

# Market Intel Exchange

Market data and insights from Lincoln and industry asset management partners

As of 8/31/2022

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**Market Intel Exchange.**

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Investments

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# What's inside?

<b>On the minds of investors</b>		<b>Equities</b>		<b>Asset allocation</b>	
<a href="#"><u>Three key themes on the minds of investors</u></a>	5	<a href="#"><u>S&amp;P 500: Cumulative returns</u></a>	24	<a href="#"><u>60/40 portfolio returns</u></a>	44
<a href="#"><u>Inflation levels remain high</u></a>	6	<a href="#"><u>S&amp;P 500: Valuation measures</u></a>	25	<a href="#"><u>60/40 portfolio return expectations</u></a>	45
<a href="#"><u>Inflation showing early signs of rolling over</u></a>	7	<a href="#"><u>Equity valuations and subsequent returns</u></a>	26	<a href="#"><u>The income gap</u></a>	46
<a href="#"><u>Fed tightening policy in response to inflation</u></a>	8	<a href="#"><u>Consumer confidence and subsequent S&amp;P returns</u></a>	27	<a href="#"><u>Cash on the sidelines</u></a>	47
<a href="#"><u>U.S. economy still relatively strong, but showing signs of slowing</u></a>	9	<a href="#"><u>Stock market in rising rate environment</u></a>	28	<a href="#"><u>Periodic table of investment returns</u></a>	48
<a href="#"><u>Bear markets breakdown</u></a>	10	<a href="#"><u>Growth vs. Value leadership rotation</u></a>	29		
<a href="#"><u>Embrace opportunity for the next bull</u></a>	11	<a href="#"><u>Growth vs. Value style characteristics</u></a>	30		
		<a href="#"><u>S&amp;P 500: Top 5 stocks</u></a>	31		
		<a href="#"><u>S&amp;P 500: Calendar returns and intra-year declines</u></a>	32		
		<a href="#"><u>S&amp;P 500: Returns and market volatility</u></a>	33		
		<a href="#"><u>International vs. domestic equity returns</u></a>	34		
		<a href="#"><u>International vs. domestic equity valuations</u></a>	35		
<b>Views from our network</b>		<b>Fixed income</b>		<b>Foundations</b>	
<a href="#"><u>What we're hearing from our network</u></a>	13	<a href="#"><u>U.S. Treasury yield</u></a>	37	<a href="#"><u>Market resiliency</u></a>	50
<a href="#"><u>Asset class sentiment from our network</u></a>	14	<a href="#"><u>Yield curve</u></a>	38	<a href="#"><u>Your response to volatility matters</u></a>	51
		<a href="#"><u>Core bonds: Total return breakdown</u></a>	39	<a href="#"><u>Active vs. passive fund performance</u></a>	52
		<a href="#"><u>Core bonds: Index characteristics</u></a>	40	<a href="#"><u>Life expectancy probabilities</u></a>	53
		<a href="#"><u>Core bonds: Starting yields and subsequent returns</u></a>	41	<a href="#"><u>The impact of sequence of returns risk</u></a>	54
		<a href="#"><u>Income assets: Yields and risk</u></a>	42	<a href="#"><u>Missed best days</u></a>	55
				<a href="#"><u>Mathematics of loss</u></a>	56
				<a href="#"><u>Purchasing power erosion</u></a>	57
				<a href="#"><u>Time in the market, not timing the market</u></a>	58
				<a href="#"><u>Impact of taxes</u></a>	59
<b>Economy</b>					
<a href="#"><u>Key economic and market metrics</u></a>	16				
<a href="#"><u>U.S. real GDP</u></a>	17				
<a href="#"><u>Government spending outpacing revenue</u></a>	18				
<a href="#"><u>Consumer prices on the rise</u></a>	19				
<a href="#"><u>Inflation components over time</u></a>	20				
<a href="#"><u>Stock and bond returns in inflationary regimes</u></a>	21				
<a href="#"><u>Midterm elections: Potential for higher volatility</u></a>	22				

On the  
minds of  
investors

# Three key themes on the minds of investors

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Inflation and the Fed's response



Recession risk

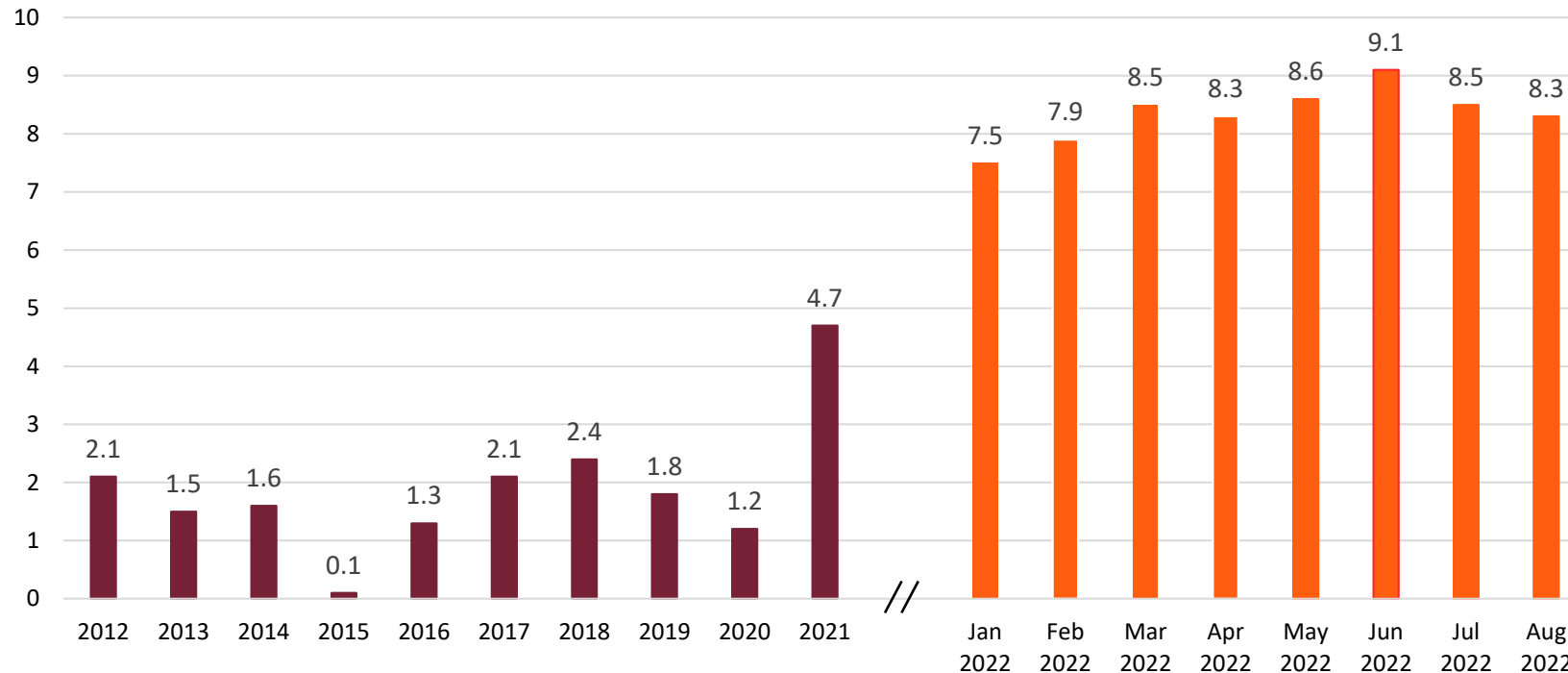


Bear markets



# Inflation levels remains high

U.S. Consumer Price Index, annual average inflation (2012–2021), not seasonally adjusted, and 2022 monthly inflation % change YOY.



## What is this chart showing?

This chart shows the U.S. annual inflation rate over time as well as the latest monthly readings.

## Why is it important?

High and sustained inflation has historically had a negative impact on economic growth and asset returns. The June 2022 inflation reading was the highest since 1981.

Source: U.S. Bureau of Labor Statistics. The Consumer Price Index (CPI) is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. This measure includes food and energy, which tend to have more price volatility and whose price shocks cannot be damped through monetary policy.

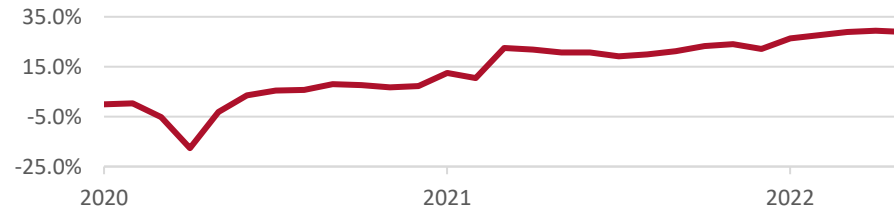
# Inflation showing early signs of rolling over

## Drivers of inflation

### Consumer demand

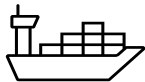


Advance retail sales: Retail trade, monthly, seasonally adjusted

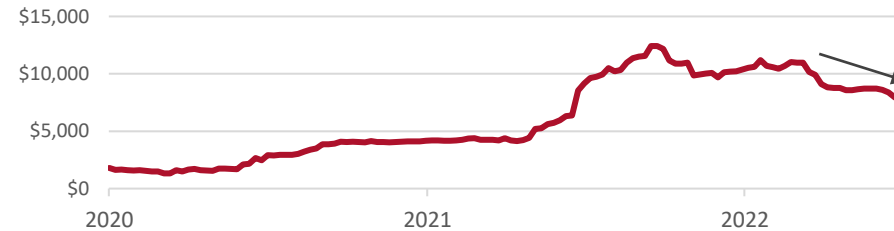


**+29%**  
Since January 2020

### Supply chain disruptions



Rate to ship a 40 ft. container from Shanghai to Los Angeles

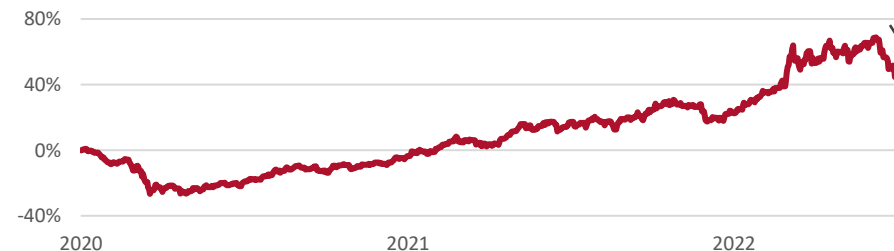


**+327%**  
Since January 2020

### Commodity prices



Bloomberg Commodity Index, percentage change



**+45%**  
Since January 2020

## What is this chart showing?

This chart shows trends in three macro factors that have been contributing to inflationary pressures.

## Why is it important?

The combination of high consumer demand for goods and services, along with supply chain disruptions and a tight labor market, have been primary contributors pushing inflation to levels not seen in four decades.

The war in Ukraine has also contributed to a surge in commodity prices, which are important inputs into nearly all aspects of the global economy.

As of the end of the second quarter, positive signs have begun to emerge that inflationary pressures may be rolling over.

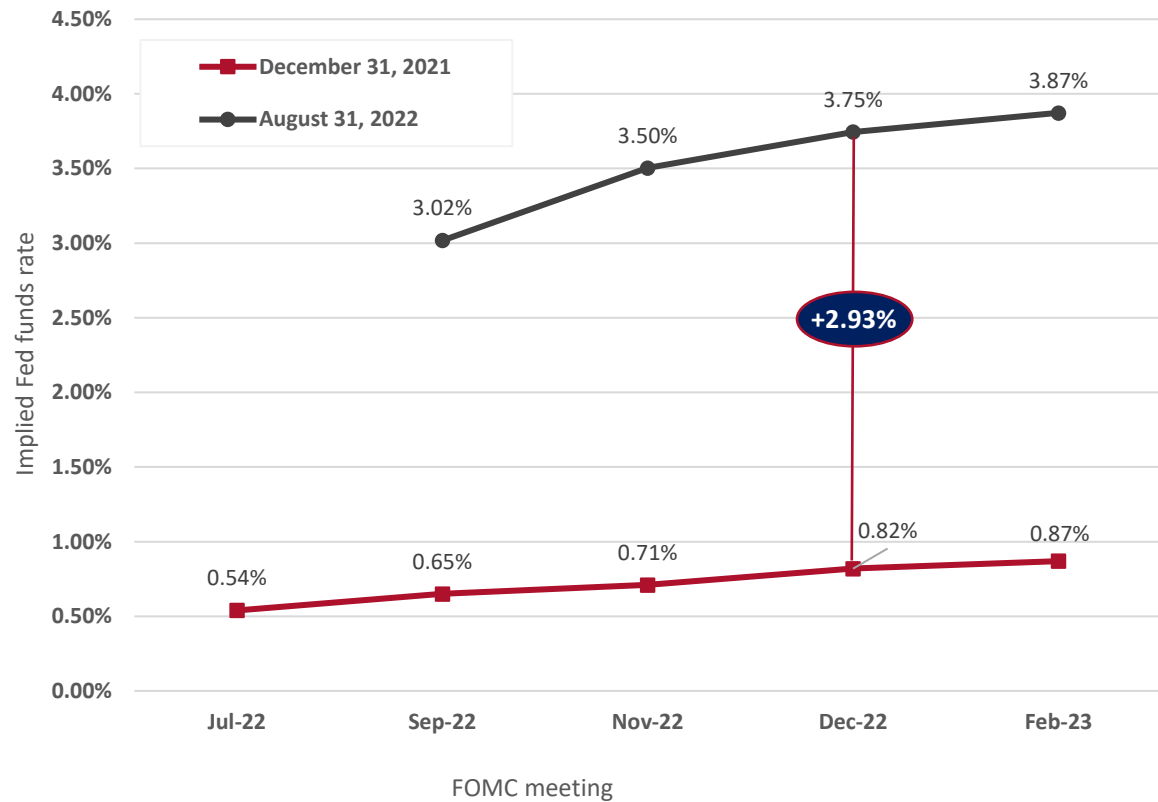
Supply chains are normalizing, bringing down transportation costs for goods, and commodity prices, as measured by the Bloomberg Commodity Index, are down more than 14% from a recent peak.

Source: U.S. Census Bureau, FRED; Federal Reserve Bank of St. Louis; Bloomberg – The World Container Index (WCI) Shanghai to Los Angeles; Morningstar Direct. All data from Jan 1, 2020, thru Jun 30, 2022



# Fed tightening policy in response to inflation

Implied Fed funds rate priced by the market following scheduled FOMC meetings.



2022 Fed rate hikes	
Jan.	0 bps
Mar.	+25 bps
May.	+50 bps
Jun.	+75 bps
Jul.	75 bps
Sep.	25–50 bps*
Nov.	25–50 bps*
Dec.	0–25 bps*

\*Market expectations as of 8/31/22.

## What is this chart showing?

This chart shows how market expectations for the Federal Reserve's policy rate have changed since the beginning of the year.

## Why is it important?

Market expectations for future rate hikes have changed meaningfully from year-end and are now pricing in a federal funds rate in the range of 3.25-3.5% by the end of 2022.

As an overnight lending rate for banks, the federal funds rate influences consumer and business borrowing costs, including rates on mortgages, credit cards, savings accounts, loans and corporate debt. The Fed uses rate hikes as a tool to attempt to lower inflation by cooling demand and holding down prices.

Source: Bloomberg. As of August 31, 2022. The implied overnight policy rate, also known as the federal funds rate, is the interest rate charged to banks and other lending institutions on unsecured loans borrowed overnight.





# U.S. economy showing signs of slowing

**ClearBridge**  
Investments



This chart shows ClearBridge Investments' U.S. Recession Risk Dashboard, which uses twelve different economic indicators to assess the overall risk of recession.

Each individual indicator can signal expansion, caution or recession in the economy. The signals from each of the twelve indicators are then combined into an overall dashboard signal of green, yellow or red.

	August 31, 2022	2020	2007–2009	2001	
Consumer	Housing permits	↑	↑	×	●
	Job sentiment	↑	●	×	×
	Jobless claims	↑	↑	●	×
	Retail sales	×	↑	×	×
	Wage growth	×	×	×	×
Business activity	Commodities	×	↑	×	×
	ISM new orders	●	●	×	×
	Profit margins	↑	×	×	×
	Truck shipments	↑	↑	●	×
Financial	Credit spreads	×	↑	×	×
	Money supply	×	↑	×	×
	Yield curve	●	×	×	×
Overall signal	×	●	×	×	

↑ Expansion      ● Caution      × Recession

Source: BLS, Federal Reserve, Census Bureau, ISM, BEA, American Chemistry Council, American Trucking Association, Conference Board, and Bloomberg. Data as of August 31, 2022. The ClearBridge Recession Risk Dashboard was created in January 2016. References to the signals the ClearBridge U.S. Recession Risk Dashboard would have sent in the years prior to January 2016 are based on how the underlying data was reflected in the component indicators at the time.

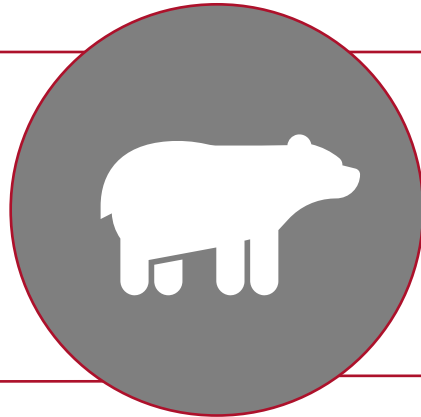
# Bear market breakdown



Overall, markets are positive most of the time. **Bear markets have only comprised about 20 out of 92 years.**



**Half of the S&P 500 Index's strongest days** in the last 20 years occurred during a bear market.



**289 days,  
9.6 months**

Average length  
of a bear  
market.



**991 days,  
2.7 years**

Average length  
of a bull  
market.

**Bear markets have been less frequent since World War II.** Between 1928 and 1945 there were 12 bear markets, or one every 1.4 years. Since 1945, there have been 14, or one every 5.4 years.

## What is this chart showing?

This chart shows context on the S&P 500 bear markets throughout its history going back to 1929.

## Why is it important?

The S&P 500 Index fell into bear market territory this June for the first time since 2020. Although recession fears loom, a bear market doesn't necessarily indicate an oncoming economic recession. It's important for investors to remain focused on the long term and remember that while bear markets can be uncomfortable, stocks have always fully recovered and gone on to set new highs.



# Embrace the opportunity for the next bull

Drawdown period	Total drawdown	Drawdown length (in months)	-20% date	Return 1 yr. later	Return 3 yrs. later	Return 5 yrs. later
05/29/46 – 05/17/47	-28.8%	11.6	09/09/46	-0.8%	2.7%	56.8%
06/15/48 – 06/13/49	-20.6%	11.9	06/13/49	42.1%	79.4%	110.9%
08/02/56 – 10/22/57	-21.6%	14.7	10/21/57	31.0%	37.6%	42.0%
12/12/61 – 06/26/62	-28.0%	6.4	05/28/62	26.1%	58.3%	63.9%
02/09/66 – 10/07/66	-22.2%	7.9	08/29/66	24.6%	27.3%	34.8%
11/29/68 – 05/26/70	-36.1%	17.9	01/29/70	11.9%	35.9%	-11.3%
01/11/73 – 10/03/74	-48.2%	20.7	11/27/73	-26.9%	7.8%	0.1%
11/28/80 – 08/12/82	-27.1%	20.4	02/22/82	30.4%	61.5%	155.8%
08/25/87 – 12/04/87	-33.5%	3.3	10/19/87	24.3%	36.0%	83.1%
03/24/00 – 09/21/01	-36.8%	17.9	03/12/01	-1.2%	-6.2%	8.6%
01/04/02 – 10/09/02	-33.8%	9.1	07/10/02	7.4%	31.7%	66.4%
10/09/07 – 11/20/08	-51.9%	13.4	07/07/08	-29.6%	8.1%	30.3%
01/06/09 – 03/09/09	-27.6%	2.0	02/23/09	47.3%	83.4%	147.0%
02/19/20 – 03/23/20	-33.9%	1.1	03/12/20	59.0%	-	-
<b>Average</b>	<b>-32.1%</b>	<b>11.3</b>		<b>+17.5%</b>	<b>+36%</b>	<b>+61%</b>

## What is this chart showing?

This chart shows bear markets since WWII with the total decline during the drawdown period, total length of drawdown, the date when the drawdown hit 20%, and the 1-, 3-, and 5-year returns following the 20% drawdown point.

## Why is it important?

Although bear markets can be a time of uncertainty and panic, they have historically represented an opportunity for investors.

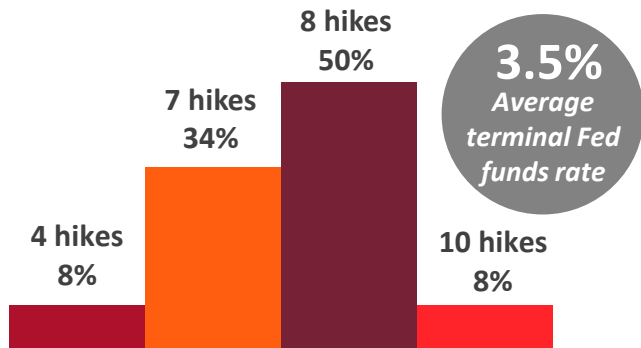
While it is tough to time the bottom, those who invested when the market fell 20%, regardless of how much deeper the decline got, saw an average return 1 year later of +17.5%, 3-year cumulative return of +36%, and 5-year cumulative return of +61%.

Source: Bloomberg, Lincoln Financial Group. S&P 500 Price Return Index. Does not include dividends. All returns are cumulative. Return 1 yr., 3 yrs. and 5 yrs. later are measured from the -20% date. Past performance is not indicative of future returns.

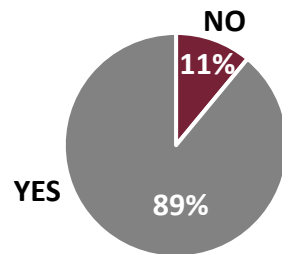
# Views from our network

# What we're hearing from our network

Remaining # of fed funds rate increases in 2022 and 2023



Will the yield curve (i.e. 3 mo. & 10 yr.) invert in 2023?

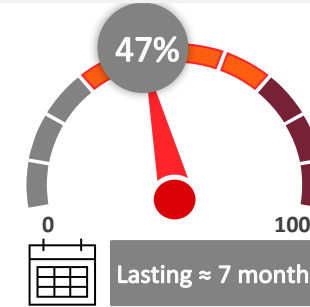


## Expectations from our industry-leading asset management partners

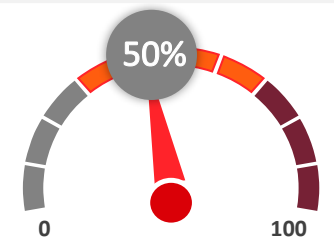
Average year-end expectation of respondents



Will the U.S. enter a recession in the next 12 months?



Will the U.S. experience stagflation in the next 12 months?



Rank in order what would have the most positive effect on equity markets. Improvements in:

- 1 Fed policy (dovish pivot)
- 2 Inflation
- 3 Supply chain
- 4 Russia/Ukraine war

Source: Collection of views from a select group of asset manager partners from our network, dated 7/1/2022. The expectations expressed above are those of the select asset managers only and not necessarily of any Lincoln Financial Group affiliate. Results are not based on any particularized financial situation, or need, and are not intended to be, and should not be construed as, a forecast, research, investment advice or a recommendation for any specific strategy, product or service from any of the participating investment managers. Investors should speak to their financial professionals regarding the investment mix that may be right for them based on their financial situation and investment objectives.

