



ALLIANCEBERNSTEIN®

# Capital Markets Outlook

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A Marathon, Not a Sprint

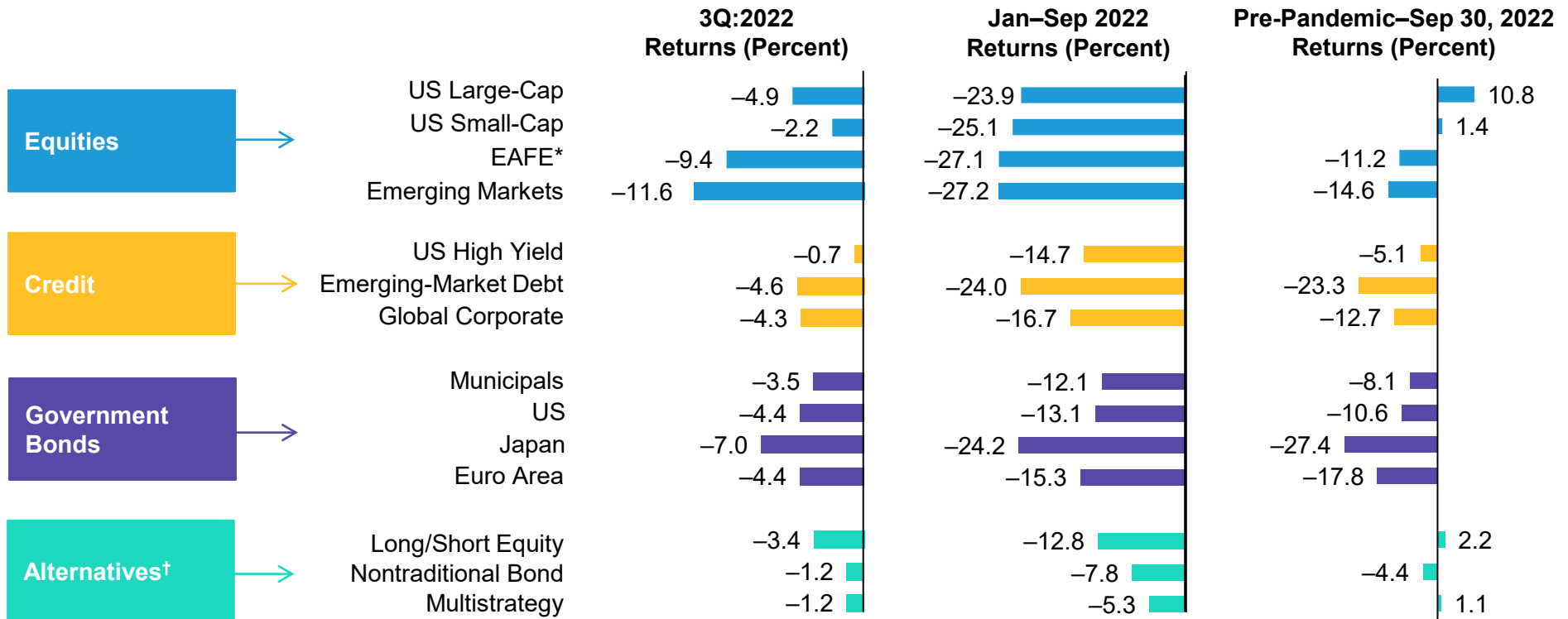
Fourth Quarter 2022

The information herein reflects prevailing market conditions and our judgments, which are subject to change, as of the date of this document. In preparing this document, we have relied upon and assumed, without independent verification, the accuracy and completeness of all information available from public sources. Opinions and estimates may be changed without notice and involve a number of assumptions that may not prove valid. There is no guarantee that any forecasts or opinions in this material will be realized. Information should not be construed as investment advice.

Investment Products Offered:

- Are Not FDIC Insured
- May Lose Value
- Are Not Bank Guaranteed

# 3Q 22: Few Safe Harbors Existed as Rates Rose and Growth Slowed



## Past performance does not guarantee future results.

Returns in US dollars. Global corporates, Japan and euro-area government bonds in hedged USD terms. All other non-US returns in unhedged USD terms. An investor cannot invest directly in an index, and its performance does not reflect the performance of any AB portfolio. The unmanaged index does not reflect the fees and expenses associated with the active management of a portfolio.

\*Europe, Australasia and the Far East

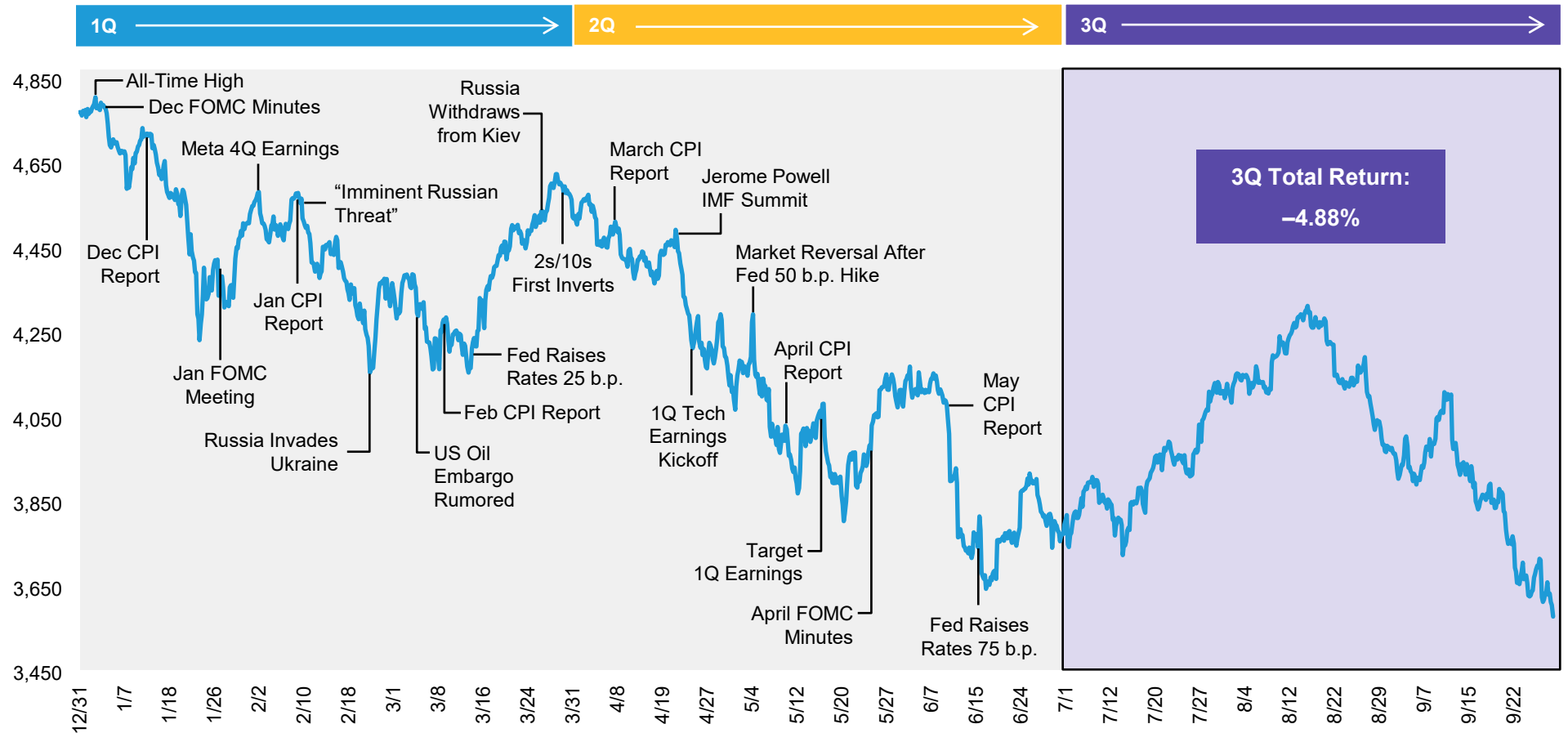
†Returns reflect Morningstar US open-end fund category averages.

As of September 30, 2022; "Pre-Pandemic" date defined as February 21, 2020

Source: Bloomberg, Morningstar Direct and AB



# S&P 500 Price Chart: Year of the Fed



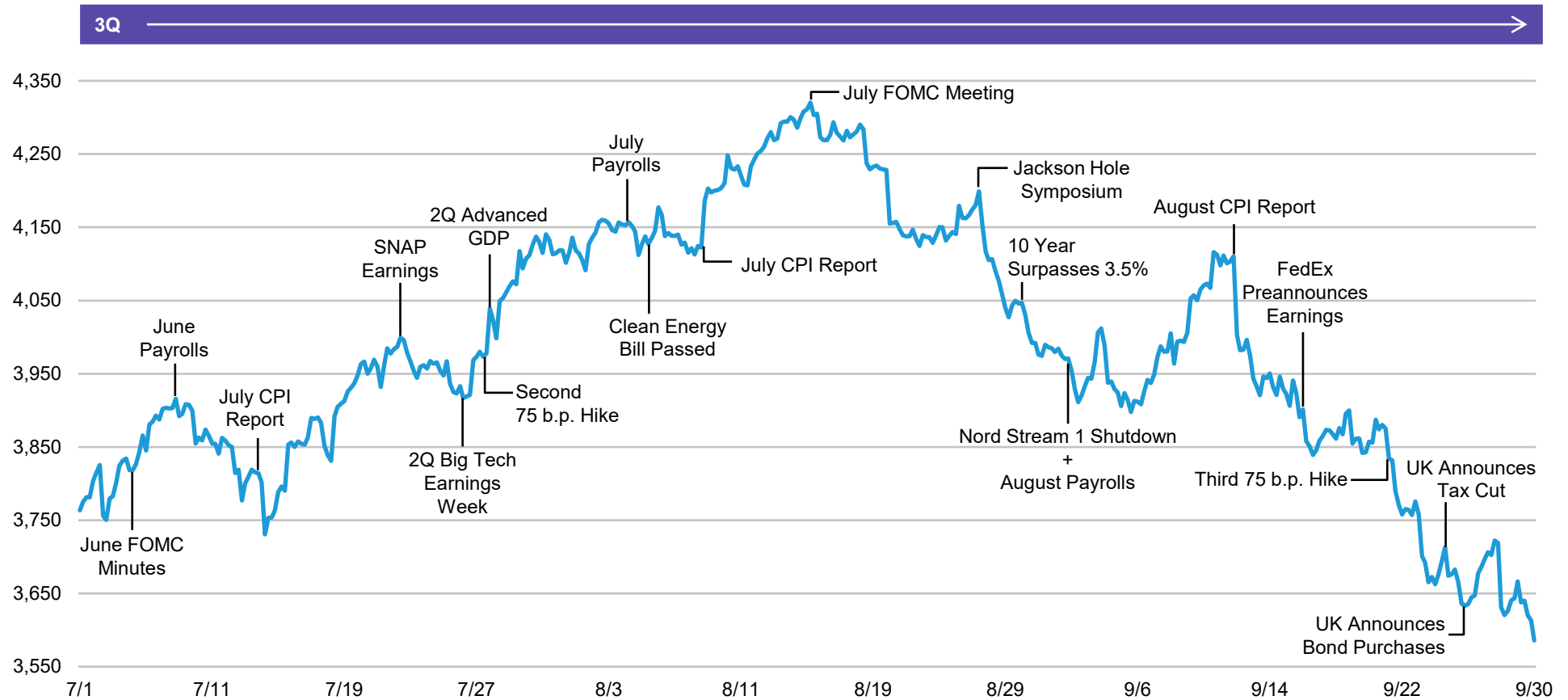
**Past performance does not guarantee future results.**

b.p.: basis points; CPI: Consumer Price Index; FOMC: Federal Open Market Committee; IMF: International Monetary Fund; PCE: personal consumption expenditures  
Through September 30, 2022

Source: Bloomberg, S&P and AB



# S&P 500 Price Chart: After Strong Start to the Third-Quarter Markets, “Digest” FedSpeak with the “Right Interpretation”



**Past performance does not guarantee future results.**

b.p.: basis points; CPI: Consumer Price Index; FOMC: Federal Open Market Committee

