BABY IT'S COLD OUTSIDE

2022 ended with a variety of surprises and "gifted" many Americans a very "Blue, Blue Christmas." Winter storm Elliot delivered a powerful dome of frigid weather that blanketed the country and colored weather maps in various shades of blue, violet, and indigo, highlighting temperatures that ranged from bitter cold to Ice Age like conditions. This abominable mega system was caused by a bomb cyclone; a storm created by a rapid drop in pressure resulting in a dramatic increase in winds. This inescapable "perfect storm" created a double threat to our already fragile energy grid. Just as demand was at its peak, catastrophic winds and flash freezes downed power lines and shut off thousands of homes across the country.

As people scrambled for coats, generators, and rock salt, markets tried to equate what this storm might mean for the important last few days of retail shopping and holiday travel, which are still recovering from the aftermaths of COVID. Despite the ability to order online, consumers may have been reluctant to make last minute purchases assuming their Christmas packages might get stuck on a semi-truck, jack-knifed in the middle of Kansas. The lackluster Santa Clause rally that never arrived (S&P 500 was down 18.1% for the year and 5.8% in December) along with higher interest rates on credit cards added additional downward pressure to the holiday cheer barometer. Whether you were on the naughty or nice list, I heard Santa gifted everyone a stocking of coal just to stay warm. My mistake, it was actually petrified reindeer droppings…it's the new "renewable" energy source powering the North Pole.

Speaking of naughty, a certain someone did not get to enjoy their traditional holiday festivities this year. Plucked from the beautiful, warm waters of the Bahamas, the disgraced Sam Bankman-Fried was extradited to New York and charged with eight federal criminal charges including securities fraud and money laundering. The fallen ex-CEO of FTX, a cryptocurrency exchange, allegedly lost some $8 billion of customer deposits. These depositors included high-powered executives, celebrities and even Wall Street moguls who seemingly trusted each other's due diligence on the investment opportunity. Bankman-Fried was released to his parents with an ankle monitor on a $250 million bond; the largest bail in history. Looks like he was skating on thin ice!

Sam Bankman-Fried is so notorious that he now goes by his initials "SBF", not to be confused with "BFF" (of which he now has none). It is traditional, especially around the holidays, to gift something tangible to people we care about. BFFs share matching silver necklaces, retirees receive a gold watch, and one's betrothed is presented a diamond ring on bended knee. Mr. Wonderful (aka famed businessman Kevin O'Leary) and several other well-known celebrities received something very different indeed. Now we are witnessing the fallout of trying to buy "friends" and influencers with ephemeral crypto coins "printed" out of thin air, as opposed to the real thing.

The unraveling of FTX not only took down its own token but roiled crypto markets in what has been deemed a crypto winter (Bitcoin is down 65% YTD and roughly $2 trillion in crypto market capitalization has disappeared). So much for COLD storage!

The bond market suffered from a case of the blues this year with the Bloomberg Aggregate tumbling 13% and wiping out 5 years of returns. Other economic factors were also feeling pretty low this holiday season. Existing home sales fell for the 10th straight month (down 7.7% month over month and 35.4% from the previous year) due to higher mortgage rates and lack of supply. In addition, leading economic indicators are down 3.7% over the last 6 months, consumer confidence is at an all-time low, and China's reopening has resulted in yet another wave of Omicron contagion. It's enough to make your teeth chatter.

One bright spot was that inflation continued to cool for the 3rd straight month (PCE dropped to 5.5% in November from 6.1% in October). Most of this decrease, however, has been categorized by goods inflation while service inflation is still a concern and a major focus for the Fed. With unemployment sitting stubbornly at 3.7% as of November, it's hard to forecast a Fed pause or pivot any time soon. Longer-term, these labor shortages and rising wage costs should drive innovation and force companies to adapt. Further investment in automation, robotics, and artificial intelligence will be necessary to control supply chains and will eventually provide deflationary forces through enhanced productivity.

Closing Thoughts

Yes, this winter of discontent has made me want to retreat to a sunny beach and bury my head in the sand. But as always, the frost will thaw, the grass will grow and the flowers will bloom again. There is a time for every season and as the world makes one more trip around the sun, we greet the 2023 new year with hope for the future. Investing is not a short-term game, and we continue to see opportunities to plant the seeds for a long-term, successful harvest for our clients.

Regards,

John P. Ulrich, CFP®
President

Whitney E. Solcher, CFA®
Chief Investment Officer

Equity Markets

U.S. stock indices posted positive returns in 4Q as investor sentiment improved, but the YTD results remained dismal with most indices posting double-digit declines. The S&P 500 Index rose 7.6% for the quarter, lowering its YTD loss to 18.1%. Returns were quite mixed across sectors with Energy (+22.8%) being the best and Consumer Discretionary (-10.2%) faring the worst. Value stocks trounced growth for the quarter (Russell 1000 Value: +12.4%; Russell 1000 Growth: +2.2%) and the year (Russell 1000 Value: -7.5%; Russell 1000 Growth: -29.1%). In 4Q, the Growth Index was hurt by relative underweights in Health Care, Financials, and Energy as well as significant underperformance from Tesla (-54%) and Amazon (-26%). Looking back three years, growth is only modestly ahead of value (Russell 1000 Value: +6.0%; Russell 1000 Growth: +7.8%). Small cap stocks exhibited the same pattern in 4Q (Russell 2000 Value: +8.4%; Russell 2000 Growth: +4.1%) but value's full year margin is smaller in the small cap space (Russell 2000 Value: -14.5%; Russell 2000 Growth: -26.4%).

Global ex-U.S. markets also participated in the 4Q rally, and currency appreciation vs. the U.S. dollar further bolstered returns. The MSCI ACWI ex USA Index gained 14.3% (Local: +7.8%), reducing its YTD loss to 16.0% (Local: -9.6%). Across developed market countries, gains were broad-based and value outpaced growth, but by a smaller margin than in the U.S. (MSCI ACWI ex USA Value: +15.7%; MSCI ACWI ex USA Growth: +12.9%). Unlike in the U.S., all sectors of the ACWI ex USA Index delivered a positive return in 4Q of 10% or more.

Emerging markets (MSCI Emerging Markets: +9.7%; Local: +6.6%) also rebounded in 4Q, but returns were mixed across countries. While many countries were up double-digits, India (+2.0%) and Brazil (+2.4%) weighed on broad market returns. China (MSCI China: +13.5%) outperformed. Quarterly returns were also mixed across regions: Latin America (+5.7%), Emerging Europe (+43.1%), and Emerging Asia (+10.8%). The 2022 return for the MSCI EM Index was -20.1%.

Fixed Income Markets

U.S. fixed income experienced its worst year—ever—in 2022, by a wide margin. The Bloomberg US Aggregate Bond Index sank 13.0%; the next worst calendar year was 1994 when the Aggregate fell 2.9%. The silver lining lies in the 4.68% yield-to-worst for the Index, up from 1.75% at the beginning of the year. The yield curve remained inverted at year-end; the 10-year Treasury yield was 3.88% and the 2-year yield was 4.41%. The inversion reflects investor expectations for the economy to slow and an eventual need for the Fed to lower rates. The fourth quarter brought some relief to bond investors as longer rates fell modestly and most "spread" sectors outperformed Treasuries. The Aggregate gained 1.9%. High yield corporates (Bloomberg High Yield Index: +4.2%) were star performers, but this Index was down 11.2% for the year.

The Bloomberg Municipal Bond Index rose 4.1% in 4Q, dampening the year's loss to 8.5%, the worst return in 20 years but ahead of most other fixed income sectors. The ratio of AAA municipal yields to the 10-year U.S. Treasury fell to 68%, below its 10-year average (88%). Outflows from municipal bond mutual funds were $122 billion in 2022, a record.

While rates across developed markets rose broadly in 2022, changes were mixed in 4Q. Rates fell in the U.K. but rose across most of Europe and in Japan. The Bloomberg Global Aggregate ex USD soared 6.8% (hedged: +0.2%) due largely to weakness in the U.S. dollar. Still, the YTD differential for hedged and unhedged investors is nearly 9% (unhedged: -18.7%; hedged: -9.8%). Emerging markets also had a good quarter with the JPM EMBI Global Diversified up 8.1% and the local currency JPM GBI-EM Global Diversified up 8.5%. For the year, the indices were down 17.8% and 11.7%, respectively.

Real Assets

Real assets as a group performed well in 4Q. The S&P GSCI Index rose 3.4%; Gold (S&P Gold Spot Price Index: +9.2%), REITs (MSCI US REIT: +5.2%), infrastructure (DJB Global Infrastructure: +9.6%), and TIPS (Bloomberg TIPS: +2.0%) all posted solid returns. Full year results remained poor, however, for most real assets outside of those related to energy. REITs posted the worst returns (MSCI US REIT: -24.5%) while MLPs (Alerian MLP Index: +30.9%) benefited from higher energy prices.

Returns for Various Periods - December 31, 2022

	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years
MSCI:ACWI	9.76	(18.36)	(18.36)	4.00	5.23	7.98	4.84
Russell:3000 Index	7.18	(19.21)	(19.21)	7.07	8.79	12.13	8.66
Russell:3000 Growth Index	2.31	(28.97)	(28.97)	7.32	10.45	13.75	10.10
Russell:3000 Value Index	12.18	(7.98)	(7.98)	5.88	6.50	10.16	6.96
MegaCap							
Russell:Top 50	3.22	(24.05)	(24.05)	7.82	10.07	12.67	8.65
Russell:Top 200	6.56	(19.77)	(19.77)	7.89	9.90	12.92	8.90
Russell:Top 200 Growth	1.14	(29.74)	(29.74)	8.72	11.77	14.90	10.84
Russell: Top 200 Value	13.42	(5.11)	(5.11)	5.99	7.13	10.40	6.59
Large Cap							
S&P:500	7.56	(18.11)	(18.11)	7.66	9.42	12.56	8.81
Russell:1000 Index	7.24	(19.13)	(19.13)	7.35	9.13	12.37	8.77
Russell: 1000 Growth	2.20	(29.14)	(29.14)	7.79	10.96	14.10	10.32
Russell:1000 Value	12.42	(7.54)	(7.54)	5.96	6.67	10.29	6.96
MidCap							
S&P:400 Mid Cap	10.78	(13.06)	(13.06)	7.23	6.71	10.78	8.87
Russell:Midcap Index	9.18	(17.32)	(17.32)	5.88	7.10	10.96	8.44
Russell:Midcap Growth	6.90	(26.72)	(26.72)	3.85	7.64	11.41	8.61
Russell:Midcap Value	10.45	(12.03)	(12.03)	5.82	5.72	10.11	7.96
Small Cap							
S&P:600 Small Cap	9.19	(16.10)	(16.10)	5.80	5.88	10.82	8.89
Russell:2000 Index	6.23	(20.44)	(20.44)	3.10	4.13	9.01	7.16
Russell:2000 Growth	4.13	(26.36)	(26.36)	0.65	3.51	9.20	7.26
Russell:2000 Value	8.42	(14.48)	(14.48)	4.70	4.13	8.48	6.81
Russell Microcap	4.72	(21.96)	(21.96)	4.05	3.69	8.86	6.34
Non-US Equity							
MSCI:ACWI xUS	14.28	(16.00)	(16.00)	0.07	0.88	3.80	1.52
MSCI:EAFE	17.34	(14.45)	(14.45)	0.87	1.54	4.67	1.81
MSCI:EAFE Growth	15.05	(22.95)	(22.95)	0.47	2.49	5.59	2.61
MSCI:EAFE Value	19.64	(5.58)	(5.58)	0.65	0.17	3.51	0.82
MSCI:EAFE Small	15.79	(21.39)	(21.39)	(0.93)	(0.05)	6.21	3.80
MSCI:EM	9.70	(20.09)	(20.09)	(2.69)	(1.39)	1.44	0.65
Fixed Income							
Blmbg:Aggregate	1.87	(13.01)	(13.01)	(2.71)	0.02	1.06	2.66
Blmbg:TIPS	2.04	(11.85)	(11.85)	1.21	2.11	1.12	3.05
Blmbg:Long Gov/Credit	2.61	(27.09)	(27.09)	(6.20)	(1.21)	1.57	4.36
Blmbg:Long Credit A	4.96	(25.65)	(25.65)	(6.09)	(1.33)	1.90	4.35
Blmbg:HY Corp Cash Pay	4.22	(11.15)	(11.15)	0.08	2.33	4.04	6.10
Blmbg:Muni 1-10 Yr	3.12	(4.84)	(4.84)	(0.10)	1.37	1.69	2.83
Blmbg:Glb Agg xUSD	6.81	(18.70)	(18.70)	(5.94)	(3.07)	(1.64)	0.54
Blmbg:Glb Agg xUSD Hdg	0.18	(9.76)	(9.76)	(2.57)	0.52	2.10	2.98
JPM:EMBI Plus	8.70	(24.67)	(24.67)	(8.34)	(3.87)	(0.35)	3.11
Other Assets							
Blmbg:Commodity TR Idx	--	--	--	--	--	--	--
S&P GSCI	3.44	25.99	25.99	10.49	6.46	(3.30)	(4.93)
S&P:Gold Spot Price Ix	9.22	(0.13)	(0.13)	6.24	6.88	0.86	5.33
FTSE:NAREIT Equity Index	5.24	(24.37)	(24.37)	(0.11)	3.68	6.53	6.17
Alerian:MLP Index	10.11	30.92	30.92	9.38	4.08	1.99	5.39