# Asset class sentiment from our network

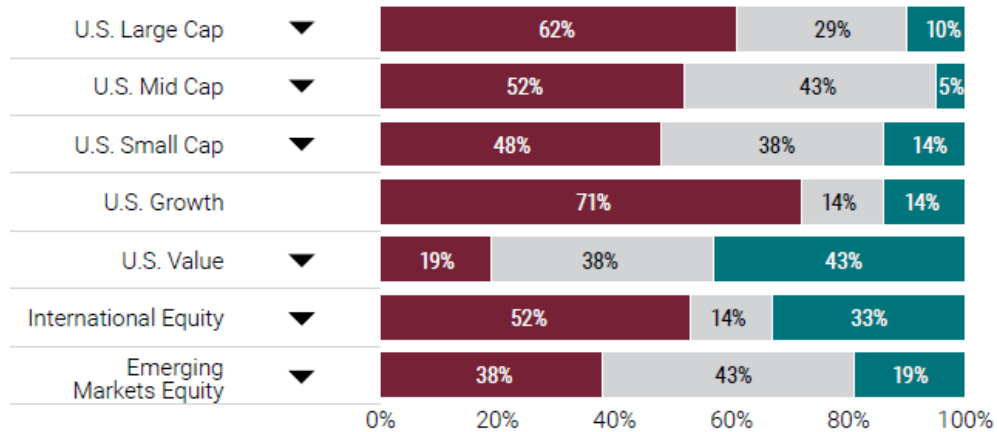
**Bearish:** Potential to underperform its class or subclass on a risk-adjusted basis

**Neutral:** Potential for performance to be in line with asset's historical average

**Bullish:** Potential to outperform its class or subclass on a risk-adjusted basis

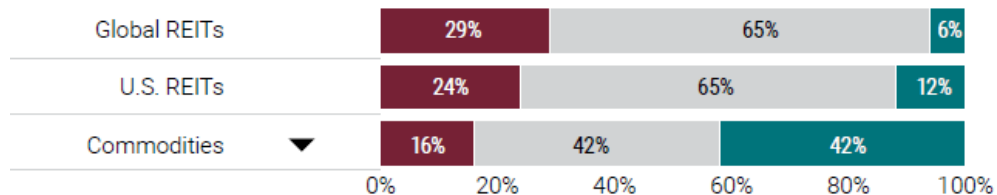
## Equities

vs. prior quarter



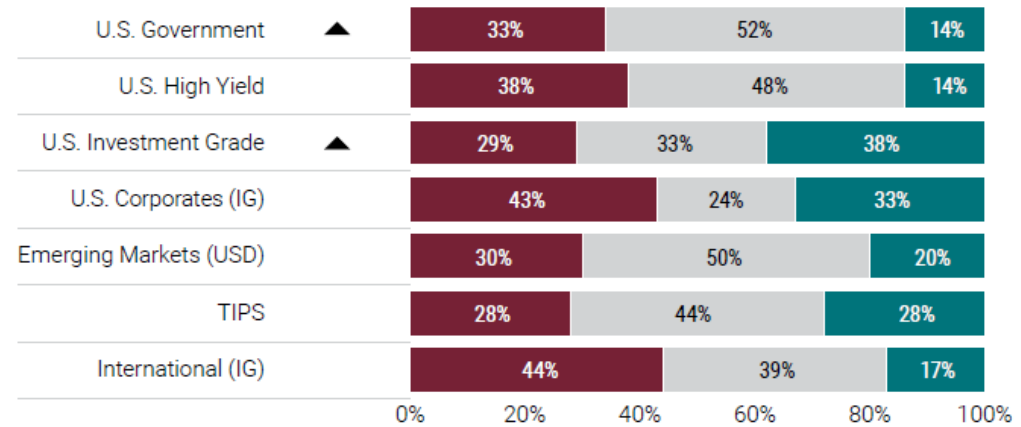
## Alternatives

vs. prior quarter



## Fixed Income

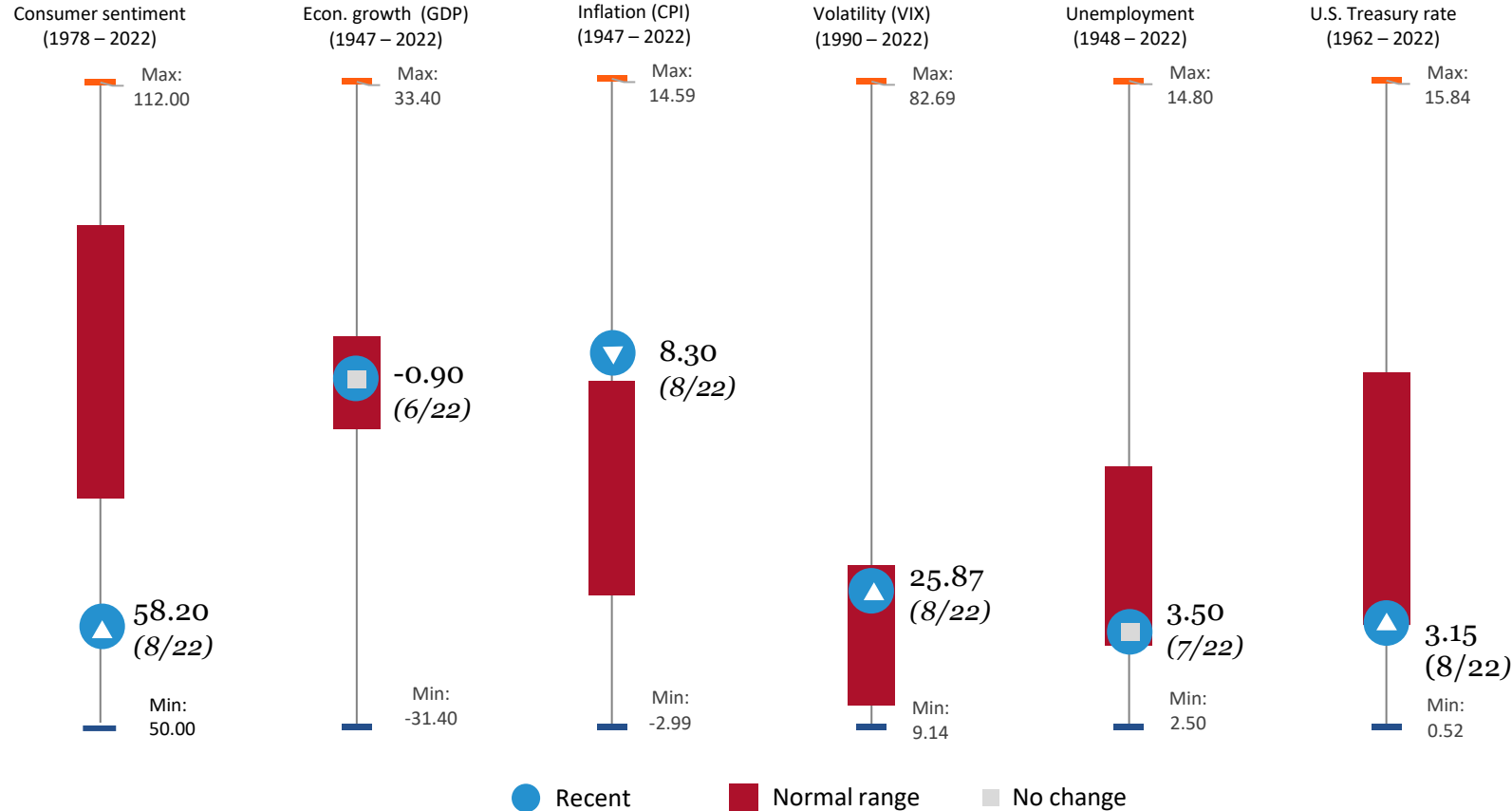
vs. prior quarter



Survey results as of 6/30/22. Survey results may not add up to 100% due to rounding. Every quarter, Lincoln collects, and aggregates in this chart, various asset class sentiments from our network of asset management partners, to provide readers a consensus view from industry leaders on asset class outlooks for the next 12 to 18 months. Asset manager views are compiled each quarter-end through a survey process. This quarter's results include the views of 21 asset managers. The views expressed above are those of the select asset managers only and not necessarily of any Lincoln Financial Group affiliate. The survey results are not based on any particularized financial situation, or need, and are not intended to be, and should not be construed as, a forecast, research, investment advice or a recommendation for any specific strategy, product or service from any of the participating investment managers. Investors should speak to their financial professionals regarding the investment mix that may be right for them based on their financial situation and investment objectives.

# Economy

# Key economic and market metrics



## What is this chart showing?

This chart shows the historical range and recent level of six key economic and market indicators.

## Why is it important?

Investors can use this chart to quickly determine if economic indicators are at, above, or below historical ranges. Indicators that are outside of their normal range may provide insight into the health or direction of the economy and the market.

**Consumer Sentiment** as measured by the Michigan Consumer Sentiment Index is calculated each month on the basis of a household survey of consumers' opinions on current conditions and future expectations of the economy.

**Economic Growth (GDP)** is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time period.

**Inflation (CPI)** is a measure of inflation that calculates the change in the prices of a basket of goods and services. This measure includes food and energy. Core CPI (excludes food and energy) was +4.98% YOY November 2021.

**Volatility VIX** is a real-time market index representing the market's expectations for volatility over the coming 30 days.

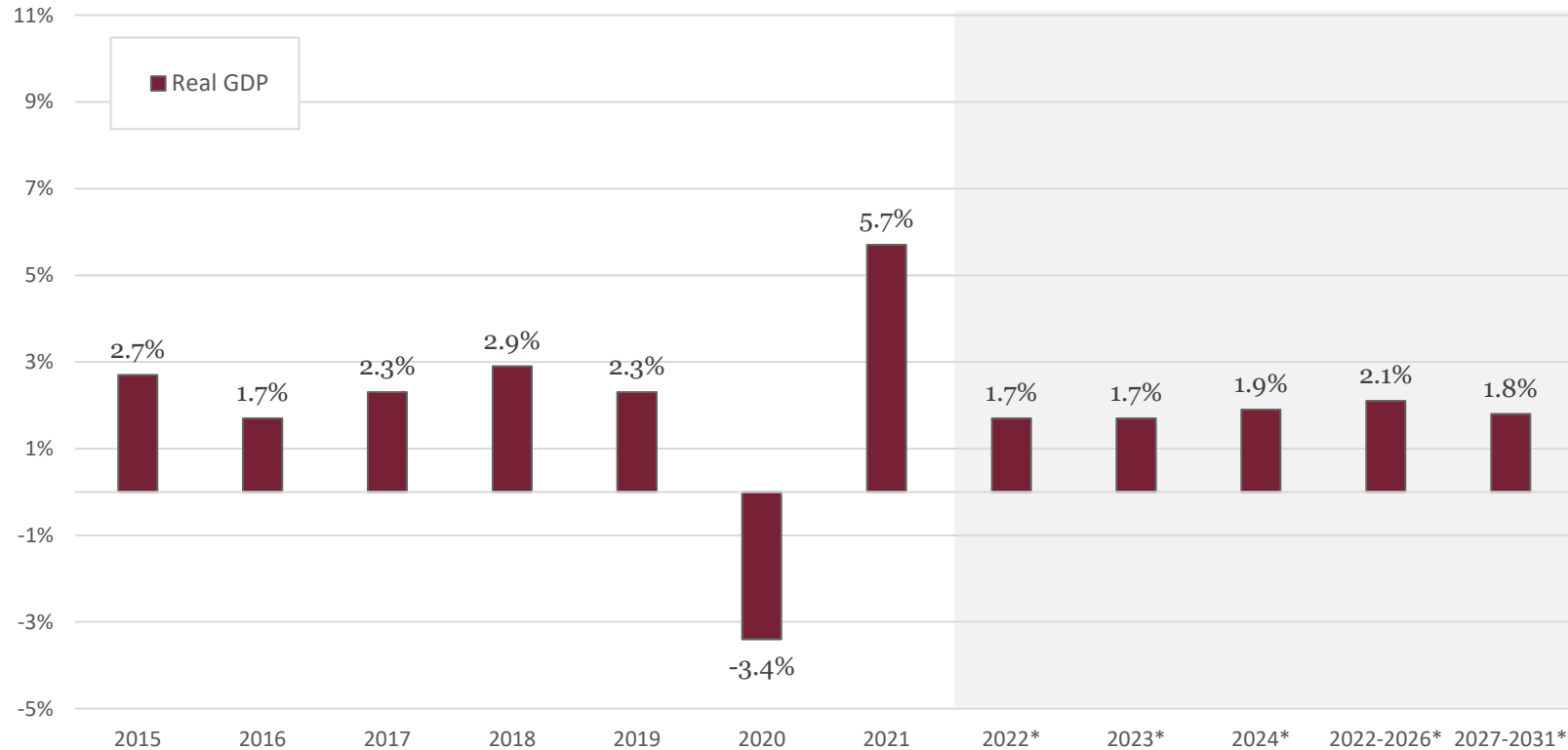
**Unemployment** rate as measured by the U.S. Bureau of Labor Statistics.

Source: Most recent data available as of 9/13/2022. Bloomberg. Arrows in the blue circles are indicative of most recent three-month trend, with exception of GDP, which is based on trend over the previous three quarters. Normal range represents +/- one standard deviation to the mean over timeframe referenced. See Additional Information for more details. **Past performance is not indicative of future returns.**



# U.S. real GDP

Real gross domestic product and projections for calendar years 2015 to 2024 and beyond.



Source: Federal Open Market Committee. \*indicates future projections as of June 2022.

## What is this chart showing?

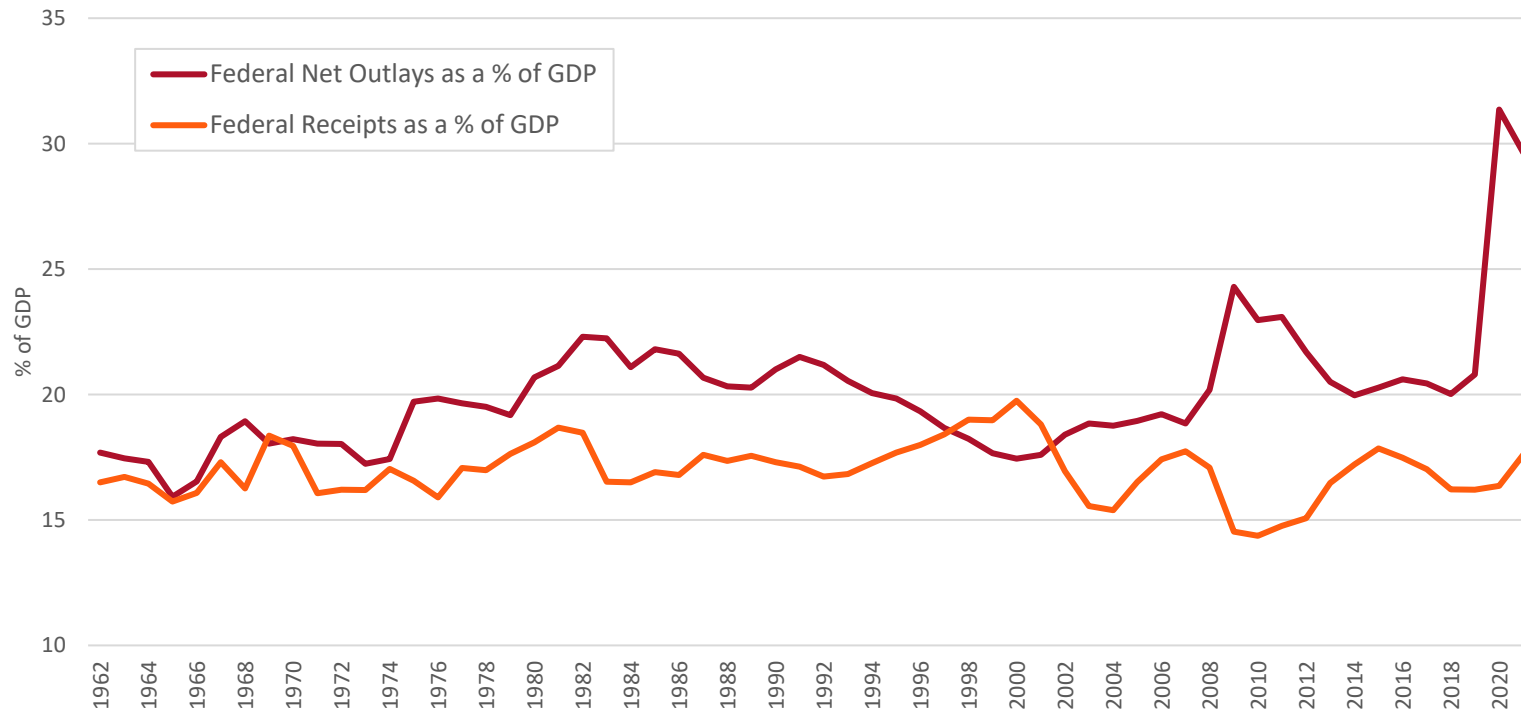
This chart shows historical real GDP, as well as the most recently reported economic growth projections prepared by the Federal Open Market Committee.

## Why is it important?

Economic growth influences many factors that can impact the long-term performance of the markets, including interest rates and corporate earnings growth. As such, these GDP projections can be a valuable input for investors looking to set future portfolio return expectations.

# Government spending outpacing revenue

U.S. federal government spending vs. receipts (1962 – 2021).



Source: Federal Reserve Bank of St. Louis Economic Research.

## What is this chart showing?

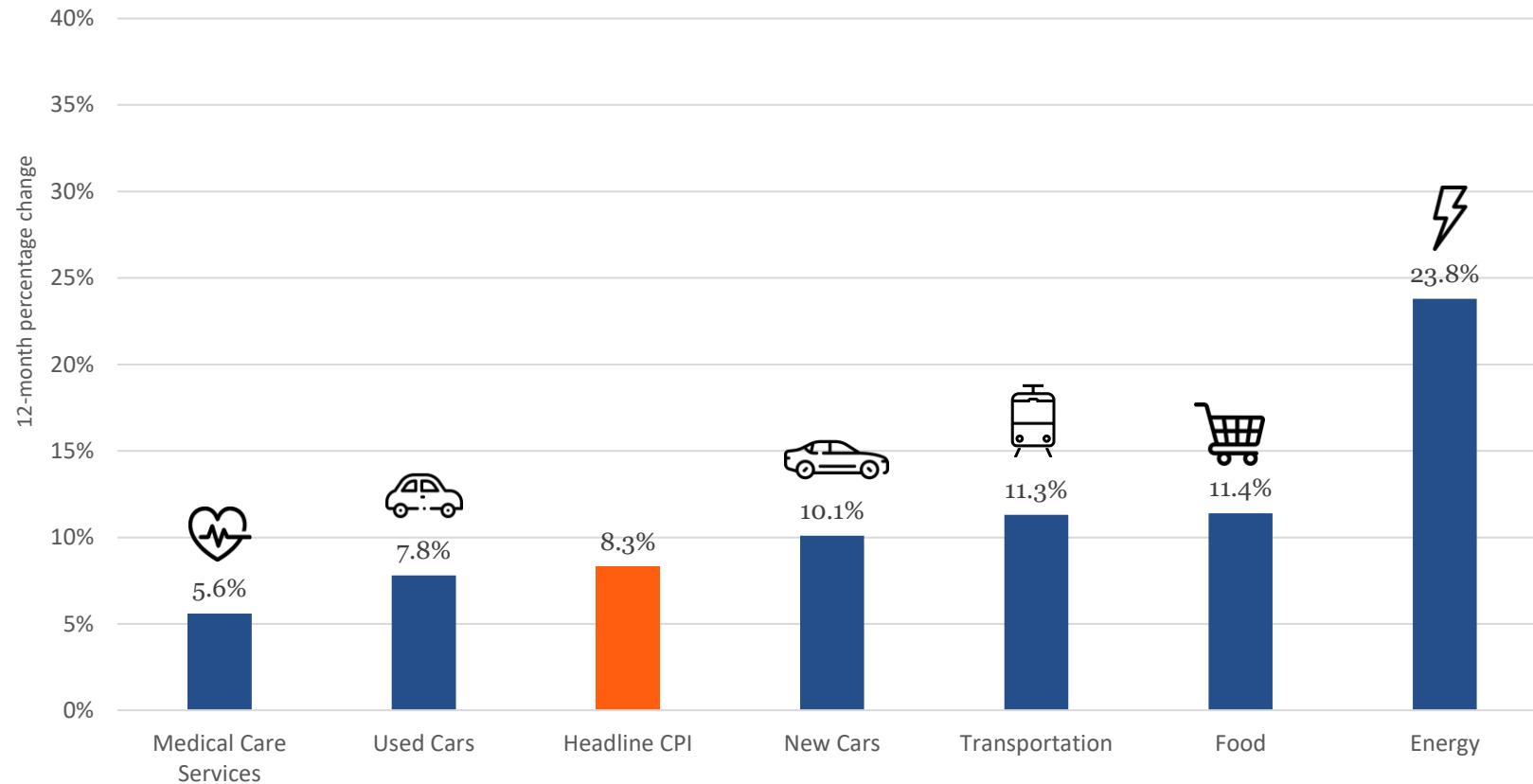
This chart plots the trend in U.S. government spending and U.S. government receipts from sources such as taxes.

## Why is this important?

The U.S. federal government committed trillions of dollars to help support the economy during the pandemic, but tax revenue has not kept pace, leading to an increasing deficit and questions around how to narrow the gap.

# Consumer prices on the rise

Headline CPI and select underlying components, as of August 2022.



Source: U.S. Bureau of Labor Statistics.

## What is this chart showing?

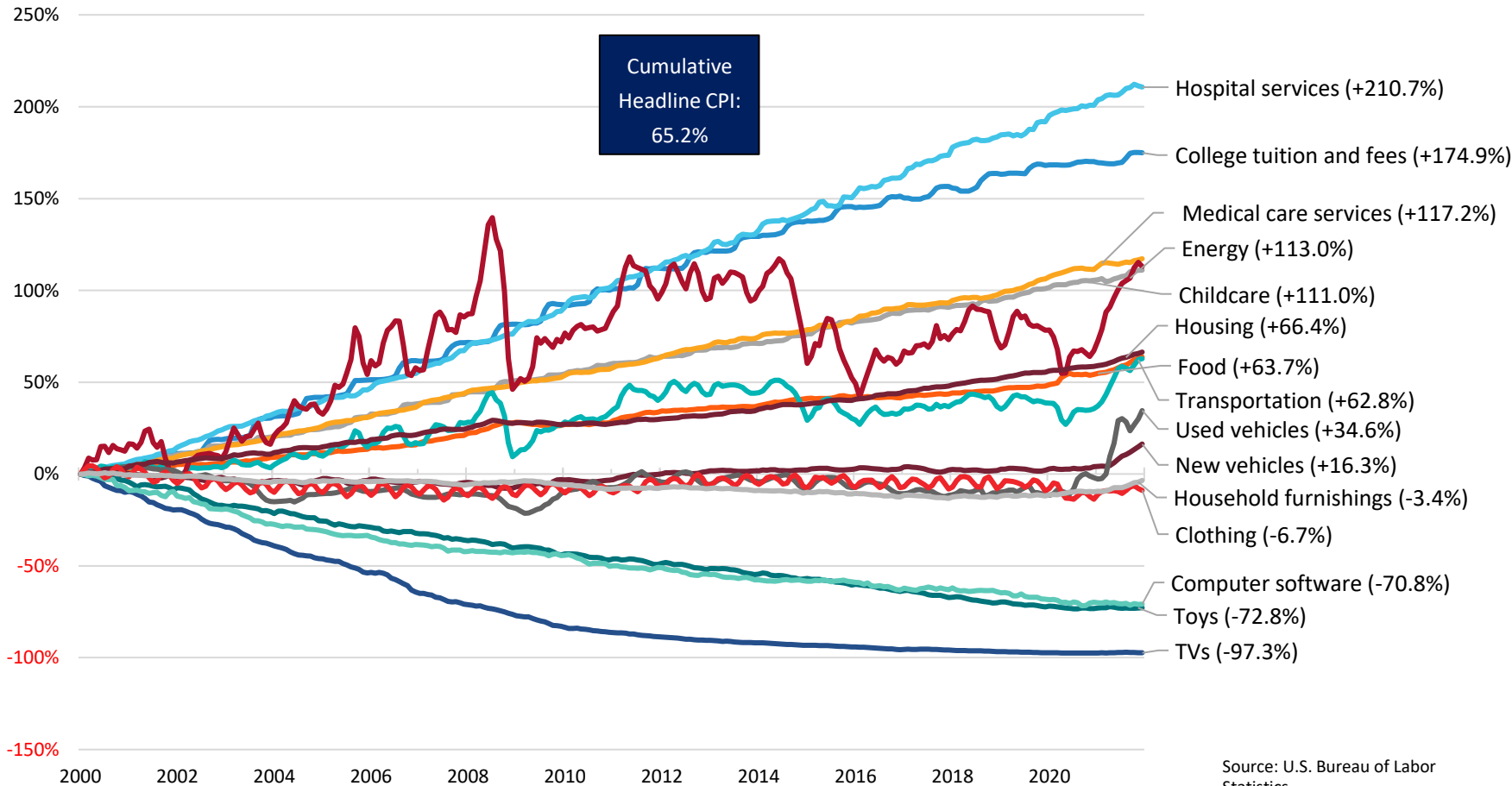
This chart shows the year-over-year price increases in select components of the headline Consumer Price Index, which includes food and energy.

