. See Appendix for important index information. Asset classes represented by: Commodities—Bloomberg Commodity Index; Emerging-Market Stocks—MSCI Emerging Markets Index; Non-U.S. Developed-Country Stocks—MSCI EAFE Index; Growth Stocks—Russell 3000 Growth Index; High-Yield Bonds—ICE BofA U.S. High Yield Index; Investment-Grade Bonds—Bloomberg U.S. Aggregate Bond Index; Large Cap Stocks—S&P 500 index; Real Estate/REITs—FTSE NAREIT All Equity Total Return Index; Small Cap Stocks—Russell 2000 Index; Value Stocks—Russell 3000 Value Index. Source: Morningstar, Standard & Poor's, Haver Analytics, Fidelity Investments (AART), as of 12/31/22.

Appendix: Important Information

Information presented herein is for discussion and illustrative purposes only and is not a recommendation or an offer or a solicitation to buy or sell any securities. Views expressed are as 12/31/22, based on the information available at that time, and may change based on market and other conditions. Unless otherwise noted, the opinions provided are those of the authors and not necessarily those of Fidelity Investments or its affiliates. Fidelity does not assume any duty to update any of the information.

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Fidelity does not provide legal or tax advice and the information provided herein is general in nature and should not be considered legal or tax advice. Consult with an attorney or a tax professional regarding your specific legal or tax situation.

Past performance and dividend rates are historical and do not guarantee future results.

Investing involves risk, including risk of loss.

Diversification does not ensure a profit or guarantee against a loss.

Index or benchmark performance presented in this document does not reflect the deduction of advisory fees, transaction charges, and other expenses, which would reduce performance.

Indexes are unmanaged. It is not possible to invest directly in an index.

Although bonds generally present less short-term risk and volatility than stocks, bonds do contain interest rate risk (as interest rates rise, bond prices usually fall, and vice versa) and the risk of default, or the risk that an issuer will be unable to make income or principal payments.

Additionally, bonds and short-term investments entail greater inflation risk—or the risk that the return of an investment will not keep up with increases in the prices of goods and services—than stocks. Increases in real interest rates can cause the price of inflation-protected debt securities to decrease.

Stock markets, especially non-U.S. markets, are volatile and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. Foreign securities are subject to interest rate, currency exchange rate, economic, and political risks, all of which are magnified in emerging markets. The securities of smaller, less well-known companies can be more volatile than those of larger companies.

There is no guarantee that a factor-based investing strategy will enhance performance or reduce risk. Before investing, make sure you understand how a factor investment strategy may differ from a more traditional index-based or actively managed approach. Depending on market conditions, factor-based investments may underperform compared to investments that seek to track a market-capitalization-weighted index or investments that employ full active management.

Growth stocks can perform differently from the market as a whole and from other types of stocks and can be more volatile than other types of stocks. Value stocks can perform differently from other types of stocks and can continue to be undervalued by the market for long periods of time.

Lower-quality debt securities generally offer higher yields but also involve greater risk of default or price changes due to potential changes in the credit quality of the issuer. Any fixed income security sold or redeemed prior to maturity may be subject to loss.

Floating rate loans generally are subject to restrictions on resale, and sometimes trade infrequently in the secondary market; as a result, they may be more difficult to value, buy, or sell. A floating rate loan may not be fully collateralized and therefore may decline significantly in value.

The municipal market can be affected by adverse tax, legislative, or political changes, and by the financial condition of the issuers of municipal securities. Interest income generated by municipal bonds is generally expected to be exempt from federal income taxes and, if the bonds are held by an investor resident in the state of issuance, from state and local income taxes. Such interest income may be subject to federal and/or state alternative minimum taxes. Investing in municipal bonds for the purpose of generating tax-exempt income may not be appropriate for investors in all tax brackets. Generally, tax-exempt municipal securities are not appropriate holdings for tax-advantaged accounts such as IRAs and 401(k)s.

The commodities industry can be significantly affected by commodity prices, world events, import controls, worldwide competition, government regulations, and economic conditions.

The gold industry can be significantly affected by international monetary and political developments, such as currency devaluations or revaluations, central bank movements, economic and social conditions within a country, trade imbalances, or trade or currency restrictions between countries.

Changes in real estate values or economic downturns can have a significant negative effect on issuers in the real estate industry.

Leverage can magnify the impact that adverse issuer, political, regulatory, market, or economic developments have on a company. In the event of bankruptcy, a company's creditors take precedence over the company's stockholders.