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ULRICH
Investment Consultants

Capital Markets Review & Outlook

4th Quarter, 2022

ulrichcg.com

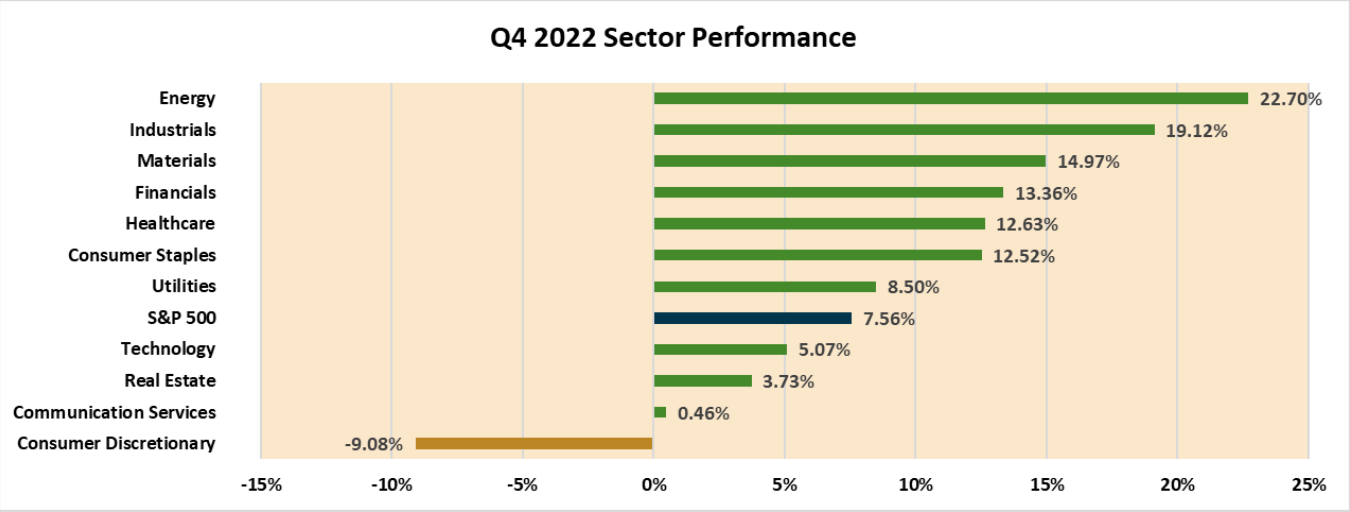
MAJOR MARKET INDICES (AS OF 12/31/2022)

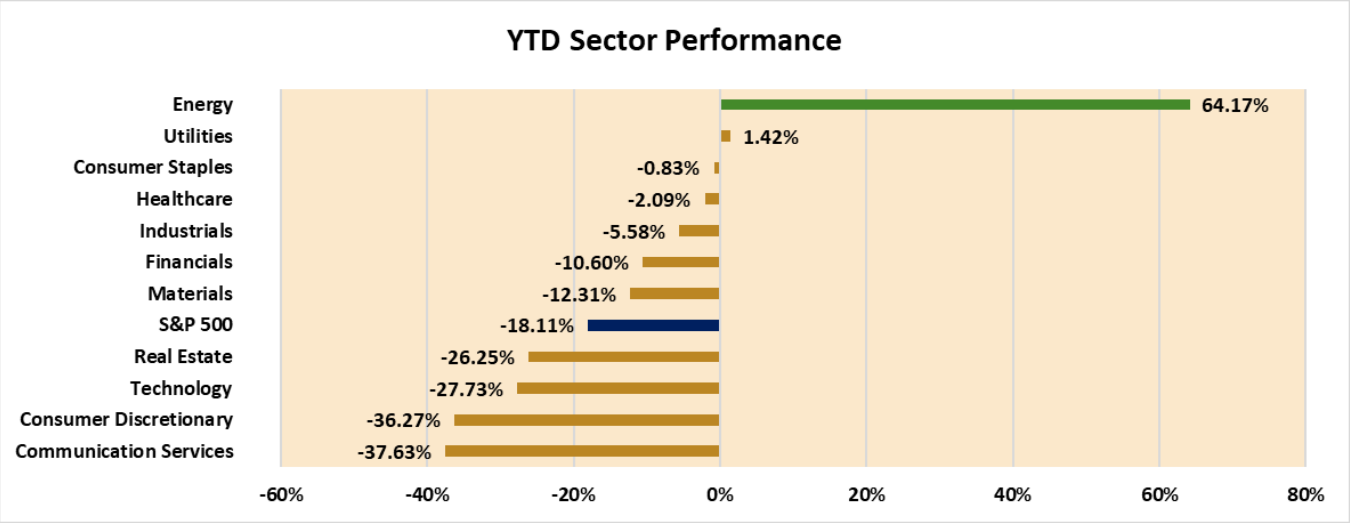
Domestic Equity	2022 Q4	YTD	Annualized 1 Year	5 Year	10 Year
S&P 500	7.6%	-18.1%	-18.1%	9.4%	12.6%
Russell 3000	7.2%	-19.2%	-19.2%	8.8%	12.1%
Russell 1000 Value	12.4%	-7.5%	-7.5%	6.7%	10.3%
Russell 1000 Growth	2.2%	-29.1%	-29.1%	11.0%	14.1%
Russell 1000	7.2%	-19.1%	-19.1%	9.1%	12.4%
Russell 2000	6.2%	-20.4%	-20.4%	4.1%	9.0%
Russell 2500	7.4%	-18.4%	-18.4%	5.9%	10.0%
International Equity	**2022 Q4**	**YTD**	**Annualized 1 Year**	**5 Year**	**10 Year**
MSCI ACWI Ex US	14.4%	-15.6%	-15.6%	1.4%	4.3%
MSCI EAFE	17.4%	-14.0%	-14.0%	2.0%	5.2%
MSCI EM	9.8%	-19.7%	-19.7%	-1.0%	1.8%
Fixed Income	**2022 Q4**	**YTD**	**Annualized 1 Year**	**5 Year**	**10 Year**
Bloomberg US Aggregate	1.9%	-13.0%	-13.0%	0.0%	1.1%
Bloomberg US Universal	2.2%	-13.0%	-13.0%	0.2%	1.3%
Other	**2022 Q4**	**YTD**	**Annualized 1 Year**	**5 Year**	**10 Year**
S&P/LSTA Leveraged Loan	2.7%	-0.6%	-0.6%	3.3%	3.7%
FTSE Nareit Equity REITs	5.2%	-24.4%	-24.4%	3.7%	6.5%
US Dollar	-7.7%	7.9%	7.9%	2.4%	2.6%
WTI	1.0%	6.7%	6.7%	5.8%	-1.5%
Gold	9.8%	-0.3%	-0.3%	7.0%	0.9%

- Markets recovered strongly into the 4th quarter only to fade on new recessionary fears in December.
- Growth continued to struggle with rising rates, underperforming Value by over 2000 basis points.
- Rising rates resulted in the worst year for fixed income, essentially wiping out 5-years of returns.
- A 60/40 portfolio experienced a "balanced bear," offering no protection to investors.
- International markets recovered quite strongly in the 4th quarter, as the weakening dollar provided some relief.
- Gold finally made a showing in the wake of the crypto meltdown, rising roughly 10% in the 4th quarter.

Source: Koyfin, Morningstar Direct, Callan

SECTOR PERFORMANCE





- Most sectors recovered well in the 4th quarter but were led by the more cyclical sectors, followed by safe havens like healthcare and staples.
- Year-to-date there was only one clear winner, energy, which continued to outperform despite a moderation in oil prices.
- The FAANG stocks that led the "stay at home" trend during COVID, completely reversed, bringing technology and communication services well below bear territory.

Source: Morningstar Direct

MARKET VALUATIONS

- Valuations have contracted significantly since the January 3rd high of 21.4x.
- The S&P 500 had its worst year since 2008 and experienced 46 daily moves of greater than 2%.
- The five largest declines occurred around the Fed meetings.

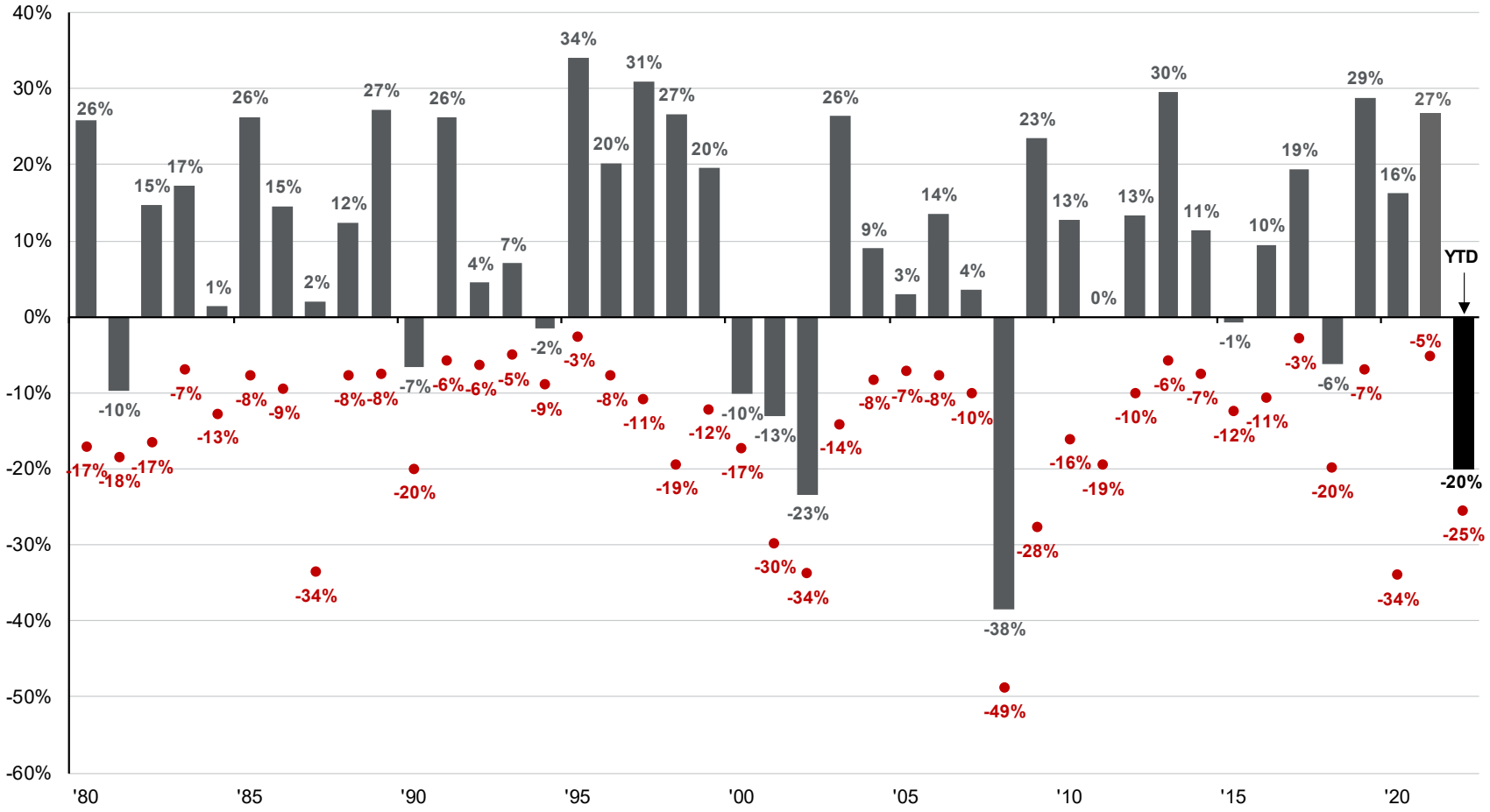
S&P 500 Price Index

Characteristic	3/24/2000	10/9/2007	2/19/2020	1/3/2022	12/31/2022
Index Level	1,527	1,565	3,386	4,797	3,840
P/E Ratio (fwd.)	25.2x	15.1x	19.2x	21.4x	16.7x
Dividend Yield	1.4%	1.9%	1.9%	1.3%	1.8%
10-yr. Treasury	6.2%	4.7%	1.6%	1.6%	3.9%