## Why is it important?

While the headline number tends to get the attention, the inflation rate of underlying components may help investors better understand what factors are driving overall price increases.

# Inflation components over time

Percentage change of select CPI underlying components, from January 2000 to December 2021.



## What is this chart showing?

This chart shows the cumulative percentage change of 15 select components of the Consumer Price Index from January 2000 to December 2021.

## Why is it important?

During this period, six of the selected 15 goods and services have increased more than average cumulative inflation of 65.2%, led by large increases in hospital services (+210.7%), college tuition and fees (+174.9%), and medical care services (+117.2%), as well as increases in energy (+113%), childcare and nursery school (+111%), and housing (+66.4%).

Source: U.S. Bureau of Labor Statistics.

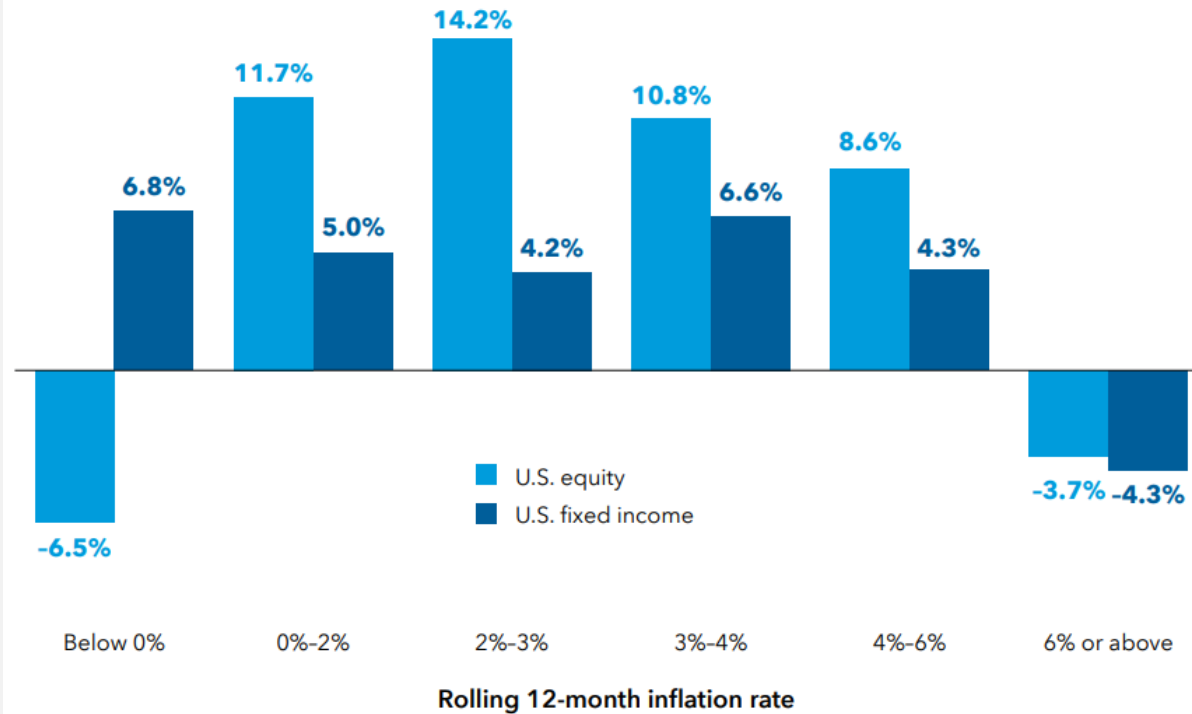
# Stock and bond returns in inflationary regimes



Even during times of higher inflation, stocks and bonds have generally provided solid returns, as shown in the chart. It's mostly at the extremes — when inflation is above 6% or negative — that financial assets have tended to struggle.

Sources: Capital Group, Bloomberg Index Services Ltd., Morningstar, Standard & Poor's. As of 11/30/21. All returns are inflation-adjusted real returns. U.S. equity returns represented by the Standard & Poor's 500 Composite Index. U.S. fixed income represented by Ibbotson Associates SBBi U.S. Intermediate-Term Government Bond Index from 1/1/70–12/31/75, and Bloomberg U.S. Aggregate Bond Index from 1/1/76–11/30/21. Inflation rates are defined by the rolling 12-month returns of the Ibbotson Associates SBBi U.S. Inflation Index.

Average annual returns at different inflation rates (1970-2021)



Source: American Funds. Outlook 2022 Edition.

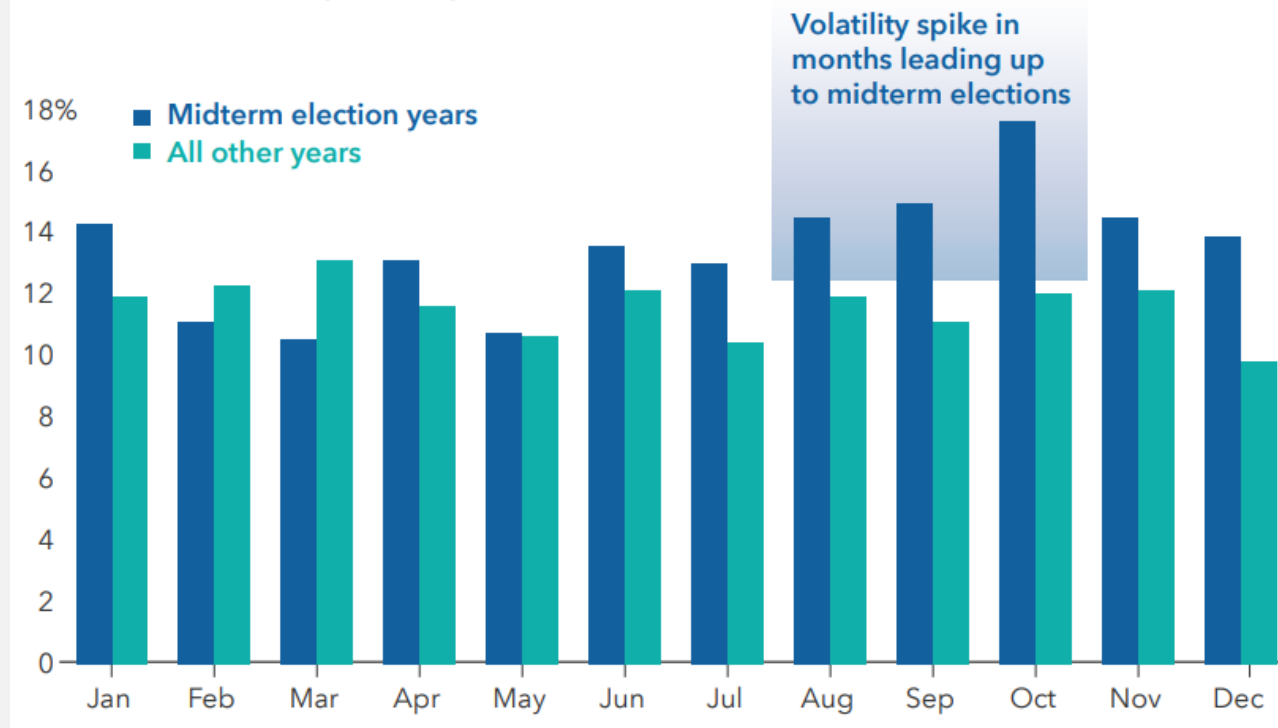
# Midterm elections: Potential for higher volatility



Elections can be tough on the nerves. So, it may not be surprising that market volatility is higher in midterm election years, especially in the months leading up to Election Day. Since 1970, midterm years have had a median standard deviation of returns of nearly 16%, compared with 13% in all other years.

Source: Capital Group, RIMES, Standard & Poor's. As of 12/31/21. Volatility is calculated using the standard deviation of daily returns for each individual month. Standard deviation is a measure of how returns over time have varied from the average. A lower number signifies lower volatility. Median volatility for each month is displayed on an annualized basis.

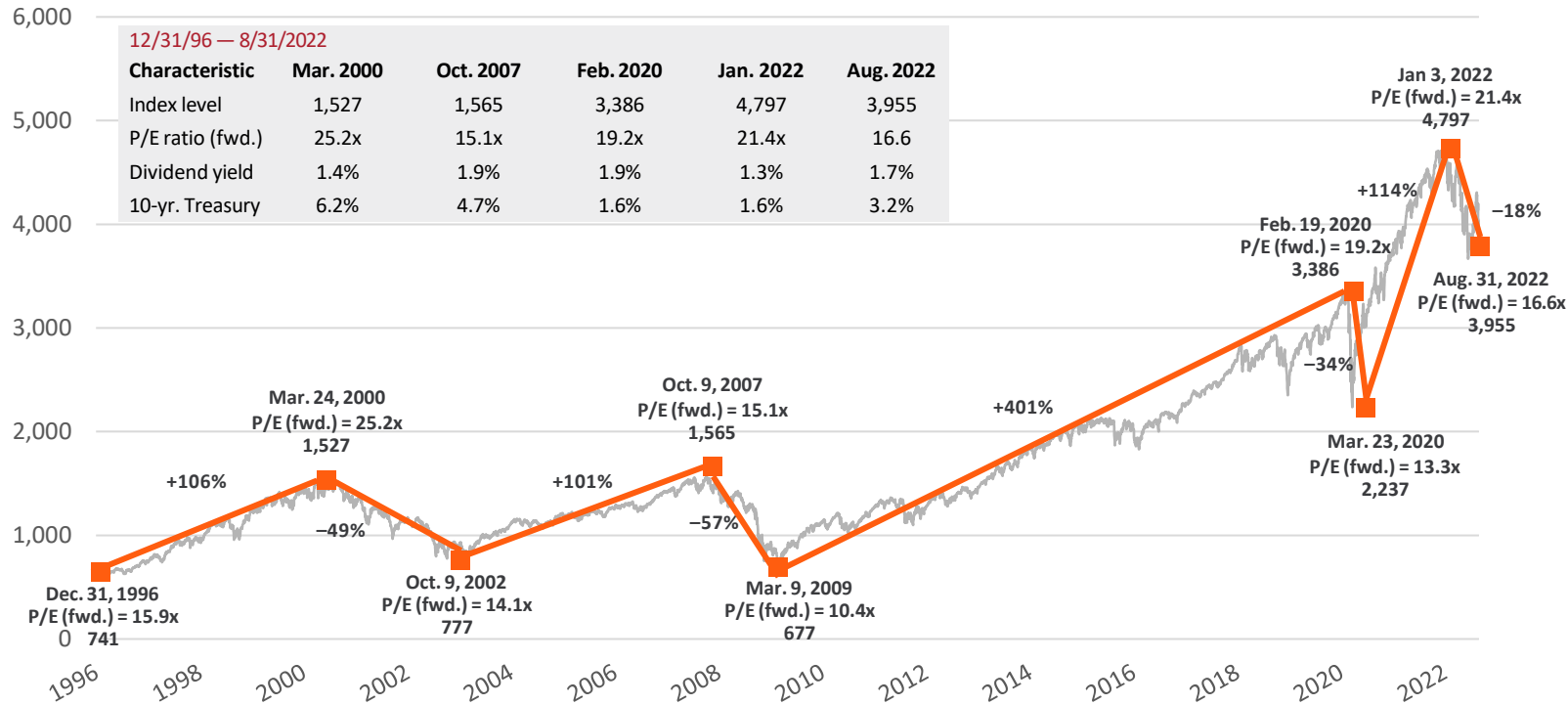
**S&P 500 Index monthly volatility since 1970**



Source: Capital Group. "Can Midterm Elections Move Markets? 5 Charts to Watch," January 2022.

# Equities

# S&P 500: Cumulative returns



Since 1929, we've seen 26 bear markets<sup>1</sup>

Stocks lost more than 36% on average in a bear market<sup>2</sup>

Stocks gained 114% on average during a bull market<sup>3</sup>

## What is this chart showing?

This chart shows the cumulative return of the S&P 500 Index from 1996 to present. It also highlights the return of major expansionary and contraction periods during this time.

## Why is it important?

This chart can help put market cycles in context by comparing the magnitude and duration of bull and bear markets, along with the long-term trend of the S&P 500.

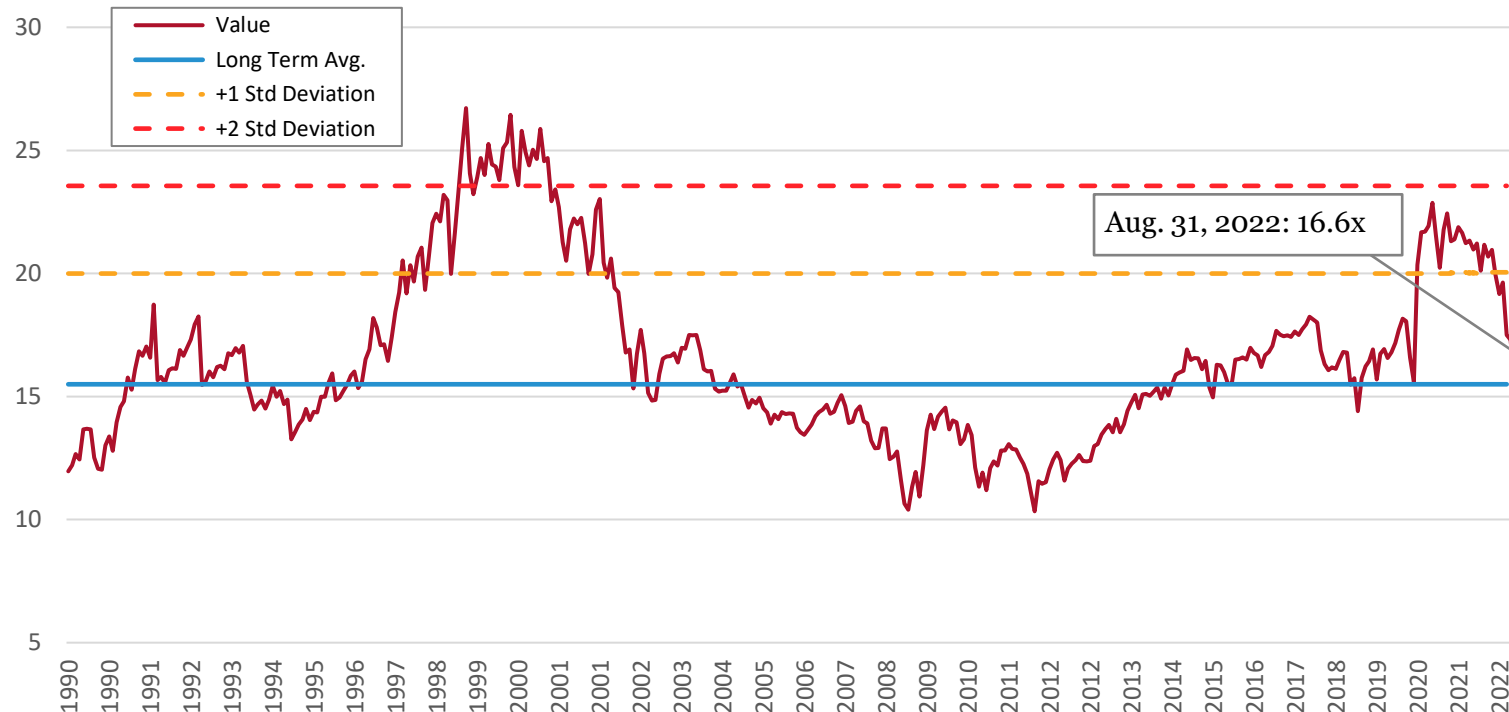
**Past performance is not indicative of future returns.** You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management. **Dividend yield** is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. **Forward price-to-earnings ratio** is a bottom-up calculation based on the most recent S&P 500 Index price, divided by consensus estimates for earnings in the next 12 months (NTM). The S&P 500<sup>®</sup> Price Return Index tracks the stock performance of 500 large U.S. companies. The index used is a price index and does not reflect dividends paid on the underlying stocks.<sup>1</sup> Bloomberg, Lincoln Financial Group as of 6/30/2022. Bear markets are defined as instances of at least a 20% market decline. <sup>2</sup> Source for bear/bull market stats is Ned Davis Research as of 12/15/21 unless otherwise noted. <sup>3</sup> Source for bear/bull market stats is Ned Davis Research as of 12/15/21 unless otherwise noted.



# S&P 500: Valuation measures

## Forward P/E ratio valuation



Source: FactSet, S&P, Robert Shiller, Bloomberg. As of August 31, 2022.

**Forward P/E ratio** (or forward price-to-earnings ratio) is the most-recent stock price divided by the forward-looking EPS estimate. **Shiller's P/E ratio** is the most recent stock price divided by the average of 10 years of inflation-adjusted earnings. **Dividend yield** is the percentage of its stock price that a company is projected to pay out as dividends. It is calculated by dividing estimated annual dividends per share for the current fiscal year by the company's most recent month-end stock price. **Price-to-book** compares a firm's market capitalization to its book value. It's calculated by dividing the company's stock price per share by its book value per share (BVPS). **Price-to-cash flow** is a valuation indicator or multiple that measures the value of a stock's price relative to its operating cash flow per share. **Standard deviation** is a statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time.

Valuation measures	Recent	20-year average
Forward P/E	16.6	15.5
Shiller's P/E	29.9	25.7
Dividend yield	1.7%	2.1%
Price-to-book	3.5	2.6
Price-to-cash flow	12.7	10.8

## What is this chart showing?

This chart shows the historical trend of the S&P 500 forward P/E ratio compared to the modern-era historical average.

## Why is it important?

Equity valuation measures, like the forward P/E, can help investors gauge if the market is overvalued or undervalued relative to the historical average.

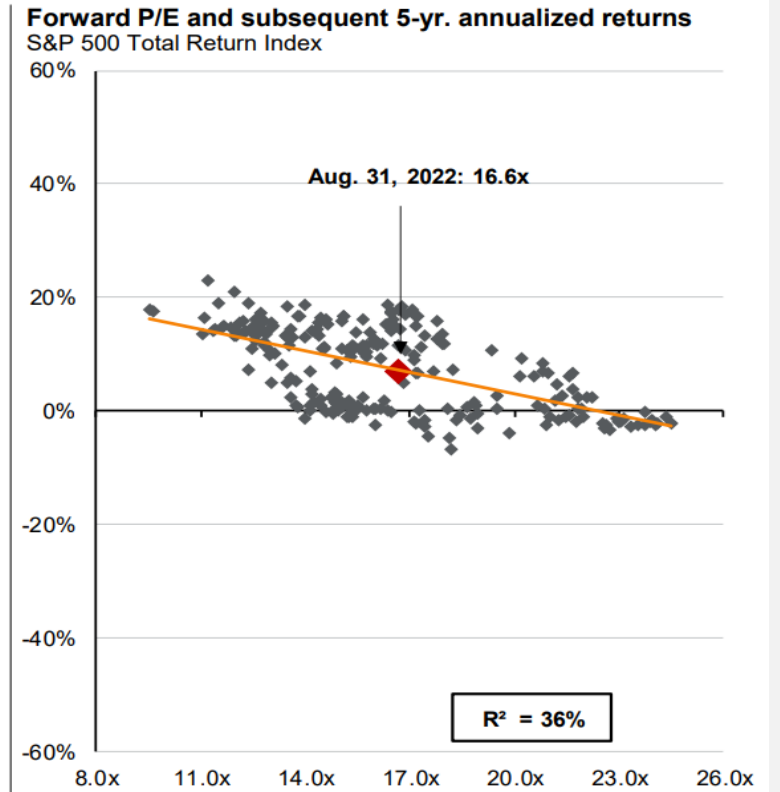
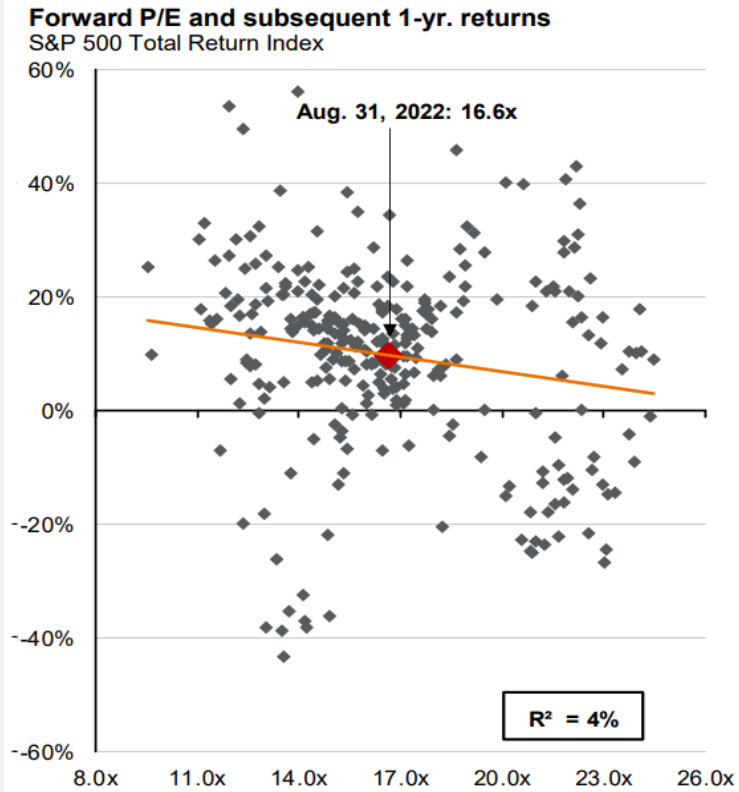
# Equity valuations and subsequent returns

## J.P.Morgan Asset Management

While valuation measures, such as the forward P/E, do not necessarily have predicative power in terms of returns over a short time period (one year), there is a much tighter correlation when using longer return periods, such as five years.

Source: FactSet, Refinitiv Datastream, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.

Returns are 12-month and 60-month annualized total returns, measured monthly, beginning 7/31/97.  $R^2$  represents the percent of total variation in total returns that can be explained by forward price-to-earnings ratios. Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since January 1997 and by FactSet since January 2022.  
Guide to the Markets – U.S. Data are as of August 31, 2022.



Source: JP Morgan, as of August 31, 2022.