Through September 30, 2022

Source: Bloomberg, S&P and AB

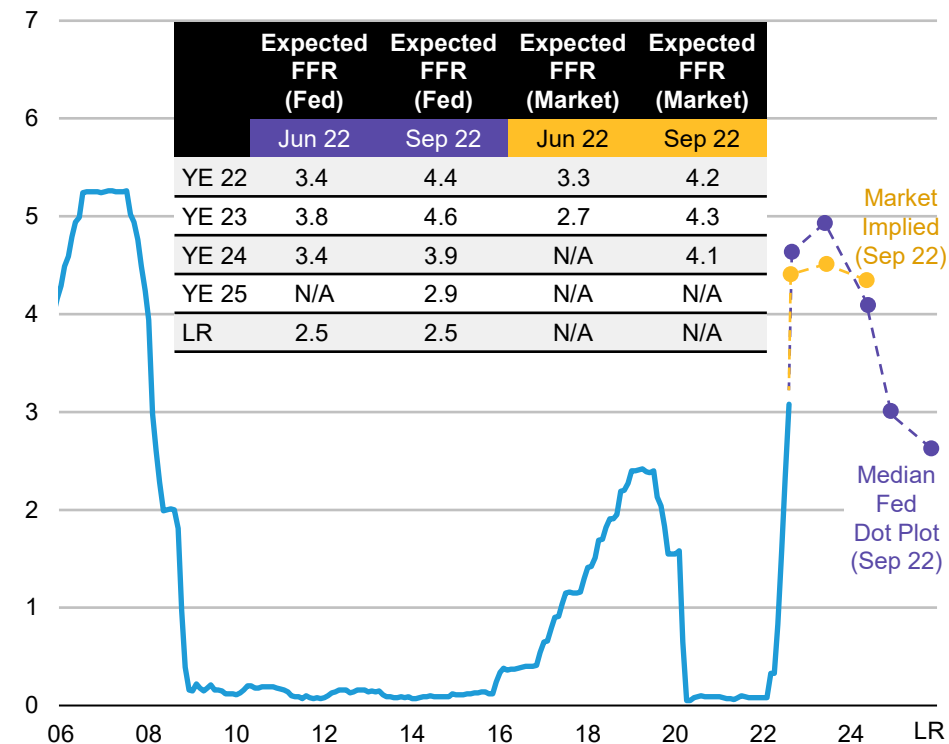


# Fed Projects Rates Will Stay Above Neutral Until at Least 2025...

**Upper Bounds of Federal Funds Rate (FFR) Through Time**  
Percent

	2022	2023	2024	2025	Longer Run
5.25	—	—	—	—	—
5.00	—	●●●●●	—	—	—
4.75	●	●●●●●	●●	●	—
4.50	●●●●●●●●	●●●●●	●●	—	—
4.25	●●●●●●●	—	●●	—	—
4.00	●	●	●●●●	—	—
3.75	—	—	●●●	●●	—
3.50	—	—	●●●	●●	—
3.25	—	—	●	●●●●	—
3.00	—	—	●	●●●	●●
2.75	—	—	●	●●●	●
2.50	—	—	—	●●●●	●●●●●●●●
2.25	—	—	—	—	●●●●●
2.00	—	—	—	—	—

**Fed and Market Expectations**  
Percent



**Historical analysis and current forecasts do not guarantee future results.**

YE: year-end; LR: longer run

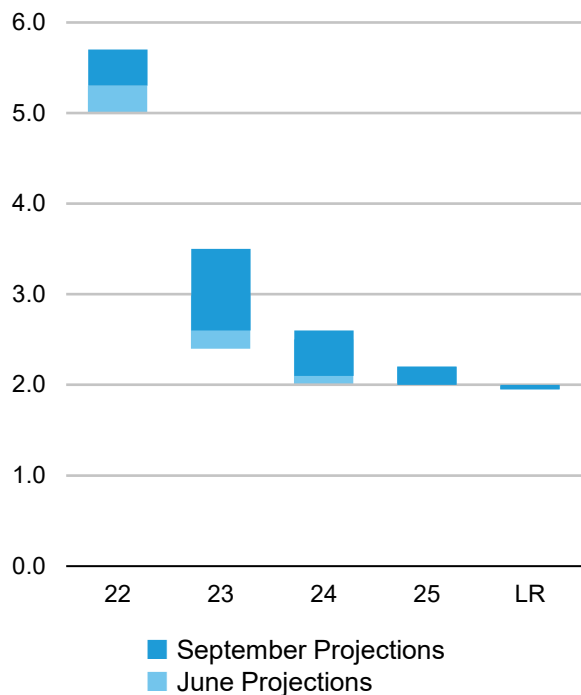
As of September 30, 2022

Source: Bloomberg, US Federal Reserve and AB

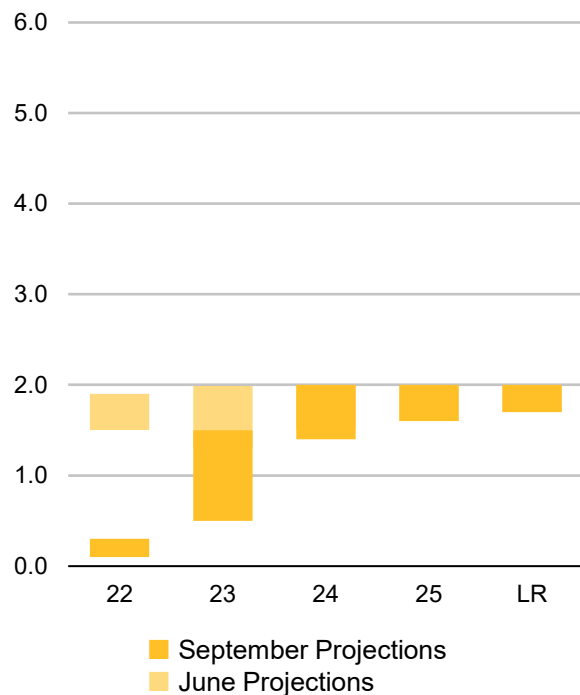


# ...as It Makes Clear Bringing Down Inflation, Not Sustaining Growth, Is Its Main Focus

**Core PCE Central Tendency of FOMC Members (Percent)**



**Real GDP Central Tendency of FOMC Members (Percent)**



**Unemployment Central Tendency of FOMC Members (Percent)**



**Historical analysis and current forecasts do not guarantee future results.**

FOMC: Federal Open Market Committee; LR: longer run; PCE: personal consumption expenditures

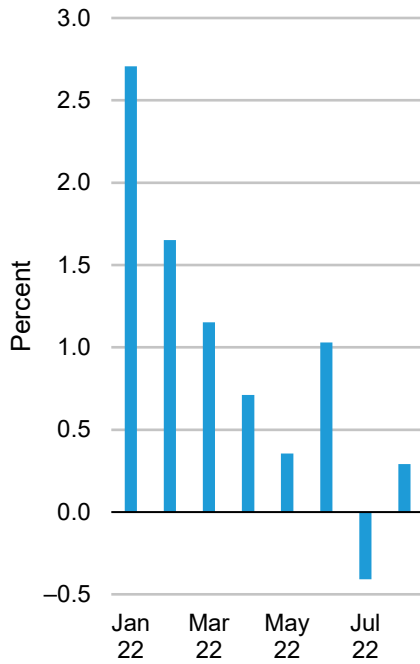
As of September 30, 2022

Source: Bloomberg, US Federal Reserve and AB

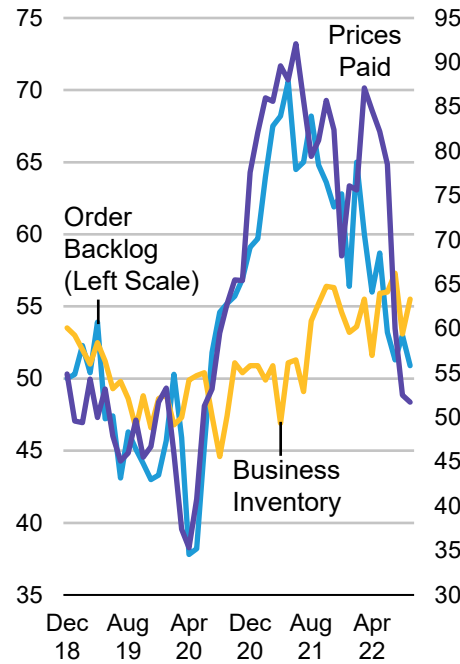


# By Raising Rates Aggressively, the Fed Is Trying to Cool Demand...

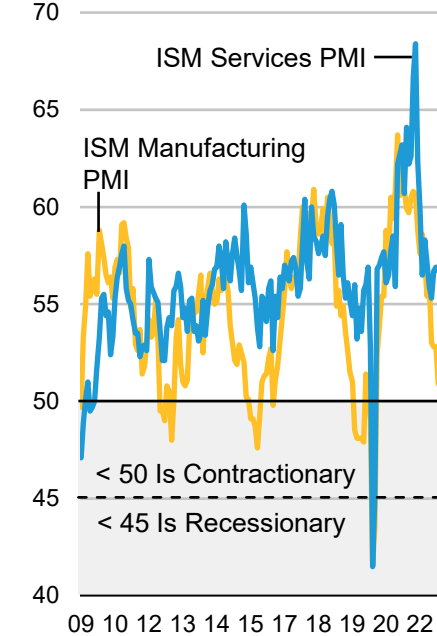
**Retail Sales Growth Has Slowed Due to Falling Demand for Durable Goods**



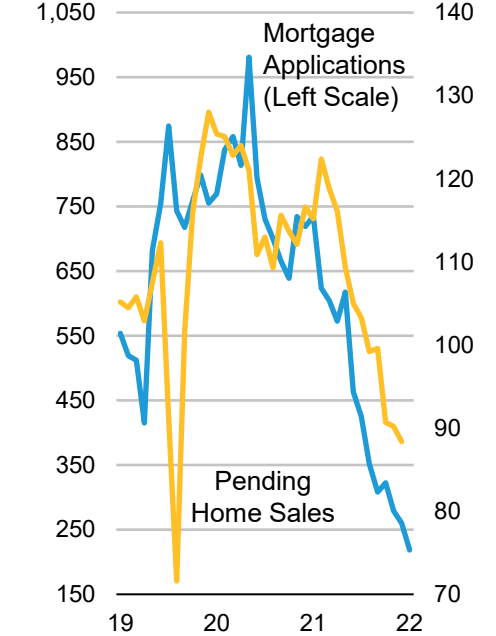
**Leading to Lower Backlogs, Higher Inventories and Ultimately Lower Prices**