Source: JP Morgan

ANNUAL RETURNS AND INTRA-YEAR DECLINES

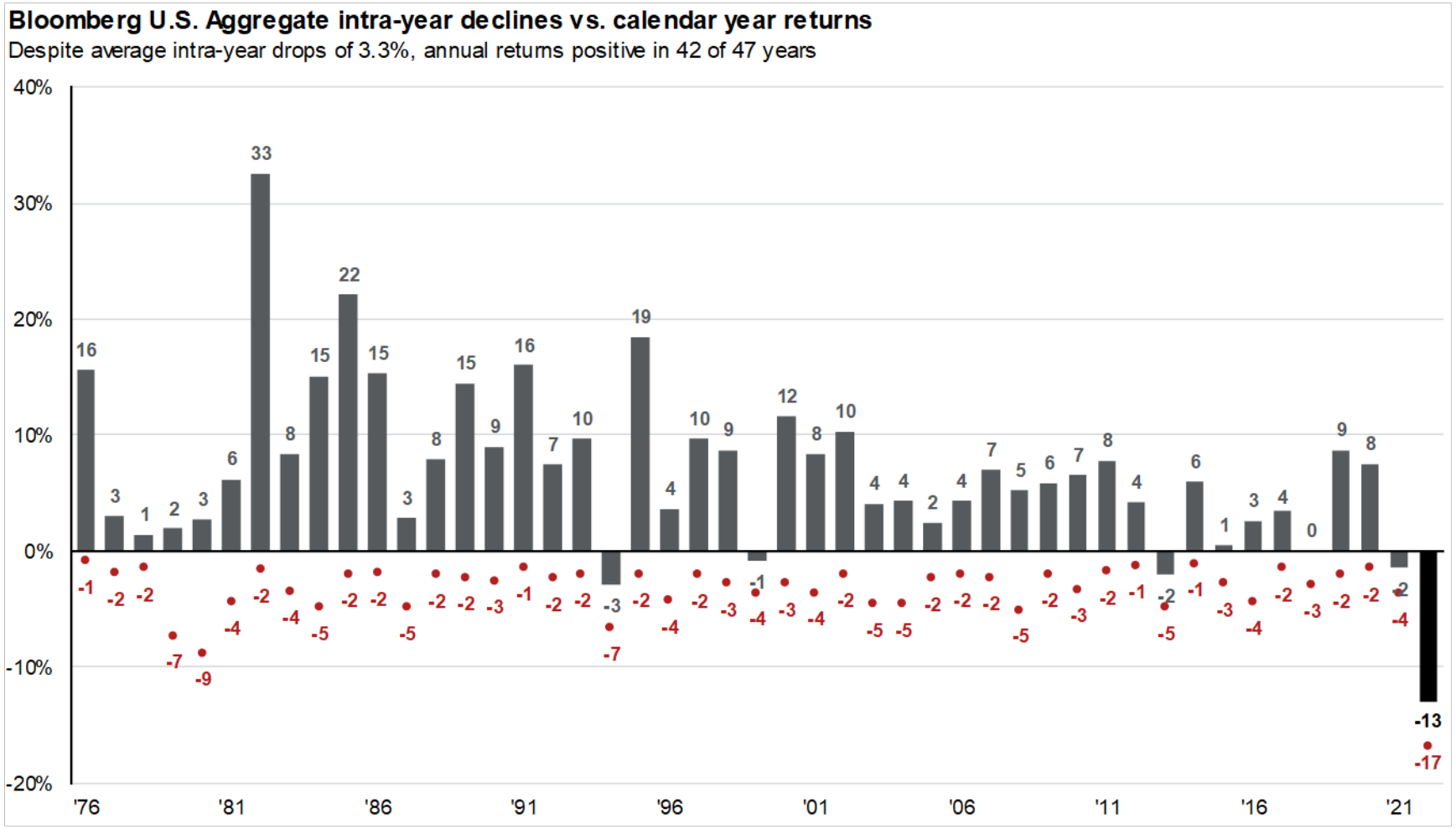
- 2022 has seen the worst draw down since 2008, however, feels worse as bonds have also declined, providing no protection to portfolios.



Source: JP Morgan

BLOOMBERG US AGG ANNUAL RETURNS AND INTRA-YEAR DECLINES

- 2022 marked the worst year for bonds and the first negative two-years of performance.

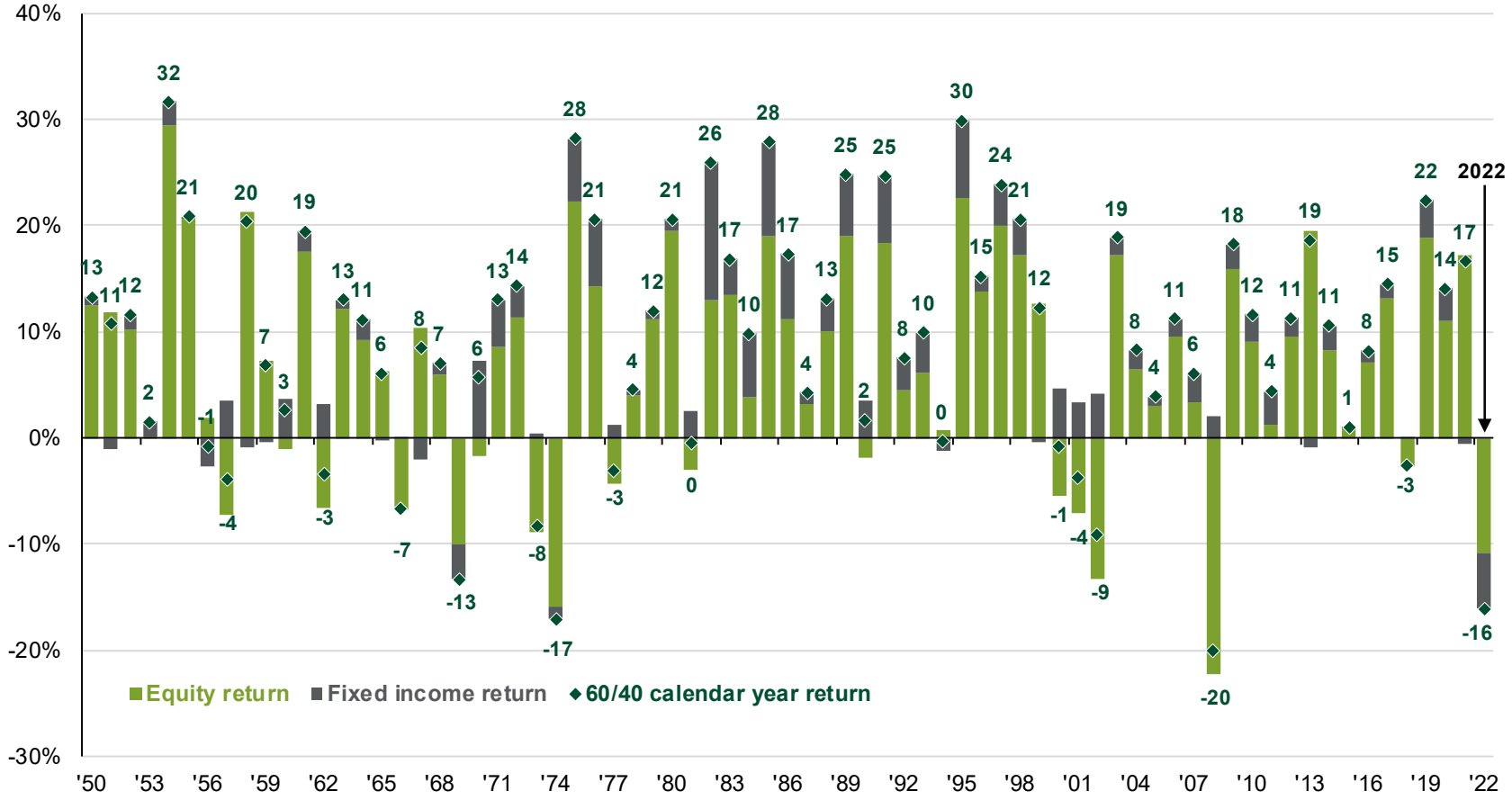


Source: JP Morgan

THE IMPACT ON A 60/40 PORTFOLIO

- Diversification failed in 2022, with bonds returning their worst performance ever.

60/40 annual return decomposition
Total returns, 1950 – present



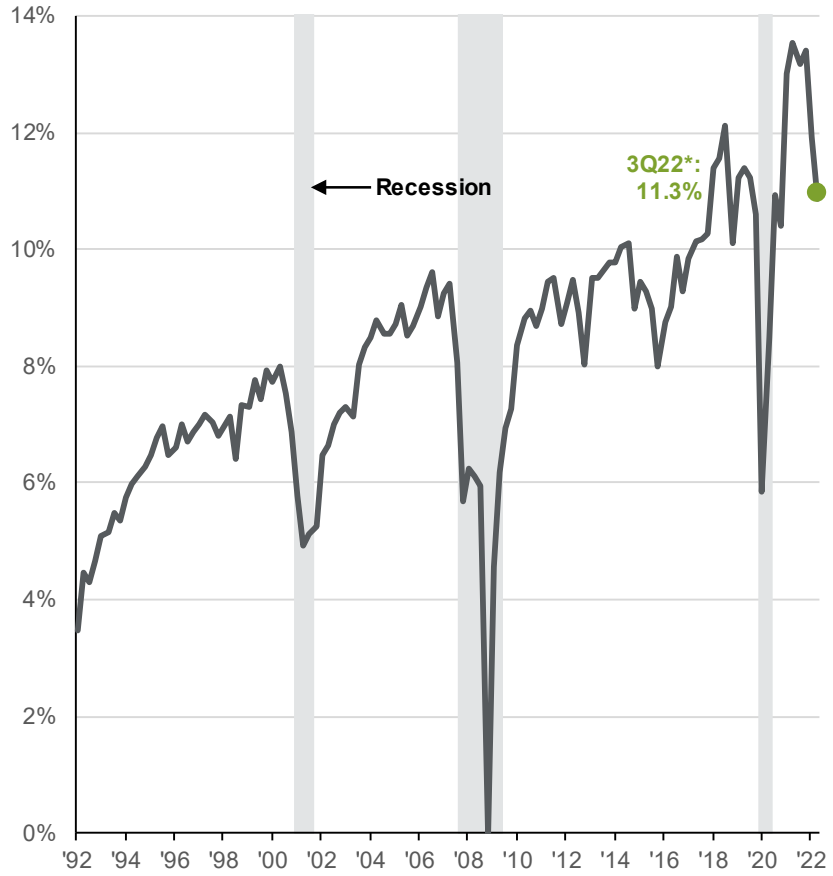
Source: JP Morgan

PROFIT MARGINS

- Inflation and higher wages are eating into corporate profit margins.
- Service inflation will likely keep overall inflation high and therefore, companies are likely to devote more resources to automation to boost productivity.