# Consumer confidence and subsequent S&P returns

## J.P.Morgan Asset Management

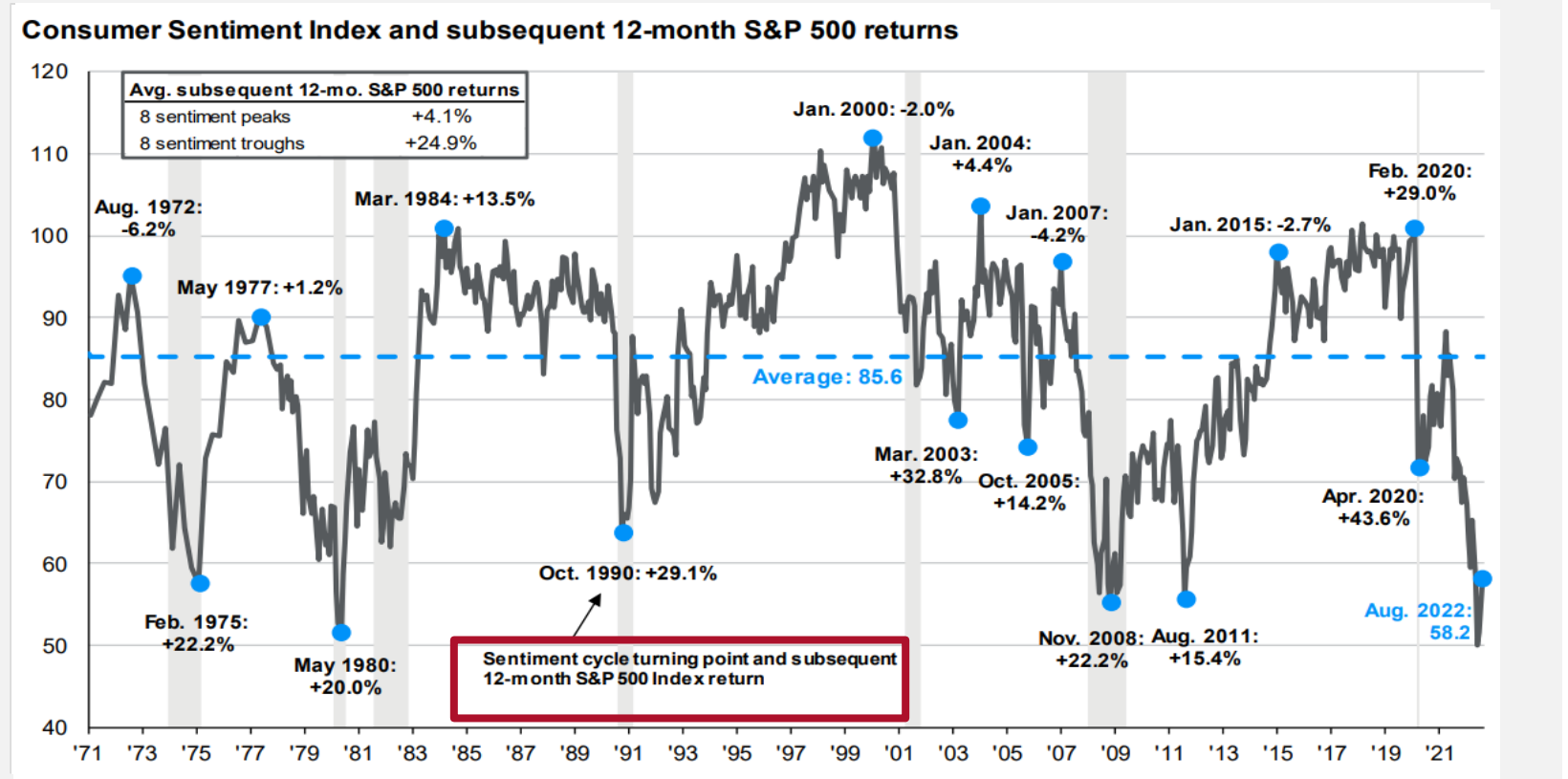
This chart shows consumer sentiment over the past 50 years and how much the S&P 500 gained or lost on average 12 months after eight distinct peaks and troughs. Buying at a confidence peak returned on average 4.1%, while buying at a trough returned 24.9%.

This underscores that when investors feel gloomy and worried about the outlook, history shows they should consider resisting the temptation to sell risk assets.

Source: FactSet, Standard & Poor's, University of Michigan, J.P. Morgan Asset Management.

Peak is defined as the highest index value before a series of lower lows, while a trough is defined as the lowest index value before a series of higher highs. Subsequent 12-month S&P 500 returns are price returns only, which excludes dividends. Past performance is not a reliable indicator of current and future results.

Guide to the Markets – U.S. Data are as of August 31, 2022.

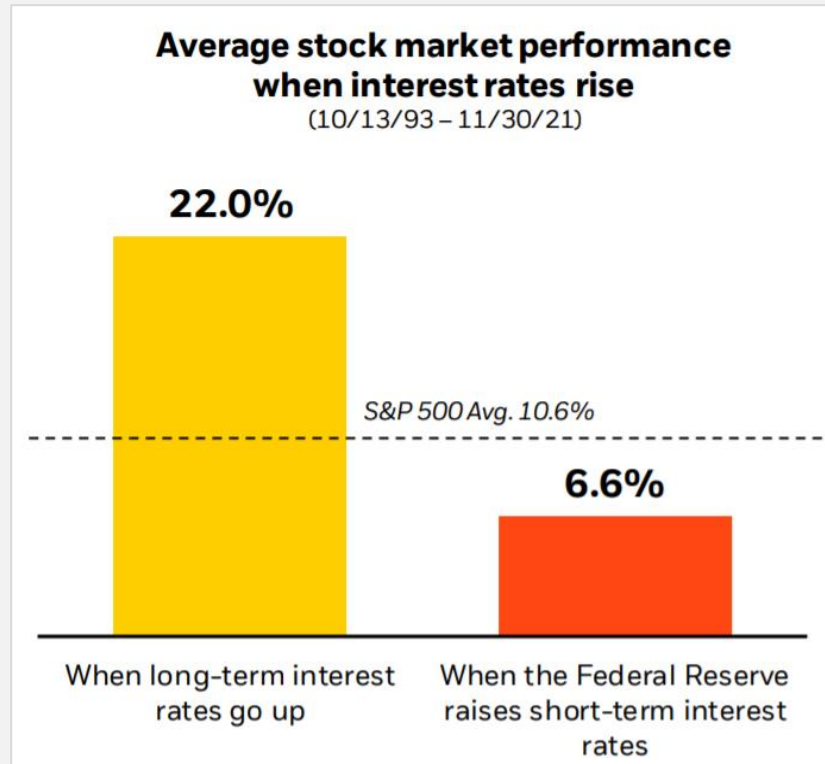


Source: JP Morgan, as of August 31, 2022.

# Stock market in rising rate environment

## BlackRock

Higher long-term interest rates have been historically good for stocks, but the Federal Reserve raising short-term rates has been more problematic.



Source: BlackRock, "Student of the Market," December 2021; <https://www.blackrock.com/us/financial-professionals/literature/investor-education/student-of-the-market.pdf>.

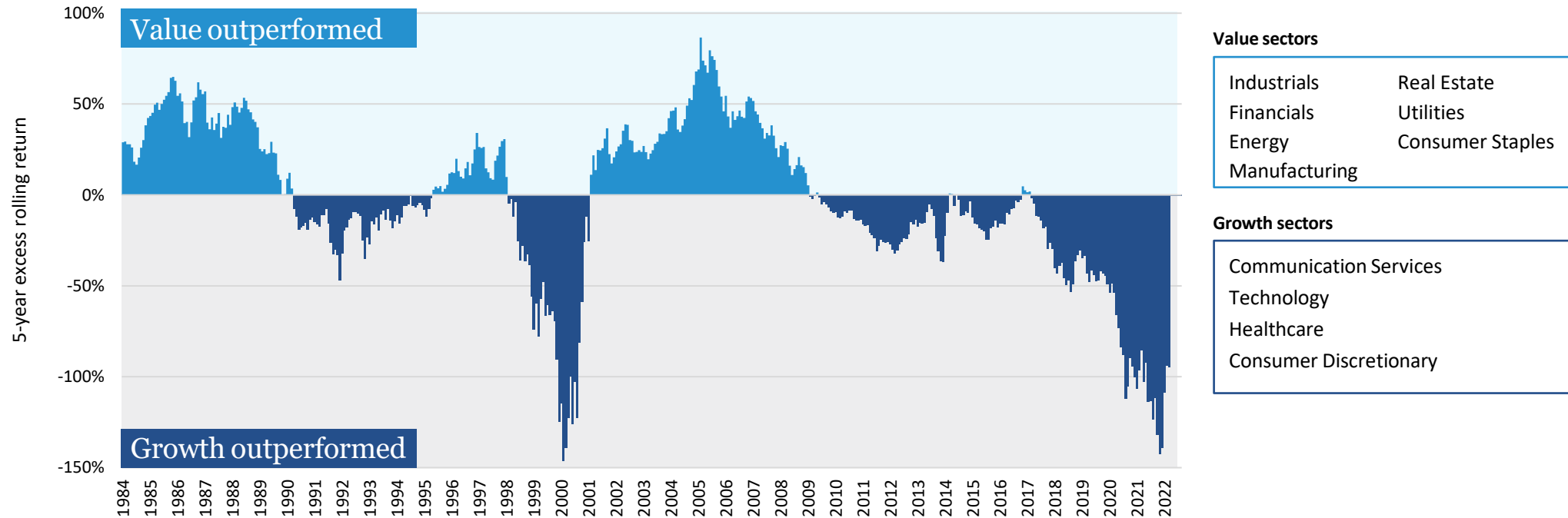
# Growth vs. Value leadership rotation

## What is this chart showing?

Growth and value styles have rotated leadership during different market and economic environments.

## Why is it important?

Historically, value has led early in the economic recovery and when rates are rising, where growth has led when interest rates are falling, and earnings are strong. A mix of both styles can help smooth returns over time.



Source: Morningstar; Value represented by Russell 1000 Value Index, Growth represented by Russell 1000 Growth Index. Both indices are total return. Data through 8/31/2022. **Past performance is not indicative of future returns.**

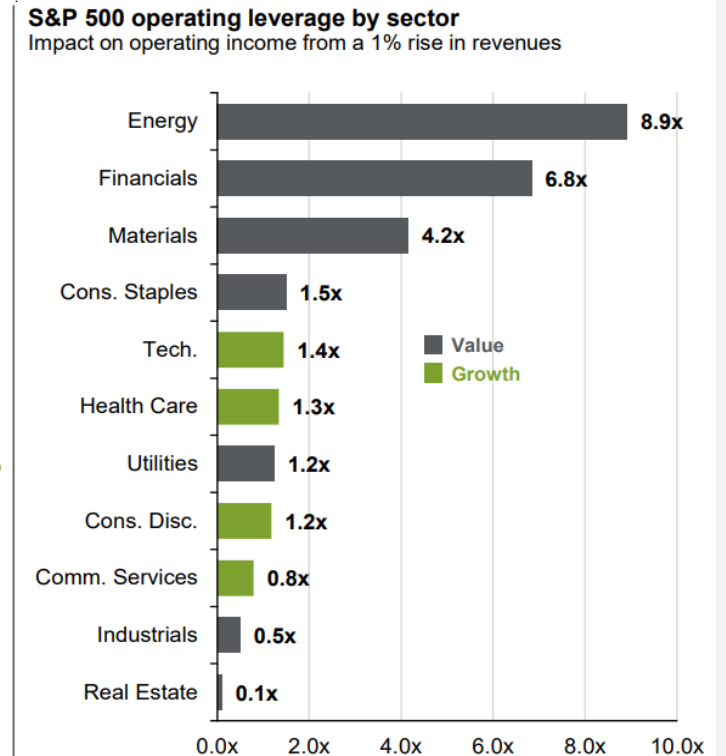
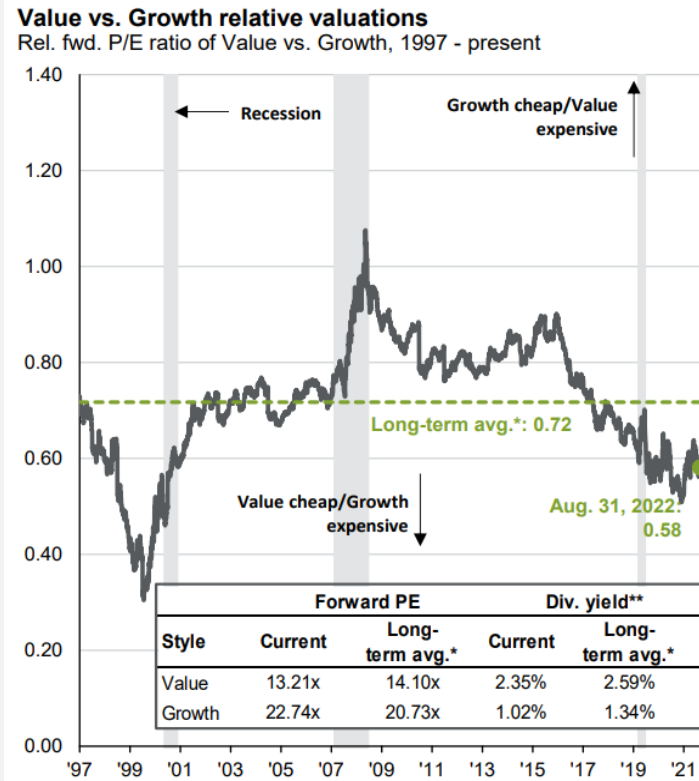
# Growth vs. Value style characteristics

## J.P.Morgan Asset Management

The **chart on the left** shows the relative forward price-to-earnings ratio for the Russell 1000 Value and Russell 1000 Growth indices. When the line is moving up and above the long-term average it shows that value is expensive relative to growth, but when the line is below the long-term average and moving down it represents growth as becoming expensive relative to value.

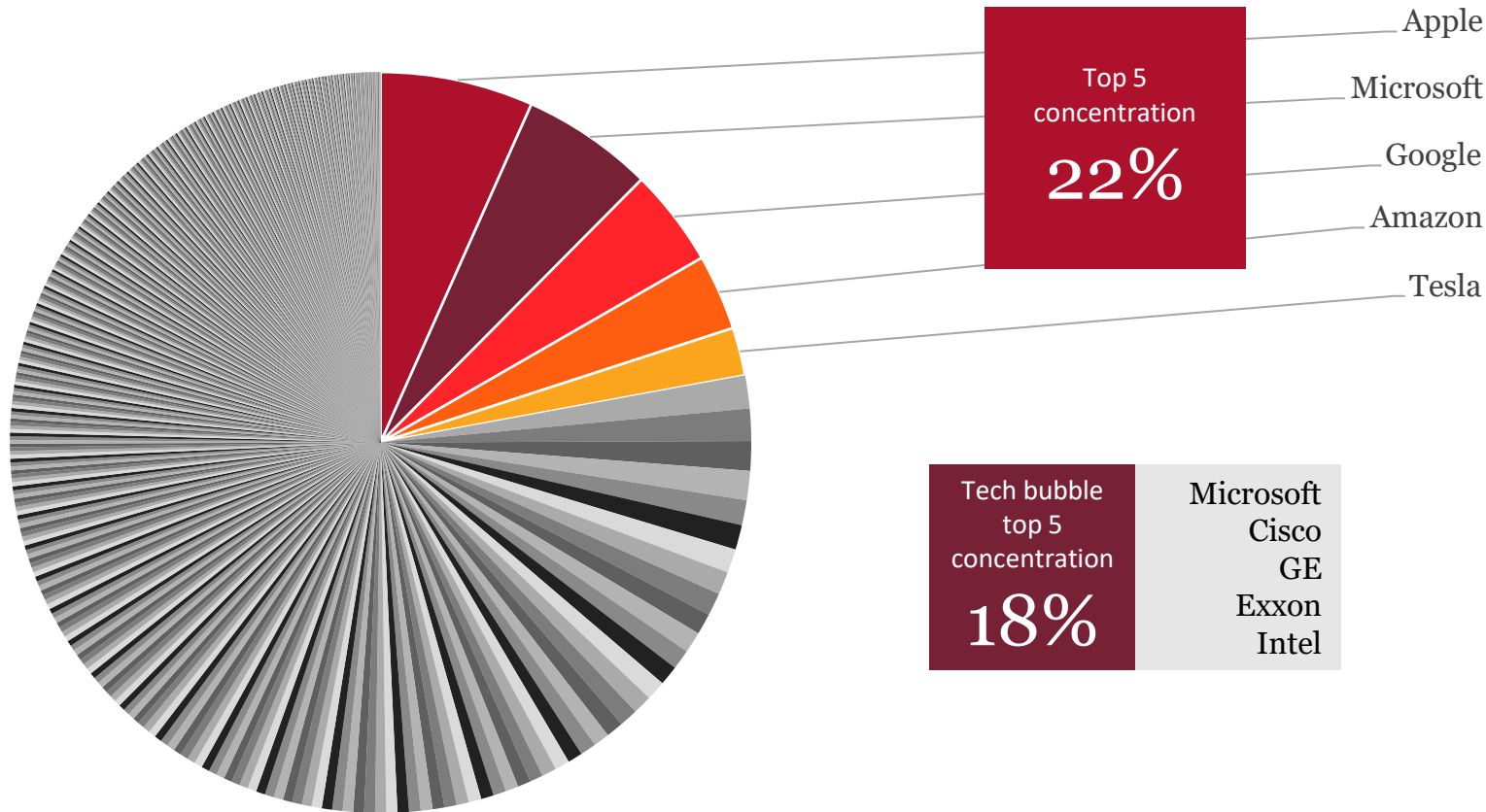
The **chart on the right** shows the correlations of each sector's earnings to real GDP, with each sector categorized as value or growth based upon their weight in the Russell growth and value indices.

Source: FactSet, FTSE Russell, NBER, J.P. Morgan Asset Management.  
(Left) Growth is represented by the Russell 1000 Growth Index and Value is represented by the Russell 1000 Value Index. \*Long-term averages are calculated monthly since December 1997. \*\*Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. (Right) Operating leverage is a bottom-up calculation based on the 5-year compounded annual growth rate (CAGR) in EBIT divided by the 5-year CAGR in revenues. Each sector's operating leverage is weighted by market cap. Calculations use EBIT and revenue over the 5-year period between 2016 and 2021.  
Guide to the Markets – U.S. Data are as of August 31, 2022.



Source: J.P. Morgan, "Guide to the Markets – U.S. Data" are as of August 31, 2022.

# S&P 500: Top 5 stocks



## What is this chart showing?

This pie chart shows the top five stocks in the S&P 500, and their combined concentration of the total index. The concentration of the top five stocks during the tech bubble is also shown for reference.

## Why is it important?

Investors can use this to gauge current levels of concentration and determine if they represent increased risk.

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures. Source: FactSet, S&P. June 30, 2022. Not a recommendation to buy or sell any security.

# S&P 500: Calendar returns and intra-year declines

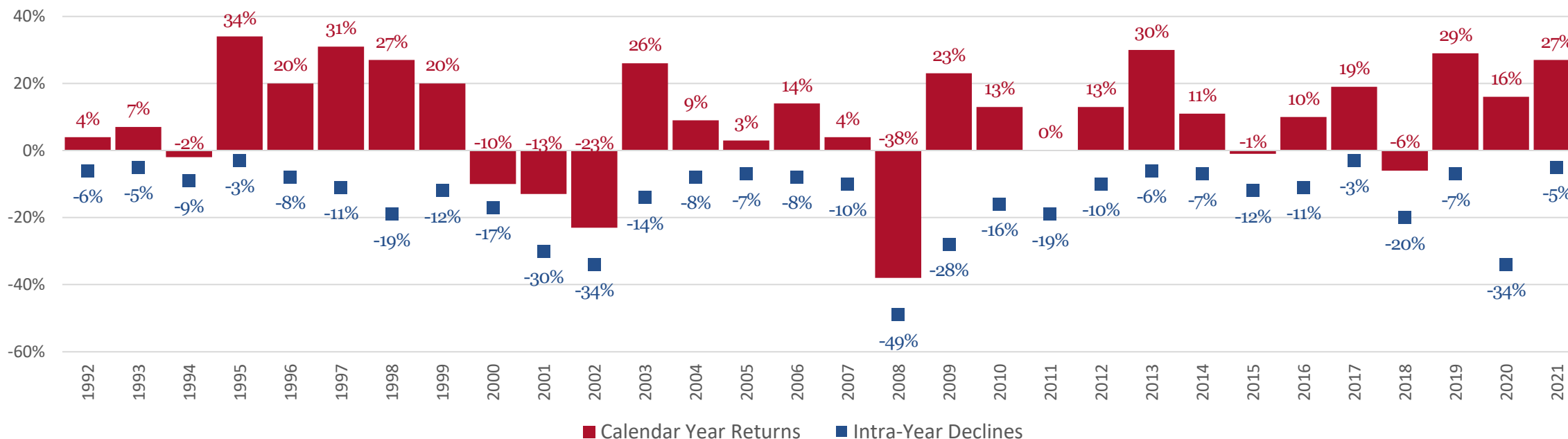
## What is this chart showing?

This chart shows calendar year returns of the S&P 500 Price Index from 1992 to present. It also shows the largest intra-year declines (lows) for each year.

## Why is it important?

Investors can use this to understand how looking at annual returns alone can hide that there are often large drops that occur within the year.

Despite average intra-year drops of 14.3%, annual returns were positive in 22 of 30 years.

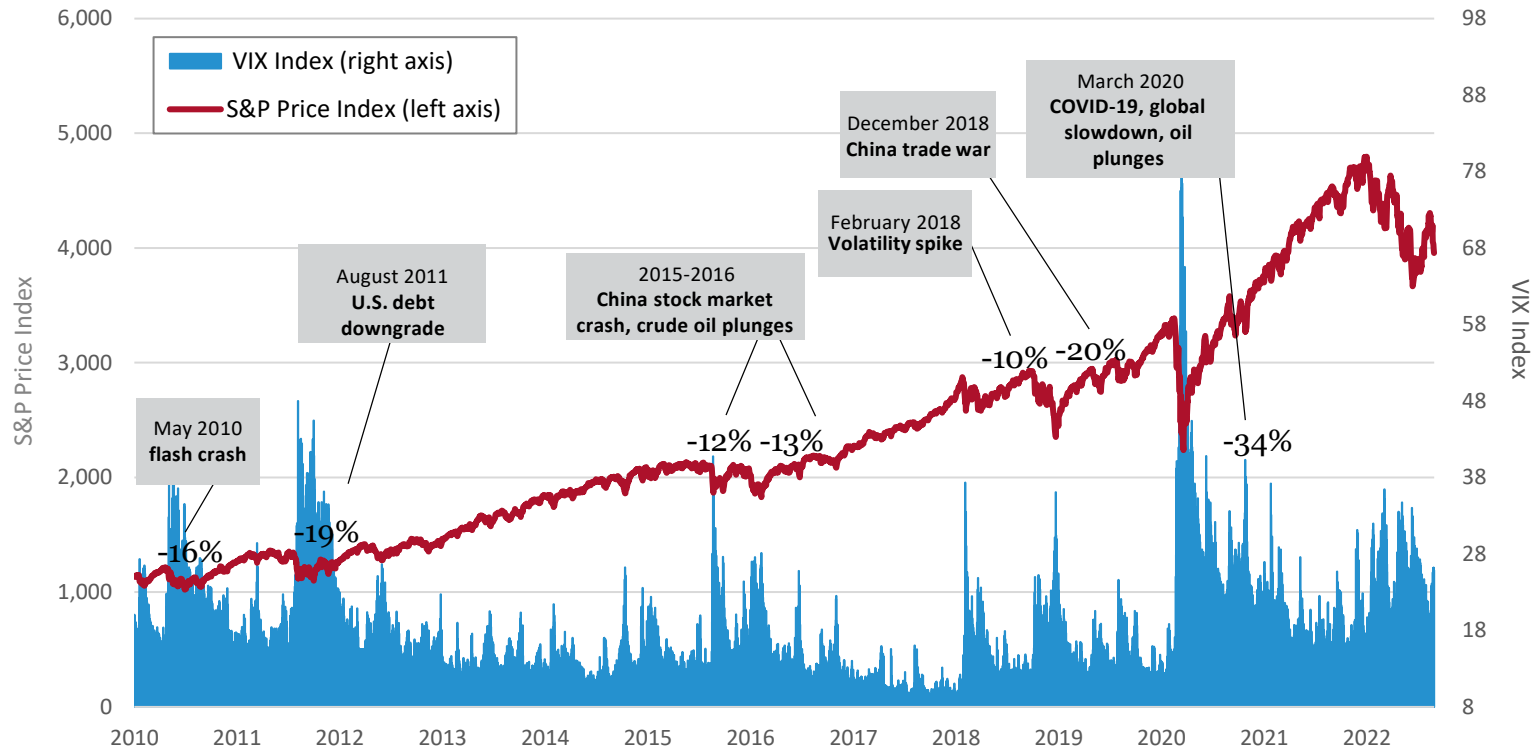


You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

Source: Morningstar, Standard & Poor's. Returns are based on price index only and do not include dividends. Intra-year declines refer to the largest market drops from a peak to a trough during the year. For illustrative purposes only. **Past performance is not indicative of future returns.**



# S&P 500: Returns and market volatility



## What is this chart showing?

This chart shows key catalysts to large market drawdowns in recent history and volatility levels during these times.