**However, Manufacturing and Service Activity Remain in Expansion Territory**



**Cooling Housing Market: Fewer Pending Sales and Mortgage Applications**



**Historical analysis and current forecasts do not guarantee future results.**

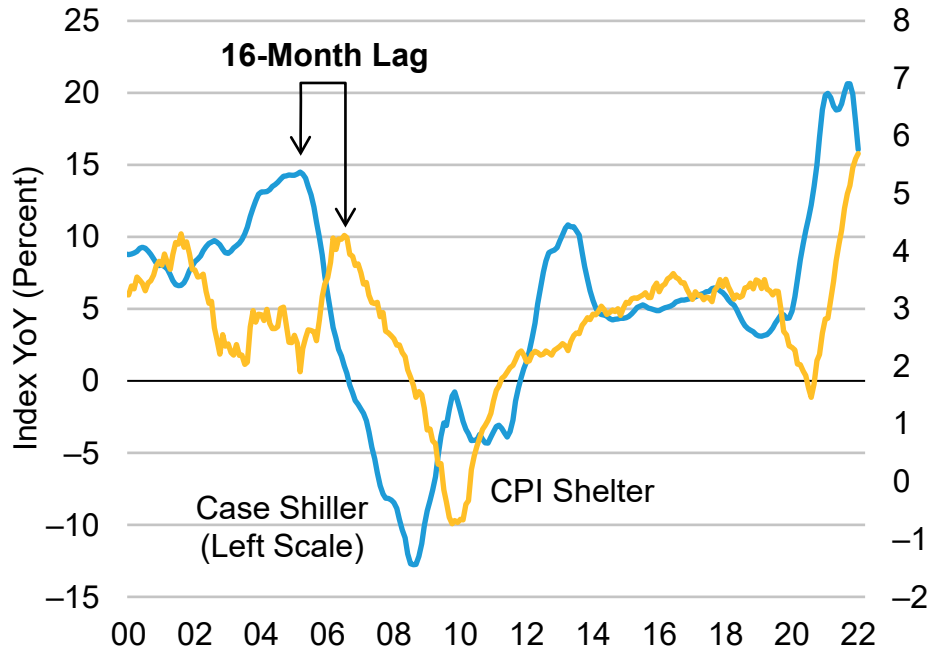
Through September 30, 2022

Source: Bloomberg, ISM, Mortgage Bankers Association, US Census Bureau and AB

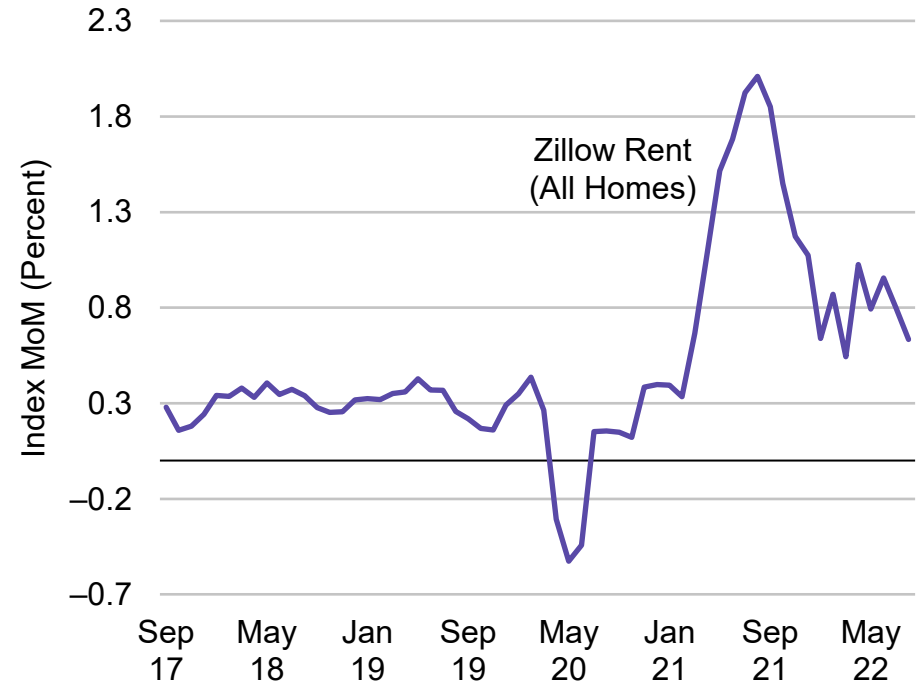


# ...but Monetary Policy Works with a Lag

## We May be Close to Peak Magnitude, but Not the Turn in Housing Prices



## Growth in Rent Prices Continues to Cool After Red-Hot 2021



**Historical analysis and current forecasts do not guarantee future results.**

CPI: Consumer Price Index; MoM: month over month; YoY: year over year

As of September 30, 2022

Source: Bloomberg, Case Shiller, Zillow and AB

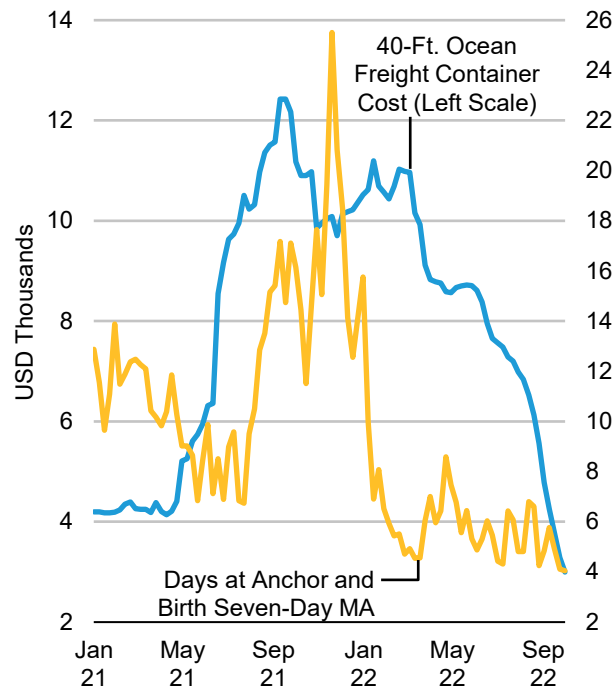




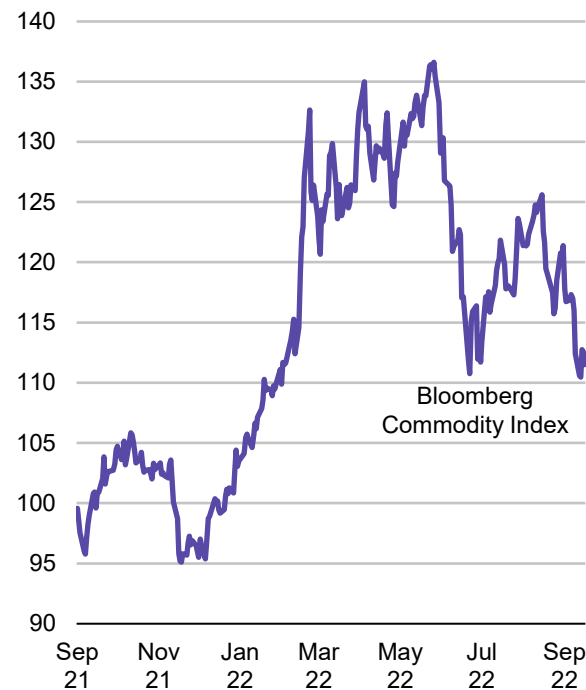
# Fortunately, Supply-Chain-Driven Inflation Has Improved...

...although future path remains uncertain

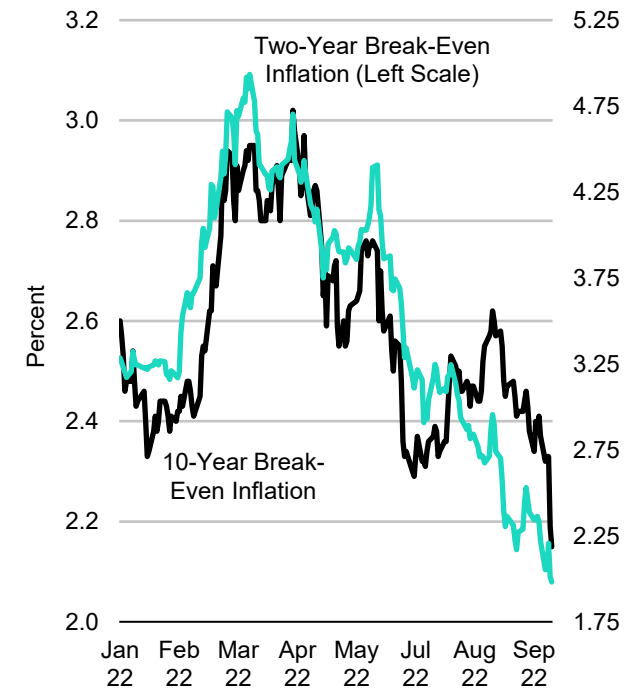
## Both Freight Costs Between US and Asia and Wait Times Have Fallen Rapidly



## While Commodity Prices Have Moderated from Their Early Summer Highs



## Supply and Demand Finding Equilibrium: Inflation Expectations Falling



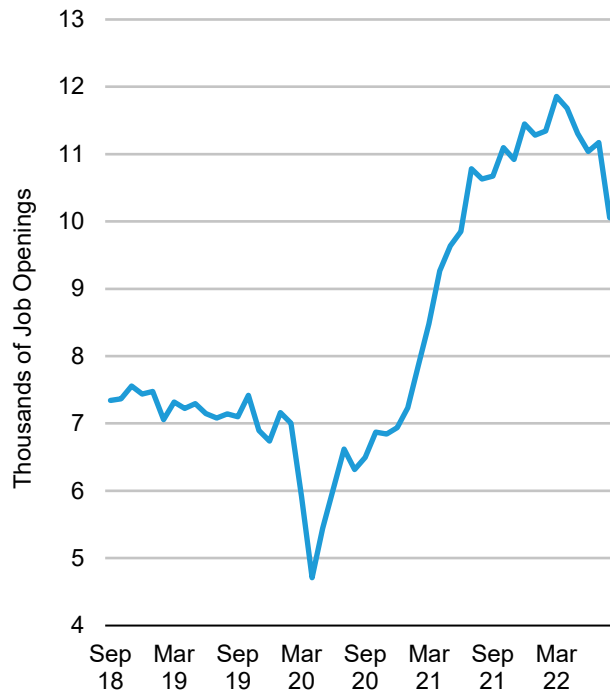
Historical analysis and current forecasts do not guarantee future results.

MA: moving average  
Through September 30, 2022  
Source: Bloomberg and AB

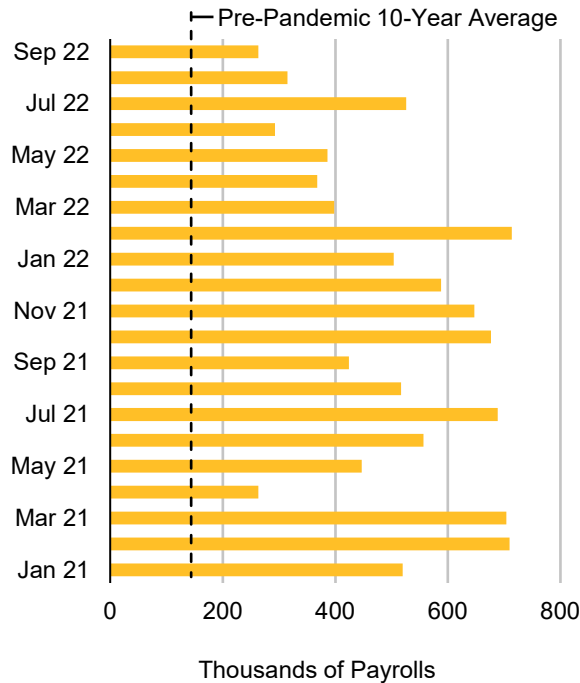


# However, Creating a Softer Labor Market Remains a Top Priority as the Fed Hopes to Not Repeat the 1970s

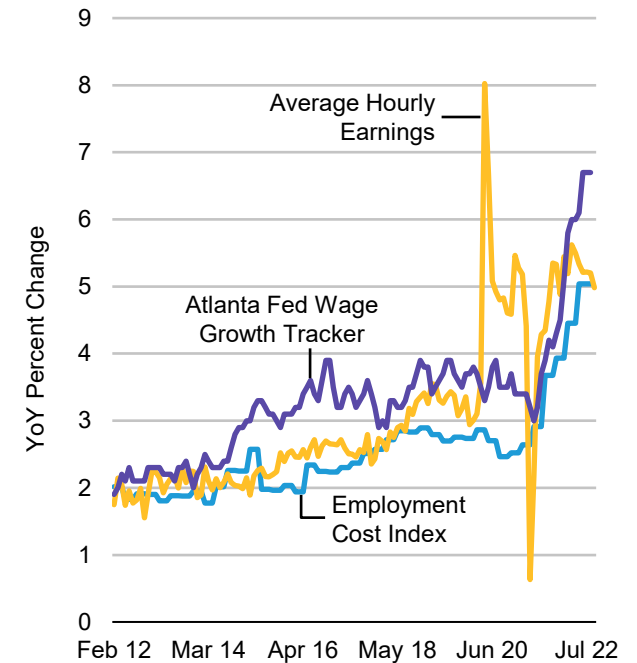
**Job Openings Have Fallen Quickly but Remain Well Above Average**



**While the Labor Market Continues to Add Jobs at an Above-Average Pace**



**Leaving Wage Growth Robust as Unemployment Stays Low**



**Historical analysis and current forecasts do not guarantee future results.**

As of September 30, 2022

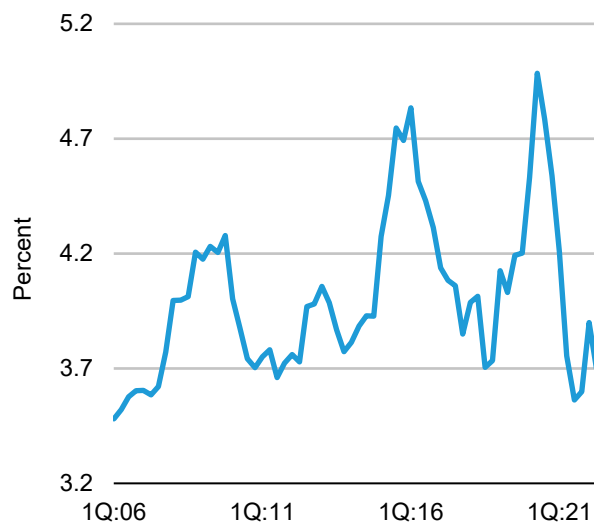
Source: Bloomberg, US Bureau of Labor Statistics, US Department of Labor and AB



# A Potential US Recession Would Likely Be Shallow in Comparison to Past Recessions

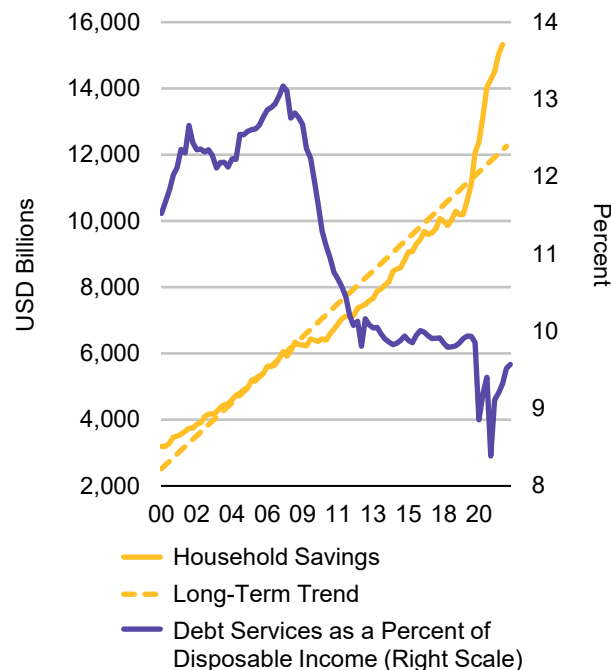
## Corporate Leverage Is Low

US high-yield net leverage (debt/EBITDA)



