

**60/40 Portfolio: US Stocks (S&P 500) and Bonds (Barclays Aggregate)  
Total Returns (1977 - 2022)**

Year	Return	Year	Return	Year	Return
1977	-3.0%	1993	9.9%	2009	18.2%
1978	4.5%	1994	-0.4%	2010	11.7%
1979	11.9%	1995	29.9%	2011	4.4%
1980	20.1%	1996	15.2%	2012	11.3%
1981	-0.3%	1997	23.9%	2013	18.6%
1982	25.3%	1998	20.6%	2014	10.6%
1983	16.7%	1999	12.3%	2015	1.1%
1984	9.7%	2000	-0.8%	2016	8.2%
1985	27.6%	2001	-3.8%	2017	14.5%
1986	17.2%	2002	-9.2%	2018	-2.6%
1987	4.6%	2003	18.8%	2019	22.4%
1988	13.1%	2004	8.3%	2020	14.0%
1989	24.8%	2005	3.9%	2021	13.8%
1990	1.7%	2006	11.2%	2022 YTD	-17.3%
1991	24.7%	2007	6.1%		
1992	7.5%	2008	-20.1%		

 COMPOUND

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**S&P 500 Down Years (1976 - 2022)**

Year	S&P 500 Total Return (Stocks)	Bloomberg Barclays US Agg Index TR (Bonds)	60/40 Portfolio (S&P 500/Barclays Agg)
1977	-7.2%	3.0%	-3.1%
1981	-4.9%	6.2%	-0.5%
1990	-3.2%	9.0%	1.7%
2000	-9.1%	11.6%	-0.8%
2001	-11.9%	8.4%	-3.7%
2002	-22.1%	10.3%	-9.2%
2008	-37.0%	5.2%	-20.1%
2018	-4.4%	0.0%	-2.6%
2022 YTD	-20.8%	-12.1%	-17.3%

 COMPOUND

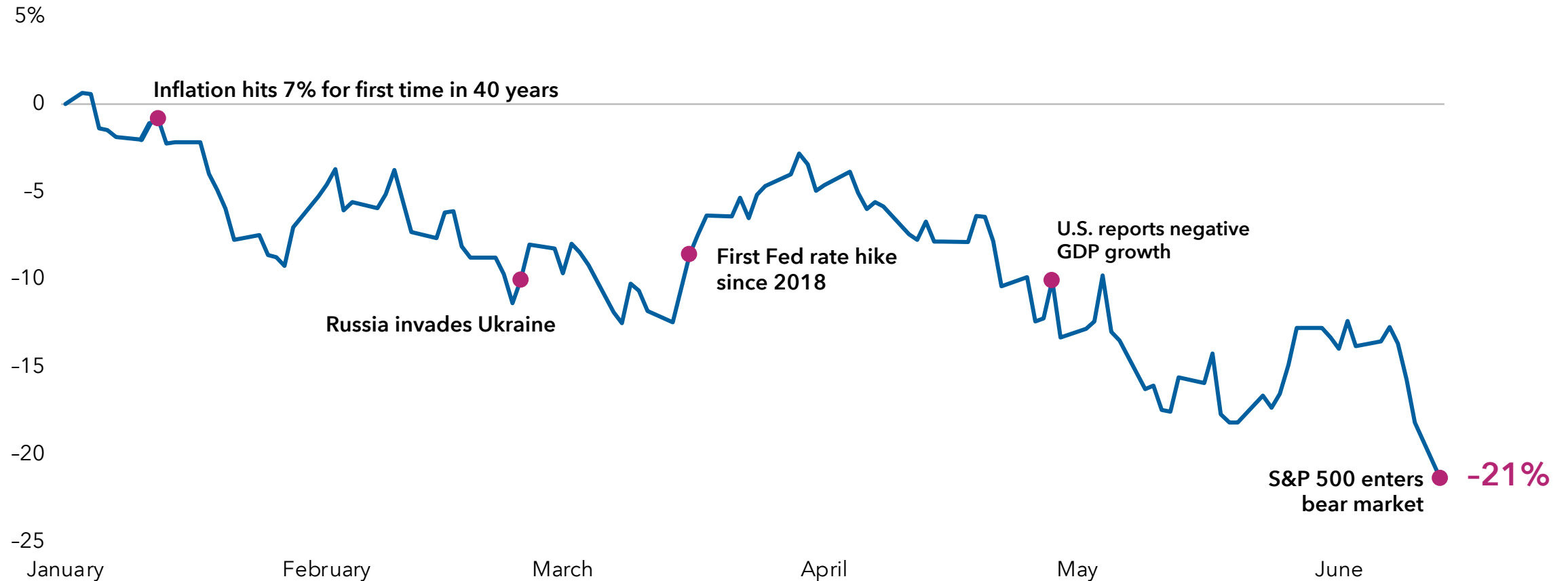
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### S&P 500 Bear Markets (defined by 20% Peak to Trough Decline): 1929 - Present

Bear Market Period	Length of Bear Market (Months)	NBER Recessions	Length of Recession (Months)	S&P Start	S&P End	% Change
Jan 2022 to ?	?	?		4819	3734	-23%
Feb 2020 to Mar 2020	1	Feb 2020 to Apr 2020	2	3394	2192	-35%
Sep 2018 to Dec 2018	3			2941	2347	-20%
May 2011 to Oct 2011	5			1371	1075	-22%
Oct 2007 to Mar 2009	17	Dec 2007 to Jun 2009	18	1576	667	-58%
Mar 2000 to Oct 2002	31	Mar 2001 to Nov 2001	8	1553	769	-51%
Jul 1998 to Oct 1998	3			1191	923	-22%
Jul 1990 to Oct 1990	3	Jul 1990 to Mar 1991	8	370	295	-20%
Aug 1987 to Oct 1987	2			338	216	-36%
Nov 1980 to Aug 1982	22	Jul 1981 to Nov 1982	16	142	102	-28%
Sep 1976 to Mar 1978	18			109	86	-20%
Jan 1973 to Oct 1974	21	Nov 1973 to Mar 1975	16	122	61	-50%
Dec 1968 to May 1970	17	Dec 1969 to Nov 1970	11	109	69	-37%
Feb 1966 to Oct 1966	8			95	72	-24%
Dec 1961 to Jun 1962	6			73	51	-29%
Aug 1956 to Oct 1957	14	Aug 1957 to Apr 1958	8	50	39	-21%
Jun 1948 to Jun 1949	12	Nov 1948 to Oct 1949	11	17	14	-21%
May 1946 to May 1947	12			19	14	-28%
Nov 1938 to Apr 1942	36			14	7	-46%
Mar 1937 to Mar 1938	12	May 1937 to Jun 1938	13	19	9	-54%
Jul 1933 to Mar 1935	20			12	8	-34%
Sep 1932 to Feb 1933	5	Aug 1929 to Mar 1933	43	9	6	-41%
Sep 1929 to Jun 1932	33	Aug 1929 to Mar 1933	43	32	4	-86%
<b>Average All</b>	<b>14</b>					<b>-36%</b>

# It's been a challenging backdrop for markets this year

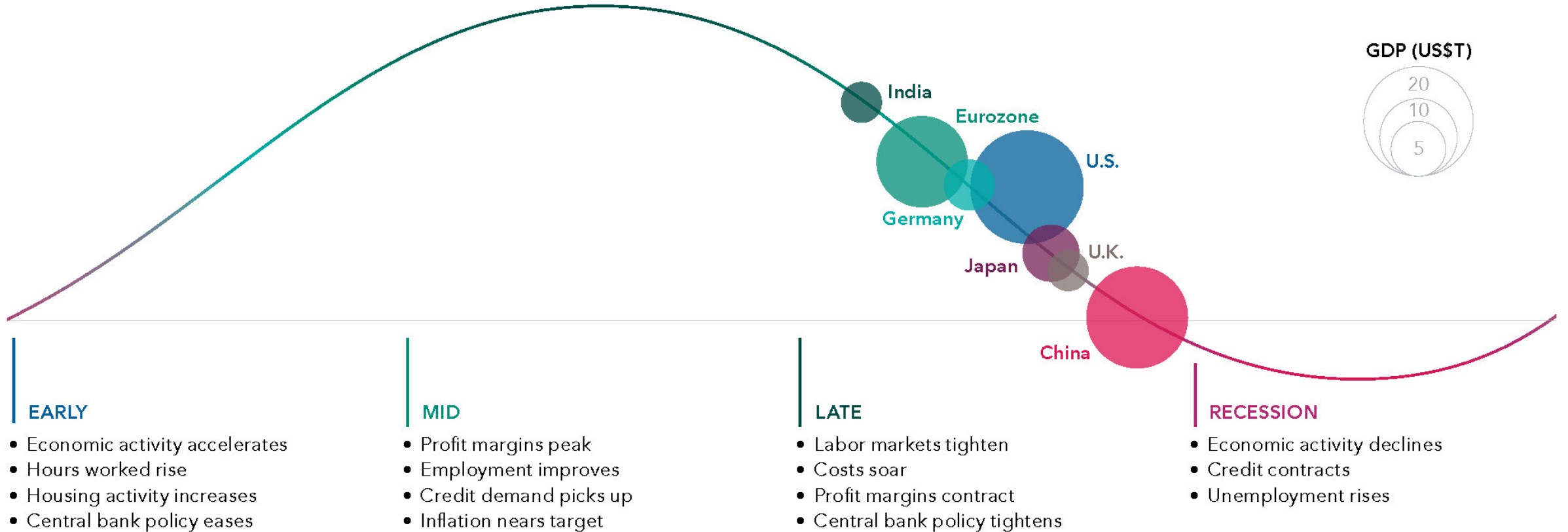
## S&P 500 total return (YTD)



Sources: RIMES, Standard & Poor's. As of 6/13/22.

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# How close is the next recession?



Sources: Capital Group, FactSet. GDP data are in USD and are the latest available through 3/31/22. Country position within the business cycle are forward-looking estimates by Capital Group economists as of June 2022.

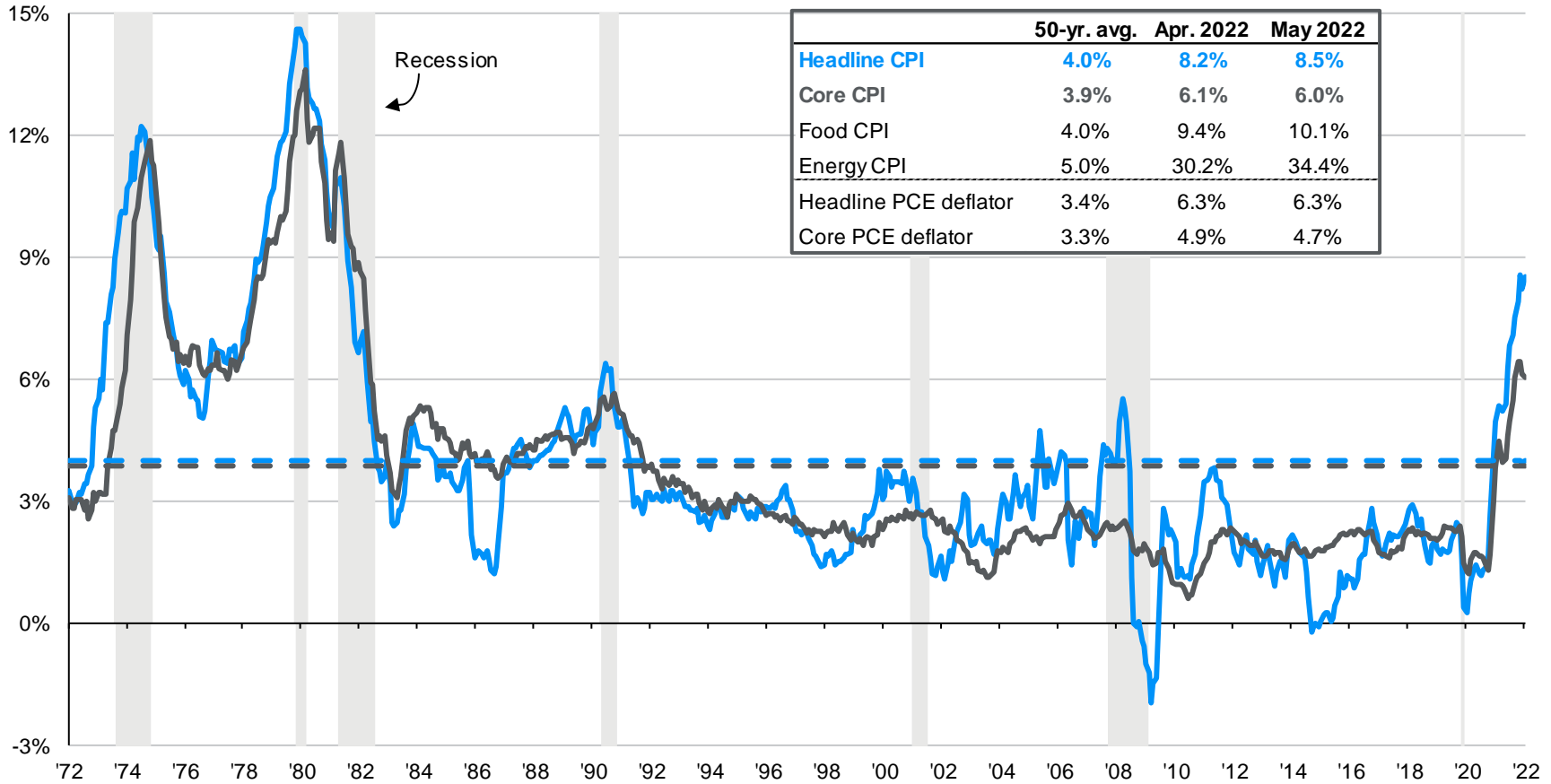


# Inflation

Economy

## CPI and core CPI

% change vs. prior year, seasonally adjusted



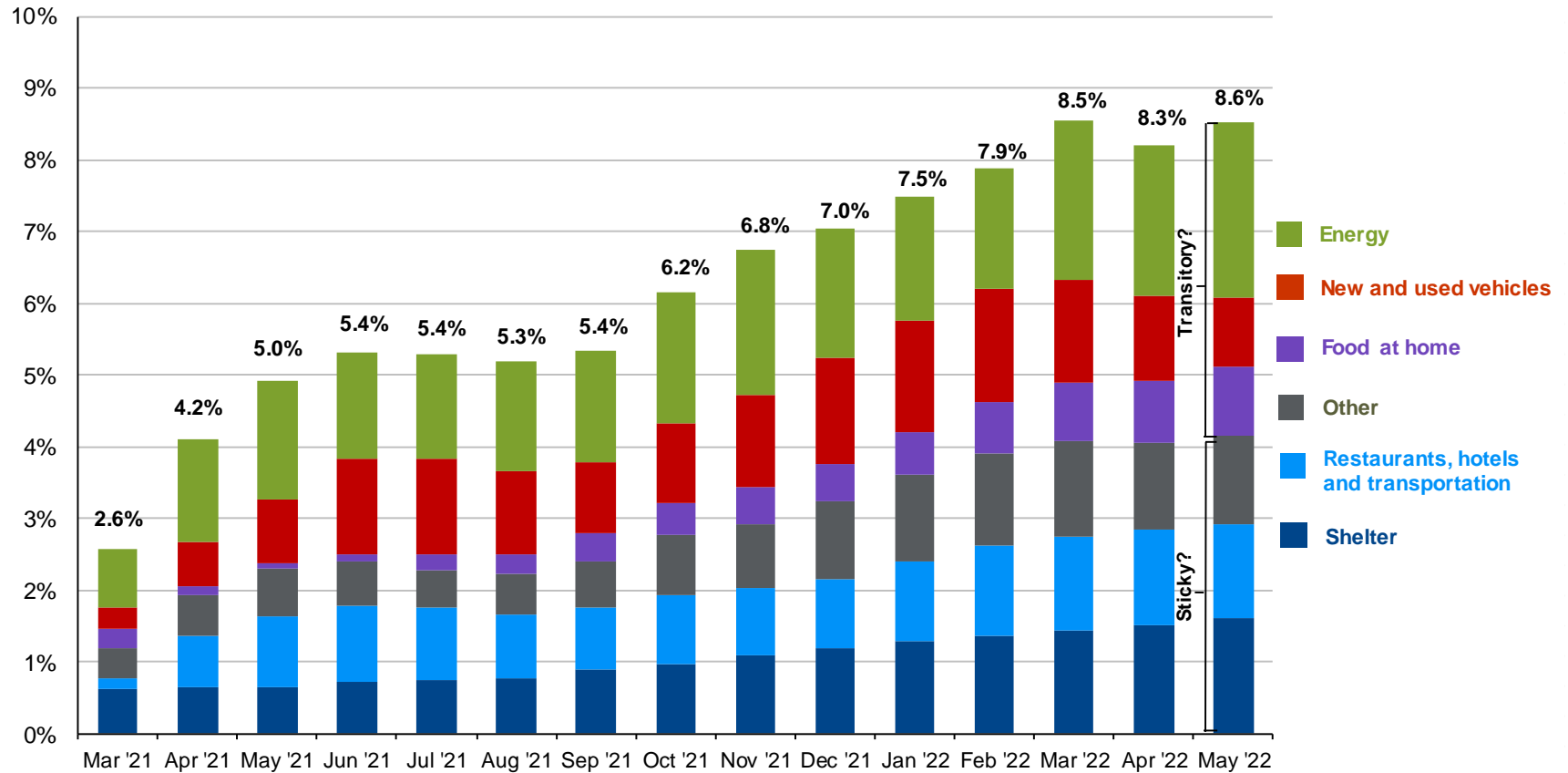
Source: BLS, FactSet, J.P. Morgan Asset Management. CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations. *Guide to the Markets – U.S.* Data are as of June 30, 2022.