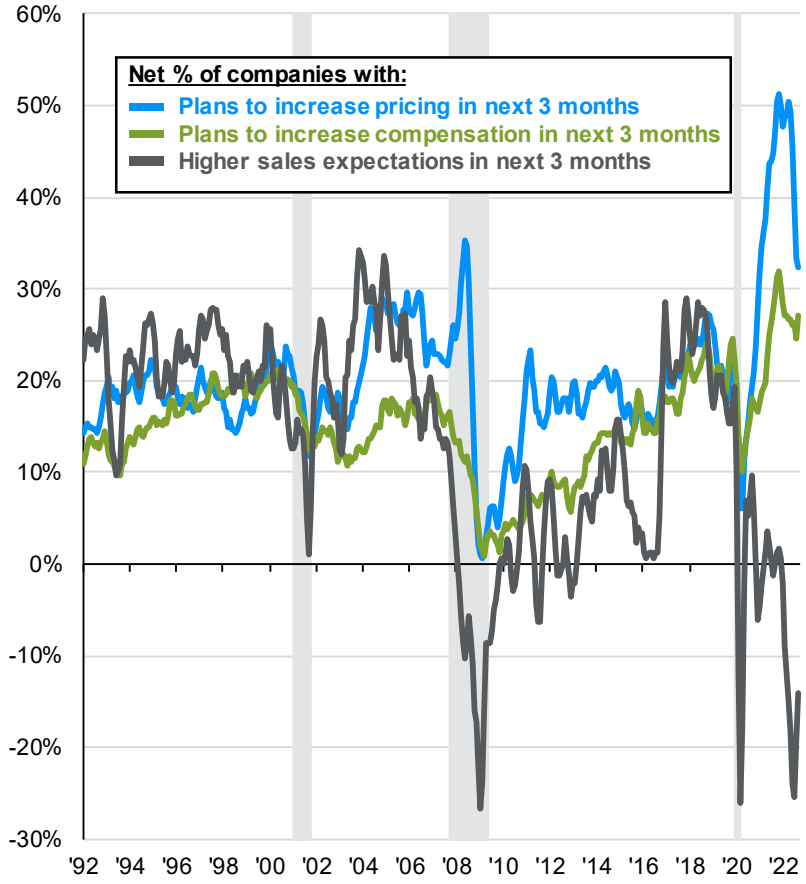
S&P 500 profit margins

Quarterly operating earnings/sales



Pricing, wages, and sales expectations for businesses

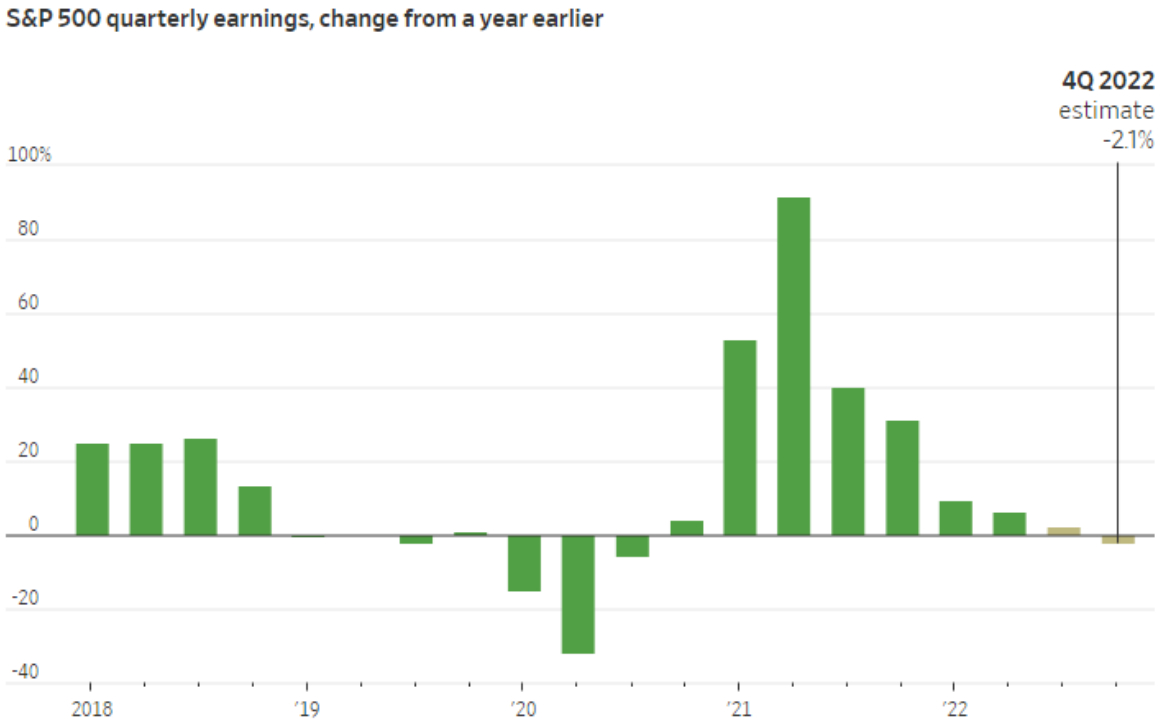
NFIB Small Business Economic Survey, three-month moving average



Source: JP Morgan

CORPORATE EARNINGS

- Q3 earnings were up 2% YoY. This was the slowest earnings growth since Q3 2020.
- Analysts are forecasting an earnings drop in Q4. In June, forecasts were for 9% earnings growth (YoY) in Q4. Now, forecasts are for a 2% drop.
- Analysts are still optimistic for 2023. Forecasts are for 5% growth in earnings.
- On average, earnings fall 24.4% during recessions.



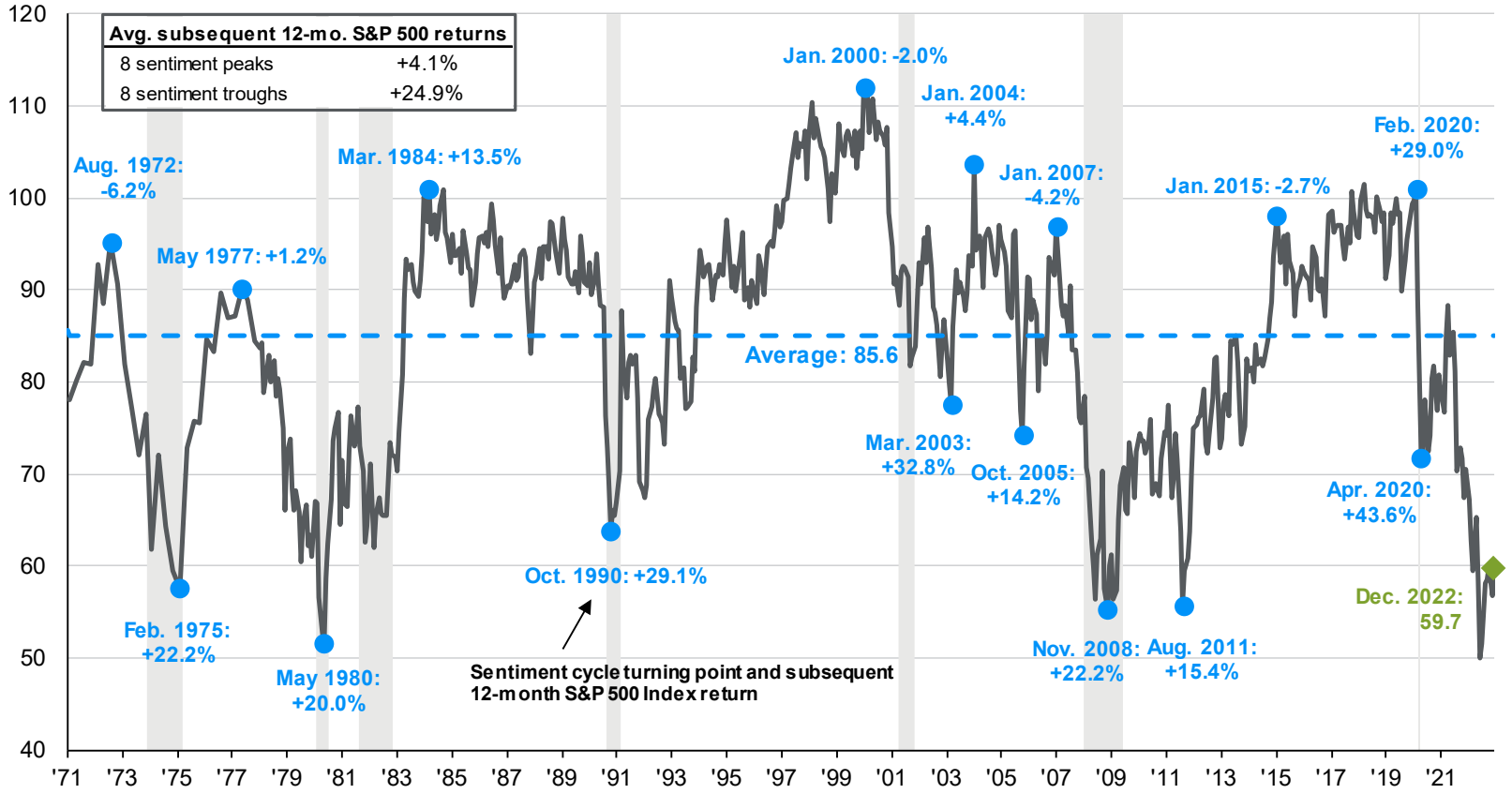
Note: 3Q 2022 earnings growth based on blend of actual results and estimates. 4Q 2022 earnings growth based on estimates. As of Nov. 25, 2022.
Source: FactSet

Source: WSJ and Barron's

CONSUMER CONFIDENCE AND THE STOCK MARKET

- The stock market generally rallies after a trough in consumer sentiment, which fell to its lowest level ever in June.
- The difference in sentiment between Democrats and Republicans is also at its widest level.

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



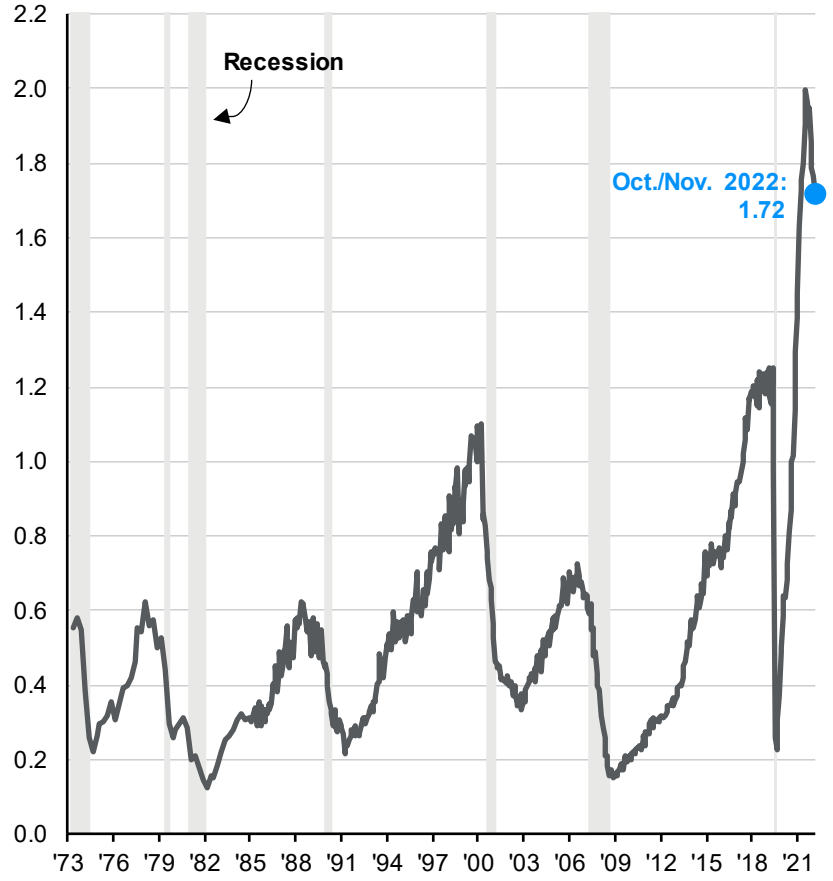
Source: JP Morgan

LABOR DEMAND

- Job growth is slowing, which should slow down wage inflation.
- The Quits rate is starting to fall, and employers are holding onto employees for fear of not finding replacements.