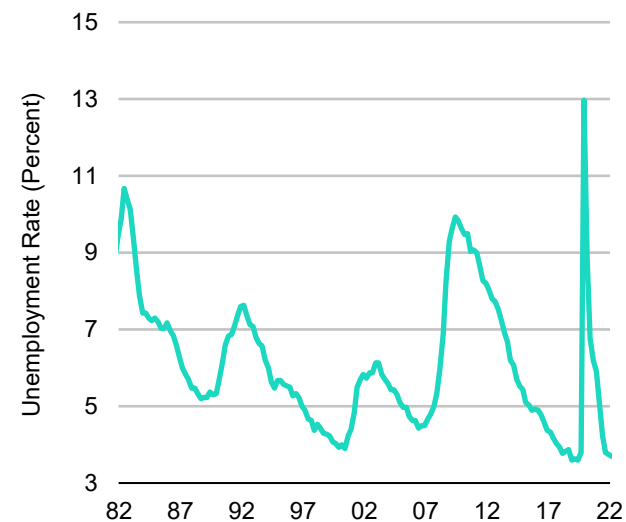
## The US Consumer Is in Strong Financial Shape

US household savings rate and US debt service as a percent of disposable income



## US Unemployment Is Near Multi-Decade Lows

US unemployment rate (percent)



**Current analysis does not guarantee future results.**

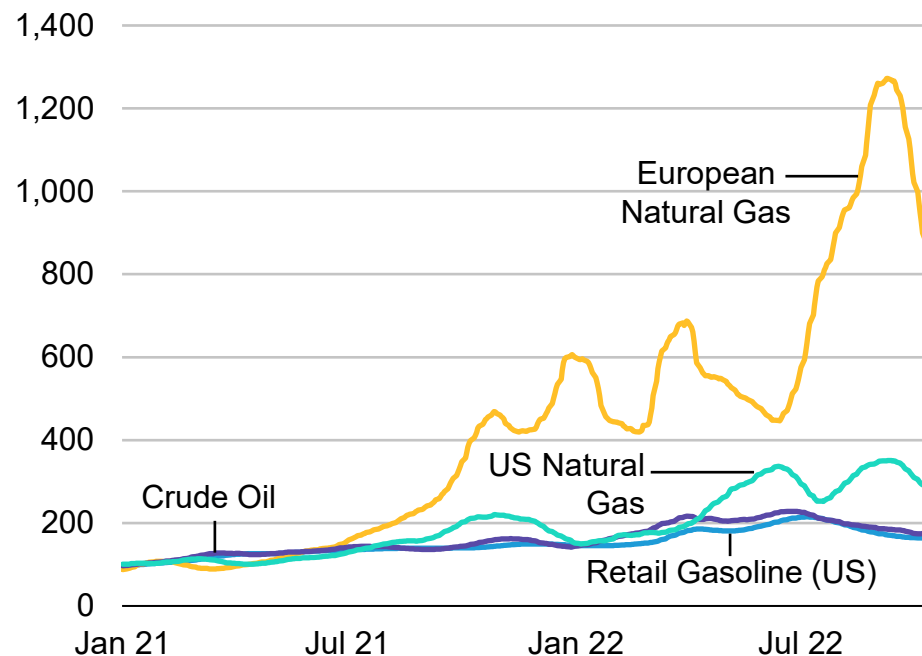
Left and middle displays through September 30, 2022; right display through September 30, 2022

Source: Bloomberg, Morgan Stanley Research, US Federal Reserve and AB

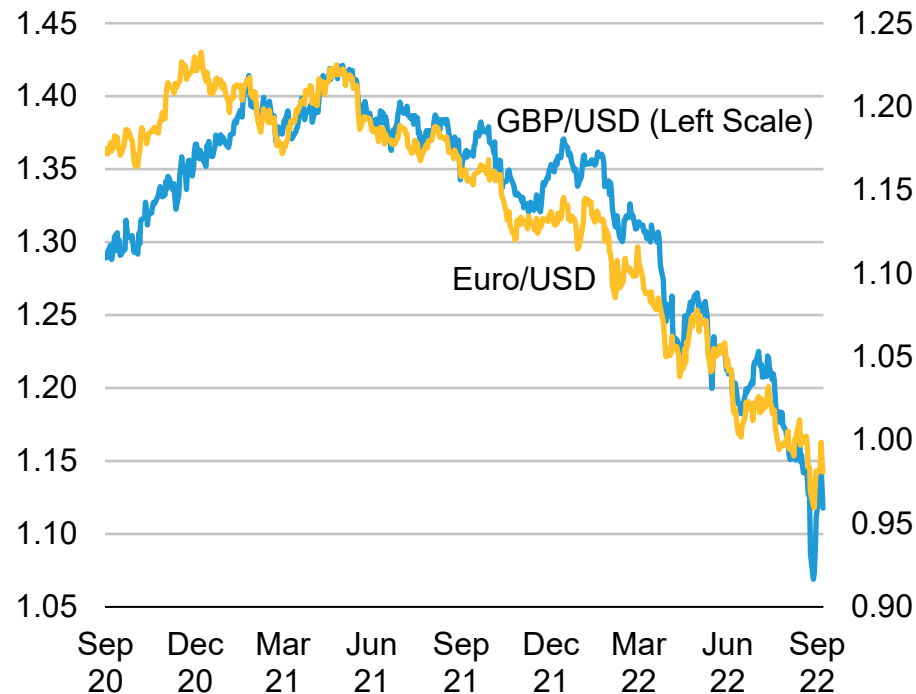


# Conversely, Europe Is in a More Precarious Spot as Headwinds Show No Near-Term Sign of Abating

**Monthly Average Energy Prices (January 1, 2019 = 100)  
Disproportionately Hitting Europe**



**Euro and Pound Have Depreciated vs. the US Dollar at Unprecedented Levels over the Last Year**



**Historical analysis and current forecasts do not guarantee future results.**

Through September 30, 2022

Source: Refinitiv and AB



# Macro Summary

Global growth to see a meaningful slowdown in 2023

## AB Global Economic Forecast: August 2022

	Real Growth (Percent)		Inflation (Percent)		Official Rates (Percent)		Long Rates (Percent)	
	22F	23F	22F	23F	22F	23F	22F	23F
Global ex. Russia	2.8	1.8	6.9	4.2	4.03	3.74	3.86	3.66
Industrial Countries	2.3	0.2	6.7	3.6	2.99	3.10	3.08	2.90
Emerging Countries	3.0	3.9	7.6	5.4	5.74	4.83	4.82	4.55
<b>US</b>	<b>1.6</b>	<b>0.3</b>	<b>5.5</b>	<b>3.5</b>	<b>4.13</b>	<b>4.38</b>	<b>4.00</b>	<b>4.00</b>
Euro Area	2.8	-0.7	9.5	3.5	2.00	1.75	2.25	1.50
UK	3.2	-0.8	10.0	6.0	3.25	3.50	4.00	4.00
Japan	2.0	2.0	2.4	2.5	0.00	0.25	0.35	0.45
China	3.3	5.5	2.1	2.6	2.00	2.00	2.80	2.90

### Past performance and current analysis do not guarantee future results.

Growth and inflation forecasts are calendar-year averages. Interest rates are year-end forecasts. Real growth aggregates represent 48 country forecasts, not all of which are shown. Long rates are 10-year yields.

As of September 30, 2022

Source: AB

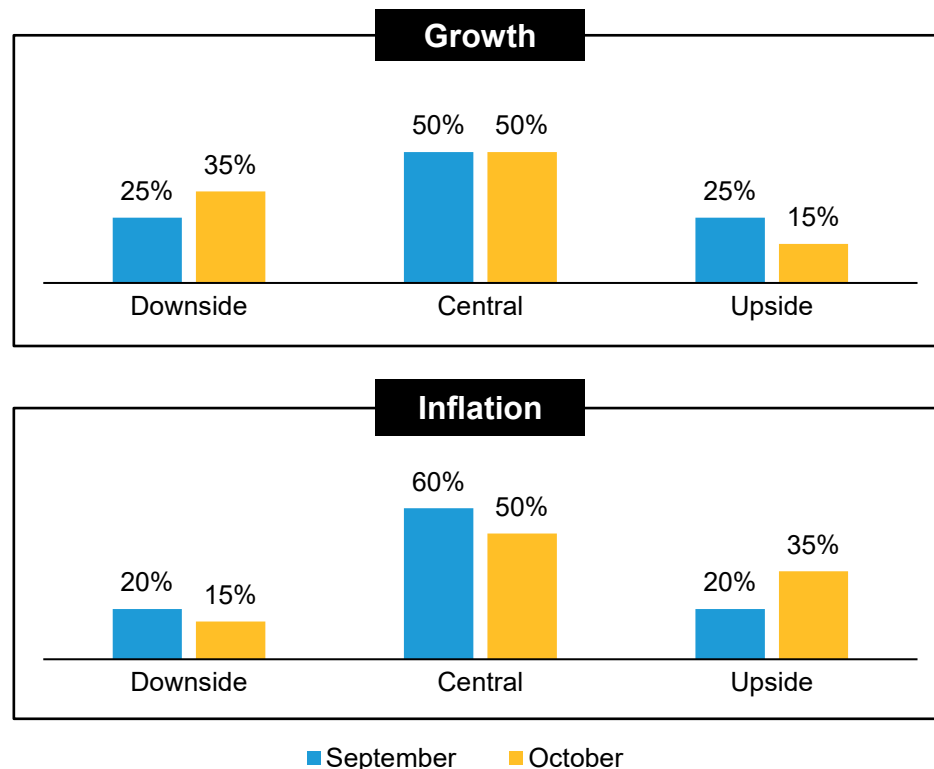


# Central Narrative and Balance of Risks

## Central Narrative

- Inflation remains the primary issue—it is too high and showing few signs of near-term moderation, forcing central banks into an escalating series of rate hikes even as policy rates move past neutral
- Our base case is for a mild recession globally, but the risks of a harder landing have risen. The longer inflation stays high and the farther that rate hikes go, the greater the hit to the growth outlook
- We see little scope for central banks to relax in the near term, given that core inflation is still so high globally. Market pricing of cuts next year may be correct—but only if central banks have to go much farther than they expect in the near term. Otherwise, a prolonged period of restrictive policy rates is the most likely outcome
- Financial market volatility is an inevitable consequence of the environment, and lower asset prices are an essential part of how central banks will eventually bring inflation to heel
- Europe has shown an appetite for fiscal support to struggling households; given the political cycle and the timing of the growth slowdown, fiscal support seems much less likely in the US

## Balance of Risks



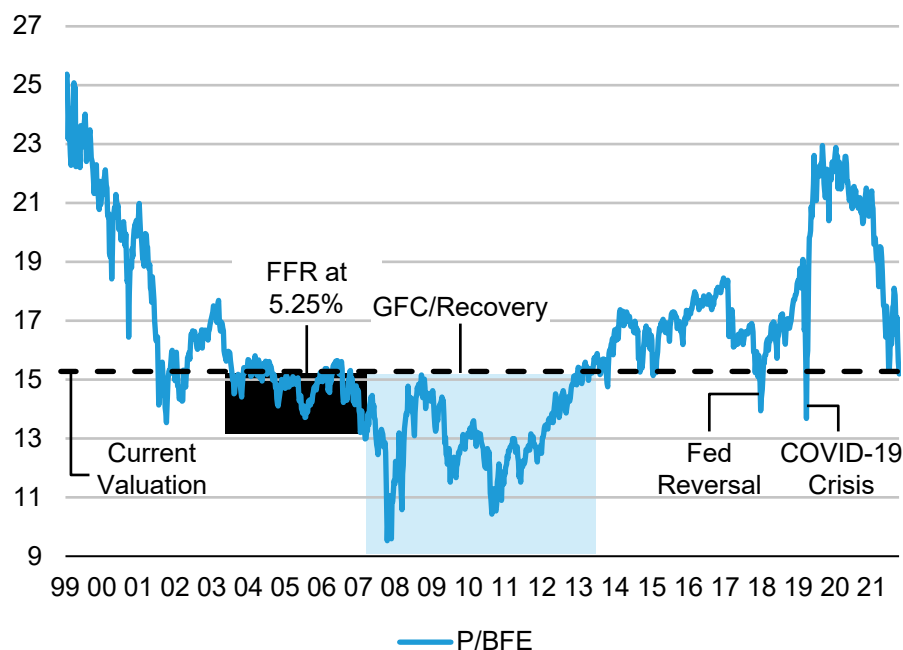
**Current analysis and current forecasts do not guarantee future results.**

As of September 30, 2022

Source: AB

# Valuations: Price Discovery Remains Challenged in Low-Growth, Rising-Rate Environment

## S&P 500 Multiples



Time Period	P/E	P/BFE	P/FE <sub>1</sub>	P/FE <sub>2</sub>	P/FE <sub>3</sub>
December 31, 2021	24.6	21.4	22.7	21.0	19.2
March 31, 2022	22.8	19.4	20.1	18.3	16.7
September 30, 2022	17.6	15.2	16.0	14.8	13.6
Five-Year Average	22.4	18.6	19.9	17.5	15.8
Pre-Pandemic*	21.5	18.8	19.3	17.3	15.5
10-Year Average	20.9	17.7	18.8	16.7	15.0
Pre-Pandemic Five-Year Average	19.8	16.9	17.8	16.0	14.4
Average Since 2000	19.6	16.3	17.4	15.3	13.8
Average P/E When Rates Are Increasing†	19.2	16.1	17.1	15.4	14.3
January 2014–November 2016	18.5	16.2	17.1	15.3	13.7

### Historical analysis and current forecasts do not guarantee future results.

FFR: federal funds rate; GFC: global financial crisis

Price/earnings (P/E) is for the trailing 12 months; price/blended forward earnings (P/BFE) is for the next 12 months; price/forward earnings (P/FE<sub>1</sub>) is for the calendar year 2022;

P/FE<sub>2</sub> is for the calendar year 2023; P/FE<sub>3</sub> is for the calendar year 2024.