# Inflation components

## Contributors to headline inflation

Contribution to y/y % change in CPI, non seasonally adjusted



Source: BLS, J.P. Morgan Asset Management. Contributions mirror the BLS methodology on Table 7 of the CPI report. Values may not sum to headline CPI figures due to rounding and underlying calculations. "Shelter" includes owners equivalent rent and rent of primary residence. "Other" primarily reflects household furnishings, apparel, education and communication services, medical care services and other personal services.  
 Guide to the Markets – U.S. Data are as of June 30, 2022.

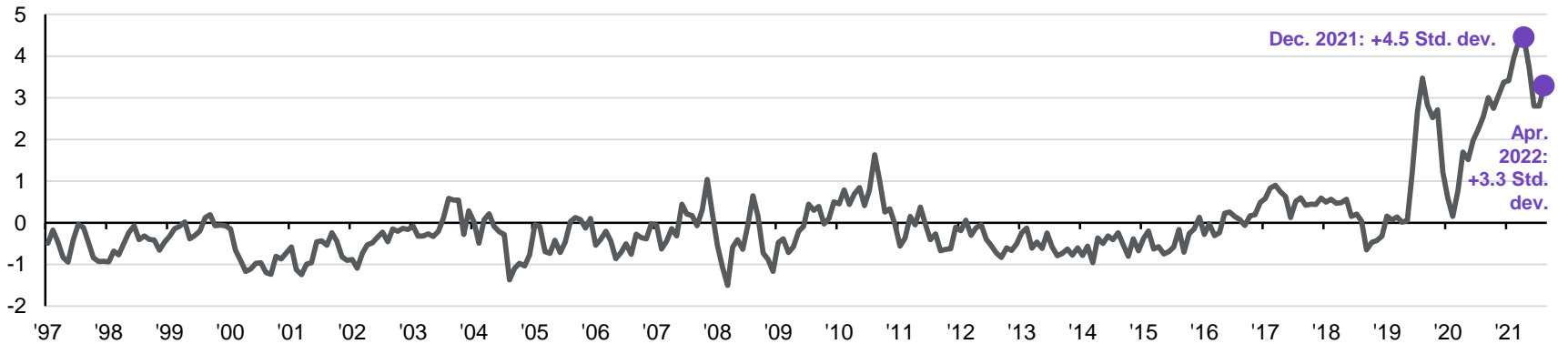


# Global supply chain pressures

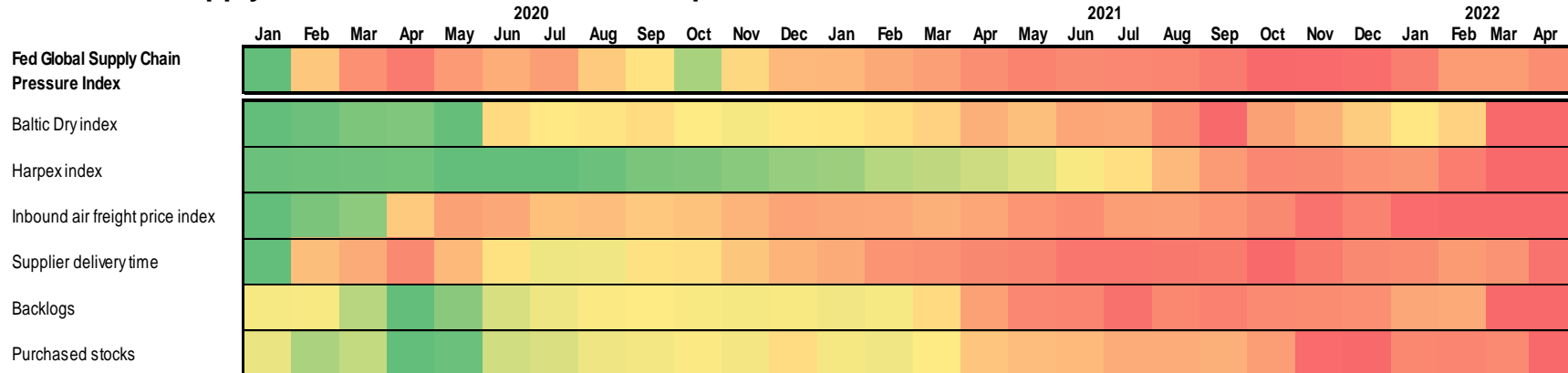
GTM U.S. 52

## Fed Global Supply Chain Pressure Index\*

Standard deviation from average value



## Fed Global Supply Chain Pressure Index subcomponents



Source: Federal Reserve Bank of New York, IHS Markit, J.P. Morgan Asset Management.

\*The Federal Reserve Bank of New York bases its Global Supply Chain Pressure Index on the 25-year averages of the Baltic Dry Index (benchmark for the price of moving raw materials by sea), Harpex Index (benchmark for the rate liners pay to charter ships), BLS airfreight cost indices (benchmarks for measuring change in rates for air transportation) and 3 PMI supply chain-related components: delivery times (the amount of time elapsed between the time an order is placed and the time it is shipped), backlogs (the volume of orders that a company has received, but not yet fulfilled) and purchased stocks (the level of inventory of materials purchased in the current month compared to the month prior) for manufacturing firms across seven interconnected economies: China, the euro area, Japan, South Korea, Taiwan, the United Kingdom and the United States. Heatmap colors determined by that month's level compared to 10-year average. Red = Very slow/constrained, Yellow = Average/moderate, and Green = Fast/least constrained.

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



# Oil markets

## Change in production and consumption of liquid fuels

Production, consumption and inventories, millions of barrels per day

Production	2019	2020	2021	2022*	2023*	Growth since '19
U.S.	19.5	18.6	18.9	20.2	21.5	10.3%
OPEC	34.6	30.7	31.7	34.3	35.0	1.3%
Russia	11.5	10.5	10.8	10.4	9.5	-17.0%
<b>Global</b>	<b>100.3</b>	<b>93.8</b>	<b>95.6</b>	<b>100.1</b>	<b>101.6</b>	<b>1.3%</b>

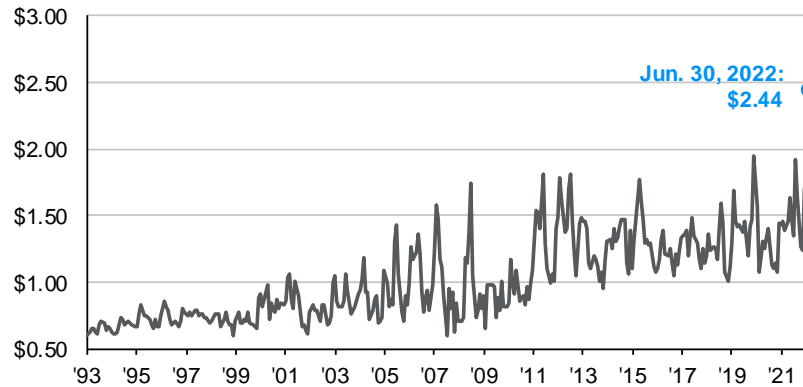
Consumption	2019	2020	2021	2022*	2023*	Growth since '19
U.S.	20.5	18.2	19.8	20.5	20.8	1.2%
China	14.0	14.4	15.3	15.5	16.1	14.6%
<b>Global</b>	<b>100.9</b>	<b>91.8</b>	<b>97.4</b>	<b>99.6</b>	<b>101.6</b>	<b>0.7%</b>

Inventory Change	2019	2020	2021	2022*	2023*
	-0.6	2.0	-1.8	0.5	0.0

## U.S. refinery spread

Gasoline prices minus WTI crude oil prices, dollars per gallon



## Price of oil

WTI crude, nominal prices, USD/barrel



Source: J.P. Morgan Asset Management; (Top and bottom left) EIA; (Bottom left and right) FactSet.

\*Forecasts are from the June 2022 EIA Short-Term Energy Outlook and start in 2022. \*These figures implicitly include both taxes and retail mark-up. All data are monthly except for the latest daily data point.

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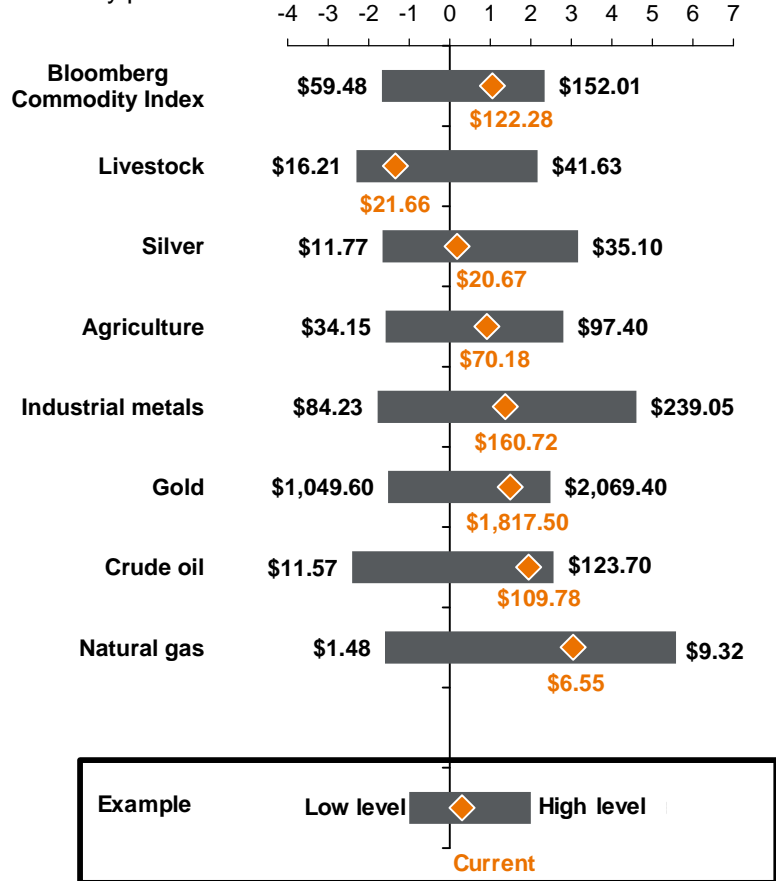