## Why is it important?

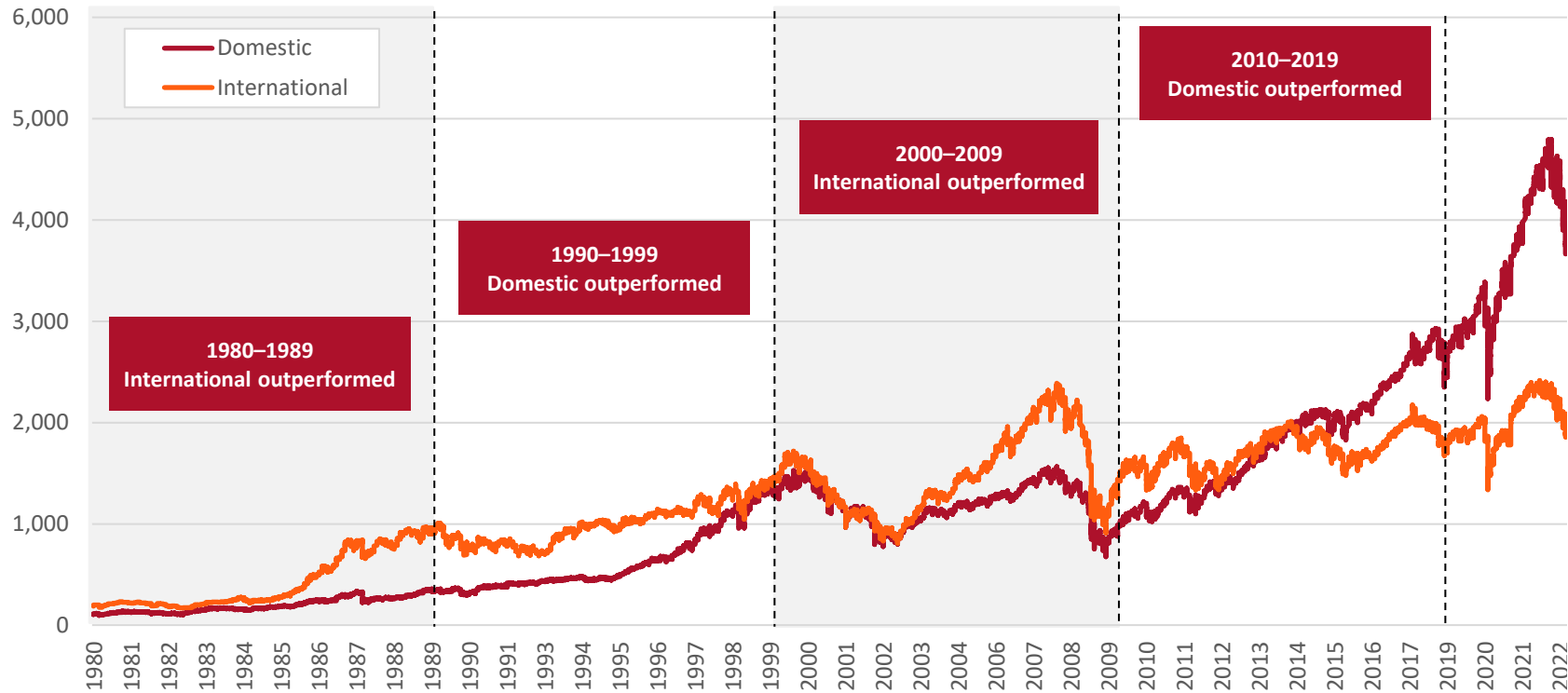
Investors can use this to view the relationship between volatility and equity market returns over both short- and long-term periods.

Source: Bloomberg, CBOE, S&P. Drawdowns are calculated as the prior peak to the lowest point. **Past performance is not indicative of future returns.**

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures. The **VIX** is a real-time market index representing the market's expectations for volatility over the coming 30 days.

# International vs. domestic equity returns

International vs. U.S. equity returns (1980 – 2022)



## What is this chart showing?

This chart shows the cumulative growth of international equities versus domestic equities from 1980 through the most recent quarter end.

## Why is it important?

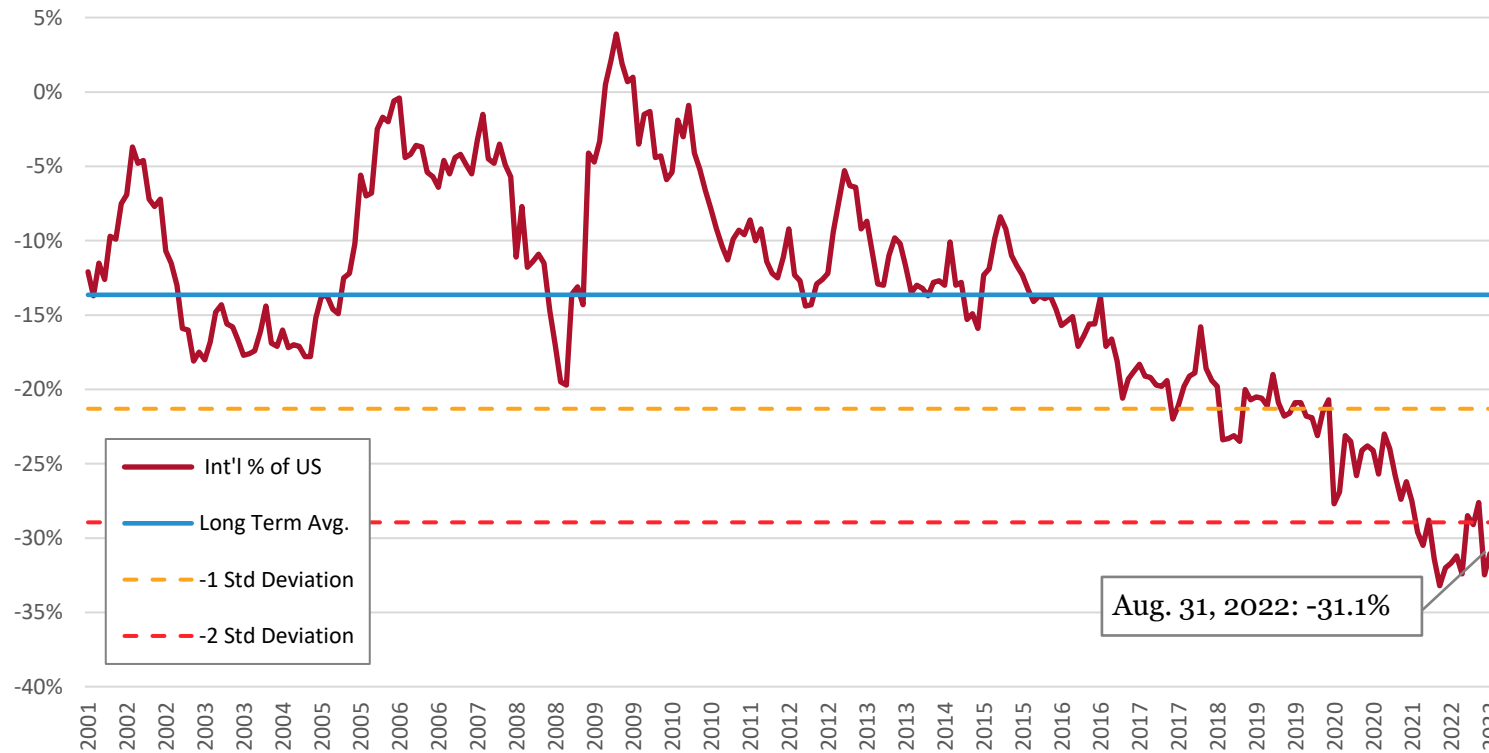
While one may outperform the other for long periods of time, history shows that leadership between international and domestic equity has rotated in each of the last four decades. Investors can use this information to help inform future investment decisions when considering portfolio allocations to domestic and international stocks.

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

Source: FactSet, S&P, MSCI as of June 30, 2022. Returns are cumulative and based on 1) S&P 500 Index price movement only, and do not include the reinvestment of dividends and 2) MSCI World ex USA PR USD. **Past performance is not indicative of future returns.**

# International vs. domestic equity valuations

Discount of International vs. U.S. stock market, based on forward P/E valuation measure.



## What is this chart showing?

This chart shows the relative valuations of International and U.S. stocks.

## Why is it important?

Compared to the long-term average, International stocks are currently priced at a steep discount to U.S. stocks. This is worth noting for investors considering their strategic allocations.

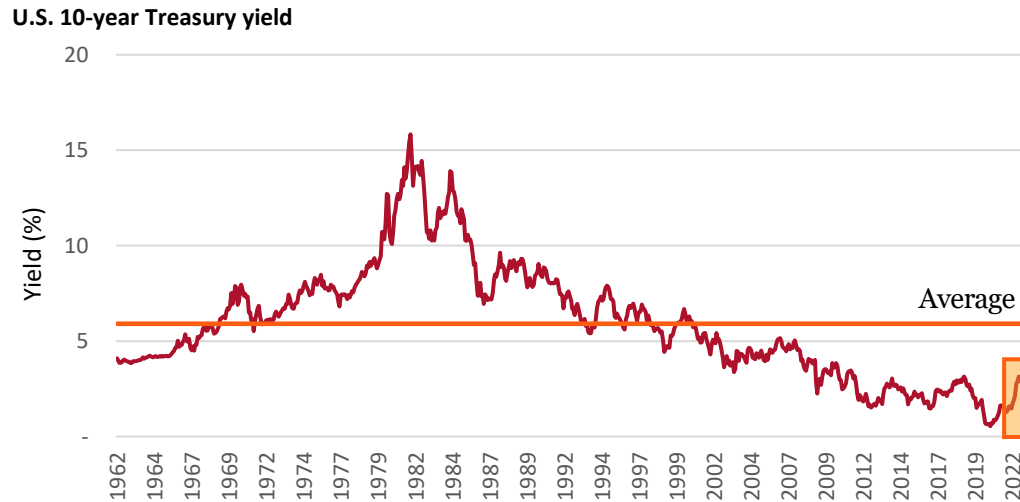
Source: FactSet, MSCI, and S&P. Based on MSCI All Country World Index ex. U.S. vs. S&P 500 Indices, forward price-to-earnings comparison. **Forward P/E ratio** (or forward price-to-earnings ratio) is the most-recent stock price divided by the forward-looking EPS estimate.

# Fixed income

# U.S. Treasury yield

## What is this chart showing?

This chart shows the historical yield for the 10-year Treasury, along with an expanded view of yield movements this year and their impact on several bond asset class returns.



### Past performance is not indicative of future returns.

Core bonds represented by Bloomberg US Aggregate Bond Index; Intermediate Treasuries represented by ICE BofA 5-10Y US Trsy TR USD; Long-term Treasuries represented by ICE BofA 10+Y US Trsy TR USD.

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. See index definitions and disclosures at back of presentation.

Source: Morningstar, Bloomberg, J.P. Morgan. \*Real 10-year Treasury yields are calculated as the daily Treasury yield less year-over-year core CPI inflation for that month. For the current month, we use the prior month's core CPI figures until the latest data is available.

## Why is it important?

Experts view the 10-year Treasury yield as a benchmark for the state of the economy and investor confidence. It drives interest rates throughout the market, making money more or less expensive to borrow. Movements can signal a need to reevaluate stock valuations and portfolio investment risks.

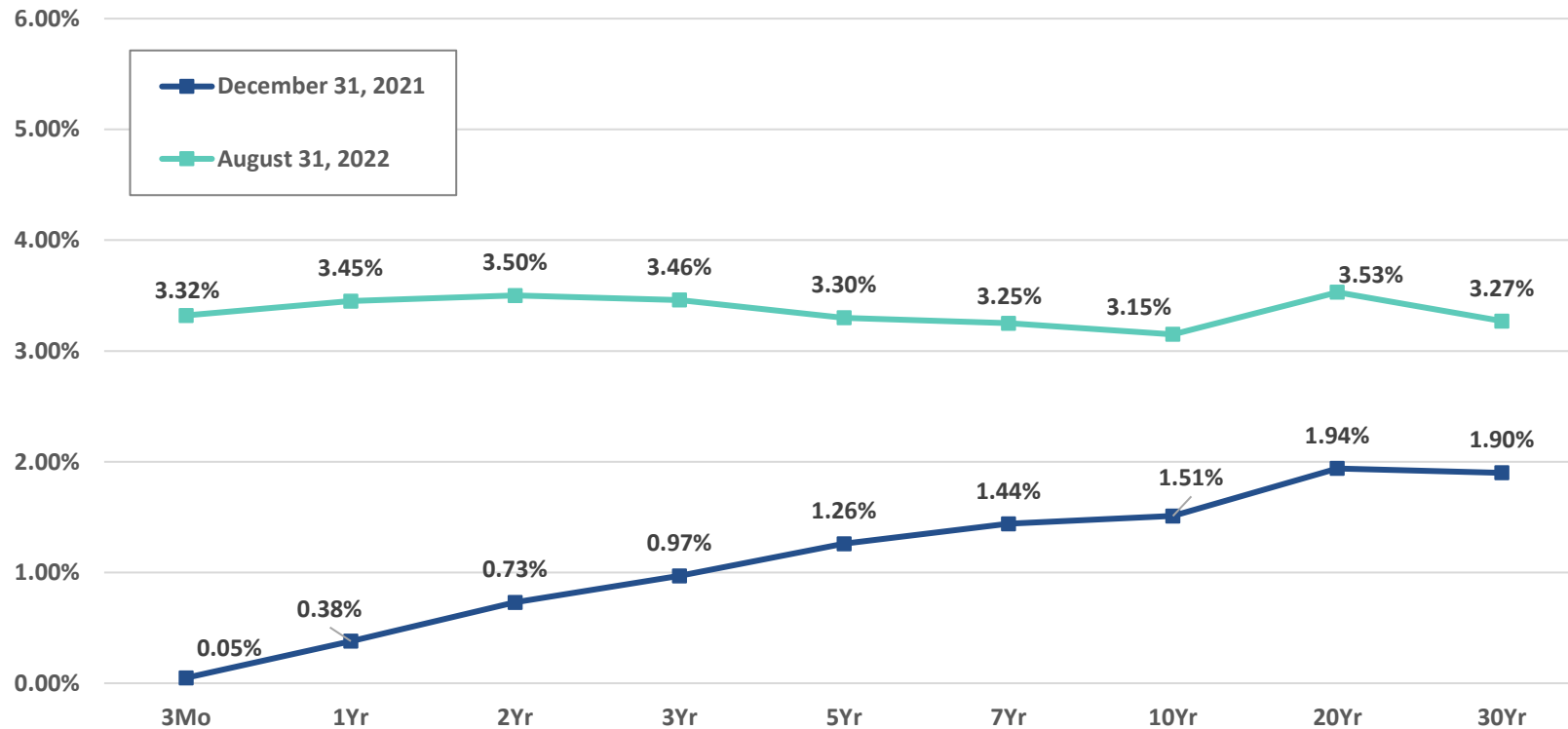


	YTD return (thru 8/31/2022)
Core bonds	-10.75%
Intermediate Treasuries	-9.79%
Long-term Treasuries	-21.59%

	Nominal yield	Core inflation*	Real yield
10-year Treasury	3.13%	5.91%	-2.78%

# Yield curve

## U.S. Treasury yield curve



Source: FactSet, J.P. Morgan Asset Management, Federal Reserve. Data as of August 31, 2022.

## What is this chart showing?

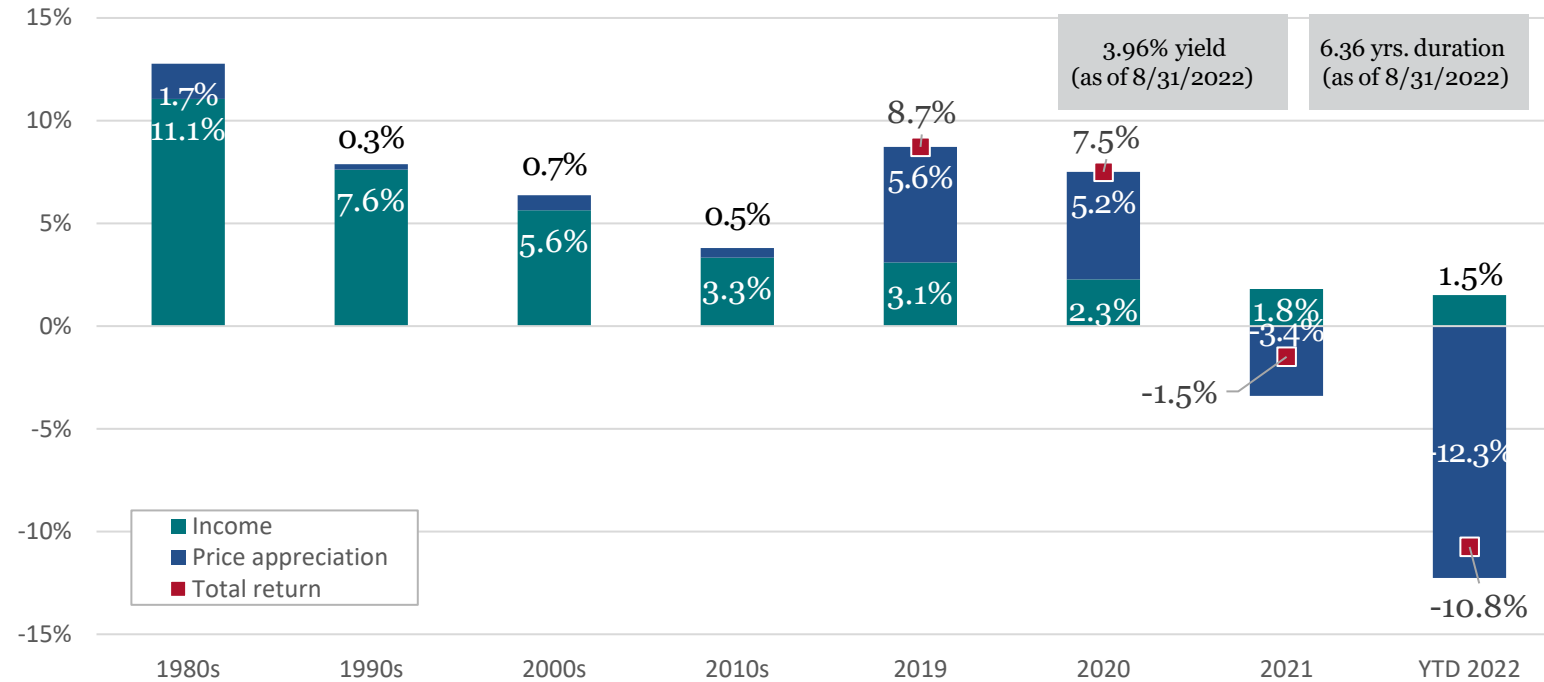
This chart compares the U.S. Treasury yield curve as of August 31, 2022, and December 31, 2021.

## Why is it important?

The yield curve is an economic indicator because it is a source of investors' expectations for future interest rates, economic growth and inflation. As the Federal Reserve has communicated to raise interest rates and set out a path of tighter monetary policy, the yield curve has become flatter and lower.

# Core bonds: Total return breakdown

**Bloomberg U.S. Aggregate Bond Index**



## What is this chart showing?

This chart breaks down the total return of the Barclays U.S. Aggregate Bond Index into separate income and price appreciation components throughout different time periods.

## Why is it important?

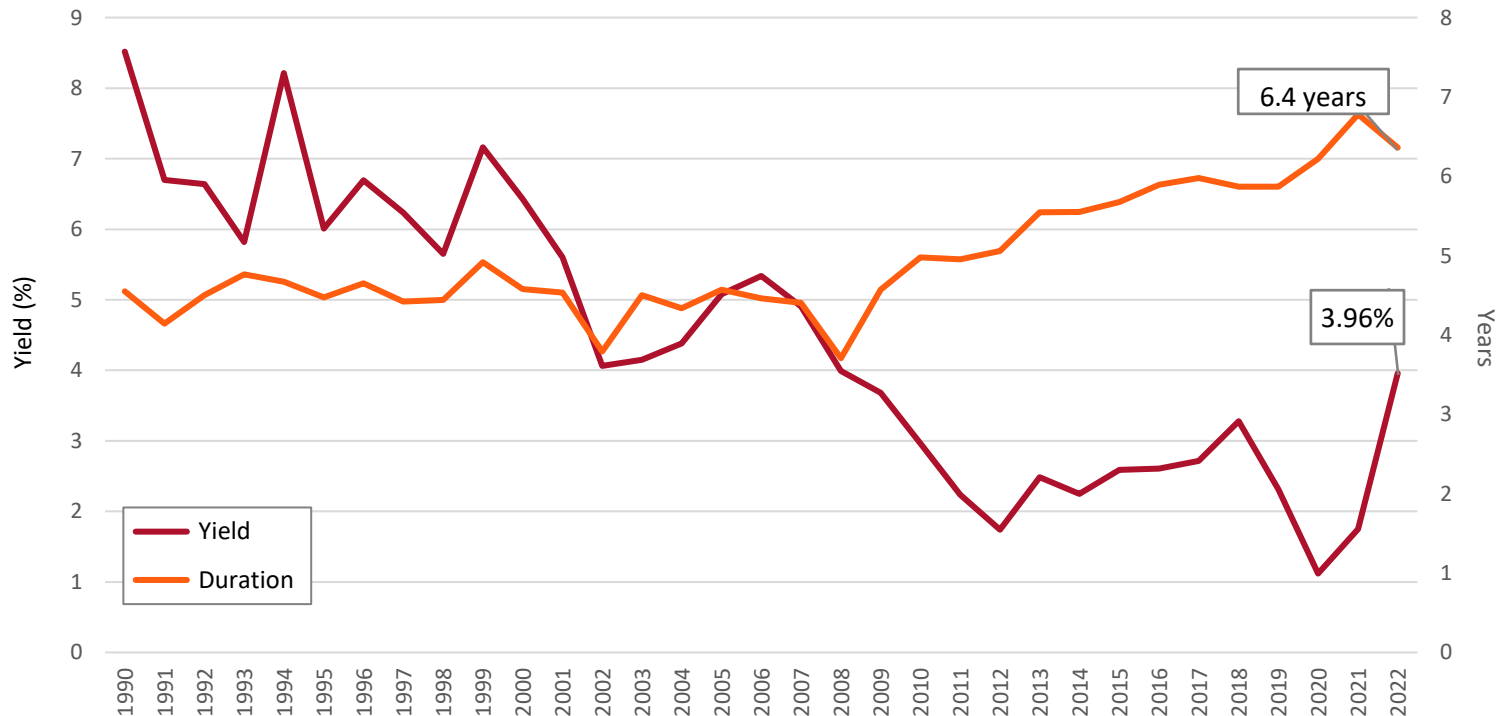
Investors can use this to see the historical drivers of bond returns, and how those drivers have shifted over the decades. Interest rates had been steadily declining for 40 years, making it challenging for investors to find meaningful levels of income from relatively safe sources, like core bonds.