\*February 21, 2020

†Last two Fed cycle hikes excluding the current one

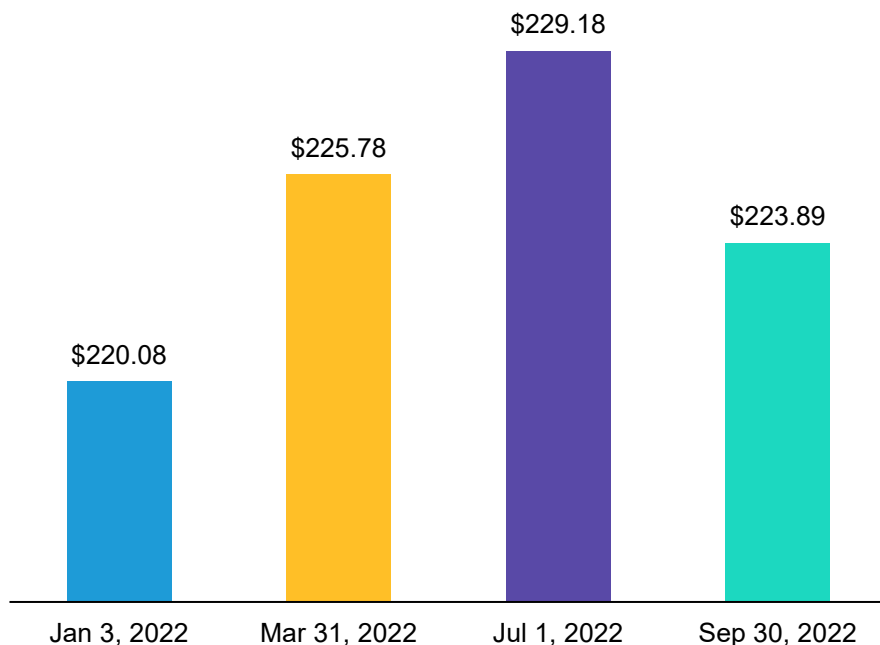
As of September 30, 2022

Source: Bloomberg, S&P and AB

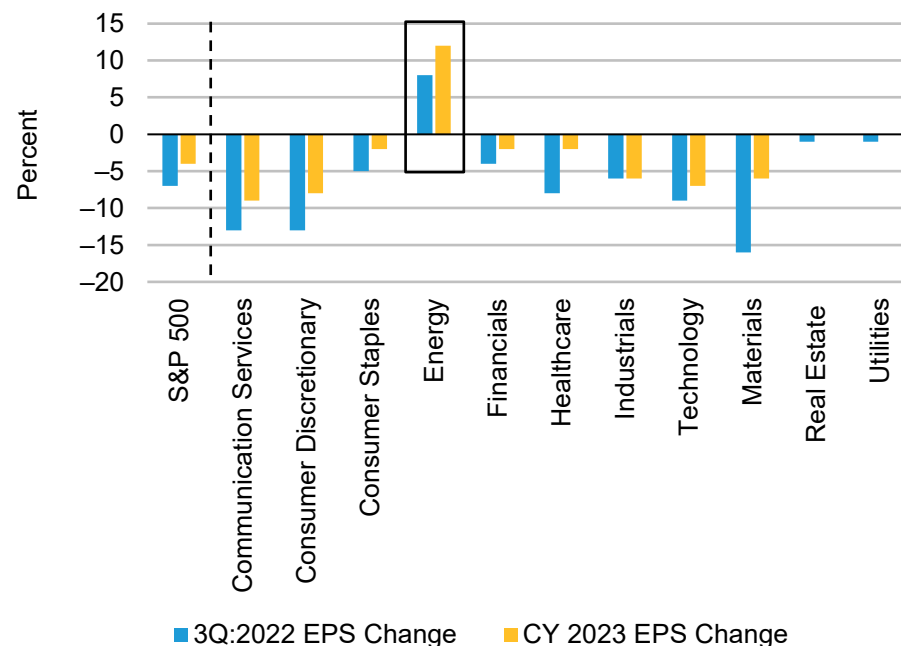
# Earnings Estimates on the Wane

Except for energy, lower revisions have been pervasive

## Earnings Estimates for S&P 500: Moderation Is Occurring



## EPS Revisions by Sector: Third Quarter 2022 and for Full-Year 2023



- Most sectors have contributed to declining 3Q:2022 and 2023 estimates, save energy

**Current analysis does not guarantee future results.**

CY: calendar year; EPS: earnings per share

As of September 30, 2022

Source: Bloomberg, FactSet, S&P and AB





# Scenario Chart: Choose Your Own Adventure

## S&P 500 Return Scenario Chart

2022												
	13	14	15	16	17	18	19	20	21		S&P Price Level	2022 Price Return*
200	2,600	2,800	3,000	3,200	3,400	3,600	3,800	4,000	4,200		3,225	-9.41%
205	2,665	2,870	3,075	3,280	3,485	3,690	3,895	4,100	4,305		3,300	-7.30%
210	2,730	2,940	3,150	3,360	3,570	3,780	3,990	4,200	4,410		3,440	-3.37%
215	2,795	3,010	3,225	3,440	3,655	3,870	4,085	4,300	4,515		3,560	0.00%
220	2,860	3,080	3,300	3,520	3,740	3,960	4,180	4,400	4,620		3,740	5.06%
225	2,925	3,150	3,375	3,560	3,825	4,050	4,275	4,530	4,725		3,910	9.83%
230	2,990	3,220	3,450	3,785	3,910	4,140	4,370	4,600	4,830		4,140	16.29%
235	3,055	3,290	3,525	3,760	3,995	4,230	4,465	4,700	4,935		4,275	20.08%
240	3,120	3,360	3,600	3,840	4,080	4,320	4,560	4,800	5,040		4,370	22.75%

2023												
	13	14	15	16	17	18	19	20	21		S&P Price Level	2023 Price Return†
225	2,925	3,150	3,375	3,600	3,825	4,050	4,275	4,500	4,725		3,220	-7.72%
230	2,990	3,220	3,450	3,680	3,910	4,140	4,370	4,600	4,830		3,430	-2.93%
235	3,055	3,290	3,525	3,760	3,995	4,230	4,465	4,700	4,935		3,525	-0.79%
240	3,120	3,360	3,560	3,840	4,080	4,320	4,560	4,800	5,040		3,560	0.00%
245	3,185	3,430	3,675	3,920	4,165	4,410	4,655	4,900	5,145		3,760	4.47%
250	3,250	3,500	3,785	4,000	4,250	4,530	4,725	5,000	5,250		3,920	8.01%
255	3,315	3,570	3,825	4,080	4,335	4,590	4,845	5,100	5,355		4,165	13.38%
260	3,380	3,640	3,900	4,160	4,420	4,680	4,940	5,200	5,460		4,320	16.74%
265	3,445	3,710	3,975	4,240	4,505	4,770	5,035	5,300	5,565		4,410	18.68%

■ September 30, 2022   
 ■ June 30, 2022   
 ■ March 31, 2022   
 ■ December 31, 2021

**Historical analysis and current forecasts do not guarantee future results.**

\*Based on S&P 500's 3Q closing price of 3,560. †Annualized return based on same closing price

As of September 30, 2022

Source: Bloomberg, S&P and AB



# What You Own Matters, Especially When Earnings Are Slowing

		Best-Performing Factors When EPS Estimates Fall			Worst-Performing Factors When EPS Estimates Fall		
Peak in NTM EPS	Trough in NTM EPS	ROA (Percent)	Net Income Margin (Percent)	FCF to EV (Percent)	Debt to MV (Percent)	Beta (Percent)	Negative Earnings (Percent)
Jan 1986	May 1986	10.00	7.90	9.00	-5.60	-5.00	-10.30
Sep 1989	Apr 1991	36.90	29.90	16.60	-20.10	-2.70	-17.20
Sep 2000	Nov 2001	0.50	2.60	36.40	28.30	-19.50	-10.00
Oct 2007	May 2009	7.40	4.40	16.80	-5.30	-4.10	-16.60
Sep 2014	Mar 2016	4.80	4.30	1.90	-9.40	-19.60	-27.90
Feb 2020	May 2020	14.70	15.00	-1.30	-18.40	-5.40	-11.30
<b>Average</b>		<b>12.40</b>	<b>10.70</b>	<b>13.20</b>	<b>-5.10</b>	<b>-9.40</b>	<b>-15.60</b>
<b>Hit Rate</b>		<b>100</b>	<b>100</b>	<b>83.30</b>	<b>16.70</b>	<b>0.00</b>	<b>0.00</b>

Highest Hit Rate and Best Performance  
When Earnings Are Falling

Lowest Hit Rate and Worst Performance  
When Earnings Are Falling

**Past performance does not guarantee future results.**

EPS: earnings per share; EV: enterprise value; FCF: free cash flow; MV: market value; NTM: next 12 months; ROA: return on assets

Figures shown represent S&P 500 factor performance high to low (Q1 vs. Q5), sector adjusted

As of September 30, 2022

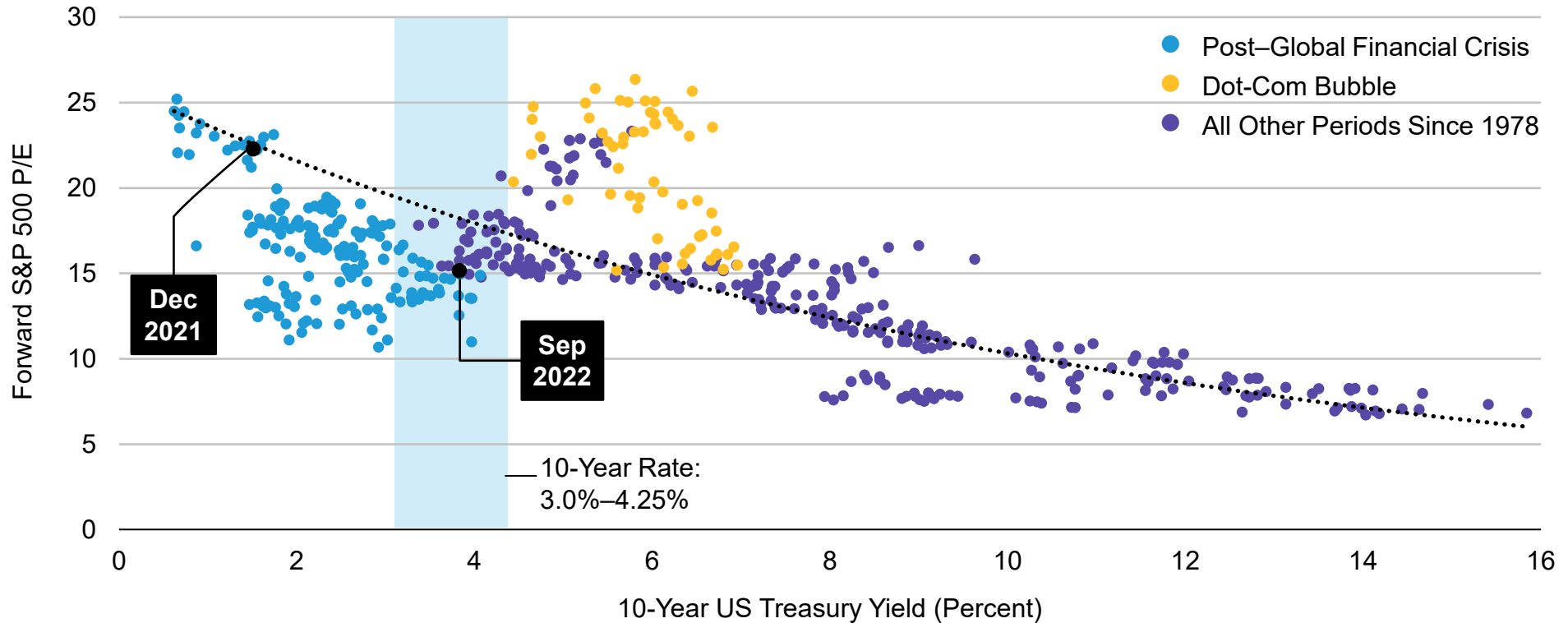
Source: Piper Sandler, S&P and AB



# Stock Valuations Have Derated as Rates Rise

Significant multiple compression from here is likely limited

## Forward P/E Multiples\* and Interest Rates Since 1978



**Historical analysis does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.**

Dot-com bubble is December 31, 1996, through September 30, 2000. Post-global financial crisis is December 31, 2007, through the present. Chart trend line is 1978–2007.