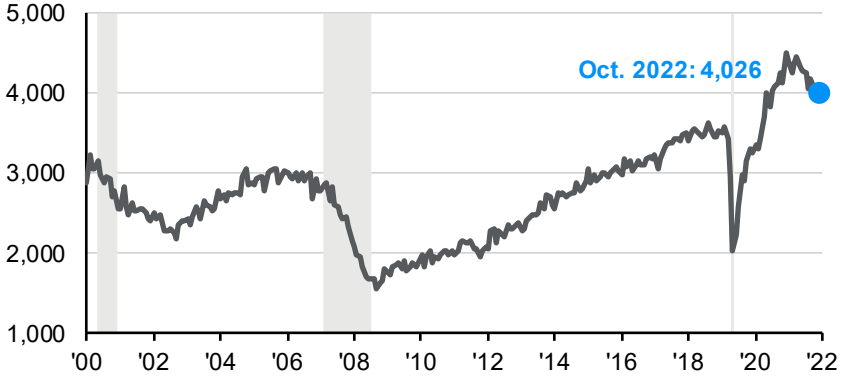
Ratio of job openings to job seekers

Job openings* lagged 1 month divided by unemployed persons, SA



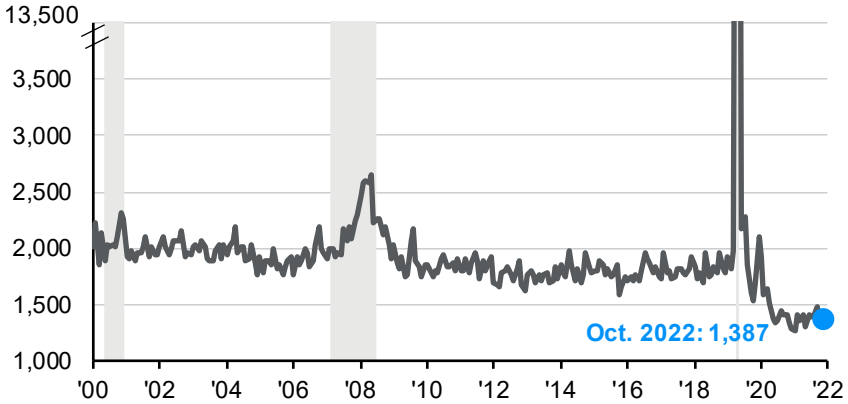
JOLTS quits

Total nonfarm quits, thousands, seasonally adjusted



JOLTS layoffs

Total nonfarm layoffs, thousands, seasonally adjusted



Source: JP Morgan

INFLATION HEATMAP

- We've experienced an extended period of transitory inflation, but we see core goods are starting to fall.
- It peaked in June at 9.0%, and expectations are it will settle between 3-4% by end of year.
- Shelter still remains a problem and will lag the rest of the economy.

Consumer Price Index, components

m/m % change, seasonally adjusted

		2021													2022										
	Weight	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Headline CPI, y/y	100.0	1.3%	1.4%	1.7%	2.7%	4.2%	4.9%	5.3%	5.3%	5.2%	5.4%	6.2%	6.8%	7.1%	7.5%	7.9%	8.6%	8.2%	8.5%	9.0%	8.5%	8.2%	8.2%	7.8%	7.1%
Core CPI, y/y	78.3	1.6%	1.4%	1.3%	1.7%	3.0%	3.8%	4.4%	4.2%	4.0%	4.0%	4.6%	5.0%	5.5%	6.0%	6.4%	6.4%	6.1%	6.0%	5.9%	5.9%	6.3%	6.7%	6.3%	6.0%
Headline CPI, m/m	100.0	0.3%	0.2%	0.4%	0.6%	0.6%	0.7%	0.9%	0.5%	0.3%	0.4%	0.9%	0.7%	0.6%	0.6%	0.8%	1.2%	0.3%	1.0%	1.3%	0.0%	0.1%	0.4%	0.4%	0.1%
Core CPI, m/m	78.3	0.1%	0.0%	0.2%	0.3%	0.9%	0.7%	0.8%	0.3%	0.2%	0.3%	0.6%	0.5%	0.6%	0.6%	0.5%	0.3%	0.6%	0.6%	0.7%	0.3%	0.6%	0.6%	0.3%	0.2%
Energy	8.0	3.7%	2.8%	4.6%	5.6%	-1.2%	0.7%	2.1%	1.6%	1.9%	1.2%	3.7%	2.4%	0.9%	0.9%	3.5%	11.0%	-2.7%	3.9%	7.5%	-4.6%	-5.0%	-2.1%	1.8%	-1.6%
Gasoline	4.0	7.0%	5.8%	8.2%	10.3%	-3.3%	0.6%	3.3%	2.5%	2.5%	1.1%	4.6%	4.5%	1.3%	-0.8%	6.6%	18.3%	-6.1%	4.1%	11.2%	-7.7%	-10.6%	-4.9%	4.0%	-2.0%
Electricity	2.7	0.6%	0.0%	0.5%	0.2%	0.7%	0.5%	0.2%	0.2%	1.0%	0.6%	1.4%	0.2%	0.5%	4.2%	-1.1%	2.2%	0.7%	1.3%	1.7%	1.6%	1.5%	0.4%	0.1%	-0.2%
Utility Gas	1.0	0.5%	-0.4%	1.7%	2.4%	2.2%	1.8%	1.8%	2.2%	1.6%	2.9%	5.9%	0.3%	-0.3%	-0.5%	1.5%	0.6%	3.1%	8.0%	8.2%	-3.6%	3.5%	2.9%	-4.6%	-3.5%
Food	13.7	0.3%	0.2%	0.1%	0.2%	0.4%	0.5%	0.7%	0.7%	0.4%	0.9%	0.9%	0.8%	0.5%	0.9%	1.0%	1.0%	0.9%	1.2%	1.0%	1.1%	0.8%	0.8%	0.6%	0.5%
Food at home	8.5	0.3%	0.1%	0.2%	0.2%	0.4%	0.4%	0.7%	0.6%	0.4%	1.2%	0.9%	0.9%	0.4%	1.0%	1.4%	1.5%	1.0%	1.4%	1.0%	1.3%	0.7%	0.7%	0.4%	0.5%
Food away from home	5.2	0.4%	0.3%	0.1%	0.1%	0.3%	0.6%	0.7%	0.8%	0.4%	0.5%	0.8%	0.6%	0.6%	0.7%	0.4%	0.3%	0.6%	0.7%	0.9%	0.7%	0.9%	0.9%	0.9%	0.5%
Core goods	21.2	0.0%	0.1%	-0.1%	0.2%	2.0%	1.8%	2.1%	0.4%	0.4%	0.3%	1.1%	0.9%	1.2%	1.0%	0.4%	-0.4%	0.2%	0.7%	0.8%	0.2%	0.5%	0.0%	-0.4%	-0.5%
Apparel	2.5	0.5%	1.4%	-0.5%	0.4%	0.6%	1.1%	0.5%	0.1%	0.3%	-0.7%	0.6%	0.7%	1.1%	1.1%	0.7%	0.6%	-0.8%	0.7%	0.8%	-0.1%	0.2%	-0.3%	-0.7%	0.2%
New vehicles	4.1	0.6%	-0.4%	0.1%	0.0%	0.5%	1.5%	1.7%	1.5%	1.2%	1.3%	1.3%	1.2%	1.2%	0.0%	0.3%	0.2%	1.1%	1.0%	0.7%	0.6%	0.8%	0.7%	0.4%	0.0%
Used cars	3.8	-1.1%	-0.9%	-0.7%	0.3%	9.8%	7.7%	10.1%	0.0%	-1.2%	-0.5%	2.5%	2.4%	3.3%	1.5%	-0.2%	-3.8%	-0.4%	1.8%	1.6%	-0.4%	-0.1%	-1.1%	-2.4%	-2.9%
Medical care commod	1.5	-0.2%	-0.1%	-0.7%	0.1%	0.6%	0.0%	-0.4%	0.2%	-0.2%	0.3%	0.6%	0.1%	0.0%	0.9%	0.3%	0.2%	0.1%	0.3%	0.4%	0.6%	0.2%	-0.1%	0.0%	0.2%
Core services	57.1	0.1%	0.1%	0.2%	0.3%	0.5%	0.4%	0.4%	0.3%	0.1%	0.2%	0.4%	0.4%	0.3%	0.4%	0.5%	0.6%	0.7%	0.6%	0.7%	0.4%	0.6%	0.8%	0.5%	0.4%
Shelter	32.6	0.1%	0.1%	0.2%	0.3%	0.4%	0.3%	0.4%	0.4%	0.2%	0.4%	0.5%	0.5%	0.4%	0.3%	0.5%	0.5%	0.5%	0.6%	0.6%	0.5%	0.7%	0.7%	0.8%	0.6%
Rent of primary res.	7.4	0.1%	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0.3%	0.4%	0.4%	0.4%	0.4%	0.5%	0.6%	0.4%	0.6%	0.6%	0.8%	0.7%	0.7%	0.8%	0.7%	0.8%
OER	24.0	0.2%	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.5%	0.6%	0.7%	0.6%	0.7%	0.8%	0.6%	0.7%
Medical care services	6.9	-0.1%	0.5%	0.4%	0.1%	0.0%	-0.1%	0.0%	0.2%	0.2%	0.2%	0.4%	0.3%	0.3%	0.6%	0.1%	0.6%	0.5%	0.4%	0.7%	0.4%	0.8%	1.0%	-0.6%	-0.7%
Transportation services	5.9	-0.2%	-0.3%	0.4%	1.0%	2.2%	1.7%	1.1%	-0.9%	-1.2%	-1.0%	0.2%	0.7%	0.0%	1.0%	1.4%	2.0%	3.1%	1.3%	2.1%	-0.5%	0.5%	1.9%	0.8%	-0.1%

Source: JP Morgan

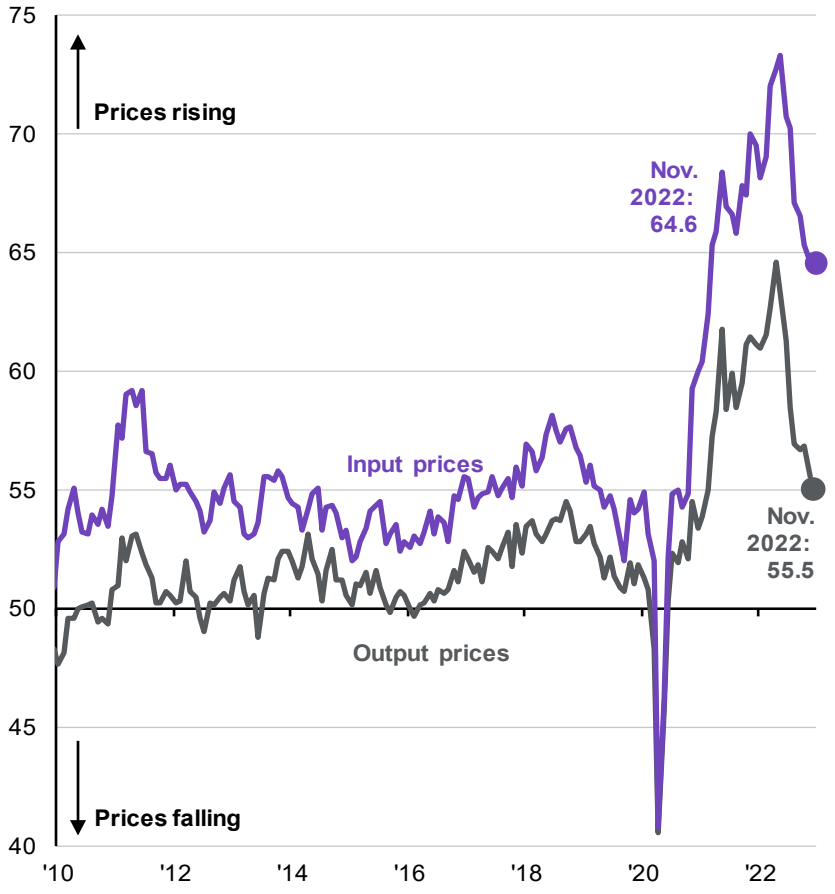
GLOBAL SUPPLY CHAINS AND INFLATION

- Global supply chains are beginning to ease, providing some relief to input and output prices.