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

Source: Bloomberg, Morningstar. YTD data as of August 31, 2022. **Past performance is not indicative of future returns.**

# Core bonds: Index characteristics

Bloomberg U.S. Aggregate Bond Index



Date	Yield (A)	Duration (B)	Rate increase that would offset yield (A/B)
12/31/89	8.62%	4.6 yrs.	187 bps
12/31/99	7.20%	4.9 yrs.	147 bps
12/31/09	3.70%	4.6 yrs.	80 bps
12/31/20	1.10%	6.2 yrs.	18 bps
12/30/21	1.75%	6.8 yrs.	26 bps
8/31/22	3.96%	6.4 yrs.	62 bps

## What is this chart showing?

This chart shows how the yield and duration of core bonds, as measured by the Bloomberg U.S. Aggregate Bond Index, has trended from 1990 through present.

## Why is it important?

Investors can use this to see how the risk/reward trade-off of core bonds has been trending over time. Risk is measured by the duration, and reward is measured by the yield.

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

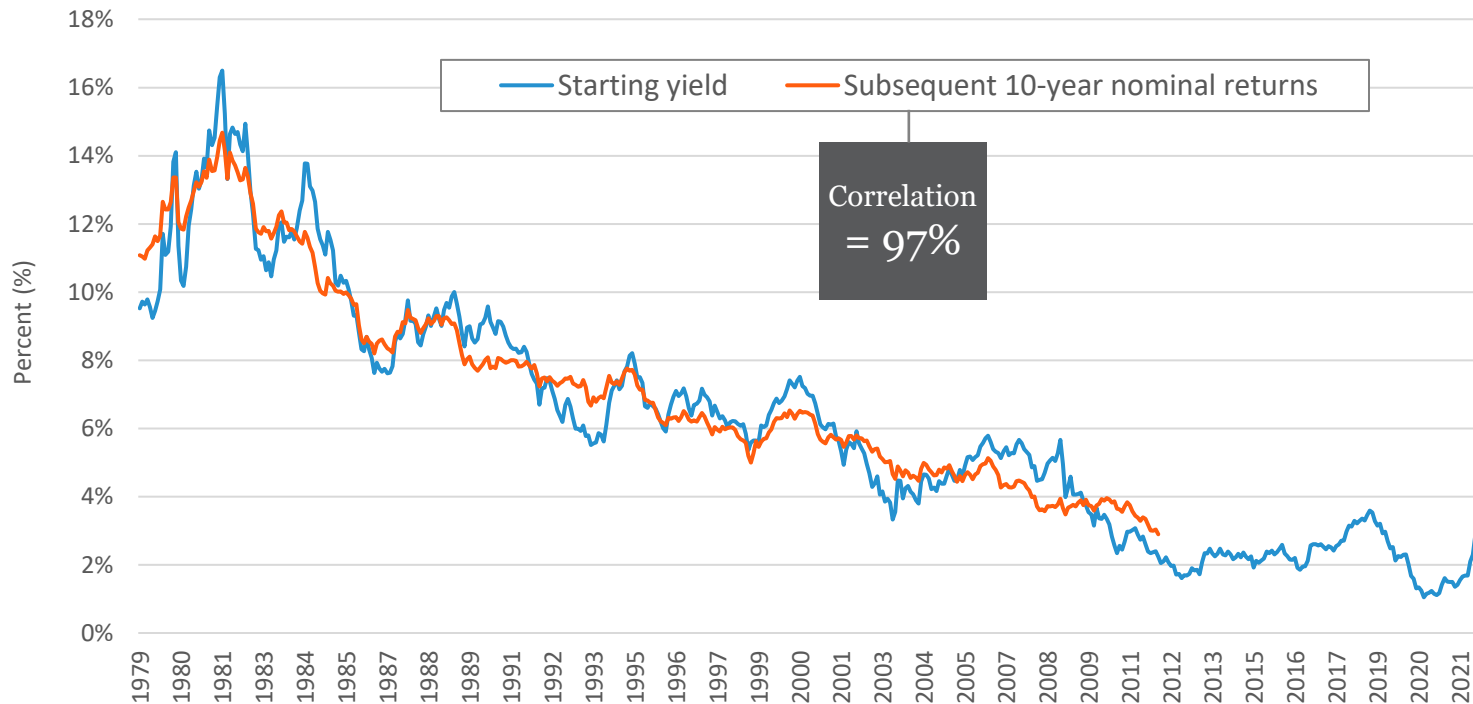
**Duration** is a measure of a fund's interest-rate sensitivity — the longer a fund's duration, the more sensitive the fund is to shifts in interest rates. **Yield** is represented by Yield to Worst, which is the lowest possible yield of a bond.

Source: Bloomberg. As of August 31, 2022. **Past performance is not indicative of future returns.**



# Core bonds: Starting yields and subsequent returns

**Bloomberg U.S. Aggregate Bond Index**



## What is this chart showing?

This chart shows the starting yield of U.S. core bonds for the past 40+ years, along with the subsequent 10-year total returns from that point.

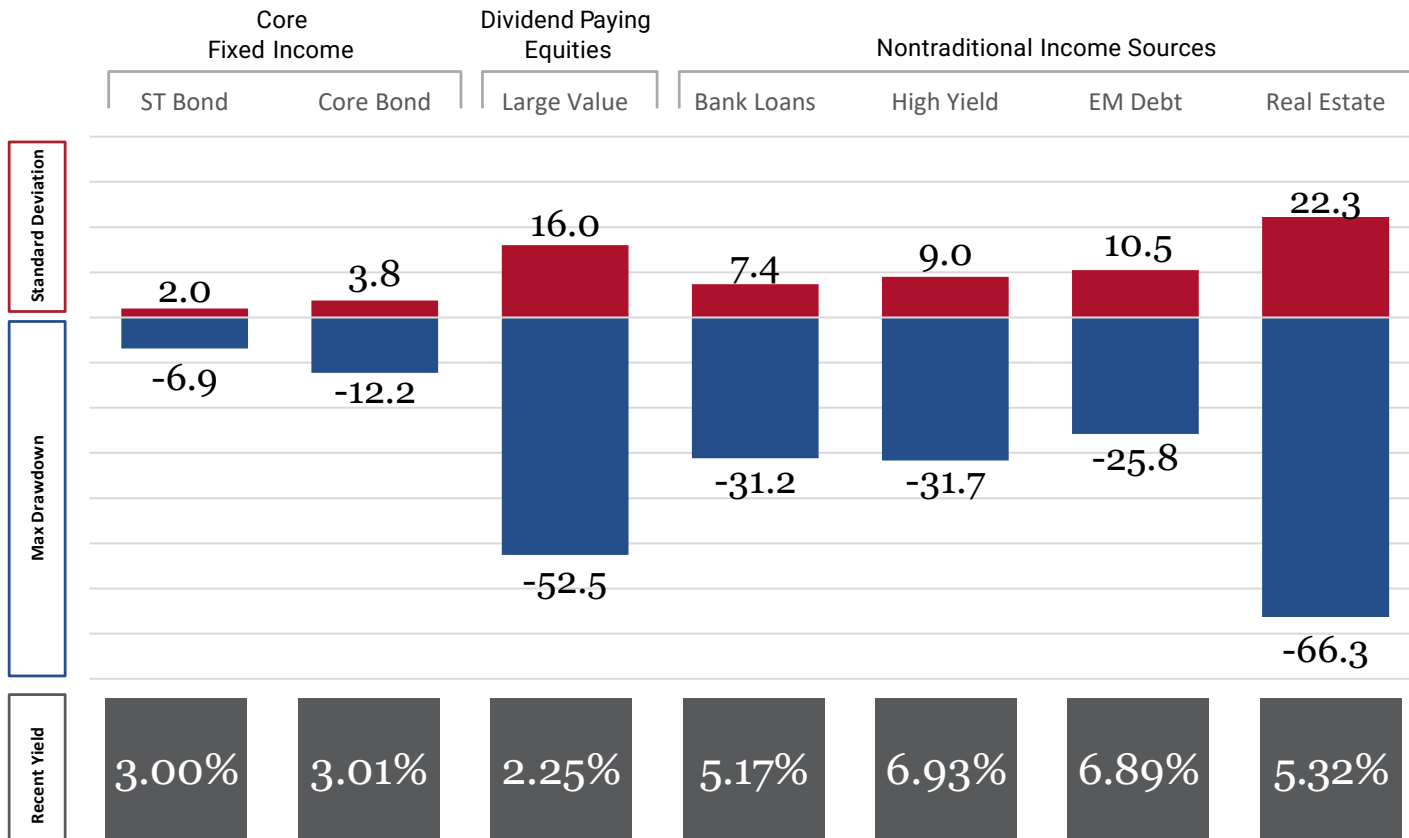
## Why is it important?

Investors commonly look to current yields to inform their total return expectations, as historically starting yield is an accurate predictor of future bond returns (97% correlation).

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

Source: Research affiliates based on data from Bloomberg and FactSet as of August 31, 2022. Proxy: Bloomberg U.S. Aggregate Bond Index. **Past performance is not a guarantee or a reliable indicator of future results.**

# Income assets: Yields and risk



Source: Morningstar. 15-year standard deviation and 15-year max drawdown based on period ending 8/31/22. SEC yield based on most current data available as of 7/31/2022. Large value and real estate categories based on current yield as of 8/31/2022.

## What is this chart showing?

This chart shows the 15-year standard deviation and maximum drawdown of select income-producing asset classes, along with recent yields.

## Why is it important?

This allows investors to easily compare both the yield and risk of various income-producing asset classes.

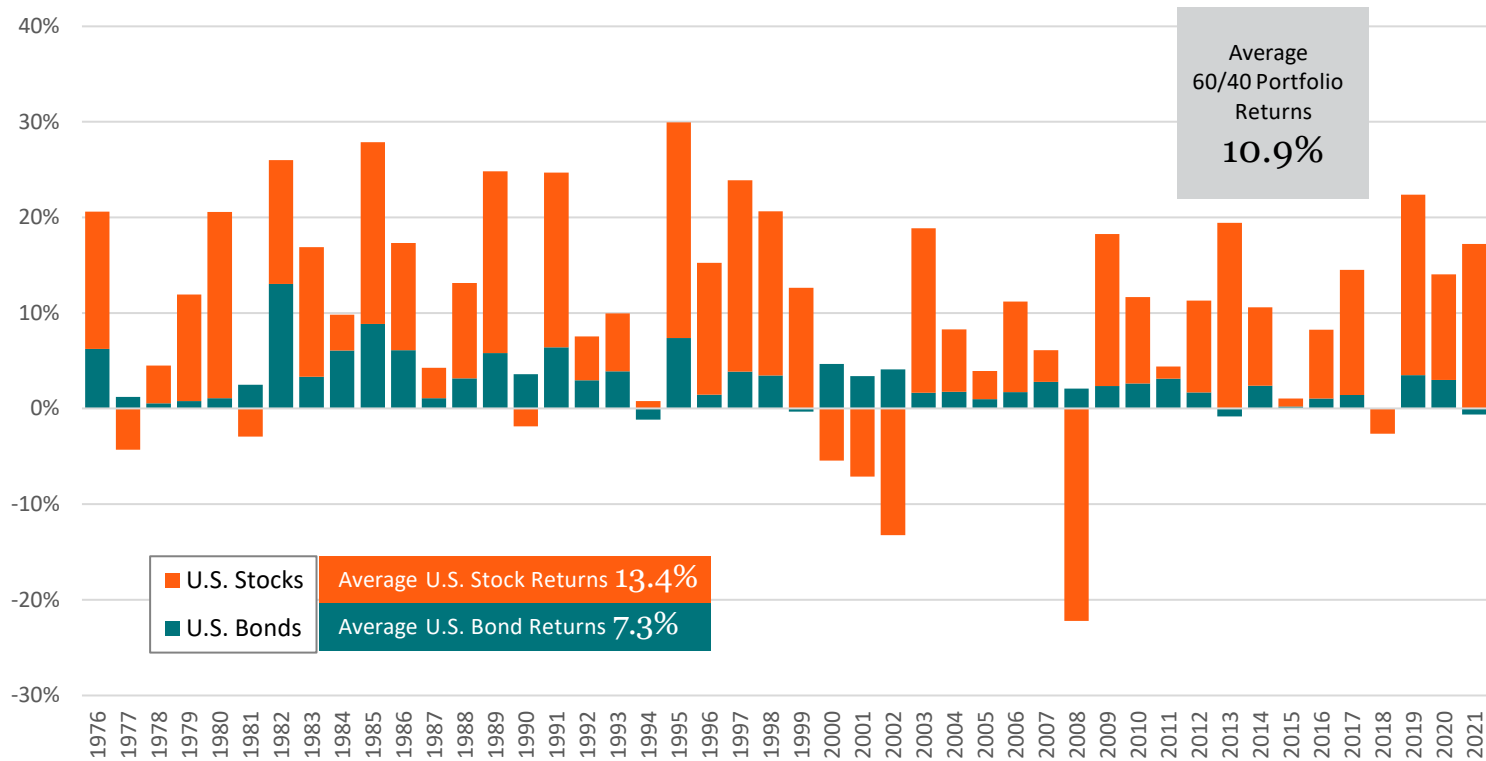
**Standard deviation** is a statistical measurement of dispersion about an average, which, for a mutual fund, depicts how widely the returns varied over a certain period of time.

**Current yield (SEC Yield)** is a calculation based on a 30-day period ending on the last of the previous month. It is computed by dividing the net investment income per share earned during the period by the maximum offering price per share on the last day of the period.

**Max drawdown** is the largest drop in value from peak to bottom for an asset, asset class, or portfolio, over a certain period of time.

# Asset allocation

# 60/40 portfolio returns



## What is this chart showing?

This chart shows both the annual and long-term average returns of a portfolio consisting of 60% U.S. stocks and 40% U.S. bonds.

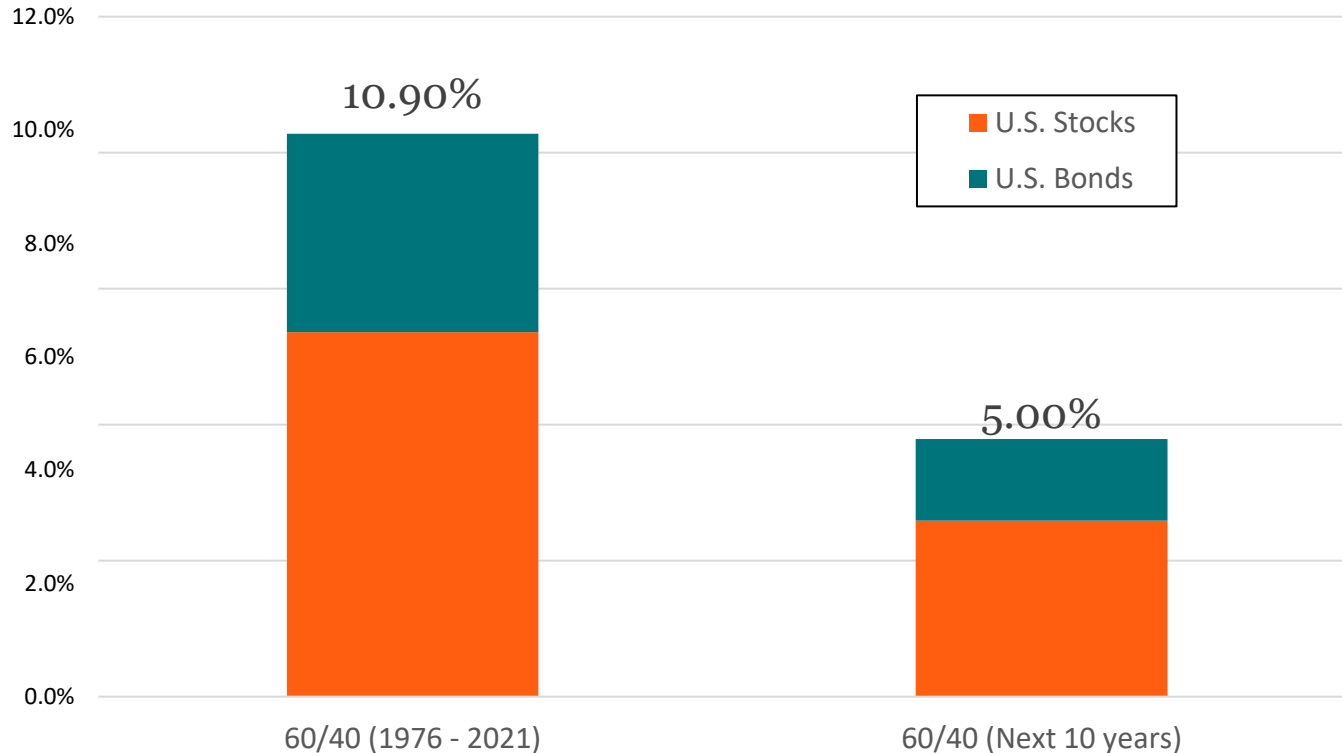
## Why is it important?

Investors can use this to compare the performance of a domestic 60/40 portfolio to other strategies, as well as view the respective contribution to total return from both stocks and bonds.

Stocks are represented by the S&P 500 Index. Bonds are represented by the Bloomberg Barclays U.S. Aggregate Bond Index. You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

Source: Data from Morningstar, Stocks = S&P 500 TR, Bonds = Barclays US Aggregate Bond Index, 1976 through 2021; 60/40 Portfolio = 60% S&P 500 TR + 40% Barclays US Aggregate Index. Arithmetic averages used. **Past performance is not indicative of future returns. Asset allocation does not ensure a profit nor protect against loss.**

# 60/40 portfolio return expectations



Stocks are represented by the S&P 500 Index. Bonds are represented by the Bloomberg U.S. Aggregate Bond Index.

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures. **Past performance is not indicative of future returns. This market forecast is based on the latest forward-looking expectations from select fund partners and is not intended as a recommendation to invest in any particular asset class or strategy or as a promise — or even estimate — of future performance.**

Source: Morningstar, S&P, Bloomberg. 60/40 Portfolio Then = 60% S&P 500 TR + 40% Barclays US Aggregate Index; 60/40 (Next 10 years) = Average Equity and bond returns based on capital market expectations shown in the table. Core equity = US Equity, Core bonds = US aggregate bonds. **See Additional Information for more information.**

Capital market expectations	U.S. Stocks	U.S. bonds
J.P. Morgan Asset Management	5.16%	2.66%
Goldman Sachs Asset Management	7.50%	3.40%
BlackRock	7.70%	3.30%
State Street	5.50%	2.30%
<b>Average</b>	<b>6.47%</b>	<b>2.92%</b>

## What is this chart showing?

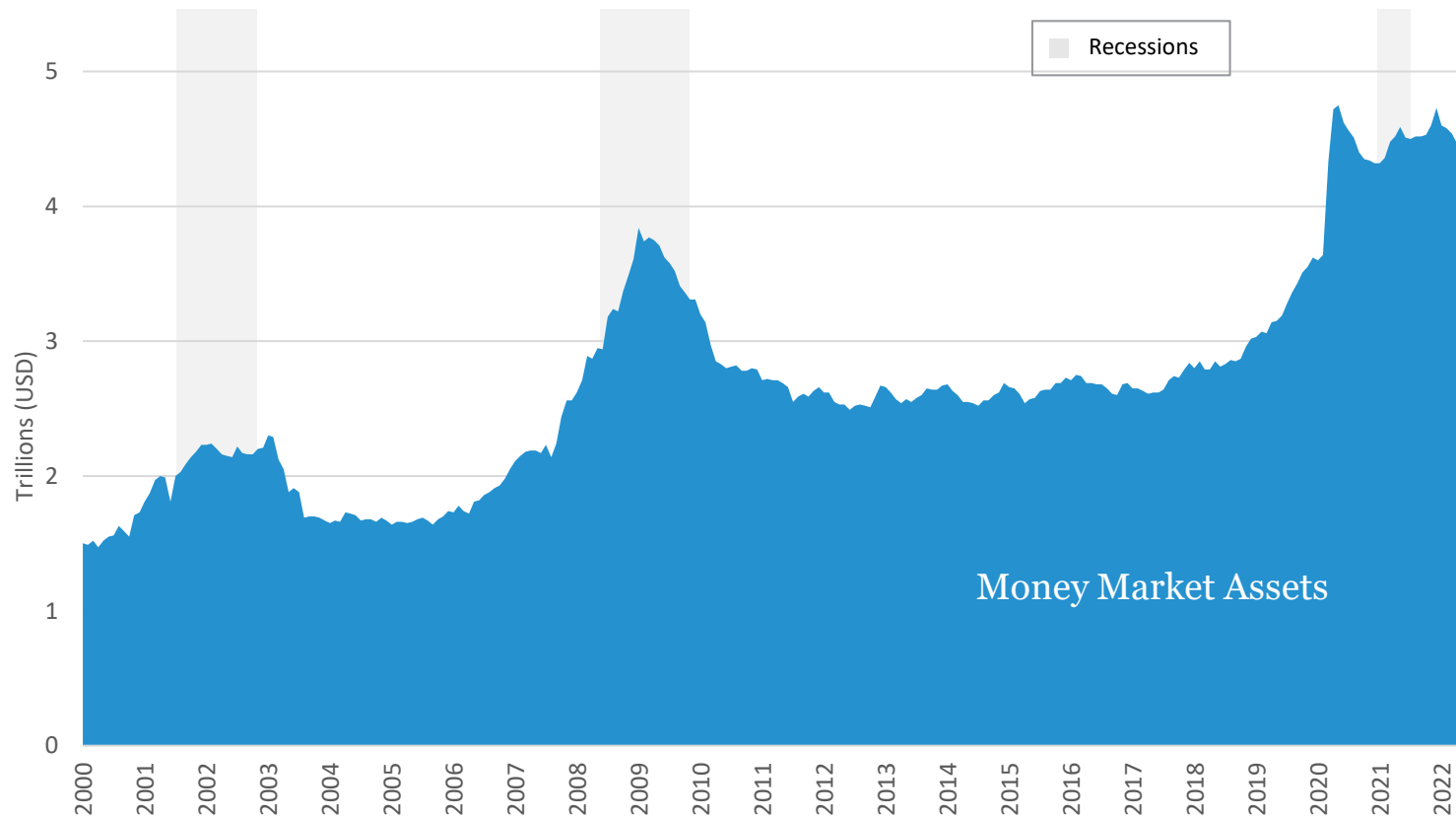
This chart shows the average historical return of a portfolio allocated to 60% equity and 40% bonds, compared to the projected 10-year future return of a similarly weighted portfolio based on the average of capital market expectations from several of our asset management partners.

## Why is it important?

Understanding what future returns may look like relative to the past can help inform investment decisions and be a valuable input for planning purposes.

# Cash on the sidelines

Growth in Money Market Assets



Source: Morningstar. Data as of July 31, 2022. Data based on combined AUM of tax-free, taxable, and Prime Money Market accounts.

## What is this chart showing?

This chart shows the amount of cash investors held in money market accounts from 2000 through the most current data available as of quarter-end.

## Why is it important?

Increases and decreases in cash on the sidelines is one indicator that can help gauge how investors are feeling, positive or negative, about the market and the economy.

# Periodic table of investment returns

## What is this chart showing?

This chart shows the annual performance of major asset classes. Each category is color-coded and listed from best-performing to worst in each year. Additionally, the returns of a diversified asset allocation are shown in each year for reference.