\*Forward P/E multiples represent earnings estimates for the next 12 months.

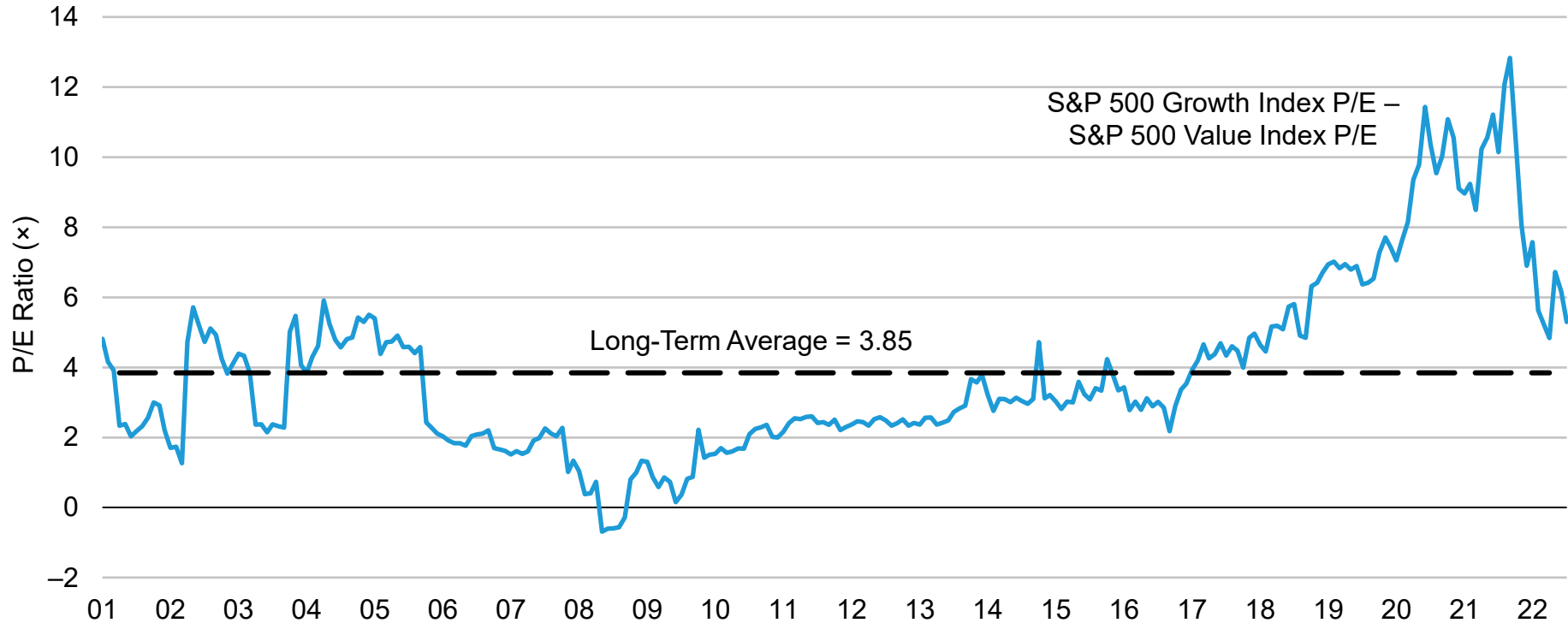
As of September 30, 2022

Source: Bloomberg, FactSet, S&P and AB



# An Improved Entry Point for Growth Stocks

Many, including profitable companies, have re-rated back to historical averages



**Historical analysis and current forecasts do not guarantee future results.**

As of September 30, 2022

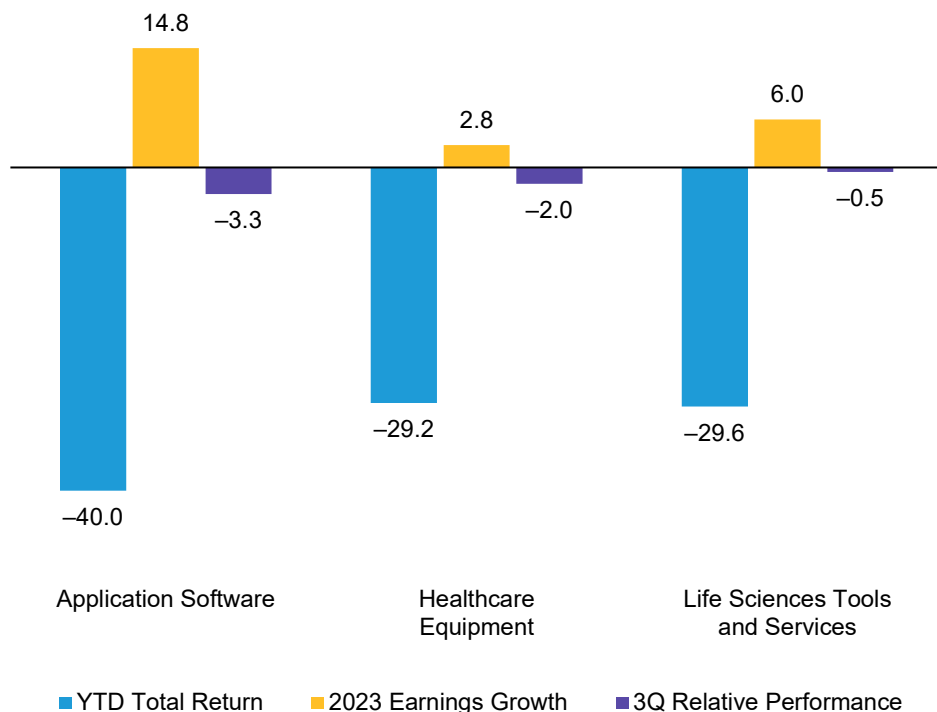
Source: Bloomberg, Piper Sandler, S&P and AB



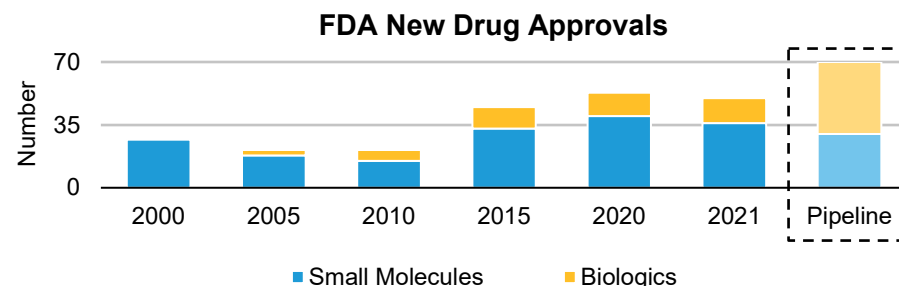
# Opportunities in Quality Growth: Selective Technology and Healthcare

Improved valuations in application software and low cyclical healthcare provide good balance

## Drilling Deeper: Discovering Attractive Risk/Reward Potential at the Industry Level for Tech and Healthcare



## Secular Growth: Drug Approvals Trending from Small Molecules to More Complex “Biologics”

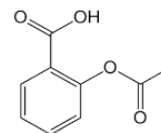


- Biologics made up **30% of drug approvals in 2021** and now represent **60% of new drugs in approval pipeline**

### Small-Molecule Drugs

**Examples:** aspirin, acetaminophen, ibuprofen

**Complexity:** low



### Biologics

**Examples:** insulin, interferon, mRNA vaccines

**Complexity:** high



### Past performance does not guarantee future results.

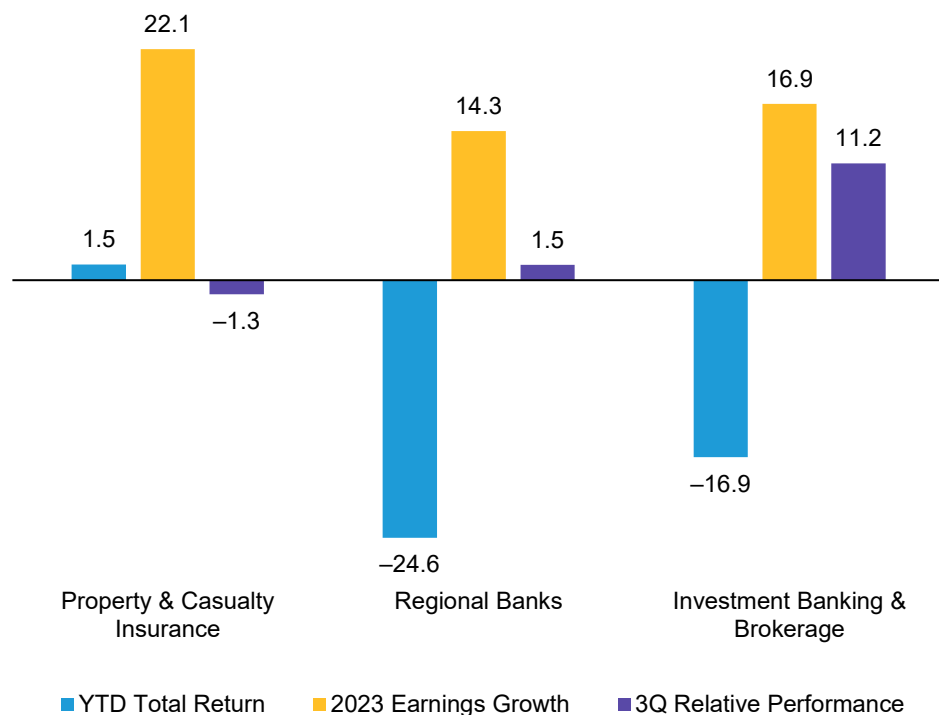
Based on consensus estimates. 3Q relative performance compared against the S&P 500 Total Return Index

Left display as of September 30, 2022; top right display as of June 30, 2022

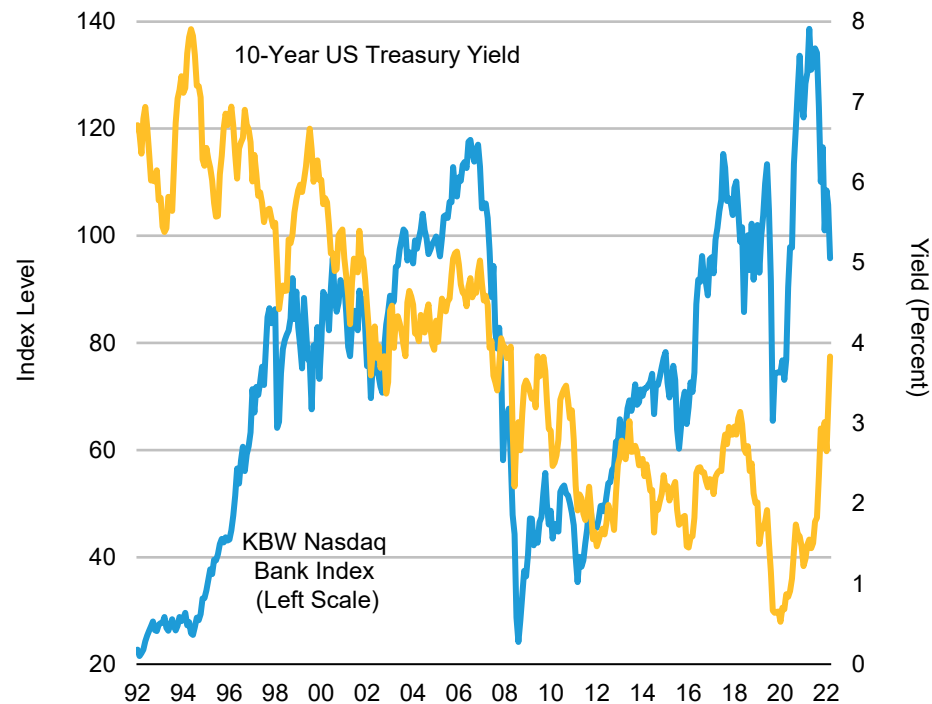
Source: Bloomberg, S&P, Strategas Research Partners, US Food and Drug Administration, company reports and AB

# An Area of Focus for Value Equities: Financials

## The Breadth of the Sector Allows for Vast Stock Selection Opportunities (Percent)



## Higher Yields: A Tailwind for Financial Stocks, Especially Banks



### Past performance does not guarantee future results.

Based on consensus estimates. 3Q relative performance compared against the S&P 500 Total Return Index