# Global commodities

Alternatives

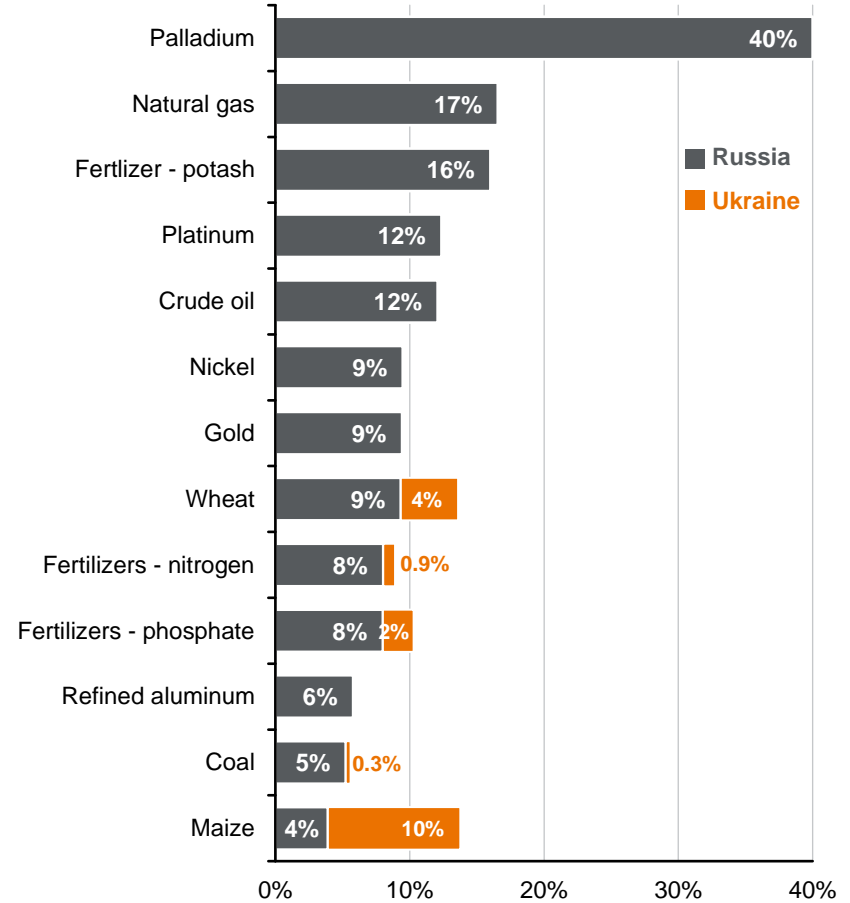
## Commodity prices

Commodity price z-scores

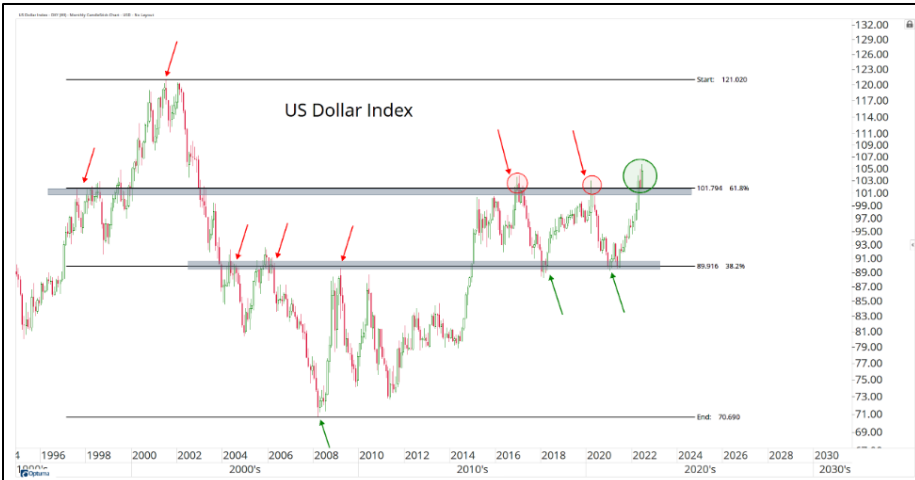


## Contribution to global production of commodities

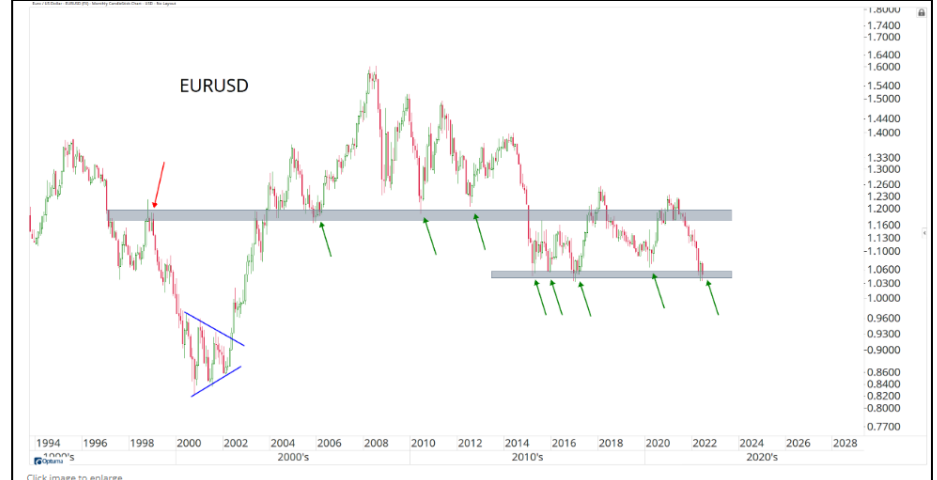
% of global production, latest



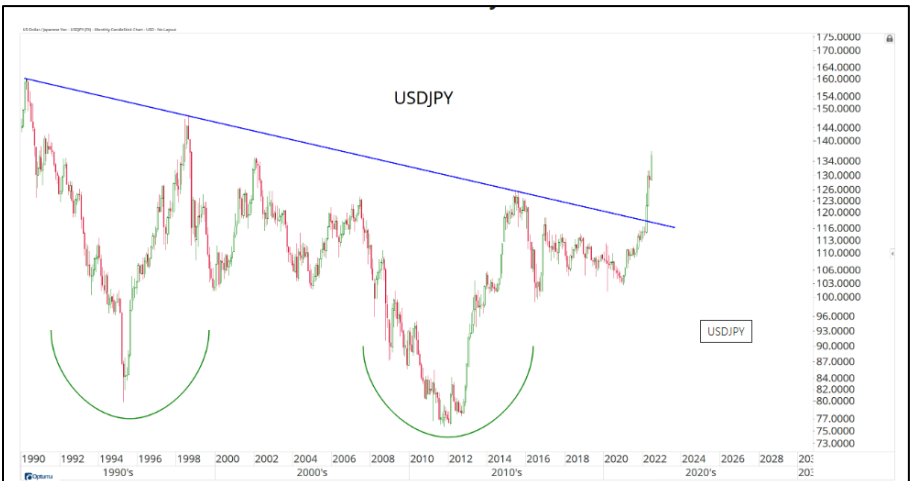
Source: FactSet, J.P. Morgan Asset Management; (Left) Bloomberg, CME; (Right) Eurostat, HSBC.  
 Commodity prices are represented by the appropriate Bloomberg Commodity subindex. Crude oil shown is West Texas Intermediate (WTI). Other commodity prices are represented by futures contracts. Z-scores are calculated using daily prices over the past 20 years.  
 Guide to the Markets – U.S. Data are as of June 30, 2022.



Last Updated Friday, July 1, 2022



Last Updated Friday, July 1, 2022



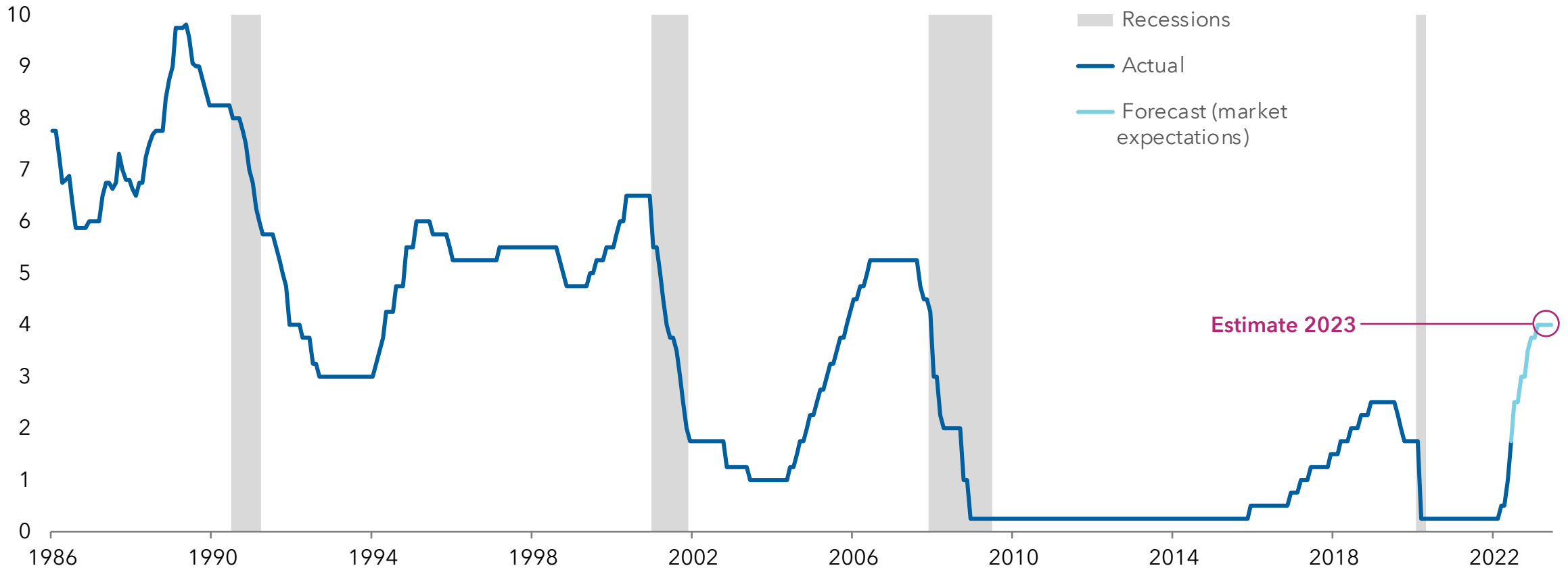
Last Updated Friday, July 1, 2022



Last Updated Friday, July 1, 2022

# Expect more volatility as the Fed fights inflation

U.S. federal funds target rate (%)



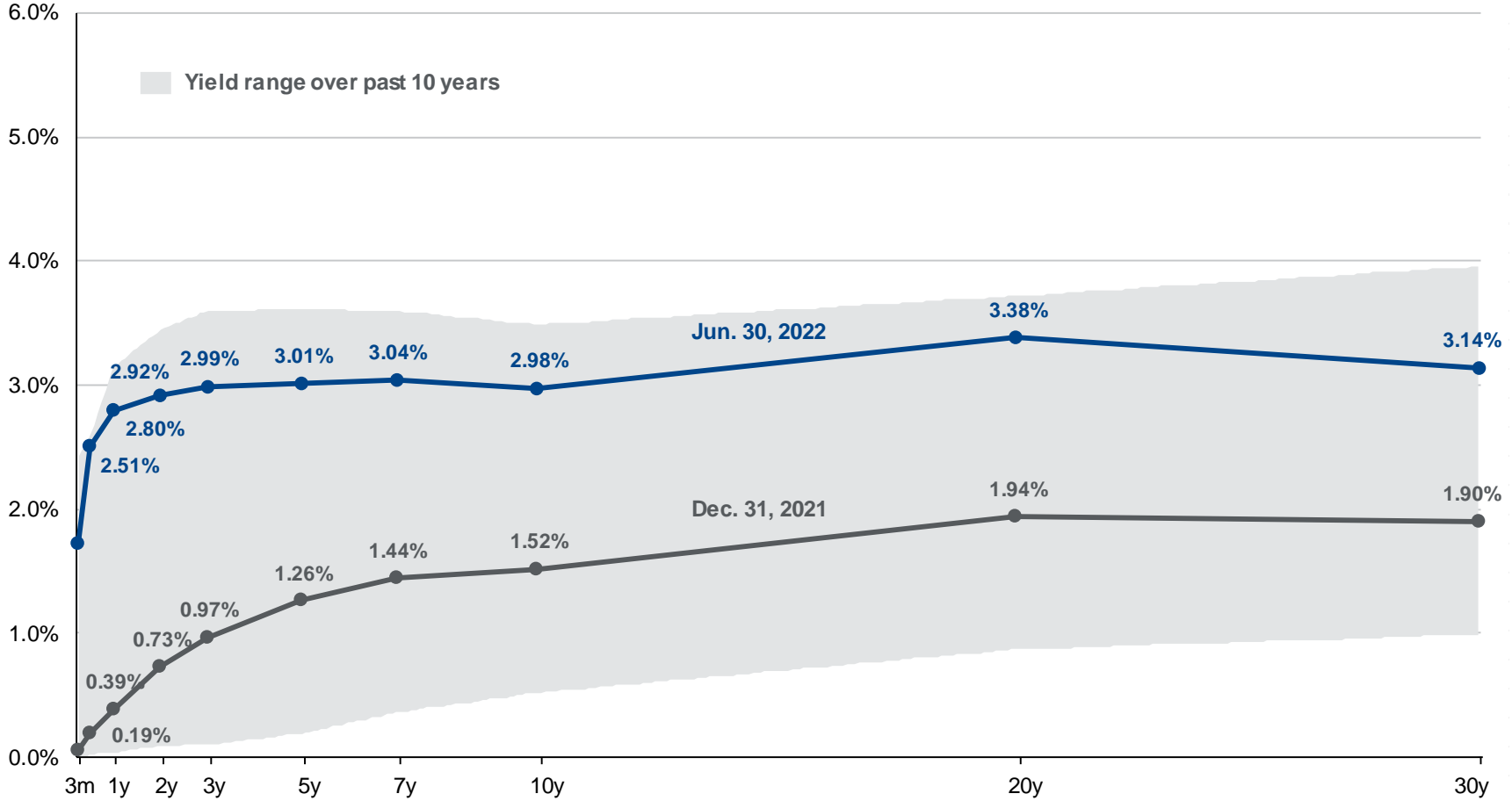
Sources: Capital Group, Chicago Mercantile Exchange, Federal Reserve Bank of St. Louis, National Bureau of Economic Research. Upper bound of target range is used since 2008. Actual data and market expectations as of 6/15/22.



# Yield curve

Fixed Income

## U.S. Treasury yield curve



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of June 30, 2022.



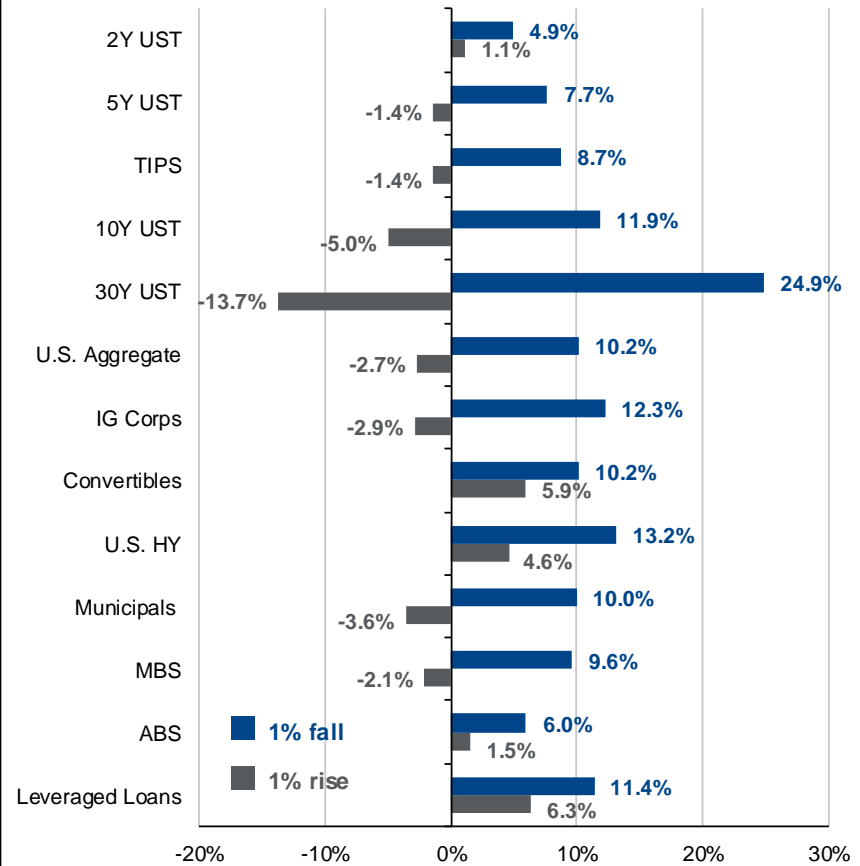
# Fixed income market dynamics

Fixed Income

U.S. Treasuries	Yield		Return			
	6/30/2022	12/31/2021	2022 YTD	Avg. Maturity	Correlation to 10-year	Correlation to S&P 500
<b>2-Year</b>	2.92%	0.73%	-3.05%	2 years	0.69	-0.32
<b>5-Year</b>	3.01%	1.26%	-7.15%	5	0.92	-0.29
<b>TIPS</b>	0.65%	-1.04%	-8.92%	10	0.58	0.24
<b>10-Year</b>	2.98%	1.52%	-11.71%	10	1.00	-0.26
<b>30-Year</b>	3.14%	1.90%	-23.57%	30	0.93	-0.25
<b>Sector</b>						
<b>U.S. Aggregate</b>	3.72%	1.75%	-10.35%	8.6	0.85	0.10
<b>IG Corps</b>	4.70%	2.33%	-14.39%	11.4	0.46	0.43
<b>Convertibles</b>	7.63%	3.66%	-19.41%	-	-0.23	0.87
<b>U.S. HY</b>	8.89%	4.21%	-14.19%	5.9	-0.20	0.74
<b>Municipals</b>	3.21%	1.11%	-8.98%	12.8	0.42	0.14
<b>MBS</b>	3.77%	1.98%	-8.78%	7.8	0.80	-0.04
<b>ABS</b>	4.38%	1.96%	-2.87%	2.4	-0.41	0.62
<b>Leveraged Loans</b>	8.83%	4.60%	-4.06%	2.6	0.06	0.03