Fidelity INVESTMENTS®

Appendix: Important Information

Market Indexes

Index returns on slide 25 represented by: Growth—Russell 3000® Growth Index; Small Cap—Russell 2000® Index; Large Cap—S&P 500®; Mid Cap—Russell Midcap® Index; Value—Russell 3000® Value Index; ACWI ex USA—MSCI ACWI (All Country World Index) ex USA Index; Japan—MSCI Japan Index; EAFE Small Cap—MSCI EAFE Small Cap Index; EAFE—MSCI EAFE (Europe, Australasia, Far East) Index; Europe—MSCI Europe Index; Canada—MSCI Canada Index; EM Asia—MSCI Emerging Markets Asia Index; Emerging Markets (EM)—MSCI EM Index; EMEA (Europe, Middle East, and Africa)—MSCI EM EMEA Index; Latin America—MSCI EM Latin America Index; Gold—Gold Bullion Price, LBMA PM Fix; Commodities—Bloomberg Commodity Index; High Yield—ICE BofA U.S. High Yield Index; Leveraged Loan—S&P/LSTA Leveraged Loan Index; TIPS (Treasury Inflation-Protected Securities)—Bloomberg U.S. TIPS Index; EM Debt (Emerging-Market Debt)—JP Morgan EMBI Global Index; CMBS (Commercial Mortgage-Backed Securities)—Bloomberg Investment-Grade CMBS Index; Credit—Bloomberg U.S. Credit Bond Index; Municipal—Bloomberg Municipal Bond Index; Long Government & Credit (Investment-Grade)—Bloomberg Long Government & Credit Index; ABS (Asset-Backed Securities)—Bloomberg ABS Index; Aggregate—Bloomberg U.S. Aggregate Bond Index; Agency—Bloomberg U.S. Agency Index; Treasuries—Bloomberg U.S. Treasury Index; MBS (Mortgage-Backed Securities)—Bloomberg MBS Index; Momentum—Fidelity U.S. Momentum Factor Index TR; Low Volatility—Fidelity U.S. Low Volatility Factor Index; Quality—Fidelity U.S. Quality Factor Index; Value—Fidelity U.S. Value Factor Index; Size—Fidelity Small-Mid Factor Index; Yield—Fidelity High Dividend Index.

Bloomberg U.S. Aggregate Bond is a broad-based, market value-weighted benchmark that measures the performance of the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market. **Bloomberg U.S. Credit Bond Index** is a market value-weighted index of investment-grade corporate fixed-rate debt issues with maturities of one year or more.

Bloomberg U.S. Treasury Bond Index is a market value-weighted index of public obligations of the U.S. Treasury with maturities of one year or more. **Bloomberg U.S. Treasury Inflation-Protected Securities (TIPS) Index (Series-L)** is a market value-weighted index that measures the performance of inflation-protected securities issued by the U.S. Treasury. **Bloomberg Long U.S. Government Credit Index** includes all publicly issued U.S. government and corporate securities that have a remaining maturity of 10 or more years, are rated investment grade, and have $250 million or more of outstanding face value. **Bloomberg U.S. Agency Bond Index** is a market value-weighted index of U.S. Agency government and investment-grade corporate fixed-rate debt issues. **Bloomberg Municipal Bond Index** is a market value-weighted index of investment-grade municipal bonds with maturities of one year or more.

Bloomberg U.S. MBS Index is a market value-weighted index of fixed-rate securities that represent interests in pools of mortgage loans, including balloon mortgages, with original terms of 15 and 30 years that are issued by the Government National Mortgage Association (GNMA), the Federal National Mortgage Association (FNMA), and the Federal Home Loan Mortgage Corp. (FHLMC).

Bloomberg CMBS Index is designed to mirror commercial mortgage-backed securities of investment-grade quality (Baa3/BBB-/BBB- or above) using Moody's, S&P, and Fitch, respectively, with maturities of at least one year. **Bloomberg ABS Index** is a market value-weighted index that covers fixed-rate asset-backed securities with average lives greater than or equal to one year and that are part of a public deal; the index covers the following collateral types: credit cards, autos, home equity loans, stranded-cost utility (rate-reduction bonds), and manufactured housing.

ICE BofA U.S. High Yield Index is a market capitalization-weighted index of U.S. dollar-denominated, below-investment-grade corporate debt publicly issued in the U.S. market.