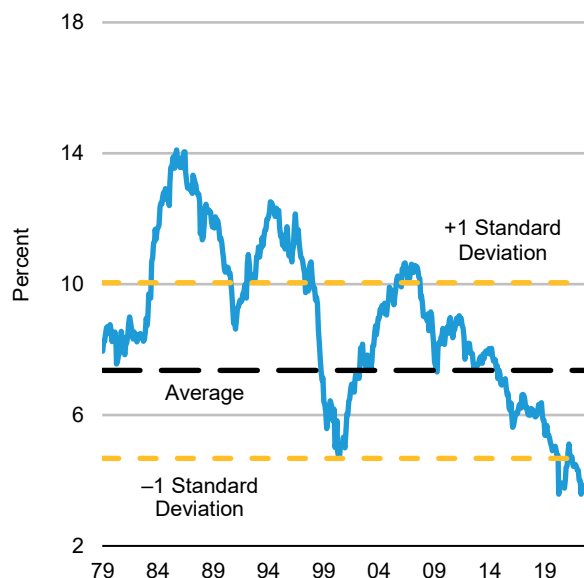
As of September 30, 2022

Source: Bloomberg, KBW Nasdaq, S&P, Strategas Research Partners and AB



# A Compelling Case for Small-Cap Stocks

## Small-Caps at 3.9% of the Equity Market Present a Rebalancing Opportunity



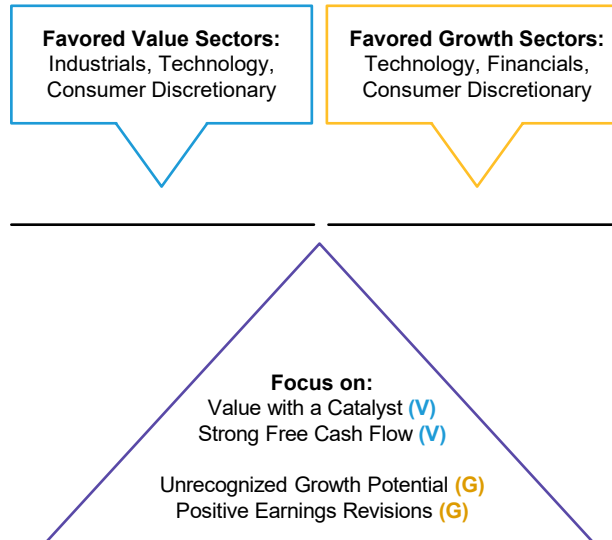
- Such a scant portion of the overall market remains at historic lows

## Fourth-Worst Nine-Month Start for Small-Caps Since the Early 1930s

Year	First Nine Months (Russell 2000)	Next 12 Months	Next Three Years*
1931	-37.9	8.7	20.8
2002	-27.2	41.9	27.8
1937	-27.1	-14.1	-1.6
<b>2022</b>	<b>-25.1</b>	<b>?</b>	<b>?</b>
1974	-25.0	51.6	38.2
1990	-22.6	47.9	28.7
1962	-21.9	25.0	20.4
1969	-20.7	-16.5	2.5
1930	-20.4	-52.9	-5.6
1973	-18.0	-40.0	8.8
2011	-16.7	33.3	24.2
<b>Average</b>		<b>8.5</b>	<b>16.4</b>
<b>Percent Positive</b>		<b>60.0</b>	<b>80.0</b>

- Taking advantage of such meaningful pullbacks has proven rewarding

## Maintain an Even Measure Between Small/SMID Value and Growth Styles



- Stay selective: a focus on profitability in value and positive earnings revisions in growth

### Past performance does not guarantee future results.

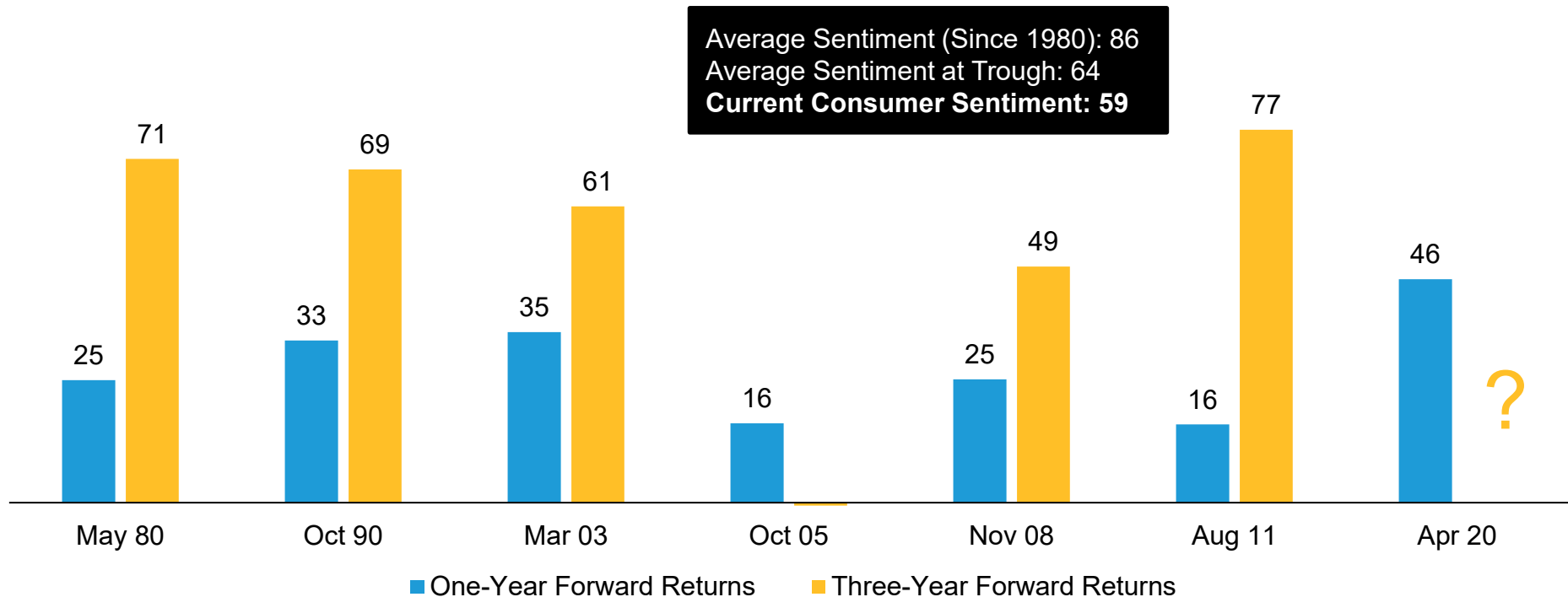
\*Next three-year returns are annualized

As of September 30, 2022

Source: Center for Research in Security Prices, FTSE Russell, Jefferies, The University of Chicago Booth School of Business and AB

# Prior Times of High Fear Have Proven Rewarding for Contrarians

One- and Three-Year Forward S&P 500 Returns Post Consumer Sentiment Troughs Since 1980 (Percent)



**Historical analysis does not guarantee future results.**

As of September 30, 2022

Source: Bloomberg, S&P, University of Michigan Index of Consumer Sentiment and AB





# Dollar-Cost Averaging During Uncertainty Is Often Better than Waiting for the All-Clear Signal

Peak Month	Trough Month	12-Month Return Following Trough	12-Month Return Following Trough: Excluding Best Five Days	12-Month Return Following Trough: Three-Month DCA Strategy
5/29/1946	5/19/1947	26%	6%	16%
12/12/1961	6/26/1962	37%	21%	16%
2/9/1966	10/7/1966	37%	25%	28%
11/29/1968	5/26/1970	49%	28%	40%
1/11/1973	10/3/1974	44%	20%	33%
11/28/1980	8/12/1982	66%	37%	44%
8/25/1987	10/19/1987	28%	-1%	21%
9/1/2000	10/9/2002	36%	13%	24%
10/9/2007	3/9/2009	72%	35%	44%
2/19/2020	3/23/2020	78%	34%	51%

**Past performance does not guarantee future results. Diversification does not eliminate the risk of loss.**

DCA: dollar-cost averaging

Sell-offs are defined as a market decline of 20% from its previous high through the lowest close after the 20% decline. All returns in this analysis are based on the S&P 500 Total Return Index, which includes gains from price returns and dividend returns. Recoveries are defined as the day after the trough that the Total Return Index reaches a level higher than the prior peak.