## Impact of a 1% rise or fall in interest rates

Total return, assumes a parallel shift in the yield curve



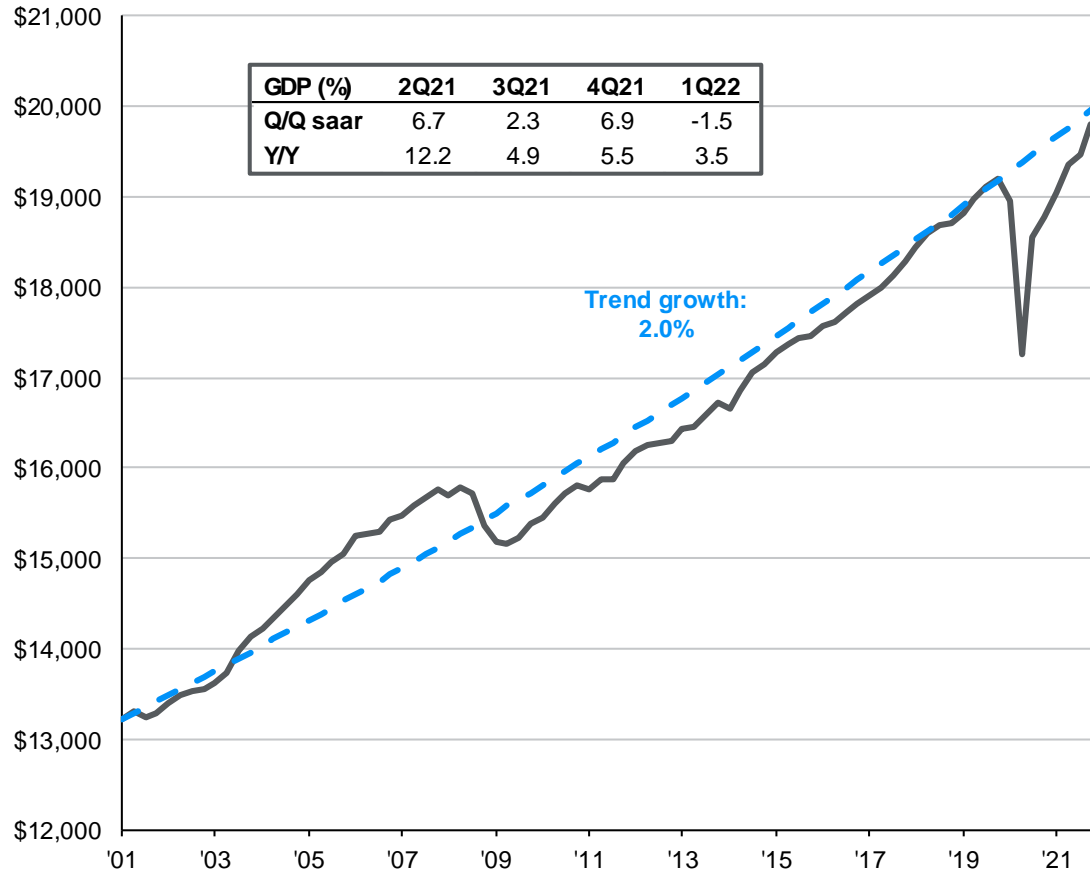
Source: Bloomberg, FactSet, Standard & Poor's, U.S. Treasury, J.P. Morgan Asset Management. Sectors shown above are provided by Bloomberg unless otherwise noted and are represented by – U.S. Aggregate; MBS: U.S. Aggregate Securitized - MBS; ABS: J.P. Morgan ABS Index; Corporates: U.S. Corporates; Municipals: Muni Bond; High Yield: Corporate High Yield; Leveraged Loans: J.P. Morgan Leveraged Loan Index; TIPS: Treasury Inflation-Protected Securities; Convertibles: U.S. Convertibles Composite. Convertibles yield is as of most recent month end and is based on U.S. portion of Bloomberg Global Convertibles Index. Yield and return information based on bellwethers for Treasury securities. Sector yields reflect yield-to-worst. Convertibles yield is based on U.S. portion of Bloomberg Global Convertibles. Correlations are based on 15-years of monthly returns for all sectors. Past performance is not indicative of future results. *Guide to the Markets* – U.S. Data are as of June 30, 2022.



# Economic growth and the composition of GDP

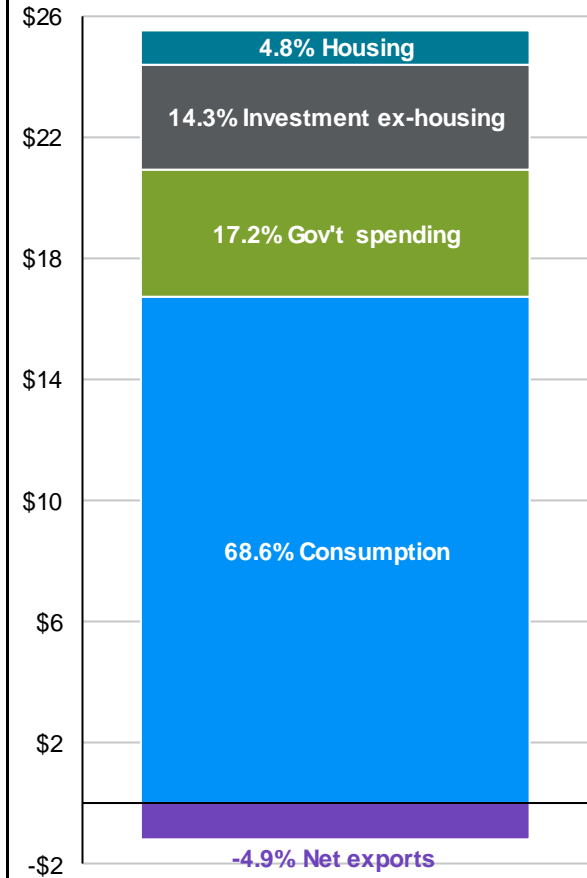
## Real GDP

Billions of chained (2012) dollars, seasonally adjusted at annual rates



## Components of GDP

1Q22 nominal GDP, USD trillions

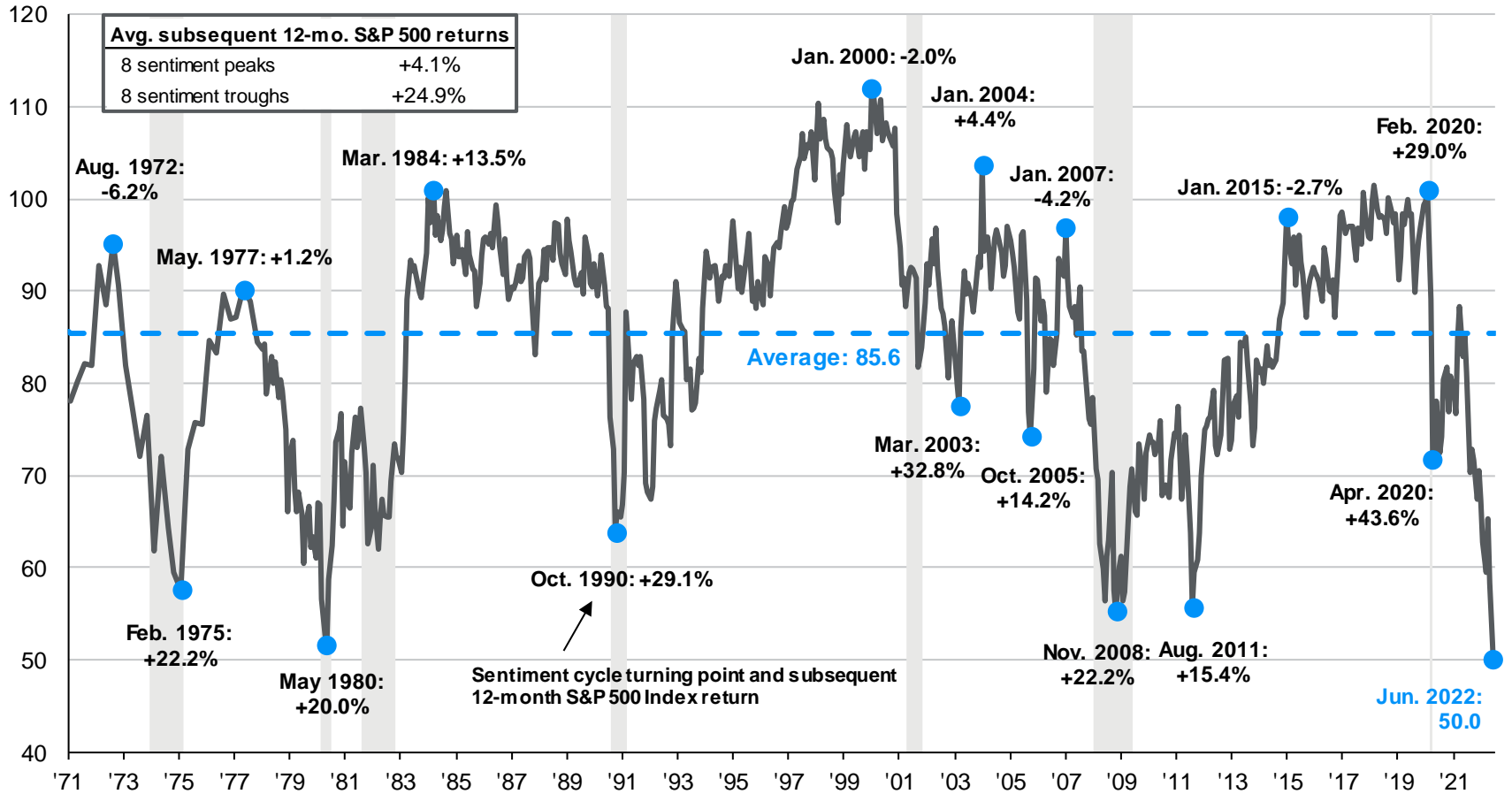


Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19. Guide to the Markets – U.S. Data are as of May 31, 2022.



# Consumer confidence and the stock market

## Consumer Sentiment Index and subsequent 12-month S&P 500 returns



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 June 30, 2022.

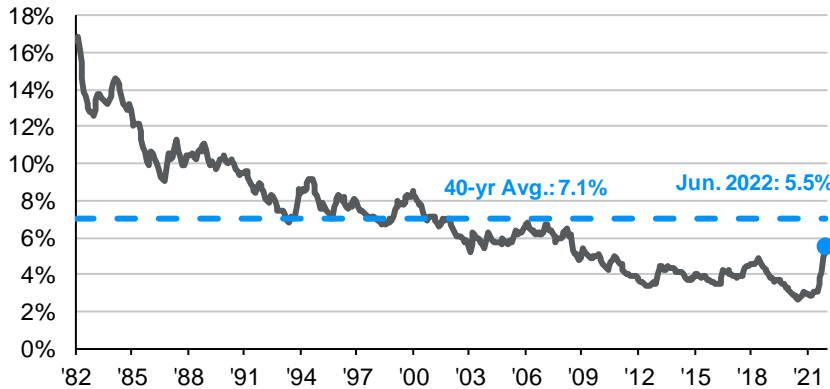


# Residential real estate

Economy

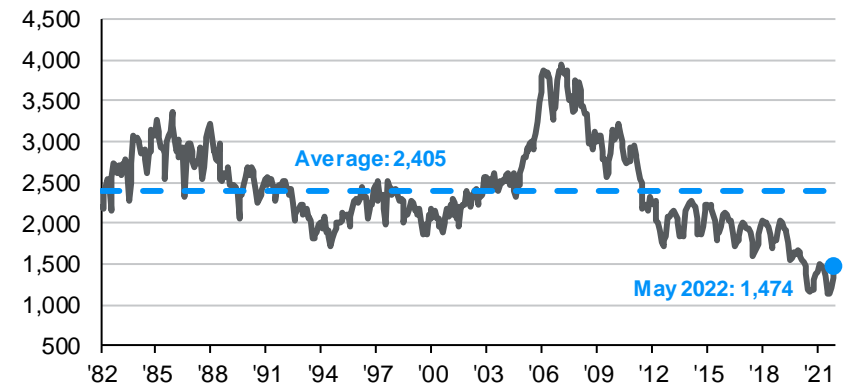
## Average interest rate on a U.S. mortgage

30-year fixed-rate mortgage



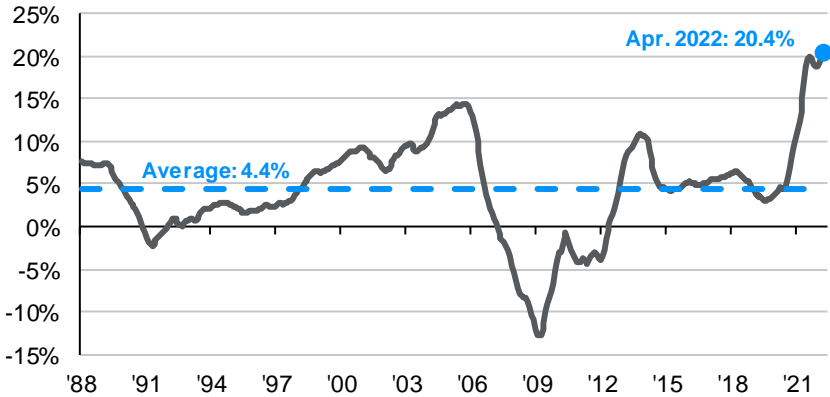
## Housing inventories

Inventory of new and existing single family homes for sale, thous, NSA



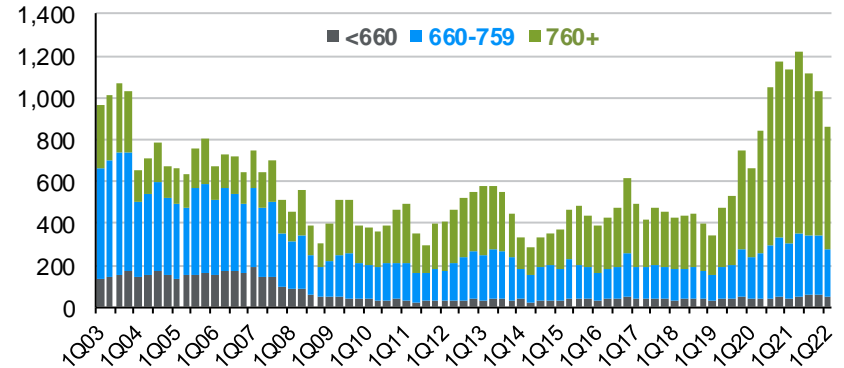
## Home prices

y/y % change in Case-Shiller Home Price Index



## Mortgage originations by credit score\*

Billions of USD

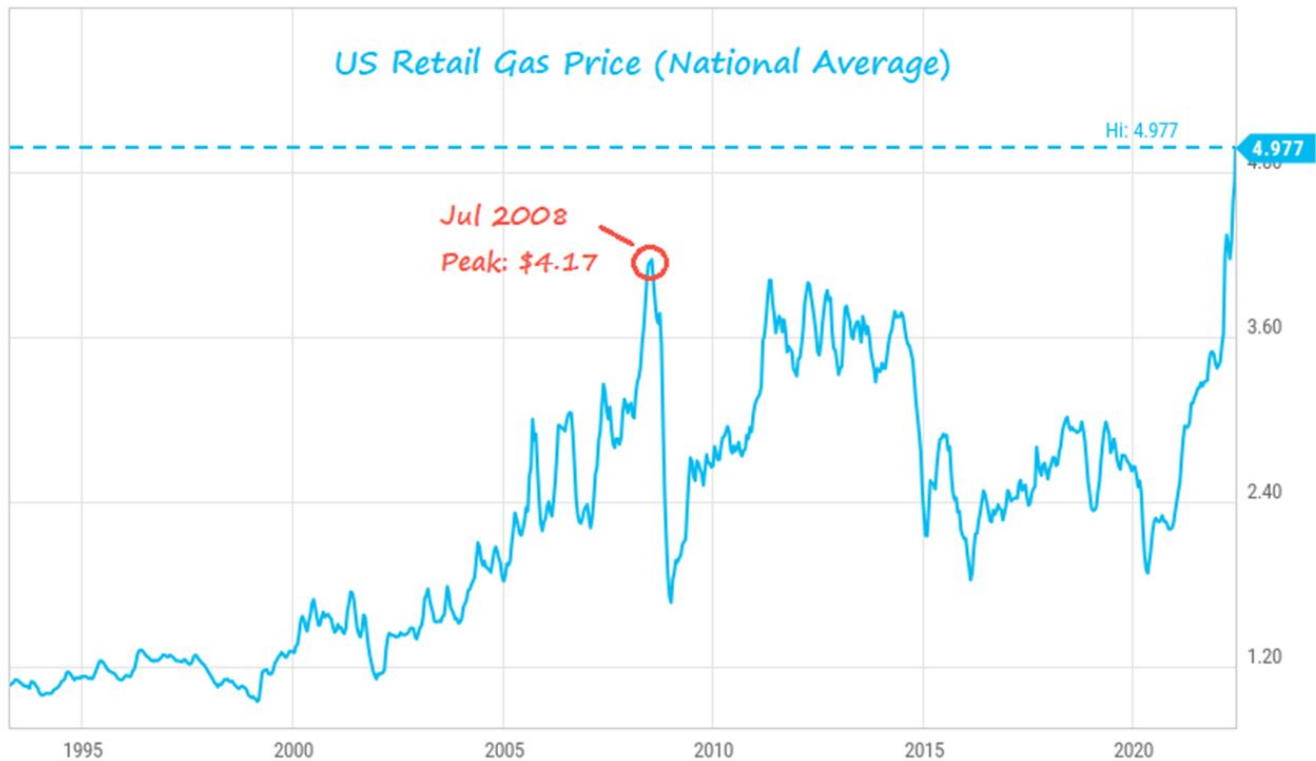


Source: J.P. Morgan Asset Management; (Top and bottom left, top right) FactSet; (Top left) Freddie Mac; (Top right) Census Bureau, National Association of Realtors; (Bottom left) S&P/Case-Shiller; (Bottom right) New York Fed Consumer Credit Panel/Equifax. Monthly mortgage payment assumes the prevailing 30-year fixed-rate mortgage rates and average new home prices excluding a 20% down payment. \*Credit score is Equifax Riskscore 3.0.