Global PMI suppliers' delivery times index*

Figure shown is 100 - Global PMI suppliers' delivery times index

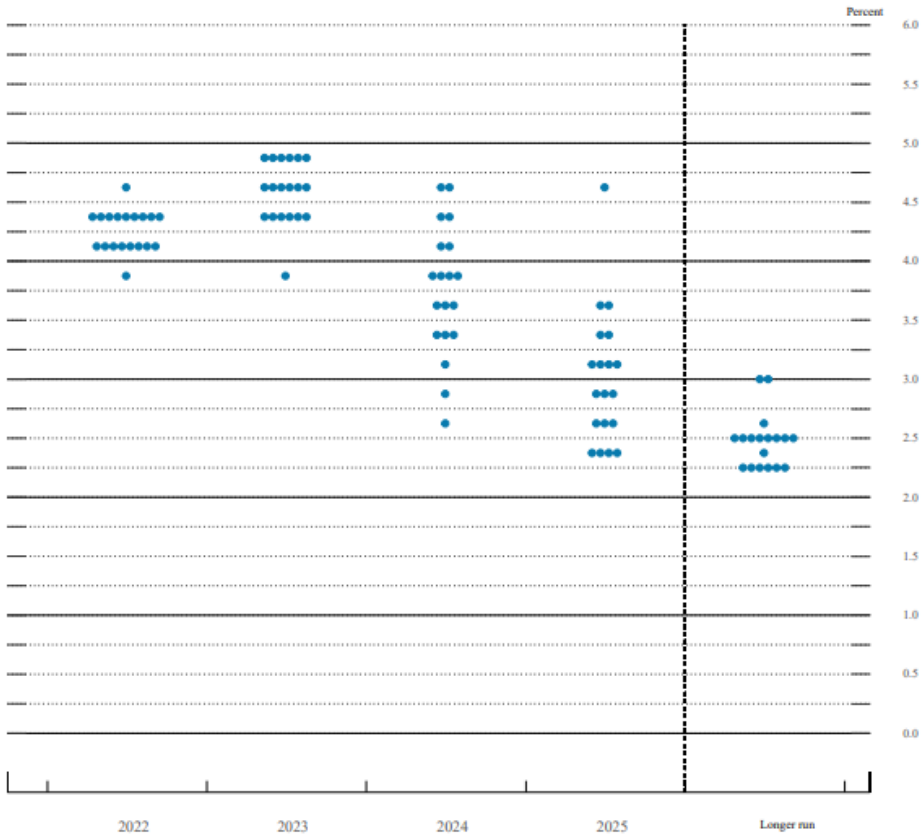
Global PMI input and output prices**



Source: JP Morgan

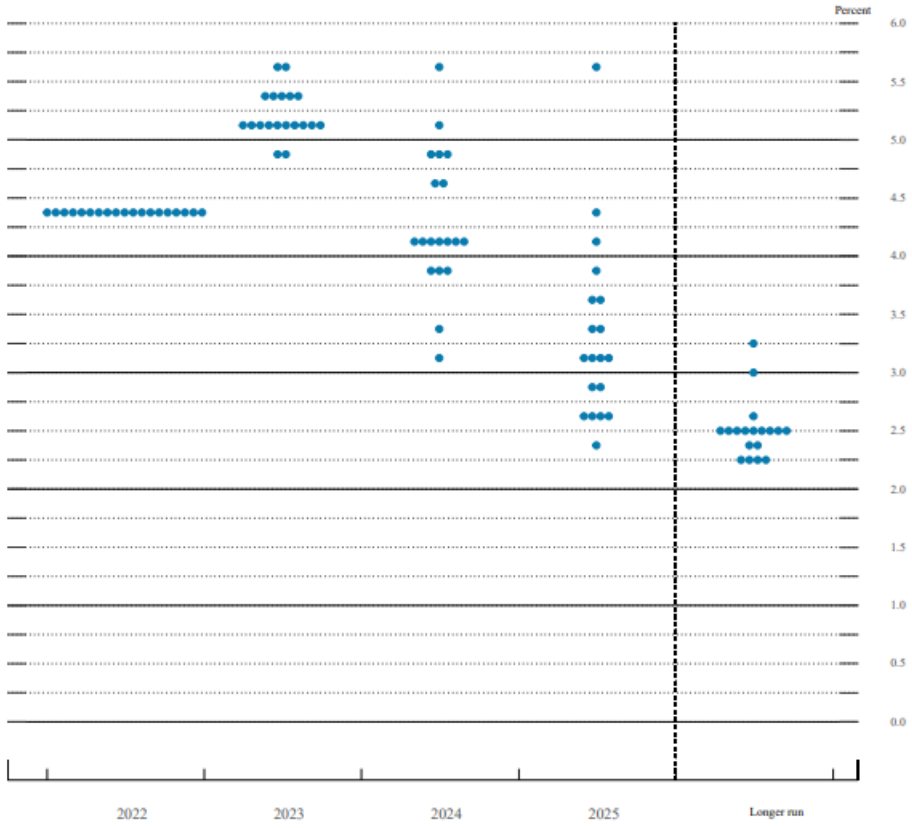
FED DOT PLOT HAS BECOME MORE HAWKISH

Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate



September 2022

Figure 2. FOMC participants' assessments of appropriate monetary policy: Midpoint of target range or target level for the federal funds rate

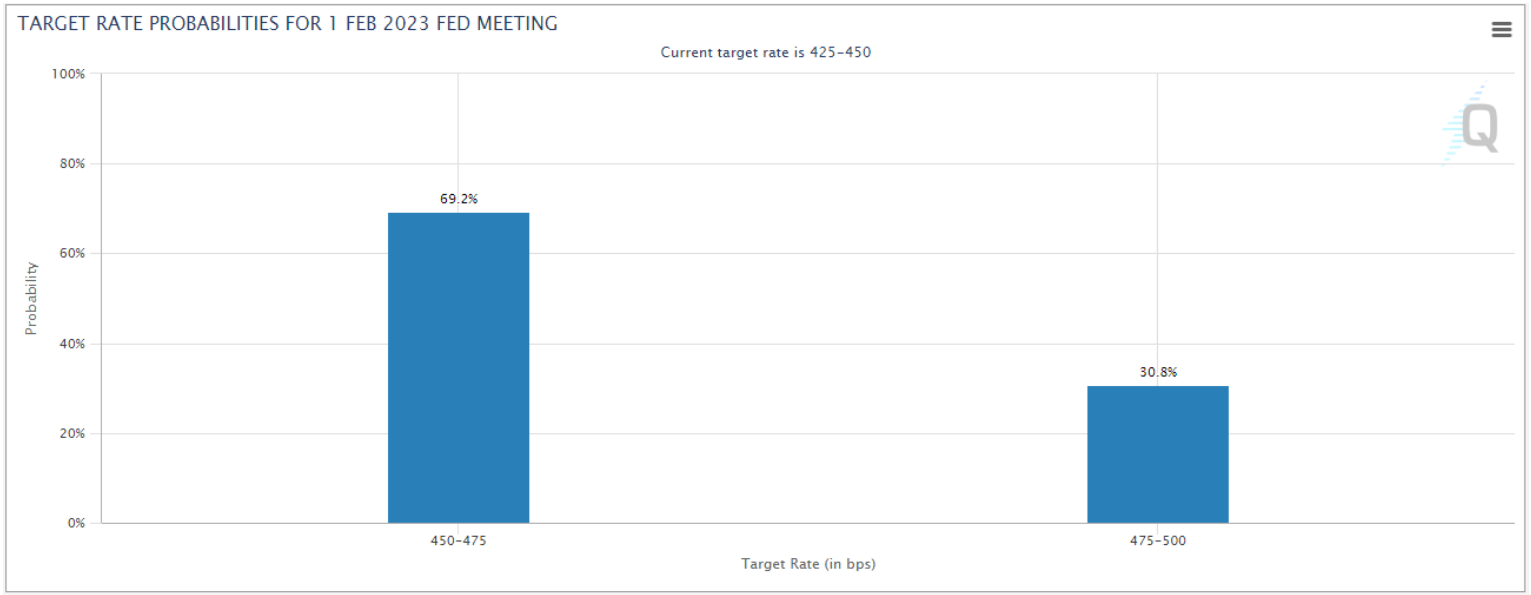


December 2022

Source: FOMC

FED PROJECTIONS VS. MARKET REALITY

- Key 2023 Federal Reserve Projections:
  - GDP: 0.5% (was 1.2%)
  - Unemployment: 4.6% (was 4.4%)
  - Core PCE inflation: 3.5% (was 3.1%)
  - Fed funds rate at end of 2023: 5.1% (was 4.6%)
- Investors and markets don't seem to be pricing in the FED's willingness to take rates higher:
  - 7 out of 19 Federal Reserve presidents said they see rates rising above 5.25% next year
  - Mester, Daly, and Williams' view is that Fed Funds Rate needs to be above 5% or at least positive in real terms



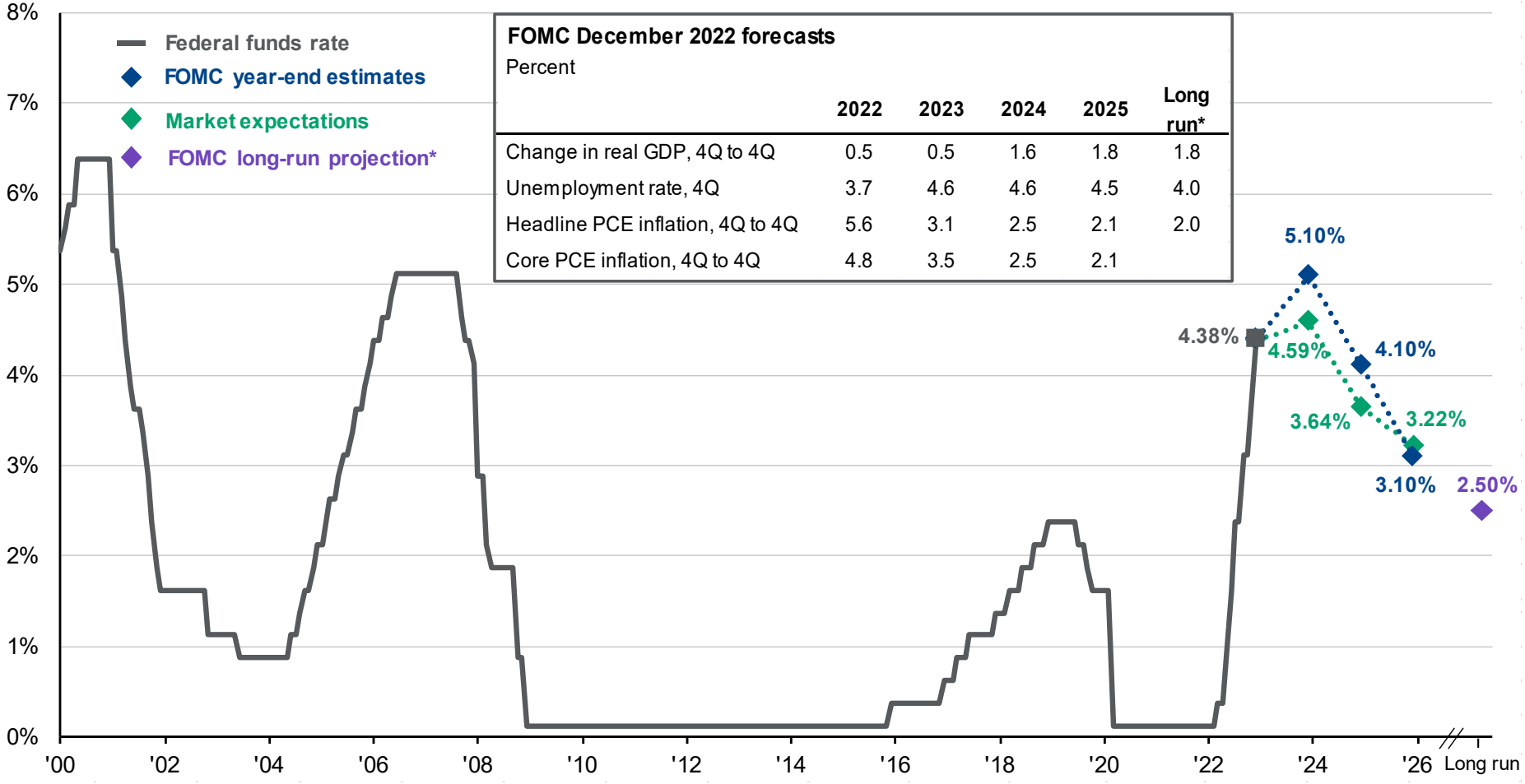
TARGET RATE (BPS)	PROBABILITY(%)			
	NOW *	1 DAY 30 DEC 2022	1 WEEK 27 DEC 2022	1 MONTH 2 DEC 2022
450-475	69.2%	67.7%	59.7%	46.1%
475-500	30.8%	32.3%	40.3%	44.9%