JPM® EMBI Global Index, and its country sub-indexes, tracks total returns for the U.S. dollar-denominated debt instruments issued by emerging-market sovereign and quasi-sovereign entities, such as Brady bonds, loans, and Eurobonds.

Standard & Poor's/Loan Syndications and Trading Association (S&P/LSTA) Leveraged Performing Loan Index is a market value-weighted index designed to represent the performance of U.S. dollar-denominated institutional leveraged performing loan portfolios (excluding loans in payment default) using current market weightings, spreads, and interest payments.

Bloomberg Commodity Index measures the performance of the commodities market. It consists of exchange traded futures contracts on physical commodities that are weighted to account for the economic significance and market liquidity of each commodity.

Russell 3000® Index is a market capitalization-weighted index designed to measure the performance of the 3,000 largest companies in the U.S. equity market. **Russell 3000 Growth Index** is a market capitalization-weighted index designed to measure the performance of the broad growth segment of the U.S. equity market. It includes those Russell 3000 Index companies with higher price-to-book ratios and higher forecasted growth rates. **Russell 3000 Value Index** is a market capitalization-weighted index designed to measure the performance of the small to mid cap value segment of the U.S. equity market. It includes those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth rates. **Russell Midcap® Index** is a market capitalization-weighted index designed to measure the performance of the mid cap segment of the U.S. equity market. It contains approximately 800 of the smallest securities in the Russell 1000 Index.

Russell 1000® Index is a market capitalization-weighted index designed to measure the performance of the large cap segment of the U.S. equity market. **Russell 1000 Growth Index** is a market capitalization-weighted index designed to measure the performance of the large cap growth segment of the U.S. equity market. It includes those Russell 1000 Index companies with higher price-to-book ratios and higher forecasted growth rates. **Russell 1000 Value Index** is a market capitalization-weighted index designed to measure the performance of the large cap value segment of the U.S. equity market. It includes those Russell 1000 Index companies with lower price-to-book ratios and lower expected growth rates.

Russell 2000® Index is a market capitalization-weighted index designed to measure the performance of the small cap segment of the U.S. equity market. It includes approximately 2,000 of the smallest securities in the Russell 3000 Index.

Appendix: Important Information

Market Indexes (continued)

S&P 500® is a market capitalization-weighted index of 500 common stocks chosen for market size, liquidity, and industry group representation to represent U.S. equity performance. S&P 500 is a registered service mark of The McGraw-Hill Companies, Inc., and has been licensed for use by Fidelity Distributors Corporation and its affiliates.

Sectors and **Industries** are defined by Global Industry Classification Standards (GICS®), except where noted otherwise. **S&P 500 sectors**: Consumer Discretionary—companies that tend to be the most sensitive to economic cycles. Consumer Staples—companies whose businesses are less sensitive to economic cycles. Energy—companies whose businesses are dominated by either of the following activities: the construction or provision of oil rigs, drilling equipment, and other energy-related services and equipment; or the exploration, production, marketing, refining, and/or transportation of oil and gas products, coal, and consumable fuels. Financials—companies involved in activities such as banking, consumer finance, investment banking and brokerage, asset management, insurance and investments, and mortgage real estate investment trusts (REITs). Health Care—companies in two main industry groups: health care equipment suppliers, manufacturers, and providers of health care services; and companies involved in research, development, production, and marketing of pharmaceuticals and biotechnology products. Industrials—companies that manufacture and distribute capital goods, provide commercial services and supplies, or provide transportation services. Information Technology—companies in technology software and services and technology hardware and equipment. Materials—companies that engage in a wide range of commodity-related manufacturing. Real Estate—companies in real estate development, operations, and related services, as well as equity REITs. Communication Services—companies that facilitate communication and offer related content through various media. Utilities—companies considered electric, gas, or water utilities, or that operate as independent producers and/or distributors of power.

Dow Jones U.S. Total Stock Market Index℠ is a full market capitalization-weighted index of all equity securities of U.S.-headquartered companies with readily available price data.

MSCI All Country World Index (ACWI) is a market capitalization-weighted index designed to measure investable equity market performance for global investors of developed and emerging markets. **MSCI ACWI (All Country World Index) ex USA Index** is a market capitalization-weighted index designed to measure investable equity market performance for global investors of large and mid cap stocks in developed and emerging markets, excluding the United States.