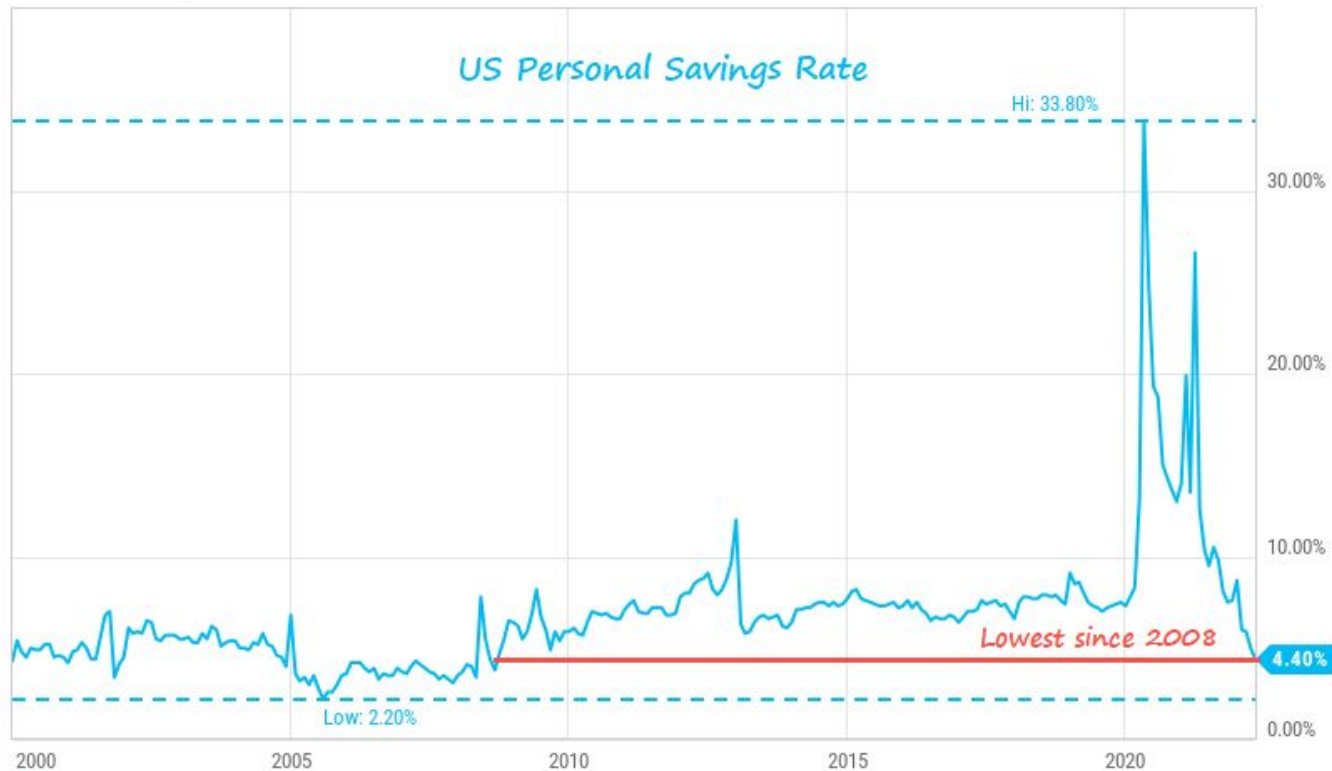
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## US Retail Gas Price



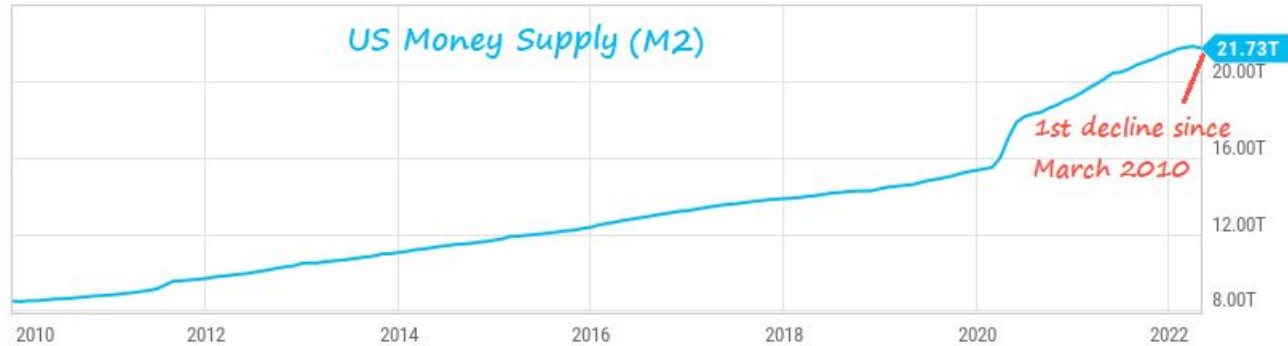
## US Personal Saving Rate





Through Feb. 2022

● US M2 Money Supply



● US M2 Money Supply YoY



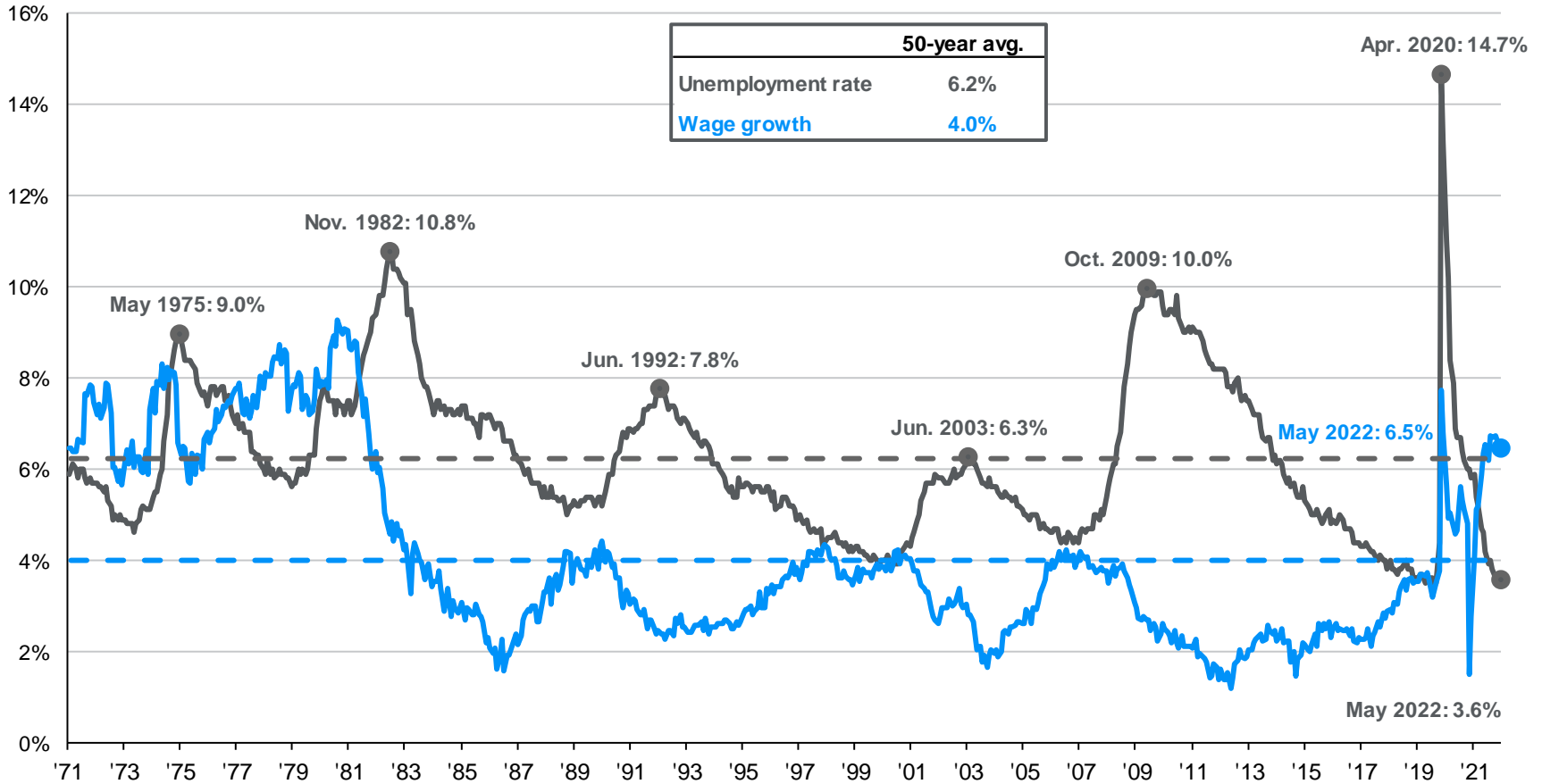


# Unemployment and wages

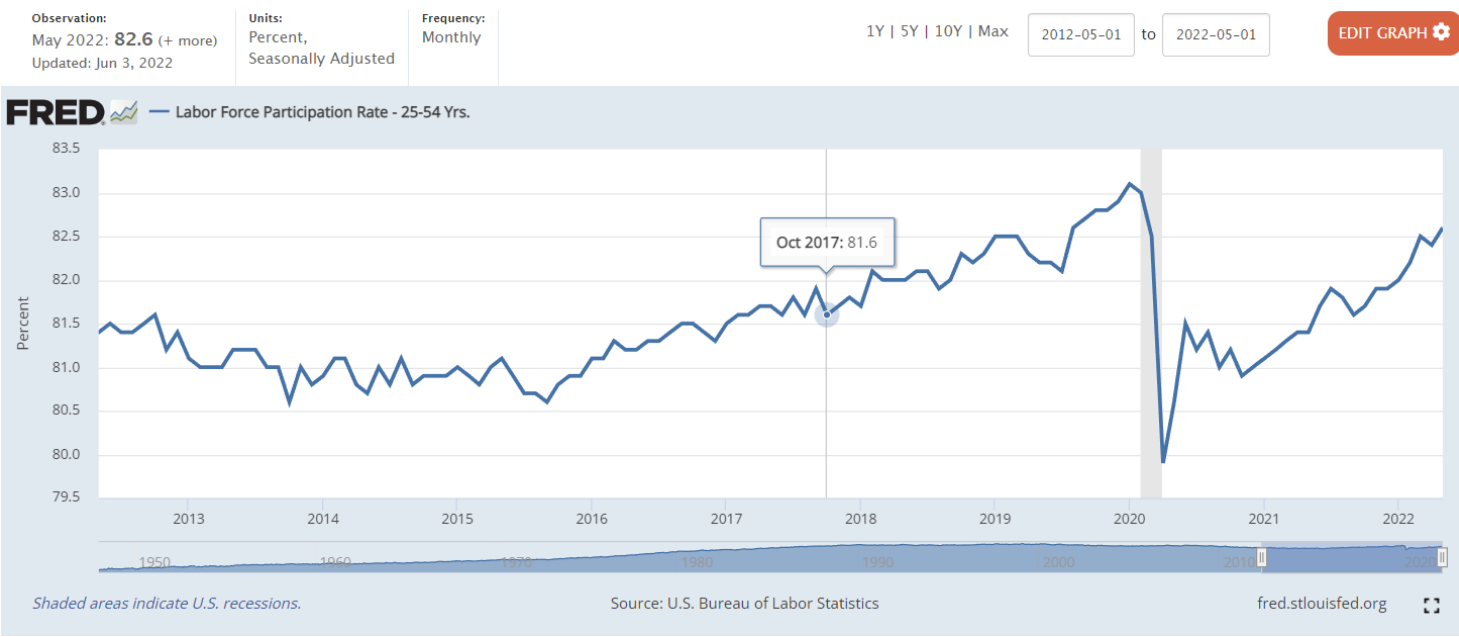
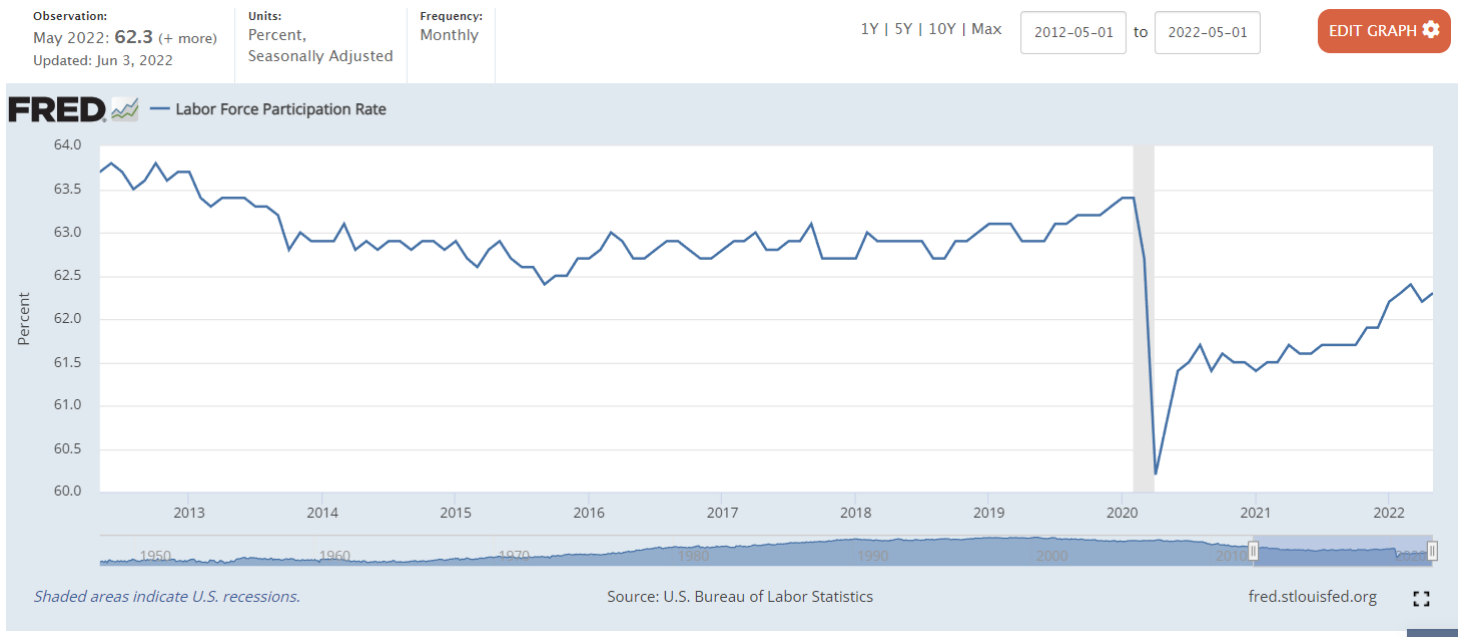
Economy

## Civilian unemployment rate and year-over-year wage growth

Private production and non-supervisory workers, seasonally adjusted, percent



Source: BLS, FactSet, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of June 30, 2022.