Source: CMEGroup

The Fed and Interest Rates

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



FOMC December 2022 forecasts

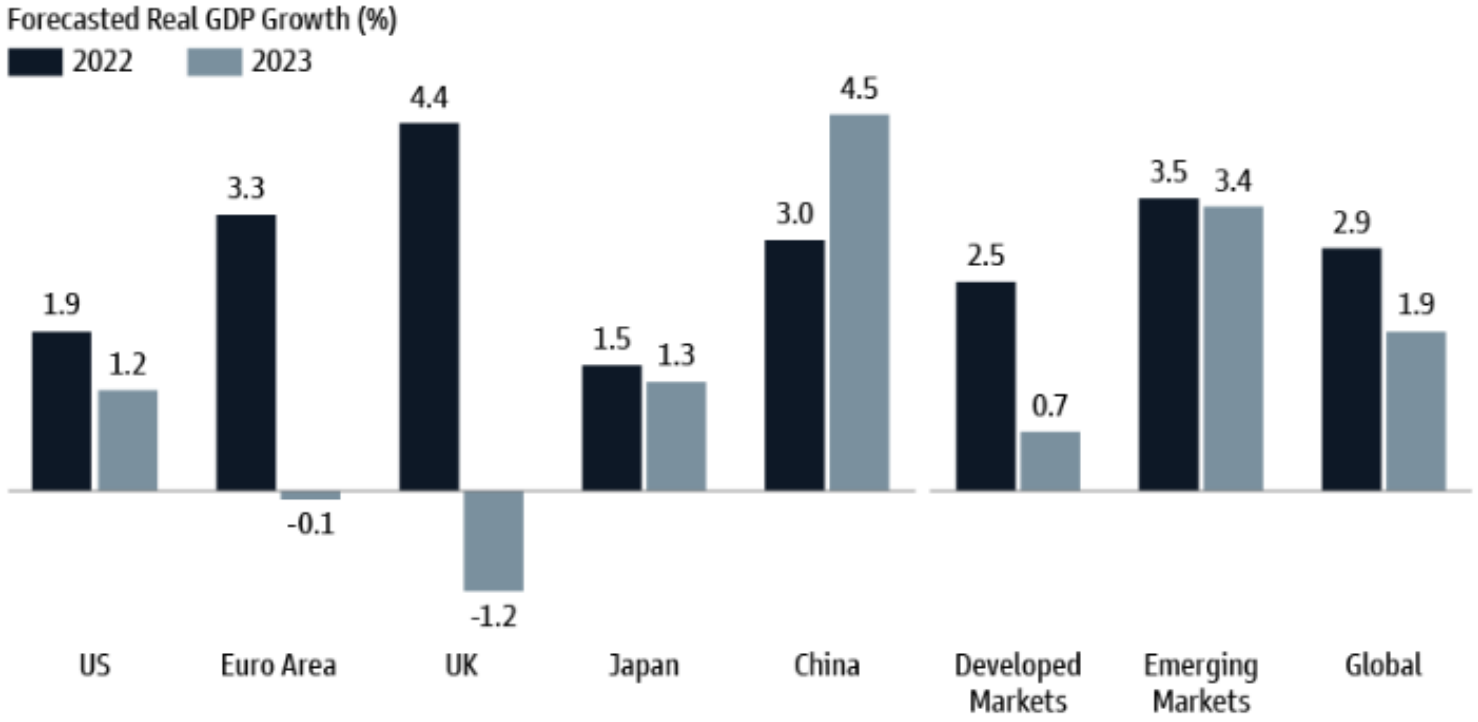
Percent

	2022	2023	2024	2025	Long run*
Change in real GDP, 4Q to 4Q	0.5	0.5	1.6	1.8	1.8
Unemployment rate, 4Q	3.7	4.6	4.6	4.5	4.0
Headline PCE inflation, 4Q to 4Q	5.6	3.1	2.5	2.1	2.0
Core PCE inflation, 4Q to 4Q	4.8	3.5	2.5	2.1	

Source: JP Morgan

Global GDP

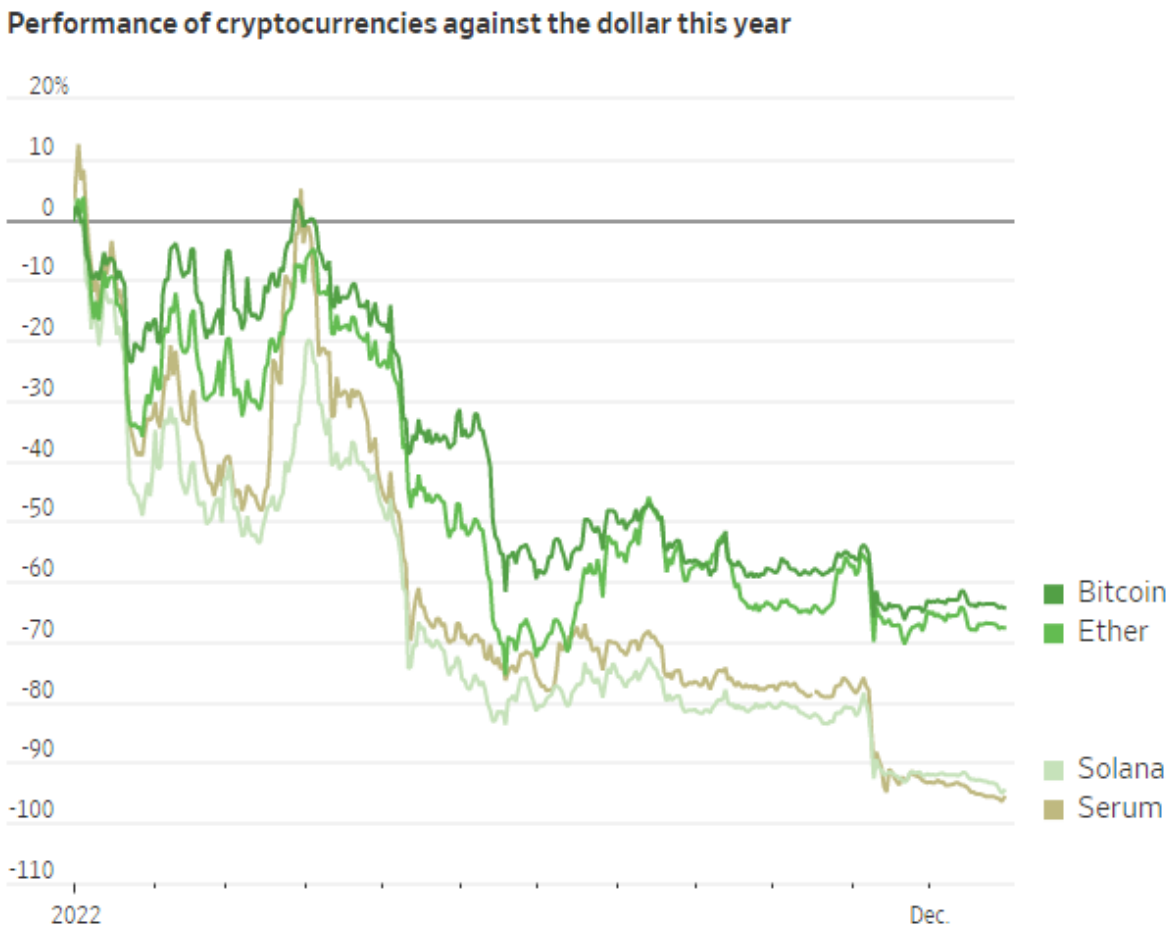
- We expect major central banks to prioritize price stability in 2023. While growth deceleration is a given, regional expectations vary. In Europe, we believe a recession is a likely consequence of the energy crisis, among other factors. US growth may hinge on consumer and corporate resilience. Meanwhile, easing policy and gradual reopening may finally reverse China's growth outlook.



Source: Goldman Sachs Global Investment Research and Goldman Sachs Asset Management. As of November 30, 2022. "Real GDP" refers to Gross Domestic Product adjusted for inflation, year-over-year. The economic and market forecasts presented herein are for informational purposes as of the date of this document. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this document. **Past performance does not guarantee future results, which may vary.**

CRYPTOCURRENCY WINTER

- Following the collapse of FTX, cryptocurrencies have plummeted.
- The market cap of crypto peaked in 2021 at $3 Trillion. Today, it has plunged to less than $800 Billion.
- Bitcoin has shed 75% of its value.

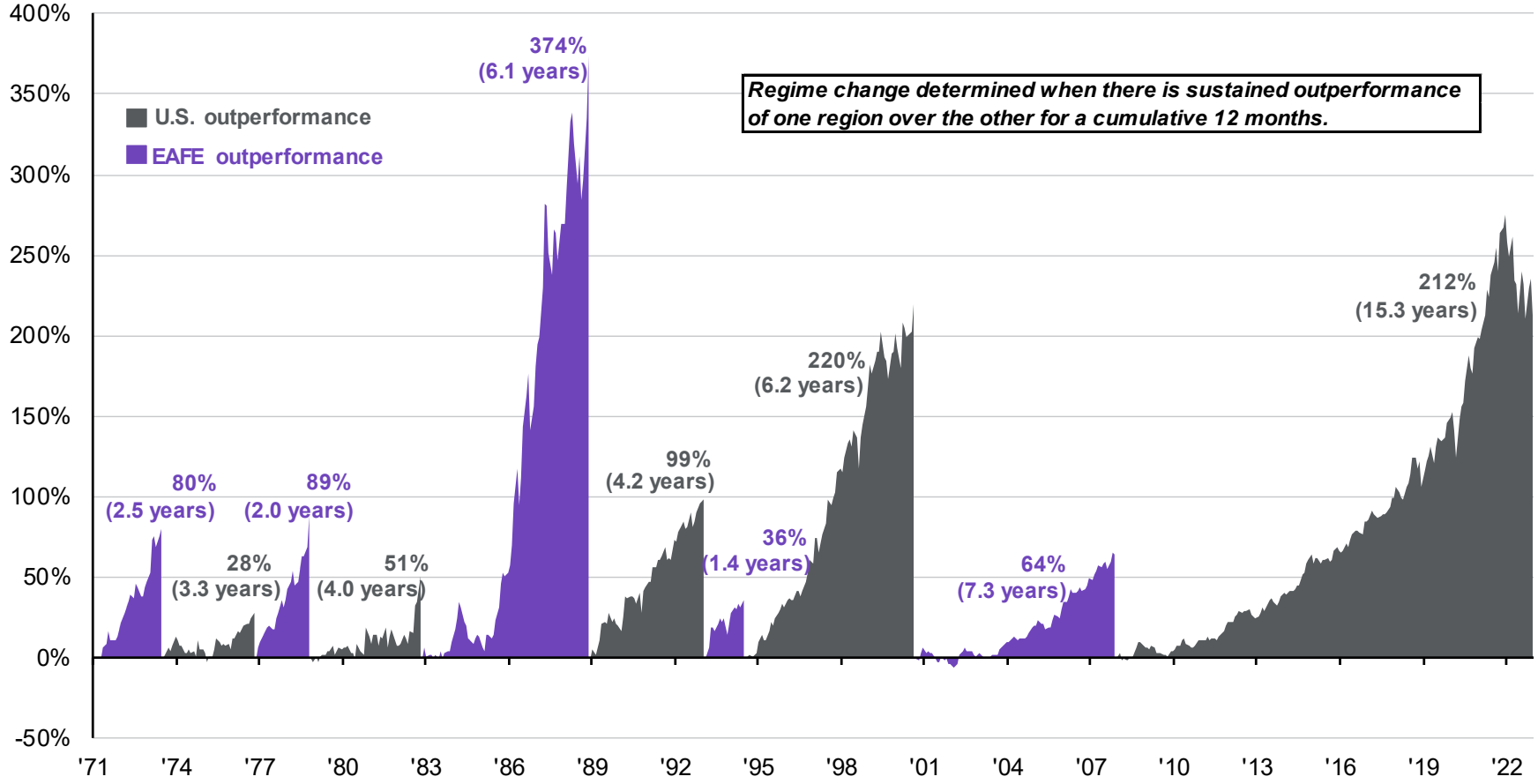


CYCLES OF US EQUITY OUTPERFORMANCE

- International markets outperformed domestic markets for the first time in 15 years, beating the S&P by 250 bps.