MSCI Europe, Australasia, Far East Index (EAFE) is a market capitalization-weighted index designed to measure the investable equity market performance for global investors in developed markets, excluding the U.S. and Canada. **MSCI EAFE Small Cap Index** is a market capitalization-weighted index designed to measure the investable equity market performance of small cap stocks for global investors in developed markets, excluding the U.S. and Canada. **MSCI Europe Index** is a market capitalization-weighted index that is designed to measure the investable equity market performance for global investors of the developed markets in Europe. **MSCI Canada Index** is a market capitalization-weighted index designed to measure equity market performance in Canada. **MSCI Japan Index** is a market capitalization-weighted index designed to measure equity market performance in Japan.

MSCI Emerging Markets (EM) Index is a market capitalization-weighted index designed to measure the investable equity market performance for global investors in emerging markets. **MSCI EM Asia Index** is a market capitalization-weighted index designed to measure equity market performance of EM countries of Asia. **MSCI EM Europe, Middle East, and Africa (EMEA) Index** is a market capitalization-weighted index designed to measure the investable equity market performance for global investors in the EM countries of Europe, the Middle East, and Africa. **MSCI EM Latin America Index** is a market capitalization-weighted index designed to measure the investable equity market performance for global investors in Latin America.

FTSE® National Association of Real Estate Investment Trusts (NAREIT®) All REITs Index is a market capitalization-weighted index that is designed to measure the performance of all tax-qualified REITs listed on the NYSE, the American Stock Exchange, or the NASDAQ National Market List. **FTSE® NAREIT® Equity REIT** Index is an unmanaged market value-weighted index based on the last closing price of the month for tax-qualified REITs listed on the New York Stock Exchange (NYSE). **FTSE NAREIT All Equity Total Return Index** is a market capitalization-weighted index that is designed to measure the performance of tax-qualified real estate investment trusts (REITs) listed on the New York Stock Exchange, the NYSE MKT LLC, or the NASDAQ National Market List.

Fidelity U.S. Low Volatility Factor Index is designed to reflect the performance of stocks of large and mid-capitalization U.S. companies with lower volatility than the broader market. **Fidelity U.S. Value Factor Index** is designed to reflect the performance of stocks of large and mid-capitalization U.S. companies that have attractive valuations. **Fidelity U.S. Quality Factor Index** is designed to reflect the performance of stocks of large and mid-capitalization U.S. companies with a higher quality profile than the broader market. **Fidelity Small-Mid Factor Index** is designed to reflect the performance of stocks of small and mid-capitalization U.S. companies with attractive valuations, high quality profiles, positive momentum signals, and lower volatility than the broader market. **Fidelity U.S. Momentum Factor Index** is designed to reflect the performance of stocks of large and mid-capitalization U.S. companies that exhibit positive momentum signals. **Fidelity High Dividend Index** is designed to reflect the performance of stocks of large and mid-capitalization dividend-paying companies that are expected to continue to pay and grow their dividends.

The London Bullion Market Association (LBMA) publishes the international benchmark price of gold in USD, twice daily. The LBMA gold price auction takes place by ICE Benchmark Administration (IBA) at 10:30 a.m. and 3:00 p.m.

Consumer Price Index (CPI) is an inflationary indicator published monthly by the U.S. Bureau of Labor Statistics that measures the change in the cost of a fixed basket of products and services, including housing, electricity, food, and transportation.

Personal consumption expenditure (PCE) indexes, published by the U.S. Bureau of Economic Analysis, are a primary measure of actual and imputed household expenditures on goods (durable and non-durable) and services. Core PCE, the Federal Reserve's preferred measure of consumer price inflation, excludes volatile food and energy prices. Definitions, data, and related resources regarding CPI and PCE variants are available at https://www.atlantafed.org/research/inflationproject/underlying-inflation-dashboard.

Appendix: Important Information

Market Indexes (continued)

Bloomberg Commodity Total Return Sub-indexes are composed of futures contracts and reflect the returns on fully collateralized commodity investments in metals, agriculture, energy, and precious metals. The sub-indexes are the Bloomberg Industrial Metals Subindex Total Return Index, Bloomberg Agriculture Subindex Total Return Index, Bloomberg Energy Subindex Total Return Index, and the Bloomberg Precious Metals Subindex Total Return Index.

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Personal and workplace investment products are provided by Fidelity Brokerage Services LLC, Member NYSE, SIPC.

Institutional asset management is provided by FIAM LLC and Fidelity Institutional Asset Management Trust Company.

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