Ages 55+ flat since pandemic: Feb. 2020: 40.3, June 2020: 39.0, May 2022 38.9



# S&P 500 valuation measures

Equities

## S&P 500 Index: Forward P/E ratio



Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.  
 Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since June 1997 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$240. Average P/E and standard deviations are calculated using 25 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. \*P/CF is a 20-year average due to cash flow availability.  
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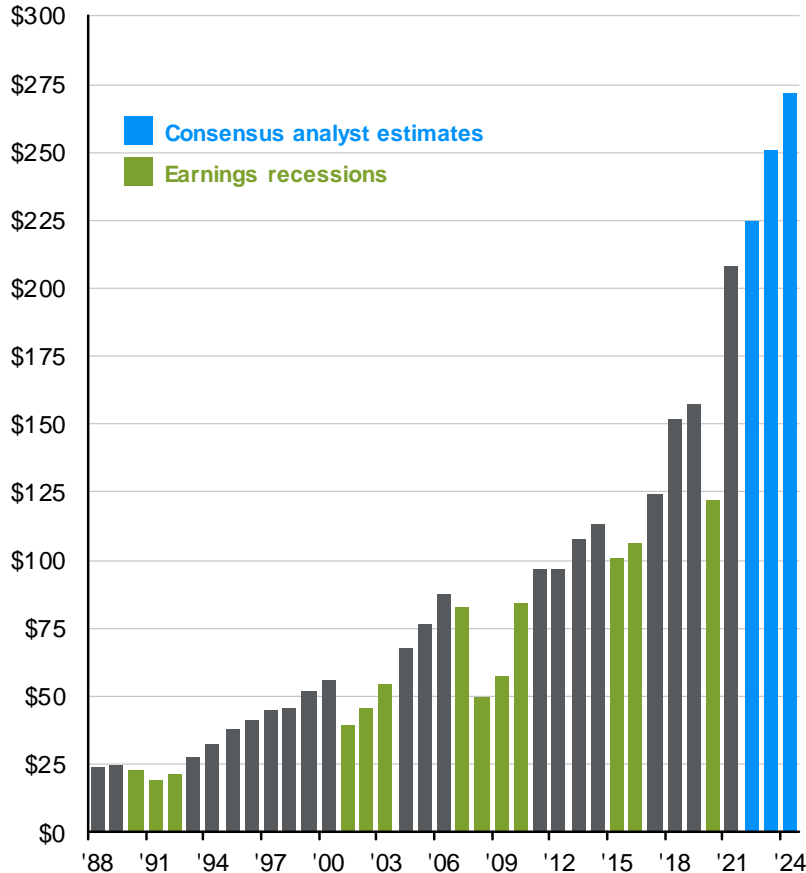


# Corporate profits and sources of total return

Equities

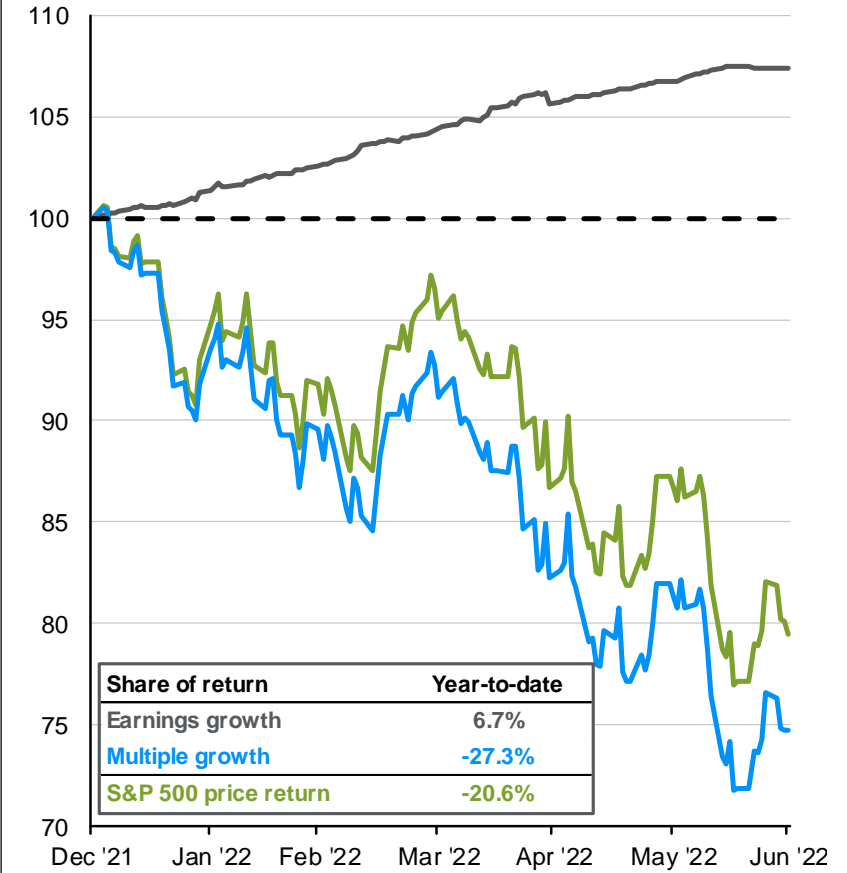
### S&P 500 earnings per share

Index annual operating earnings



### Percent change in S&P 500, earnings and valuations\*

Year-to-date, indexed to 100



Source: Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management. Historical EPS levels are based on annual operating earnings per share. Earnings estimates are based on estimates from Standard & Poor's and FactSet Market Aggregates. \*Earnings and multiple growth are both year-to-date percent changes of next twelve-month estimates. Past performance is not indicative of future returns. Guide to the Markets – U.S. Data are as of June 30, 2022.





# Profit margins and input costs

Equities

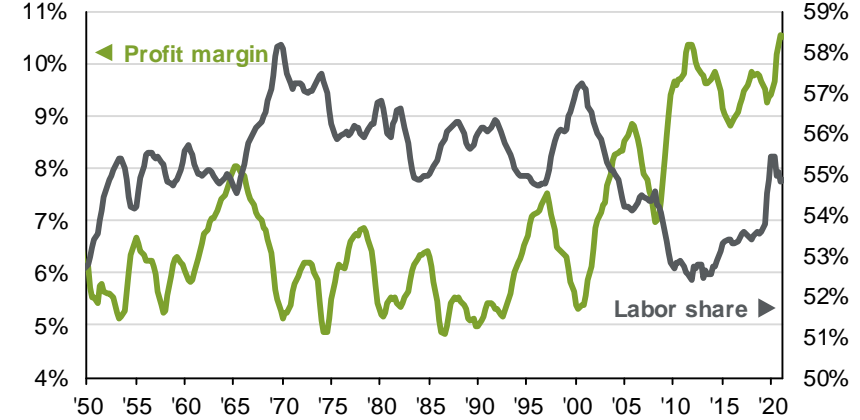
### S&P 500 profit margins

Quarterly operating earnings/sales



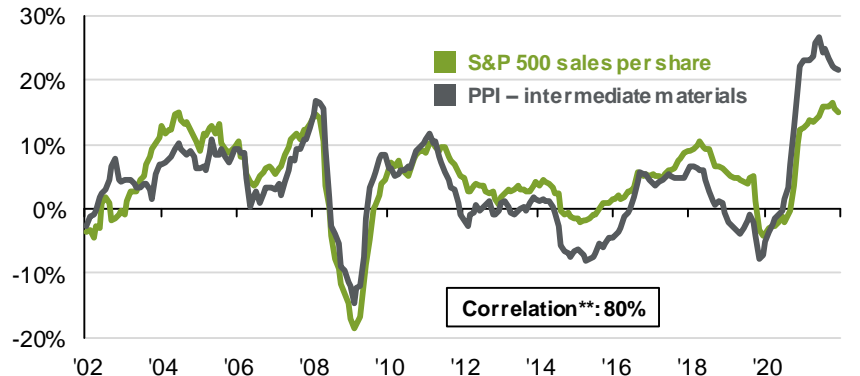
### Labor share of income and profit margins\*

Compensation and adjusted after-tax corporate profits as % of GDP



### S&P 500 sales per share and PPI for intermediate materials

Year-over-year % change, monthly, last 20 years



Source: BEA, Compustat, FactSet, Standard & Poor's, J.P. Morgan Asset Management. Past performance is not indicative of future returns. (Left) \*1Q22 operating margin is an estimate from Standard & Poor's based on 98.0% of the S&P 500's market cap having reported results. (Right)\*Labor share of income and profit margins are shown on a 4-quarter moving average basis. Compensation and adjusted after-tax corporate profits are shown as a percentage of real GDP, SAAR. \*\*Correlation is calculated using monthly y/y percent changes over the last 20 years between S&P 500 sales per share and PPI for intermediate materials.  
 Guide to the Markets – U.S. Data are as of June 30, 2022.

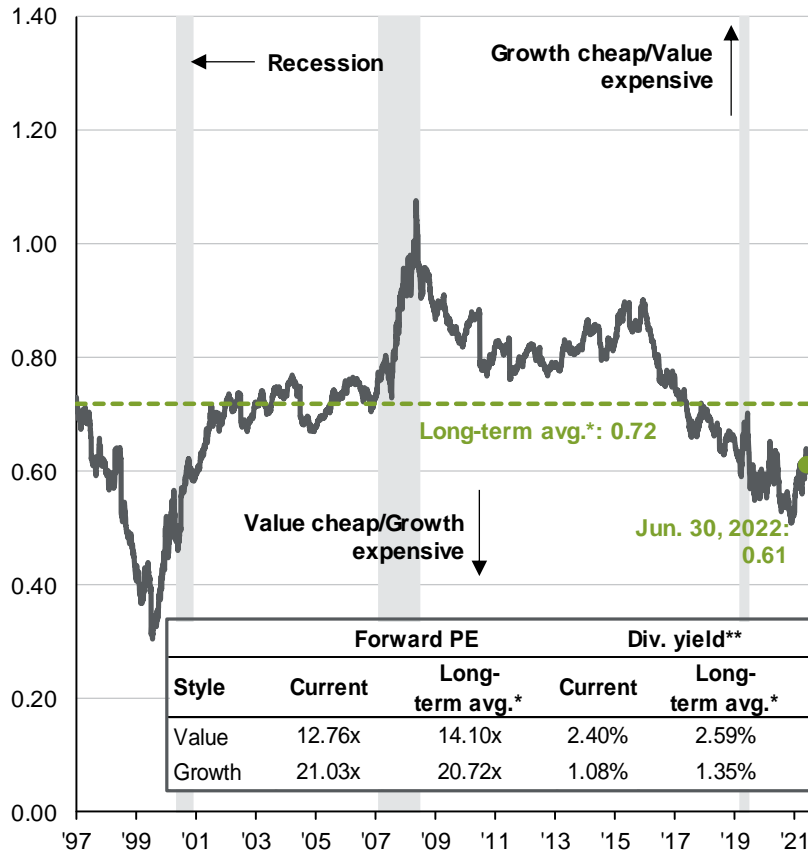


# Value vs. Growth

Equities

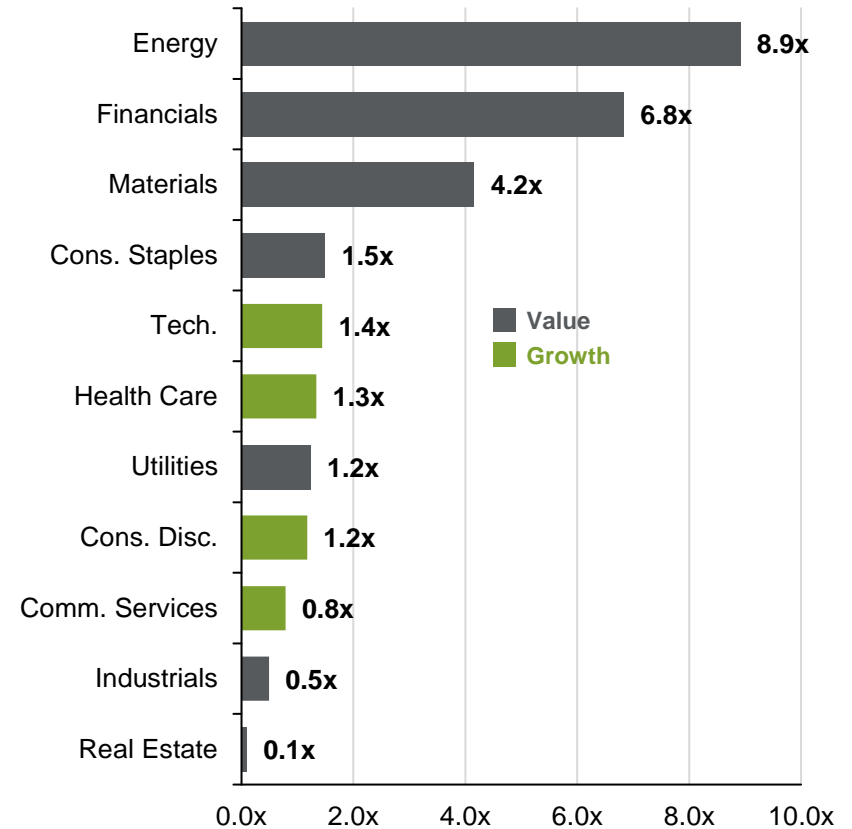
## Value vs. Growth relative valuations

Rel. fwd. P/E ratio of Value vs. Growth, 1997 - present



## S&P 500 operating leverage by sector

Impact on operating income from a 1% rise in revenues



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 June 30, 2022.