## Why is it important?

Investors can easily see that from year to year, performance of the asset categories tends to rotate, making it very difficult for investors to select the top performing asset. Investors who own a diversified asset allocation tend to experience positive returns over the long-term.

															2008 – 2021	
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	1/1/2022-6/30/2022	Annualized	Volatility
US Core Bond 5.2%	EM Stocks 79.1%	REITs 28%	REITs 8.3%	REITs 19.7%	US Sm Cap 38.9%	REITs 28%	REITs 2.8%	US Sm Cap 21.3%	EM Stocks 37.8%	Cash 1.8%	US Lg Cap 31.5%	US Sm Cap 20.0%	REITs 41.3%	Commods 18.40%	US Lg Cap 11.0%	REITs 23.4%
Cash 1.8%	Global HY Bond 59.4%	US Sm Cap 26.9%	US Core Bond 7.8%	Global HY Bond 19.6%	US Lg Cap 32.4%	US Lg Cap 13.7%	US Lg Cap 1.4%	Global HY Bond 14.2%	Foreign Stocks 25.6%	US Core Bond 0%	REITs 28.7%	Commods 18.7%	US Lg Cap 28.7%	Cash 0.20%	US Sm Cap 9.5%	US Sm Cap 23.2%
Asset Allocation -25.3%	Foreign Stocks 32.5%	EM Stocks 19.2%	Global HY Bond 3.1%	EM Stocks 18.6%	Foreign Stocks 23.3%	US Core Bond 6%	US Core Bond 0.6%	US Lg Cap 11.9%	US Lg Cap 21.8%	REITs -4%	US Sm Cap 25.5%	US Lg Cap 18.4%	Commods 27.1%	US Core Bond -10.30%	REITs 9.4%	EM Stocks 23.1%
Global HY Bond -26.8%	REITs 28%	Commods 16.8%	US Lg Cap 2.1%	Foreign Stocks 17.9%	Asset Allocation 14.9%	Asset Allocation 5.2%	Cash 0%	Commods 11.7%	US Sm Cap 14.7%	Global HY Bond -4.1%	Foreign Stocks 22.7%	Asset Allocation 11.3%	US Sm Cap 14.8%	Asset Allocation -14.60%	Global HY Bond 6.9%	Commods 19.6%
US Sm Cap -33.7%	US Sm Cap 27.2%	US Lg Cap 15.1%	Cash 0.1%	US Sm Cap 16.3%	Global HY Bond 7.3%	US Sm Cap 4.9%	Foreign Stocks -0.4%	EM Stocks 11.6%	Asset Allocation 14.6%	US Lg Cap -4.4%	Asset Allocation 19.5%	Global HY Bond 8.3%	Asset Allocation 13.4%	Global HY Bond -16.90%	Asset Allocation 6.6%	Foreign Stocks 19.5%
Commods - 35.6%	US Lg Cap 26.5%	Global HY Bond 14.8%	Asset Allocation -0.7%	US Lg Cap 16%	REITs 2.9%	Global HY Bond 0%	Asset Allocation -2%	REITs 8.6%	Global HY Bond 10.4%	Asset Allocation -5.8%	EM Stocks 18.9%	US Core Bond 7.5%	Foreign Stocks 11.8%	EM Stocks -17.50%	US Core Bond 3.9%	US Lg Cap 17.3%
US Lg Cap -36.9%	Asset Allocation 25%	Asset Allocation 13.3%	US Sm Cap -4.2%	Asset Allocation 12.2%	Cash 0%	Cash 0%	Global HY Bond -2.7%	Asset Allocation 8.3%	REITs 8.7%	US Sm Cap -11%	Global HY Bond 12.6%	Cash 7.0%	Global HY Bond 1.0%	REITs -19.20%	Foreign Stocks 3.6%	Global HY Bond 12.6%
REITs -37.7%	Commods 18.9%	Foreign Stocks 8.2%	Foreign Stocks -11.7%	US Core Bond 4.2%	US Core Bond -2%	EM Stocks -1.8%	US Sm Cap -4.4%	US Core Bond 2.6%	US Core Bond 3.5%	Commods -11.3%	US Core Bond 8.7%	REITs 0.5%	Cash 0%	Foreign Stocks -19.30%	EM Stocks 2.7%	Asset Allocation 12.1%
Foreign Stocks -43%	US Core Bond 5.9%	US Core Bond 6.5%	Commods - 13.3%	Cash 0.1%	EM Stocks -2.3%	Foreign Stocks -4.5%	EM Stocks -14.6%	Foreign Stocks 1.5%	Commods 1.7%	Foreign Stocks -13.4%	Commods 7.7%	Foreign Stocks -3.1%	US Core Bond -1.5%	US Lg Cap -20.00%	Cash 0.6%	US Core Bond 3.4%
EM Stocks -53.1%	Cash 0.1%	Cash 0.1%	EM Stocks -18.2%	Commods -1.1%	Commods -9.5%	Commods -17%	Commods - 24.7%	Cash 0.3%	Cash 0.8%	EM Stocks -14.3%	Cash 2.2%	EM Stocks -5.1%	EM Stocks -2.2%	US Sm Cap -23.40%	Commods -3.80%	Cash 0.4%

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

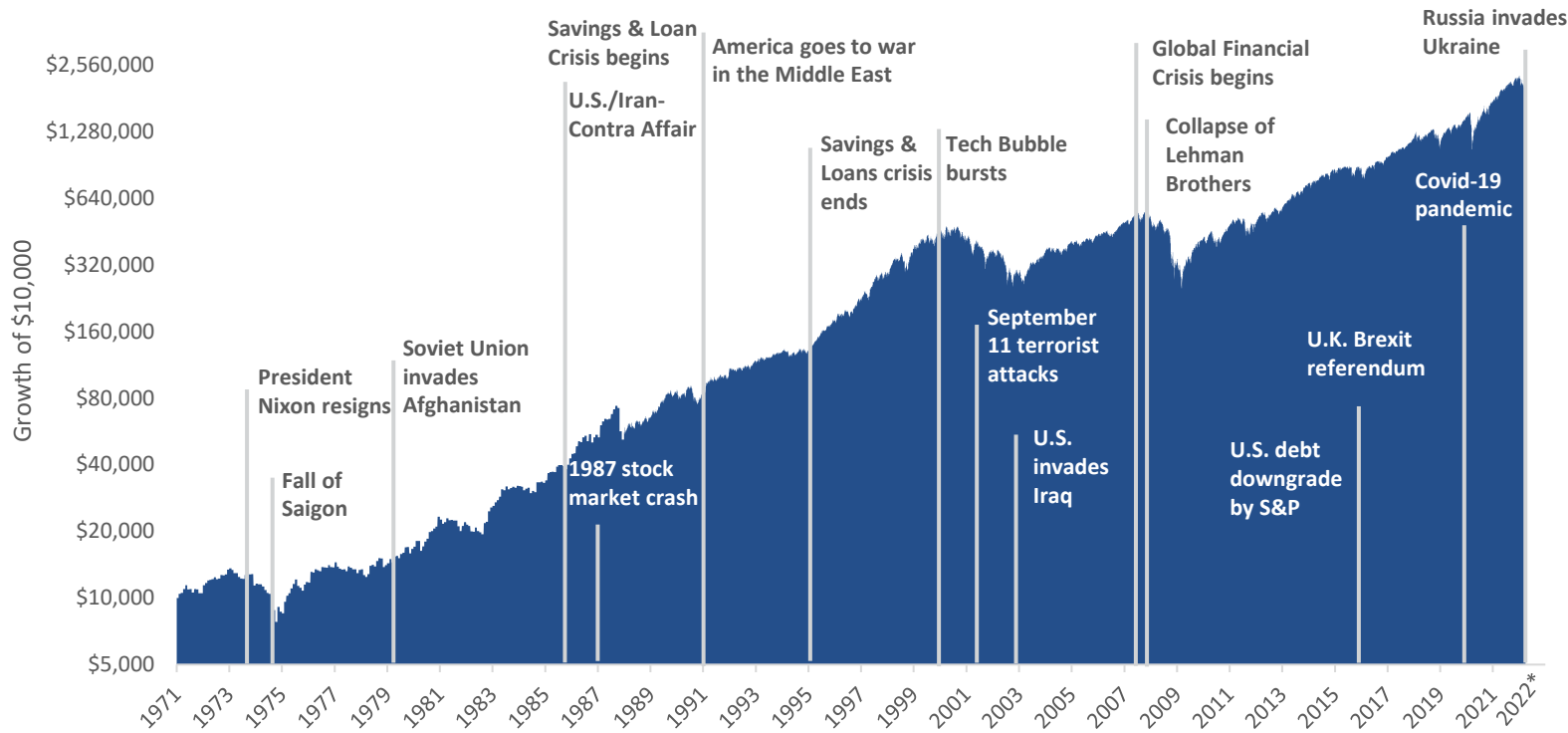
Source: Bloomberg, FactSet, S&P, MSCI, FTSE, Russell. **US Core Bond** — US BbgBarc Aggregate TR; **US Lg Cap** — S&P 500 TR; **Cash** — BbgBarc US Treasury Bill 1-3 Mon TR USD; **Global HY Bond** — BbgBarc Global High Yield TR USD; **EM Stocks** — MSCI EM GR USD; **Foreign Stocks** — MSCI EAFE GR USD; **US Sm Cap** — Russell 2000 TR USD; **Commods** — Bloomberg Commodity TR USD; **REITs** — FTSE NAREIT All Equity REITs TR USD; **Asset Allocation** - 25% S&P 500, 10% Russell 2000, 15% MSCI EAFE, 5% MSCI EME, 25% Bloomberg Barclays US Aggregate, 5% Bloomberg Barclays 1-3m Treasury, 5% Bloomberg Barclays Global High Yield Index, 5% Bloomberg Commodity Index and 5% NAREIT Equity REIT Index. **Please see Additional Information on page 60 for index definitions.** All data represents total return for stated period. The "Asset Allocation" portfolio is for illustrative purposes only. **Past performance is not indicative of future returns.**

# Foundations



# Market resiliency

Even during decades of conflict and uncertainty, the markets have generally produced long-term growth.



Source: Morningstar Direct, S&P 500 Total Return Index, January 1, 1971, through March 31, 2022. Scale is logarithmic. **Past performance is no guarantee of future results.** This chart is for illustrative purposes only and not indicative of any actual investment. Investors cannot invest directly in an index. Index returns do not reflect any fees, expenses, or sales charges. Stocks are not guaranteed and have been more volatile than the other asset classes. These returns were the result of certain market factors and events which may not be repeated in the future. The information presented is not intended to constitute an investment recommendation for, or advice to, any specific person. \*Data as of March 31, 2022.

## What is this chart showing?

This chart shows that \$10,000 invested in the S&P 500 from January 1, 1971, to March 31, 2022, grew to more than \$2.1 million throughout various crisis events. This equates to an annualized return of approximately 11%.

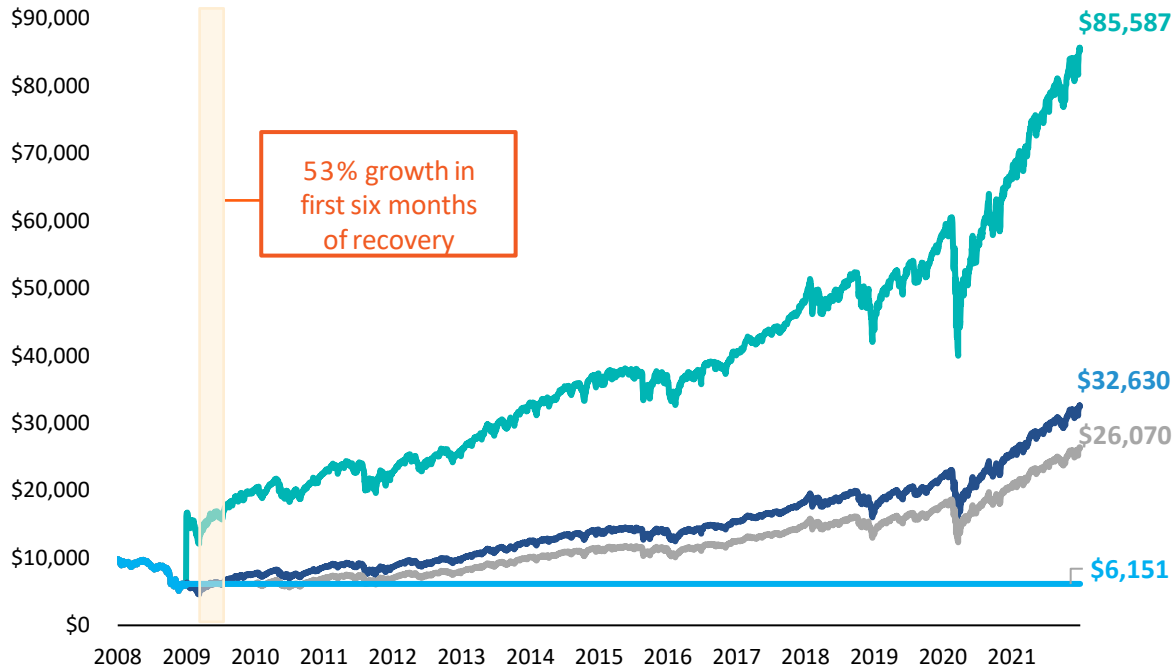
## Why is it important?

Market volatility has always been a source of concern for investors — whether it's caused by geopolitical events, pandemics, inflation, interest rates or other economic conditions. It's important to remember that while current events may feel unprecedented to us, the markets have seen and tackled these types of challenges before — and are poised to do so again.

# Your response to volatility matters

## Four investor reactions to the 2008 Financial Crisis

Hypothetical growth of \$10,000 Investment, January 2008



**Opportunistic Investor**  
Invested an additional \$10,000 at the start of 2009



**Steady Investor**  
Stayed the course, making no changes to portfolio



**Uncertain Investor**  
Moved to cash at the start of 2009 and reinvested after 1 year



**Apprehensive Investor**  
Moved to cash at the start of 2009 and remained there

## What is this chart showing?

This chart shows how four different investors may have responded to the market volatility during the 2008 Financial Crisis.

## Why is it important?

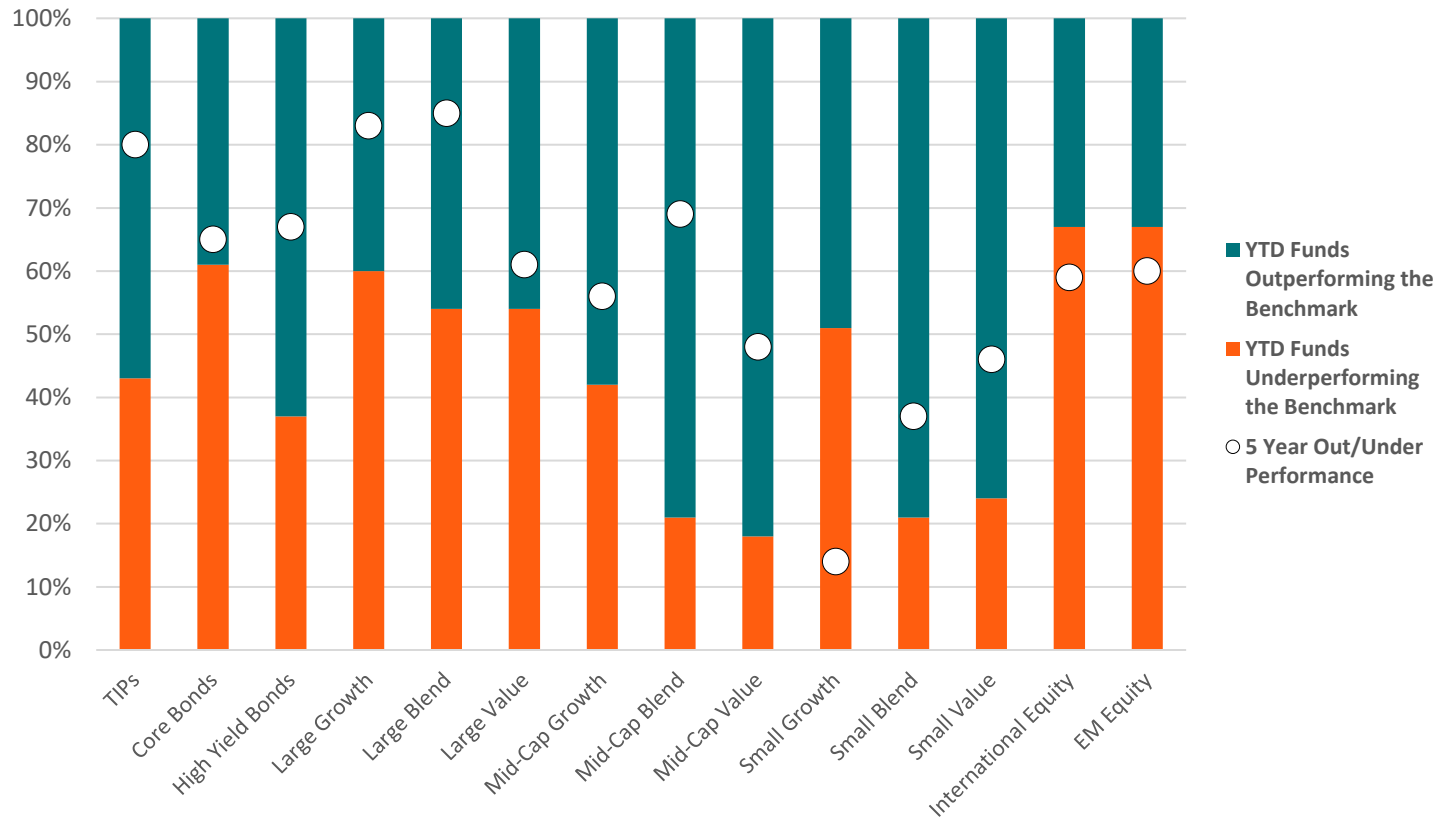
Investors can use this to help understand how different reactions to market volatility can impact their long-term outcomes.

While the steady investor outperformed those who moved to cash, the opportunistic investor who invested an additional \$10,000 during this period of market volatility had the most positive outcome of the group.

Source: Morningstar Direct, Lincoln Financial Group. 1/1/2008 – 12/31/2021. S&P 500 Price Return Index used, which does not include dividends. Cash assumed to have a net yield of 0%. **Past performance is not indicative of future returns.** You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures.

# Active vs. passive fund performance

## Open Ended Active Manager Out/Under Performance



## What is this chart showing?

This chart shows the percentage of active fund managers in the universe that have outperformed their category benchmark YTD, and over a 5-year period.

## Why is it important?

Active investing employs professional management with the goal of outperforming – or “beating” – its benchmark index, while passive investing seeks to replicate the performance of a benchmark index rather than outperforming it. The relative performance of an active fund is measured by comparing its return to the return of its benchmark.

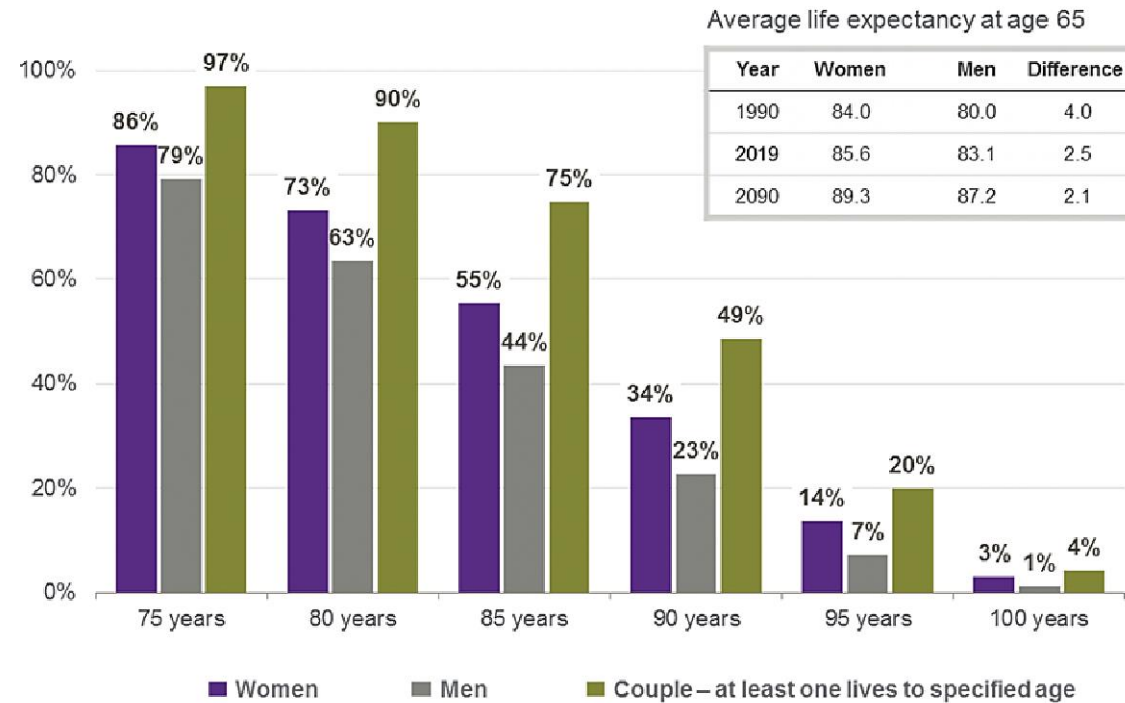
Source: Morningstar. Data based on Year-to-date performance from 1/1/2022 to 6/30/2022, and 5-year performance from 7/1/2017 to 6/30/2022.

# Life expectancy probabilities

## J.P.Morgan Asset Management

Average life expectancy continues to increase and is a midpoint not an endpoint. You may need to plan on the probability of living much longer – perhaps 30+ years in retirement.

If you're 65 today, the probability of living to a specific age or beyond



Source (chart): Social Security Administration, "Period Life Table," 2017 (published in 2020), J.P. Morgan Asset Management.

Source (table): Social Security Administration 2020 OASDI Trustees Report. Probability at least one member of a same-sex female couple lives to age 90 is 56% and a same-sex male couple is 40%.

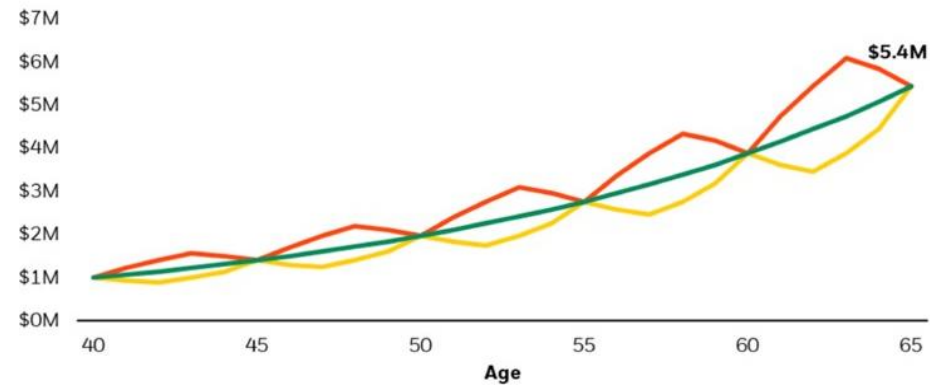
# The impact of sequence of returns risk

**BlackRock** Retirees decumulating their portfolio may realize different retirement outcomes just due to the sequence in which market returns occur. Said another way, when you retire can be as important as how much you have when you retire.