MSCI EAFE and MSCI USA relative performance

U.S. dollar, total return, cumulative outperformance*



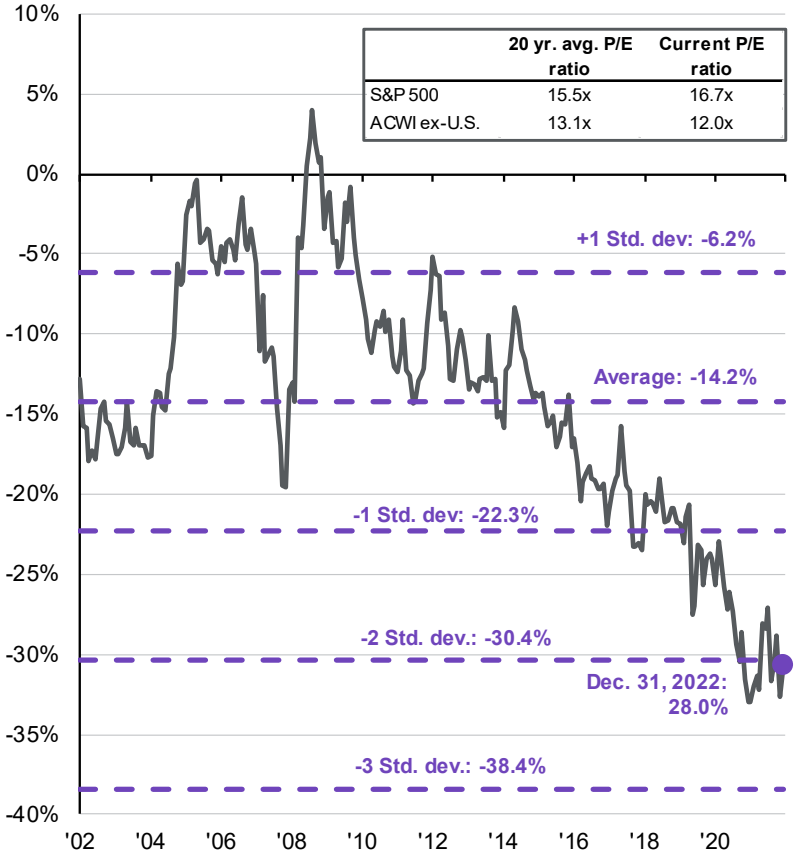
Source: JP Morgan

INTERNATIONAL VALUATIONS AND DIVIDEND YIELDS

- Valuations are much more attractive overseas, and the dividends are roughly twice that of the US.
- The recent weakening of the dollar should continue, which also bodes well for international equities.

International: Price-to-earnings discount vs. U.S.

MSCI AC World ex-U.S. vs. S&P 500 Indices, next 12 months



	20 yr. avg. P/E ratio	Current P/E ratio
S&P 500	15.5x	16.7x
ACWI ex-U.S.	13.1x	12.0x

International: Difference in dividend yields vs. U.S.

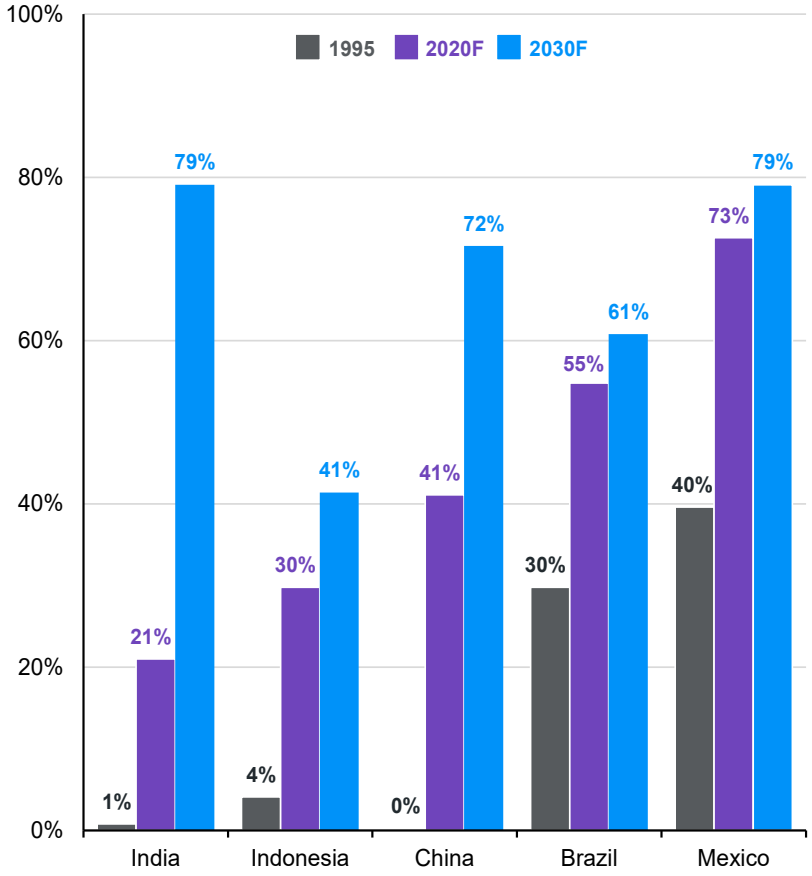
MSCI AC World ex-U.S. minus S&P 500 Indices, next 12 months

Source: JP Morgan

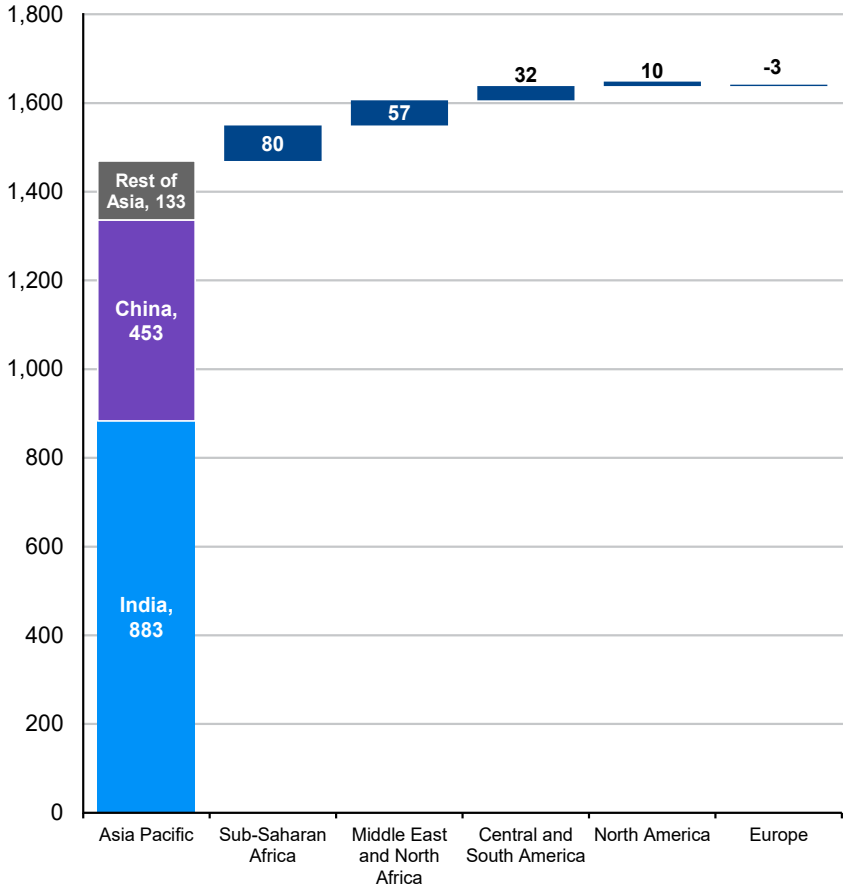
THE EMERGENCE OF THE EM MIDDLE CLASS

- India should provide a meaningful impact on future growth through their democratic rising middle class.

Growth of the middle class
Percent of total population

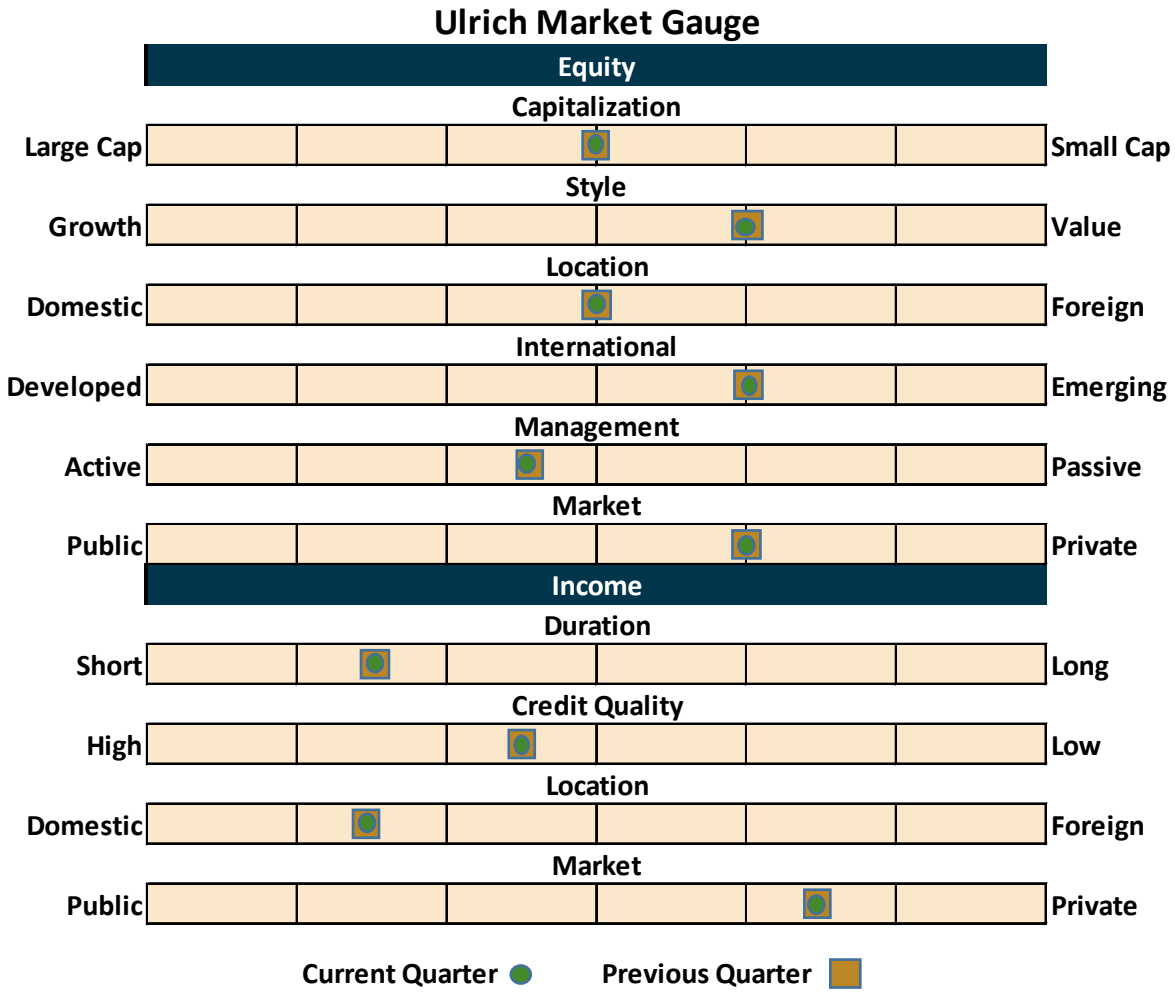


Regional contribution to middle class growth: 2020 to 2030
Millions of people



Source: JP Morgan

SUMMARY AND OUTLOOK



- Currently, markets are not pricing in any positive news; a ceasefire in Ukraine, lower inflation data, the re-opening of China, or a Fed pause. Any changes to this could provide tailwinds to stock prices.
- We prefer higher quality value and cyclical stocks that should perform better in a higher interest rate environment. Within growth stocks, given the concentration of the market, we feel a passive approach is more favorable.
- Any continued weakness in the dollar could benefit international and multi-national stocks.
- We continue to shorten and upgrade the quality of our fixed income portfolio; however, high yield could become more attractive in the coming months as spreads widen.
- We do see the need and desire for improving the energy grid and infrastructure, as well as the restructuring of supply chains; and continue to look for opportunities to capitalize on what should be bi-partisan initiatives.
- We continue to believe portfolios will benefit from the addition of Alternative Investments; and secondary markets could become more interesting in a distressed environment.