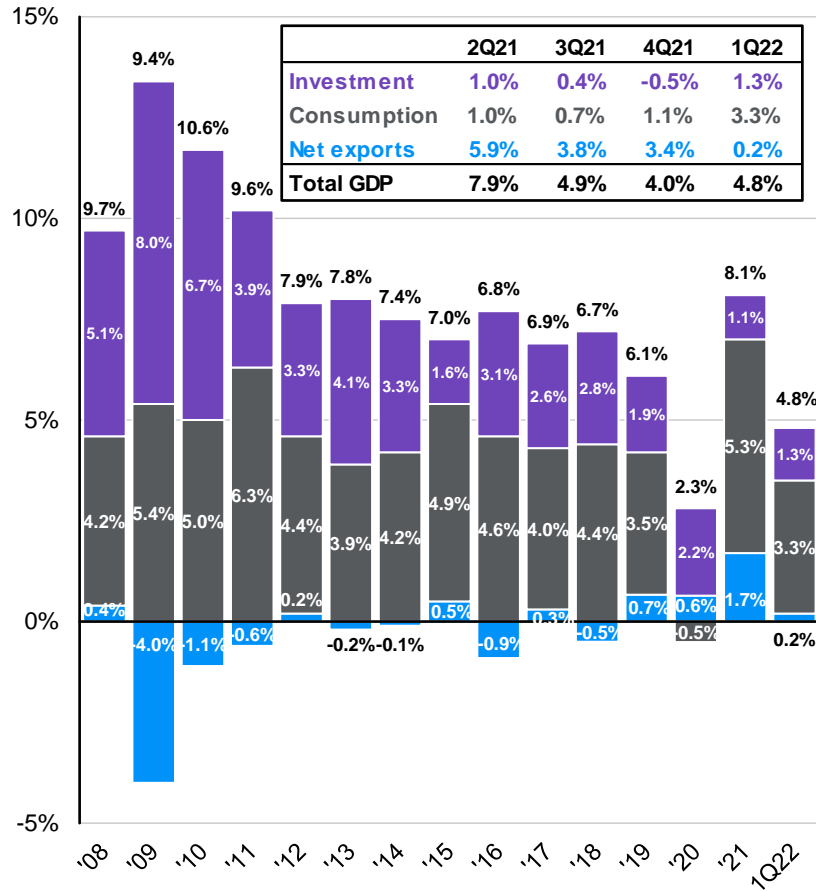


# China: Economic growth

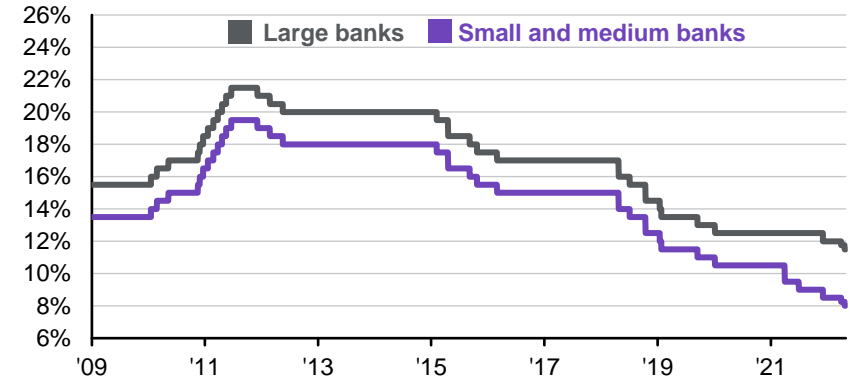
International

## China real GDP contribution

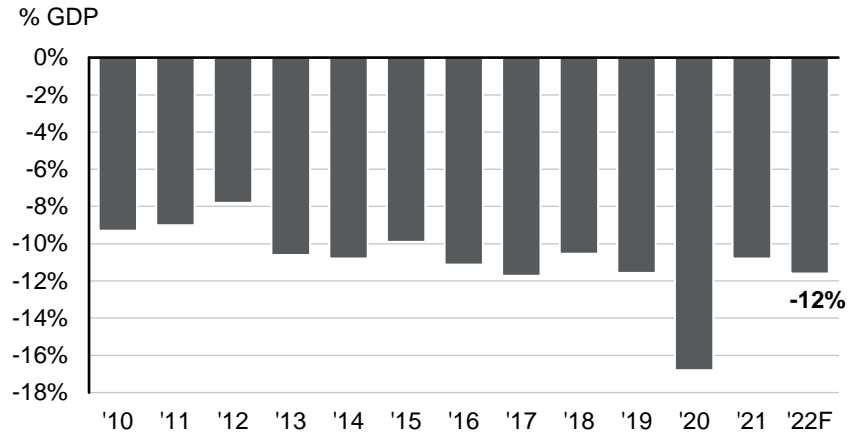
Year-over-year % change for GDP, contribution to GDP for components



## Monetary stimulus: Reserve requirement ratio



## Fiscal stimulus: Fiscal deficit\*



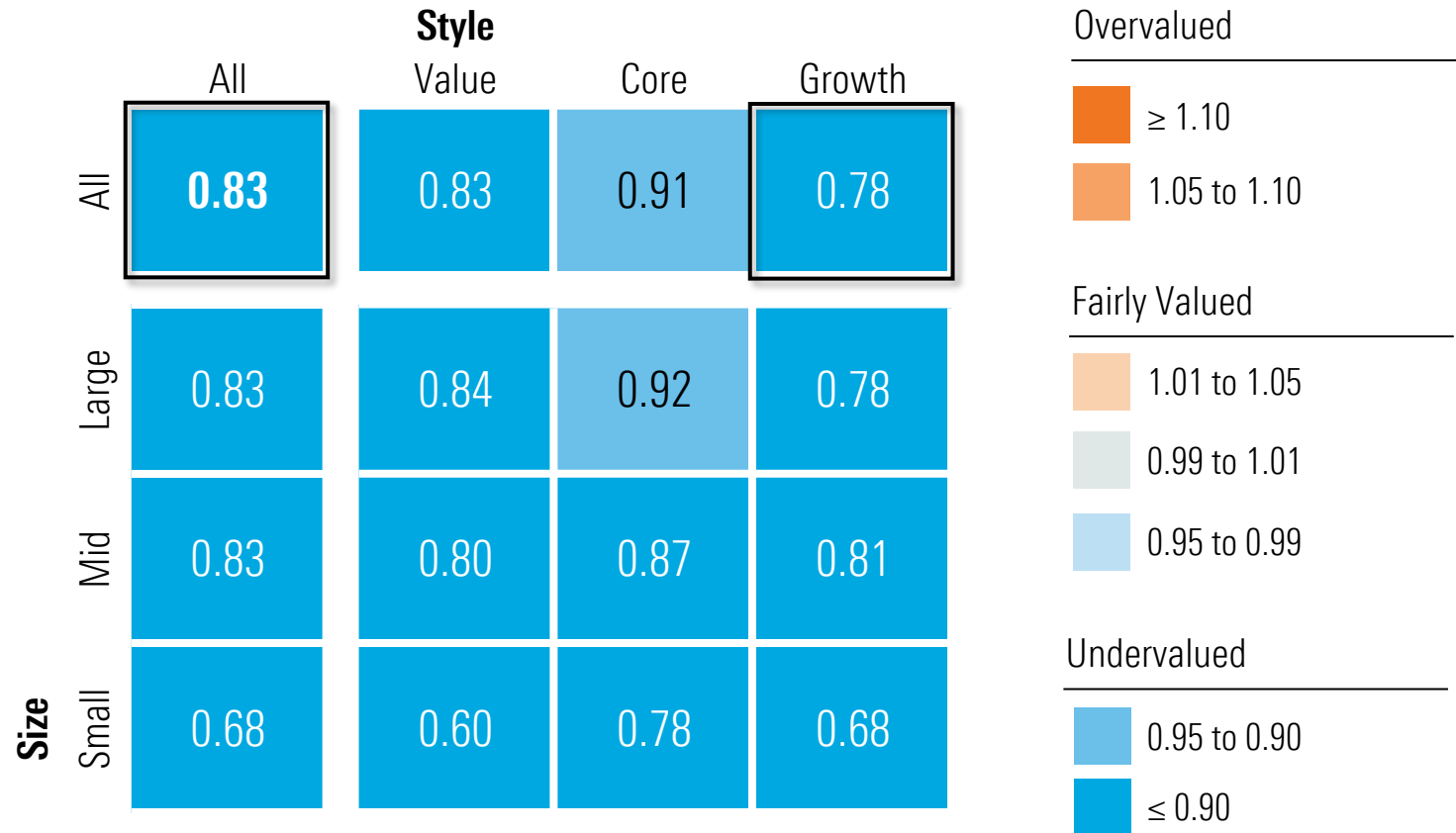
Source: FactSet, J.P. Morgan Asset Management; (Left) CEIC; (Top right) People's Bank of China; (Bottom right) China Agriculture Development Bank, China Development Bank, Ministry of Finance, People's Bank of China, Wind. \*The fiscal deficit is a J.P. Morgan Global Economic Research estimate of the augmented fiscal deficit. It measures the aggregate resources controlled by the government and used to support economic growth. It consists of the official budgetary deficit of the central and local governments, and additional funding raised and spent by local governments through Local Government Financing Vehicles and various government-guided funds, whose activities are considered quasi-fiscal. Large banks are six major banks in China, including Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank, Bank of Communications, Postal Savings Bank of China. The other banks are categorized as small and medium-sized banks. PBoC sets favorable required reserve ratio (RRR) for banks that have met specific criteria, such as loans to small and medium-sized enterprises and agricultural sectors. These measures have significantly brought down the actual RRR for banks. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated. *Guide to the Markets* - U.S. Data are as of June 30, 2022.

# U.S. Stock Market Trading at Rarely Seen Discount to Intrinsic Value

## U.S. Stock Market has Over-Corrected to Downside

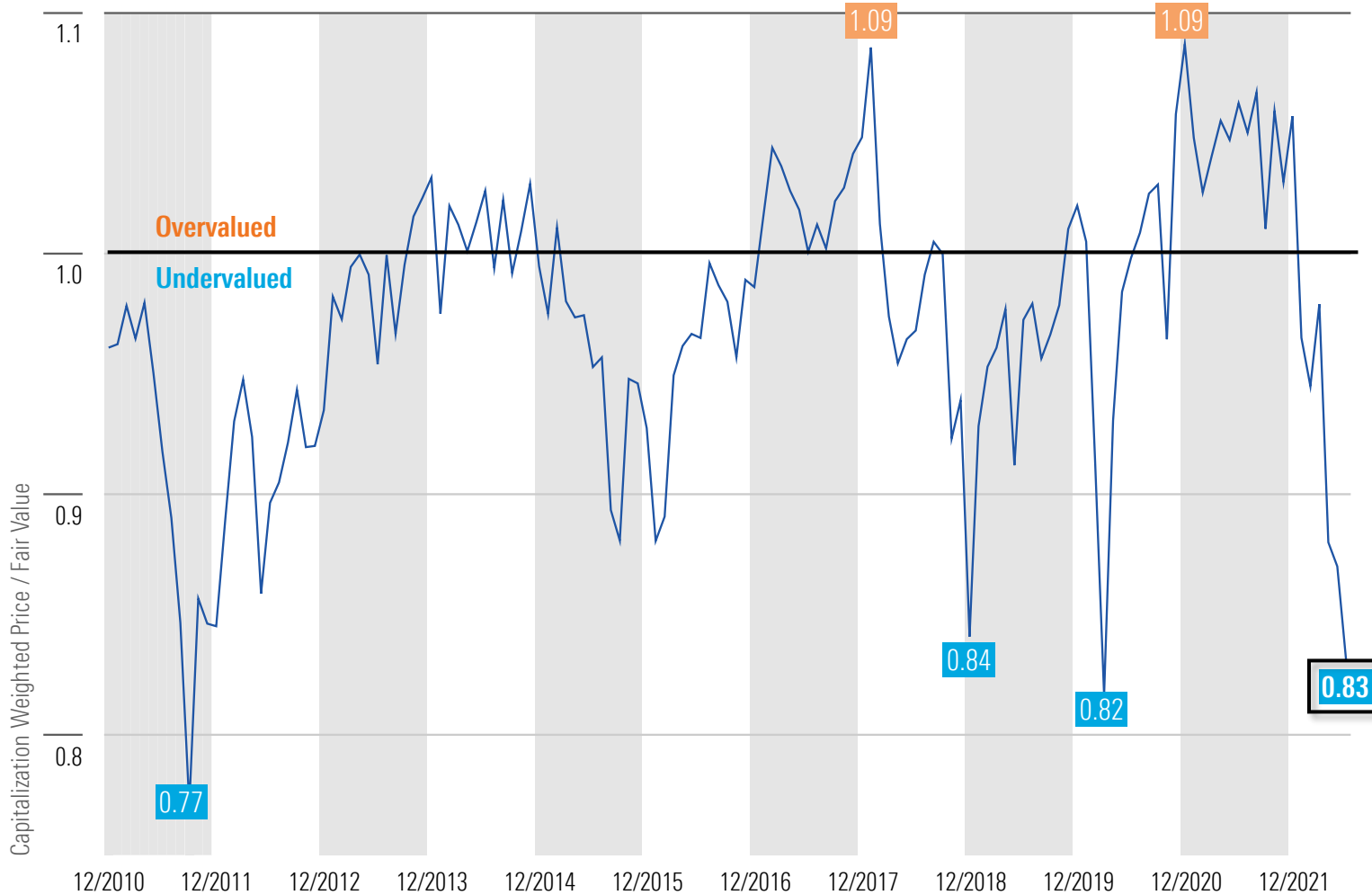
- Confluence of four main headwinds have pushed markets down deep into undervalued territory.
- Broad U.S. stock market is trading at a price to fair value of 0.83 times.
- Growth stocks most undervalued, trading at a price to fair value of 0.78, followed by value at 0.83.
- Small-cap stocks are trading at the greatest discount to fair value at 0.68.

Morningstar Equity Research Coverage Price to Fair Value, U.S. Equity Style Box



# Only Few Other Instances When Valuations Have Been This Low

Morningstar U.S. Equity Research Coverage Price to Fair Value



## Since 2010, Stocks Have Rarely Been this Undervalued

- Undervaluation is at greatest discount since emergence of the pandemic in March 2020.
- Other instances include:
  - December 2018: Growth scare
  - Fall of 2011: Greek debt crisis / European banking system.
  - Mid-2015/early 2016: Declining economic growth in China and plunging oil prices

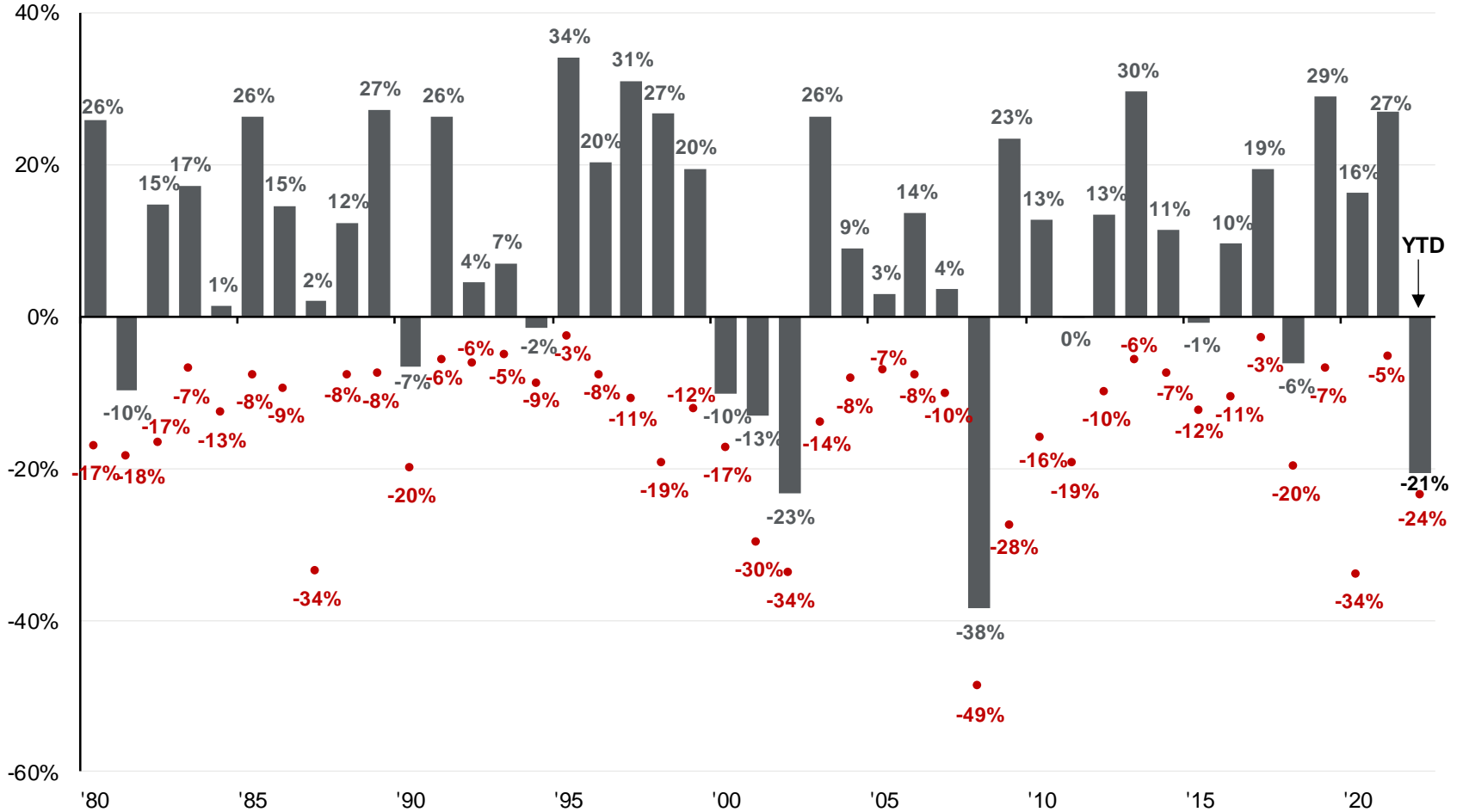


# Annual returns and intra-year declines

Equities

## S&P intra-year declines vs. calendar year returns

Despite average intra-year drops of 14.0%, annual returns were positive in 32 of 42 years



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

Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2021, over which time period the average annual return was 9.4%.