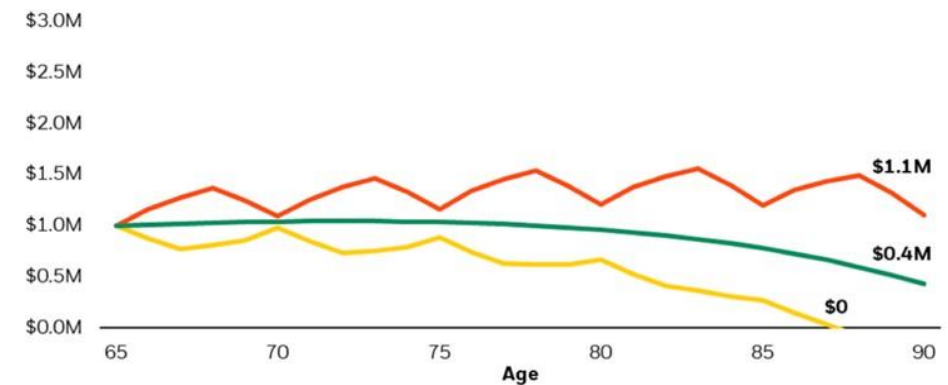
### Return pattern

	Year 1	Year 2	Year 3	Year 4	Year 5	Avg. Annual
• Portfolio A	22%	15%	12%	-4%	-7%	7%
• Portfolio B	7%	7%	7%	7%	7%	7%
• Portfolio C	-7%	-4%	12%	15%	22%	7%

### Portfolio in accumulation phase



### Portfolio in decumulation phase



Source: BlackRock. This graphic looks at the effect the sequence of returns can have on your portfolio value over a long period of time. Other factors that may affect the longevity of assets include the investment mix, taxes and expenses related to investing. This is a hypothetical illustration. The accumulation phase illustration assumes a hypothetical initial portfolio balance of \$1,000,000 with no additions or withdrawals and the hypothetical sequence of returns noted in the table. The decumulation phase illustration assumes a hypothetical initial portfolio balance of \$1,000,000, annual withdrawals of \$60,000 adjusted annually by 3% for inflation, and the hypothetical sequence of returns noted in the table. These figures are for illustrative purposes only and do not represent any particular investment, nor do they reflect any investment fees, expenses or taxes. When you are withdrawing money from a portfolio, your results can be affected by the sequence of returns even when average return remains the same, due to the compounding effect on the annual account balances and annual withdrawals. © BlackRock, Inc. and its affiliates. All rights reserved.

# Missed best days

Performance of \$10,000 investment between January 1, 2000, and December 31, 2021.



Cumulative Return	394.1%	126.3%	34.2%	-13.9%
Annualized Return	7.9%	4.0%	1.4%	-0.7%

You cannot invest directly in an index. All indices are unmanaged and do not include fees or expenses. Please see the back of this presentation for index definitions and disclosures. Returns based on S&P 500 Price Return Index, which does not include dividends.

Source: FactSet, S&P, Lincoln Investment Advisors Corp. Data from January 1, 2000, through December 31, 2021. **Past performance is not indicative of future returns.**

## What is this chart showing?

This chart shows how missing the best days in the market would have impacted returns of an investment in the S&P 500.

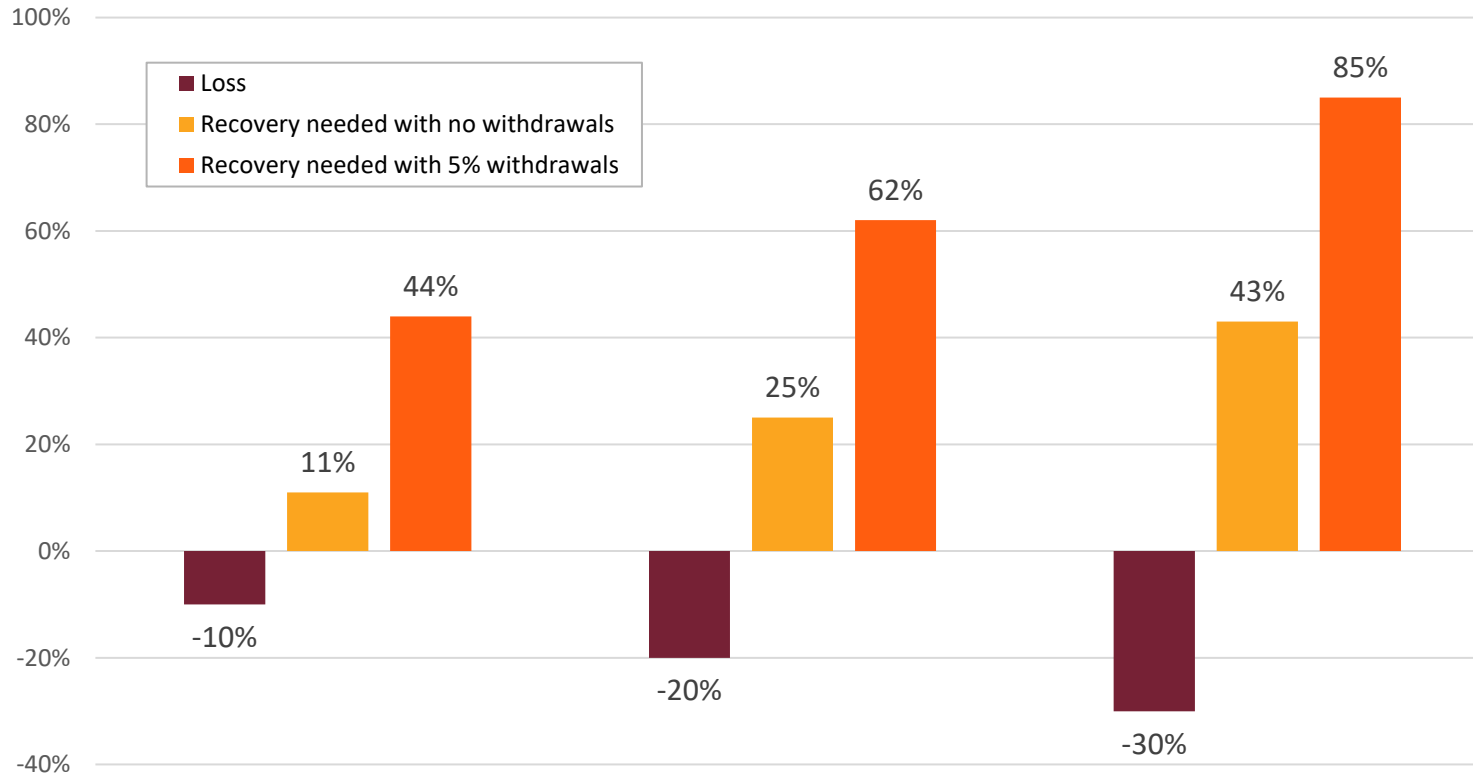
## Why is it important?

Missing the best days can be costly, while avoiding the worst days can be beneficial. However, because the best days often follow the worst, it is nearly impossible to accurately time the market.

For this reason, simply staying the course is generally the best approach.

# Mathematics of loss

## Gains required to recover from losses



Source: Lincoln Investment Advisors Corp.

The calculation of the cumulative gains required over five years with withdrawals includes the initial loss (-10%, -20%, -30%) and the continued 5% annual withdrawals from the portfolio. It does not include the impact of investment returns. This is a hypothetical example. No actual investment is being illustrated.

## What is this chart showing?

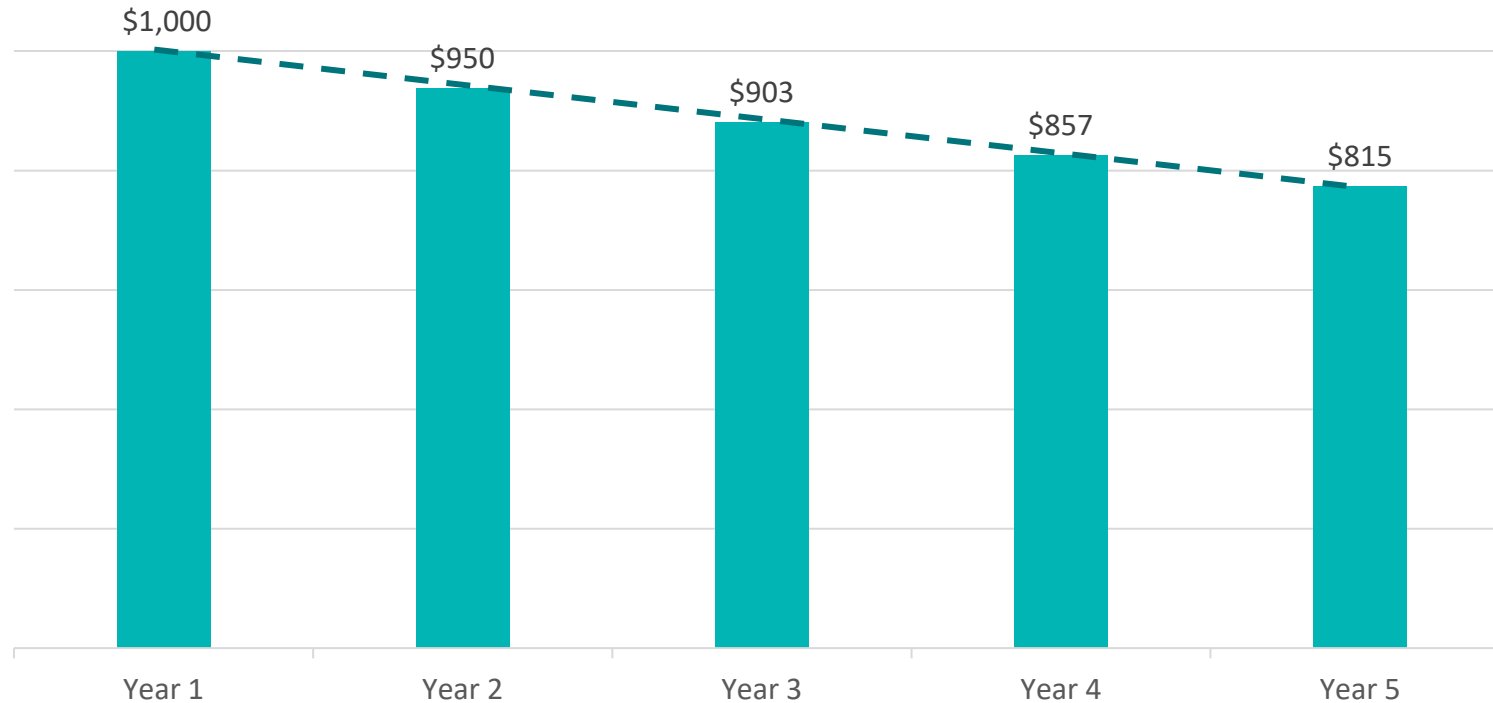
This chart shows the gains needed to offset losses, both with and without distributions.

## Why is it important?

Many investors underestimate the gains needed to recover from investment losses — especially when withdrawals are being taken. Recouping losses always requires a larger percentage of gains than the loss itself to fully recover.

# Purchasing power erosion

Calculation of future purchasing power, at 5% inflation.



Note: This illustration assumes an inflation rate of 5%.

## What is this chart showing?

This chart shows the impact inflation can have on the purchasing power of cash over time.

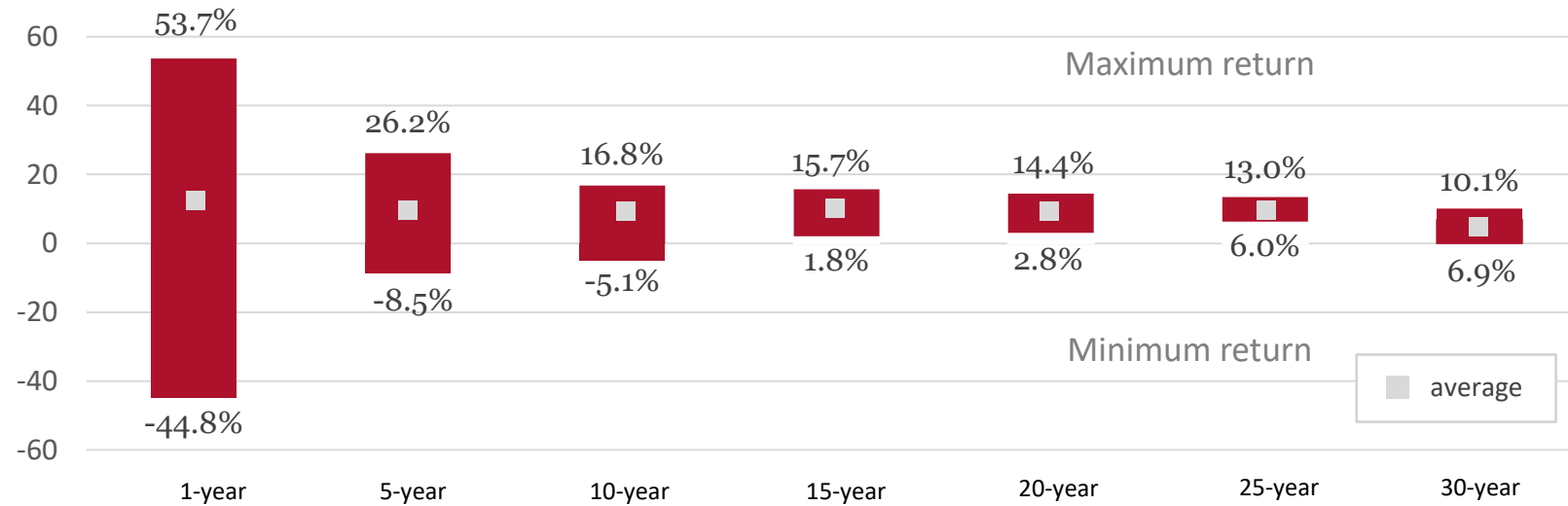
## Why is it important?

While it may feel safe to hold large cash positions, it is important for investors to understand that when inflation is high, the purchasing power of those dollars can decrease substantially over time.



# Time in the market, not timing the market

S&P 500 rolling returns, range of outcomes (1/1/1971 – 6/30/2022).



Rolling returns	1-yr.	5-yr.	10-yr.	15-yr.	20-yr.	25-yr.	30-yr.
Max. return	53.7%	26.2%	16.8%	15.7%	14.4%	13.0%	10.1%
Min. return	-44.8%	-8.5%	-5.1%	1.8%	2.8%	6.0%	6.9%
Avg. return	9.1%	8.1%	8.2%	8.1%	8.2%	8.6%	8.3%
# of periods	608	560	500	440	380	320	260

## What is this chart showing?

This chart shows rolling returns of the S&P 500 Index for 1-, 5-, 10-, 15-, 20-, 25-, and 30-year periods.

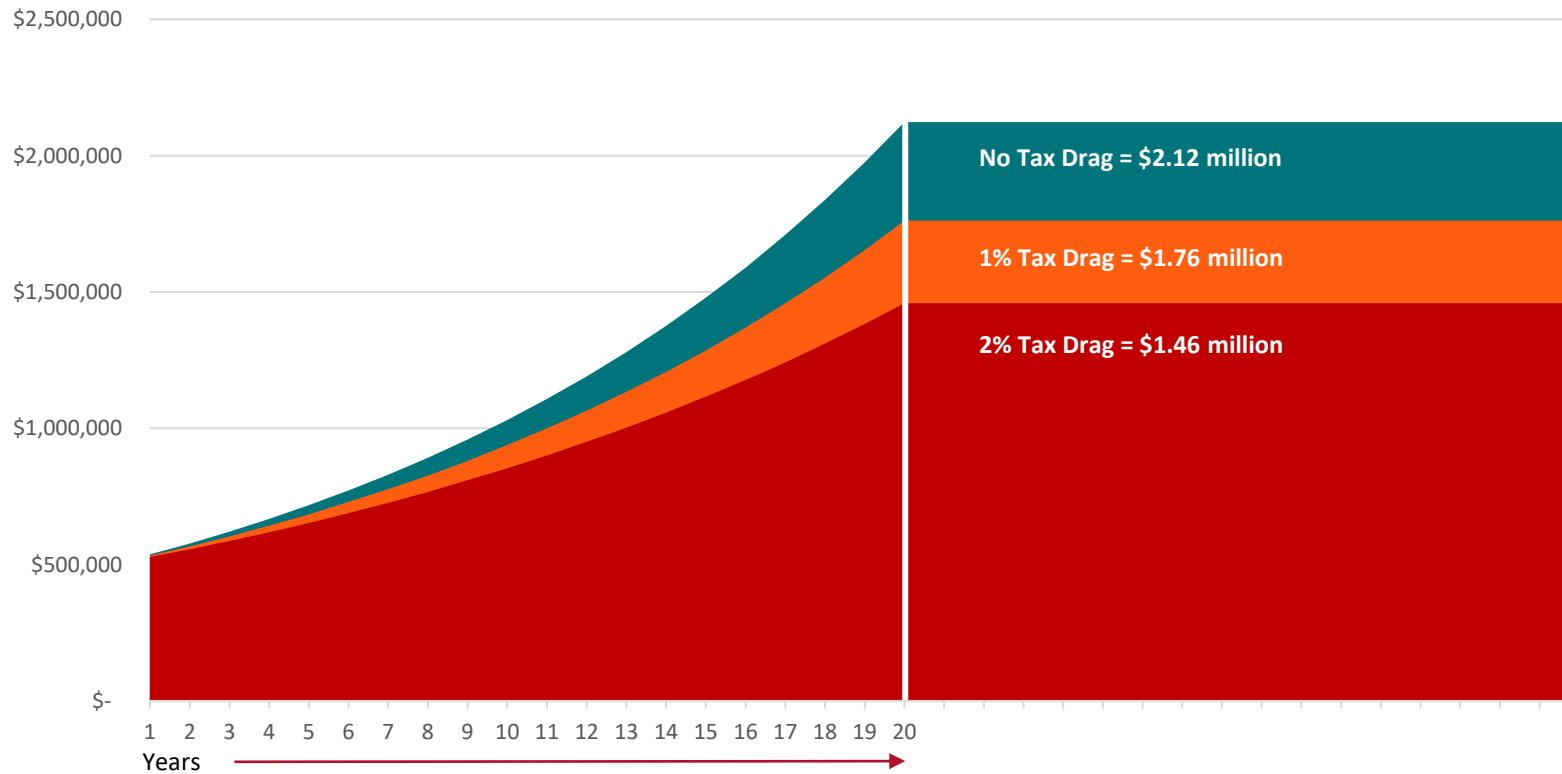
## Why is it important?

While stocks can be volatile over short periods of time, staying the course over the long term has not only reduced the range of potential outcomes, but also increased the minimum return.

Source: Morningstar Direct. Rolling returns are annualized on a 5-, 10-, 15-, 20-, and 25-year basis. Using monthly S&P 500 Price Return data starting in January of 1971, summary return statistics were calculated based on the total number of rolling returns periods existing for each given period of time. For each rolling return period, a range of returns (maximum and minimum) as well as the average return has been calculated to provide a historical reference for how equities have performed over the past half century. Returns >1yr annualized. **Past performance is not indicative of future returns.**

# Impact of taxes

Hypothetical growth of \$500,000 over 20 years at 7.5% per year, with 0%, 1% and 2% tax drag scenarios.



Note: This illustration is for hypothetical purposes only and may not represent an actual experience. Tax drag represents the reduction in portfolio returns due to taxes paid on distributions (stock dividends, bond dividends and capital gains). \*Average 5yr tax cost ratio as of 5/31/22 for U.S. funds within the Morningstar categories of U.S. equity, international equity, and taxable bond. Source: Morningstar Direct. Assumes that distributions are taxed at the highest federal tax-rate prevailing for each type of distribution, and the appropriate current or historical federal tax rate is applied to each distribution date. State and local taxes are ignored, as are the effects of AMT, exemptions, phase-out credits, or any individual specific issues.

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58



Every dollar paid in taxes is a dollar less invested for your long-term goals.

## What is this chart showing?

This chart shows the financial impact that taxes can have on a portfolio's growth over an extended period of time.

## Why is it important?

It is important for investors to understand how taxes could affect the growth of their portfolio, and to consider ways to improve after tax returns.

# Additional information

## Index Descriptions

**S&P 500 Index** is a market-cap weighted index that measures the performance of 500 widely held large capitalization stocks in the U.S. equity market. It is regarded as the best gauge of the U.S. equity market.

**Russell 2000 Index** measures the performance of the small cap segment of the U.S. equity universe. It is a subset of the Russell 3000.

**MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that measures equity market performance in large and mid cap representation across 27 emerging market countries.

**MSCI EAFE Index** is a free float-adjusted equity index that captures large and mid cap representation across 21 developed market countries, excluding the U.S. and Canada.

**MSCI All Country World Index (ACWI)** is a free float-adjusted market capitalization index that captures large and mid cap representation across 23 developed markets and 27 emerging market countries.

**Bloomberg Commodity Total Return Index** is composed of futures contracts and reflects the returns on a fully collateralized investment in the BCOM. This combines the returns of the BCOM with the returns on cash collateral invested in 13-week (3-month) U.S. Treasury bills.

**Bloomberg Barclays Global High Yield Index** is a multicurrency flagship measure of the global high yield debt market. The index represents the union of the U.S. High Yield, the Pan-European High Yield, and Emerging Markets (EM) Hard Currency High Yield Indices.

**The Bloomberg Barclays U.S. Aggregate Bond Index** is a broad-based flagship benchmark that measures the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS, ABS and CMBS.

**The FTSE Nareit All Equity REITs Index** is a free float-adjusted market capitalization-weighted index of U.S. equity REITs. Constituents of the index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property.

**The Bloomberg Barclays U.S. Treasury Bills 1-3 Month Index** includes all publicly issued zero coupon U.S. Treasury bills that have a remaining maturity of less than three months and at least one month, are rated investment-grade, are U.S.-dollar denominated, nonconvertible, and have \$300 million or more of outstanding face value.

**University of Michigan (UoM) Inflation Expectations** measures the percentage that consumers expect the price of goods and services to change during the next 12 months.

## Capital Market Expectations

- BlackRock: <https://www.blackrock.com/institutions/en-us/insights/charts/capital-market-assumptions>, as of June 2022. 10-year return time period.
- J.P. Morgan Asset Management, 2022 Long Term Capital Market Assumptions: <https://am.jpmorgan.com/us/en/asset-management/adv/insights/portfolio-insights/lcma/>, data as of September 30, 2021. 10- to 15-year investment horizon.
- StateStreet: <https://www.ssga.com/library-content/pdfs/insights/long-term-asset-class-forecasts-q2-22.pdf>, as of June 30, 2022. 10+ year return time period.
- Goldman Sachs: Goldman Sachs: US ERISA Q2 2022 Multi-Asset Solutions (MAS) Team Strategic Assumptions. 10-year return time period, as of June 30, 2022. <https://visit.lfg.com/GSMAS>

## Economic and Market Indicators

- Consumer sentiment based on month-end data, starting in Jan. 1978 to August 2022. +/- 1 std. deviation of historical value range from 98.51% to 72.70%.
- Economic expansion (CQQQ Index) based on QOQ % change data of quarterly data, starting in June 1947 to June 2022. +/- 1 std. deviation of historical value range from 7.83% to -1.49%.
- Inflation (CPI) based on YOY % change of monthly CPI seasonally adjusted data, starting in Jan. 1947 to July 2022. +/- 1 std. deviation of historical value range from 6.42% to 0.59%.
- Market volatility (VIX) based on daily closing values of the CBOE VIX index from Jan. 1990 to August 2022. +/- 1 std. deviation of historical value range from 27.61% to 11.60%.
- Unemployment based on month-end data, starting in Jan. 1948 to July 2022. +/- 1 std. deviation of historical value range from 7.45% to 4.04%.
- 10Y U.S. Treasury yield based on daily data, starting in Jan. 1962 to August 2022. +/- 1 std. deviation of historical value range from 8.91% to 2.92%.

# Disclosures

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The Russell 2000® Price Return Index measures the stock performance of 2,000 small U.S. companies. The Russell 2000® Price Return Index (the “Index”) is a trademark of Frank Russell Company (“Russell”) and has been licensed for use by The Lincoln National Life Insurance Company.

The MSCI EAFE Price Return Index follows the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada.

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