Guide to the Markets – U.S. Data are as of June 30, 2022.

# S&P 500 Index: Positive and Negative Years

Since 1926

Below we look at the S&P 500 Index since 1926 and compare the average annual total returns of the last 96 years. Although stock market returns fluctuate significantly, since 1926, the S&P 500 Index produced positive returns 74% of the time, with an average of 21.3%. In 26% of those years the return was negative, with an average of -13.2%.

**1926-2021: 10.5%**  
96-Year Average Annual Return



2021	28.48%
2019	31.49%
2013	32.39%
2003	28.68%
1998	28.58%
1997	33.36%
1995	37.43%
1991	30.55%
1989	31.49%
1985	32.16%
1980	32.42%
1975	37.20%
1958	43.36%
1955	31.56%
1954	52.62%
1950	31.71%
1945	36.44%
1938	31.12%
1936	33.92%
1935	47.67%
1933	53.99%
1928	43.61%
1927	37.49%

2015	1.38%
2011	2.11%
2007	5.49%
2005	4.91%
1994	1.31%
1987	5.23%
1984	6.27%
1978	6.56%
1970	4.01%
1960	0.47%
1956	6.56%
1948	5.50%
1947	5.71%

2016	11.96%
2014	13.69%
2004	10.88%
1993	10.08%
1992	7.67%
1968	11.06%
1965	12.45%
1959	11.96%
1926	11.62%

2020	18.40%
2012	16.00%
2010	15.06%
2006	15.79%
1988	16.81%
1986	18.47%
1979	18.44%
1972	18.98%
1971	14.31%
1964	16.48%
1952	18.37%
1949	18.79%
1944	19.75%
1942	20.34%

2017	21.83%
2009	26.46%
1999	21.04%
1996	23.07%
1983	22.51%
1982	21.41%
1976	23.84%
1967	23.98%
1963	22.80%
1961	26.89%
1951	24.02%
1943	25.90%

Down 28% +
2008 -37.00%
1937 -35.03%
1931 -43.34%

Down 21-28%
2002 -22.10%
1974 -26.47%
1930 -24.90%

Down 14-21%
1973 -14.66%

Down 7-14%
2001 -11.89%
2000 -9.10%
1977 -7.18%
1969 -8.50%
1966 -10.06%
1962 -8.73%
1957 -10.78%
1946 -8.07%
1941 -11.59%
1940 -9.78%
1932 -8.19%
1929 -8.42%

Down 0-7%
2018 -4.38%
1990 -3.17%
1981 -4.91%
1953 -0.99%
1939 -0.41%
1934 -1.44%

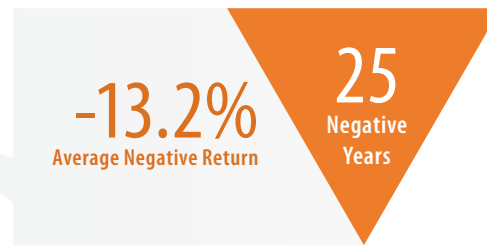
Up 0-7%
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Up 7-14%
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Up 14-21%
-----------

Up 21-28%
-----------

Up 28% +
----------



Source: Ibbotson Associates. **Past performance is no guarantee of future results.** For illustrative purposes only and not indicative of any actual investment. The S&P 500 Index is an unmanaged index of 500 companies used to measure large-cap U.S. stock market performance. Investors cannot invest directly in an index. Index returns do not reflect any fees, expenses, or sales charges. These returns were the result of certain market factors and events which may not be repeated in the future.

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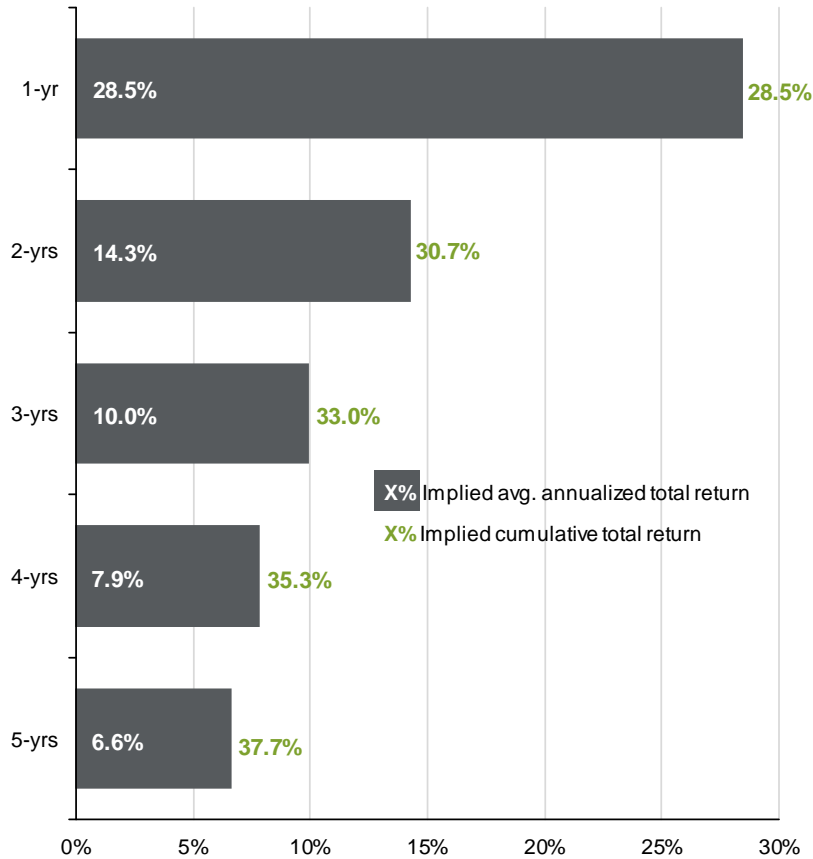


# Equity scenarios: Bull, bear and in-between

Equities

## Return needed to reach January 2022 peak

Current S&P 500 peak is 4797



## Bull and bear markets

Bull markets			Bear markets		
Bull begin date	Bull return	Duration (months)	Market peak	Bear return*	Duration (months)*
Jul 1926	152%	37	Sep 1929	-86%	32
Mar 1935	129%	23	Mar 1937	-60%	61
Apr 1942	158%	49	May 1946	-30%	36
Jun 1949	267%	85	Aug 1956	-22%	14
Oct 1960	39%	13	Dec 1961	-28%	6
Oct 1962	76%	39	Feb 1966	-22%	7
Oct 1966	48%	25	Nov 1968	-36%	17
May 1970	74%	31	Jan 1973	-48%	20
Mar 1978	62%	32	Nov 1980	-27%	20
Aug 1982	229%	60	Aug 1987	-34%	3
Oct 1990	417%	113	Mar 2000	-49%	30
Oct 2002	101%	60	Oct 2007	-57%	17
Mar 2009	401%	131	Feb 2020	-34%	1
Mar 2020	114%	21	Jan. 2022**	-24%	5
<b>Averages</b>	<b>162%</b>	<b>51</b>	<b>-</b>	<b>-41%</b>	<b>20</b>

Source: FactSet, NBER, Robert Shiller, Standard & Poor's, J.P. Morgan Asset Management. (Right) The current peak of 4797 was observed on January 3, 2022. The current market level as of June 30, 2022 is 3785. (Left) \*A bear market is defined as a 20% or more decline from the previous market high. The related market return is the peak to trough return over the cycle. Bear and bull returns are price returns. \*\*The bear market beginning in January 2022 is currently ongoing. The "bear return" for this period is from the January 2022 market peak through the current trough. Averages for the bear market return and duration do not include figures from the current cycle. *Guide to the Markets* – U.S. Data are as of June 30, 2022.



Investors like to avoid stock market declines at all costs, but declines are an inevitable part of investing. A little historical background can help put stock market declines in perspective.

## S&P 500 INDEX 1942–2022

Type of Decline	Average Frequency*	Average Length**	Last Occurrence
-5% or more	About 3 times a year	40 days	June 2022
-10% or more	About every 16 months	130 days	June 2022
-15% or more	About every 3.25 years	237 days	June 2022
-20% or more	About every 5.33 years	327 days	June 2022

## DOW JONES INDUSTRIAL AVERAGE® 1942–2022

Type of Decline	Average Frequency*	Average Length**	Last Occurrence
-5% or more	About 3 times a year	41 days	June 2022
-10% or more	About every 17 months	132 days	June 2022
-15% or more	About every 2.75 years	223 days	June 2022
-20% or more	About every 6 years	407 days	March 2020

Source: Bloomberg, 4/29/1942 - 6/30/2022. **Past performance is no guarantee of future results.** For illustrative purposes only and not indicative of any actual investment. Investors cannot invest directly in an index.

\* Correction cycles are determined by identifying market declines in excess of the minimum declines noted above. The cycle ends when there is a recovery of the magnitude of the minimum decline needed for that correction size (i.e., a recovery of greater than 5%, 10%, 15% or 20%). After that recovery is noted, the algorithm begins searching for the next decline to start the cycle again.

\*\* Measures from the date of the market high to the date of the market low.

The S&P 500 Index is an unmanaged index of 500 companies used to measure large-cap U.S. stock market performance.

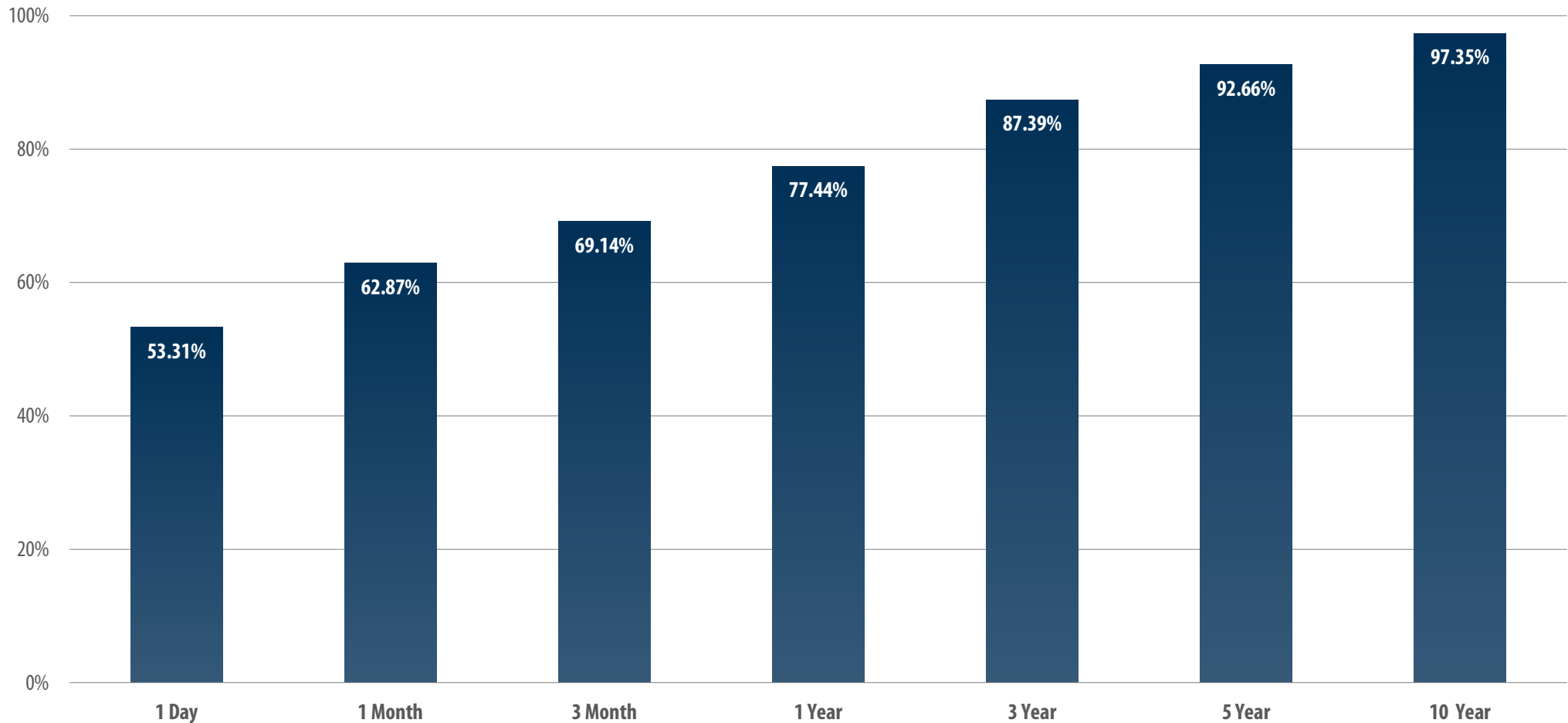
The Dow Jones Industrial Average® (The Dow®), is a price-weighted measure of 30 U.S. blue-chip companies. The index covers all industries except transportation and utilities.

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# Probability of Positive Returns

S&P 500 Index – Since 1937

Investing in the stock market can be volatile. For this reason, we believe it is important to keep proper perspective when stocks rise or fall over short periods of time. History has shown that the odds of achieving a positive return are dramatically increased the longer the investment horizon.



Source: Bloomberg. Data from 12/31/1936 - 6/30/2022. **Past performance is no guarantee of future results.** This chart is for illustrative purposes only and not indicative of any actual investment. The illustration excludes the effects of taxes and brokerage commissions or other expenses incurred when investing. These returns were the result of certain market factors and events which may not be repeated in the future. This chart is based on the total returns of the S&P 500 Index. The S&P 500 Index is an unmanaged index of 500 companies used to measure large-cap U.S. stock market performance. The index cannot be purchased directly by investors.

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