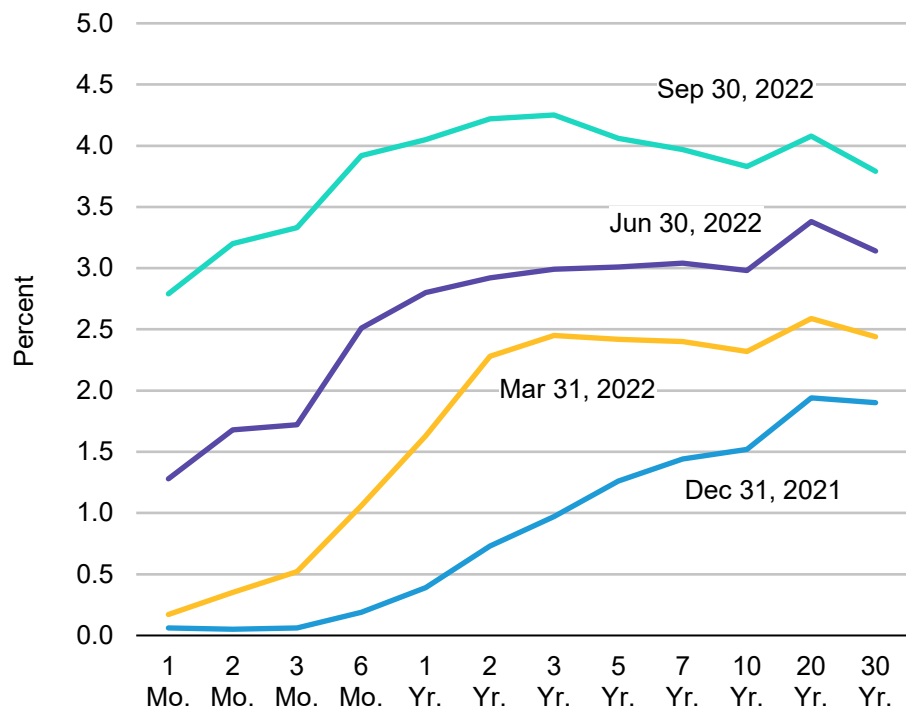
As of September 30, 2022

Source: Bloomberg, S&P and AB

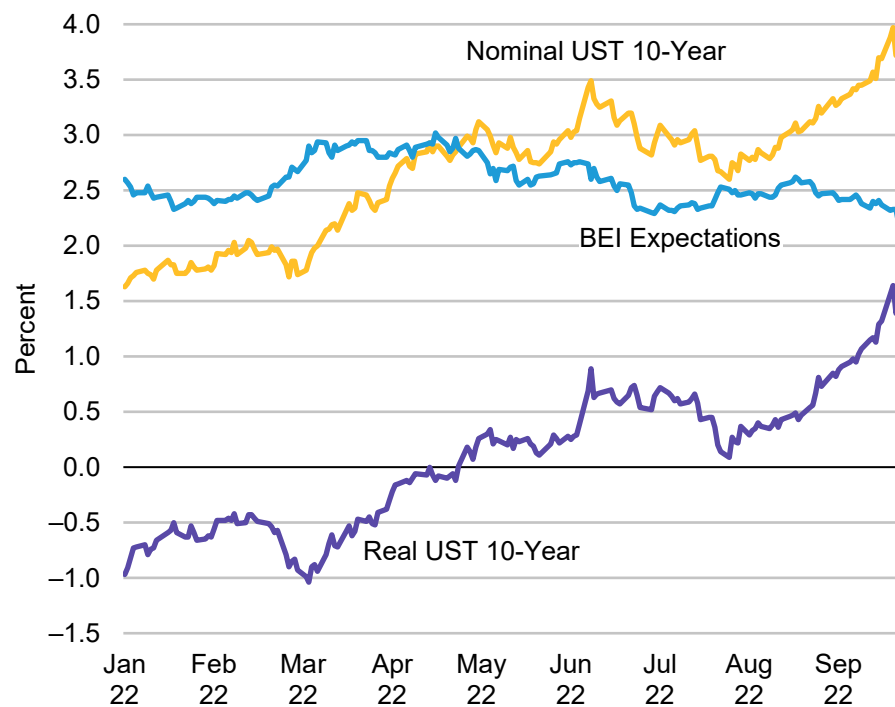


# Groundhog Day: Front End and Belly of the Curve Saw the Greatest Rise as the Fed Grew Progressively More Hawkish

## 2s/10s Inversion Nearing Historic Levels



## Nominal and Real Yields Have Risen Nearly in Tandem



**Historical analysis does not guarantee future results.**

BEI: break-even inflation; UST: US Treasury

As of September 30, 2022

Source: Bloomberg, US Treasury and AB

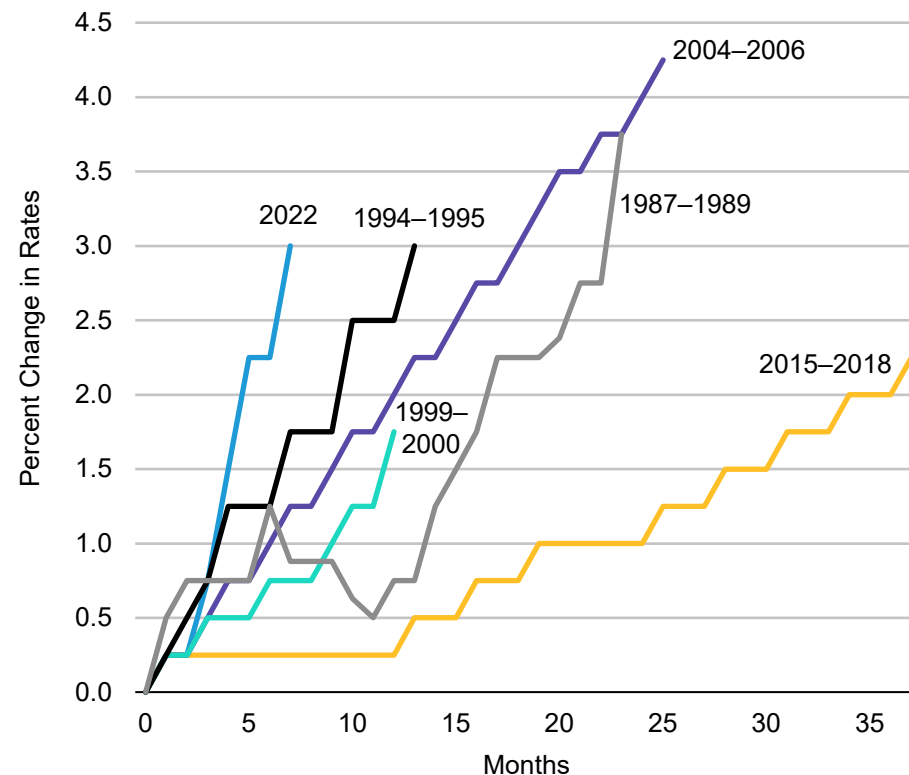


# Bond Market Recap: Yields Go Up, Happiness Goes Down

## No Safe Space in the Bond World: Returns Negative Across the Board (Percent)

US Treasuries	Yield (Sep 30, 2022)	Yield (Dec 31, 2021)	Jan–Sep 2022 Return
TIPS	1.68	−1.04	−13.61
Two-Year	4.28	0.73	−4.59
Five-Year	4.09	1.26	−10.79
10-Year	3.83	1.52	−16.85
30-Year	3.78	1.90	−31.49
Sector	YTW (Sep 30, 2022)	YTW (Dec 31, 2021)	Jan–Sep 2022 Return
US Aggregate	4.75	1.75	−14.61
IG Corps	5.69	2.33	−18.72
US HY	9.68	4.21	−14.74
Municipals	4.04	1.11	−12.13
MBS	4.83	1.98	−13.66
Leveraged Loans	10.52	4.60	−2.66

## Primarily Due to the Quickest Rate-Hike Sequence Since the 1970s



### Historical analysis does not guarantee future results.

IG: investment-grade; HY: high yield; MBS: mortgage-backed securities; TIPS: Treasury Inflation-Protected Securities; YTW: yield to worst

Sector indices provided by Bloomberg.

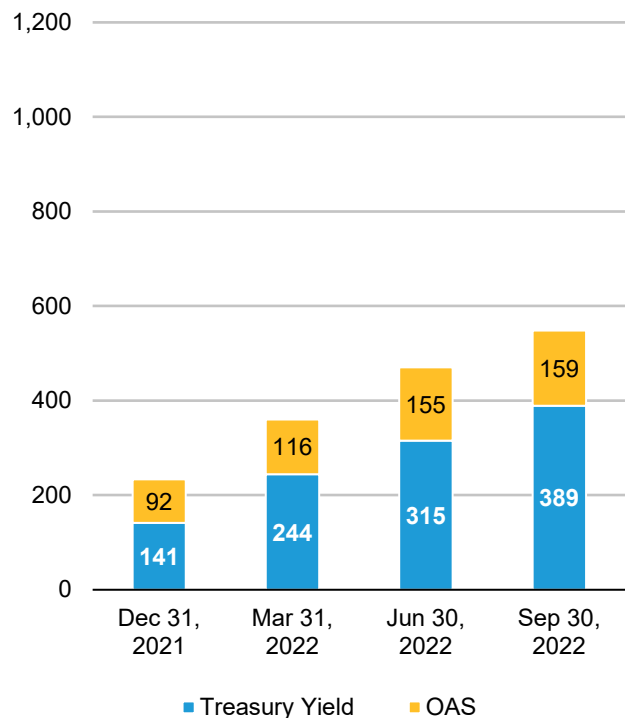
As of September 30, 2022

Source: Bloomberg, J.P. Morgan and AB

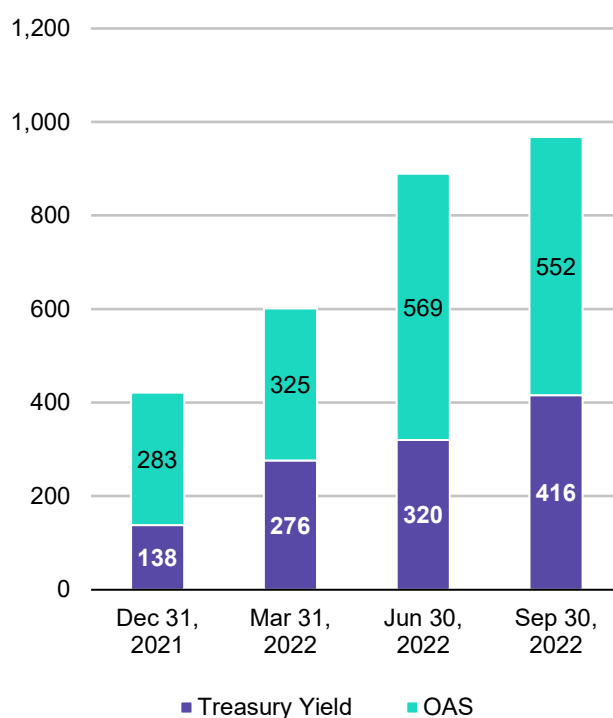


# US Corporate Credit Yields Continue to Push Higher Through Quarter

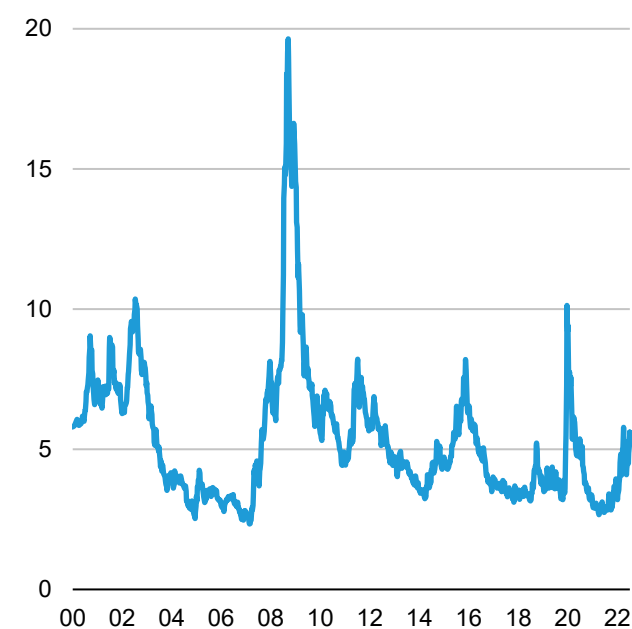
**Investment-Grade YTW Continued to Rise Because of Higher Rates...**



**...While High-Yield YTW Saw a Similar Scenario as Spreads Compressed Slightly**



**Fear of Further Widening: US HY Spreads Remain Relatively Narrow**



**Historical analysis does not guarantee future results.**

OAS: option-adjusted spread; YTW: yield to worst

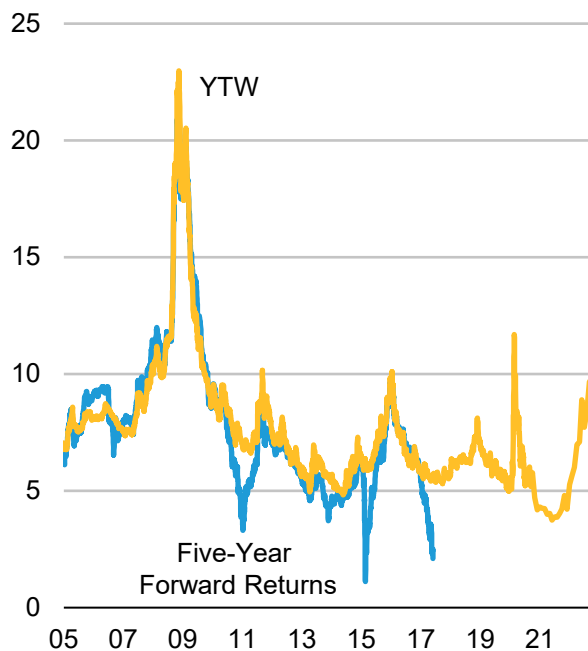
Through September 30, 2022

Source: Bloomberg and AB

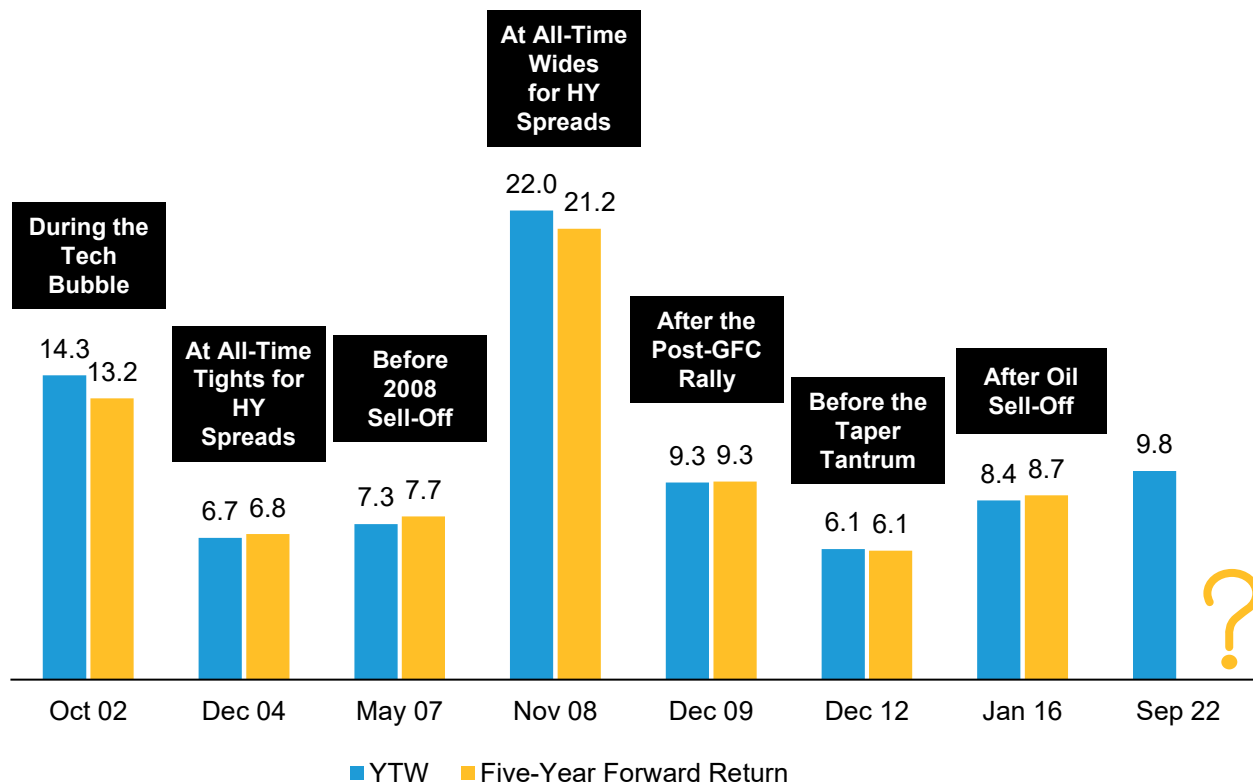


# Elevated Yields Suggest Attractive Five-Year Forward Returns

Starting YTW vs. Five-Year Forward Annualized Returns (Percent)



If You Invested...



**Past performance and historical analysis do not guarantee future results.**

GFC: global financial crisis

Left display YTW and returns represent Bloomberg US Corporate High Yield; right display YTW and returns represent Bloomberg Global Corporate High Yield (USD Hedged).

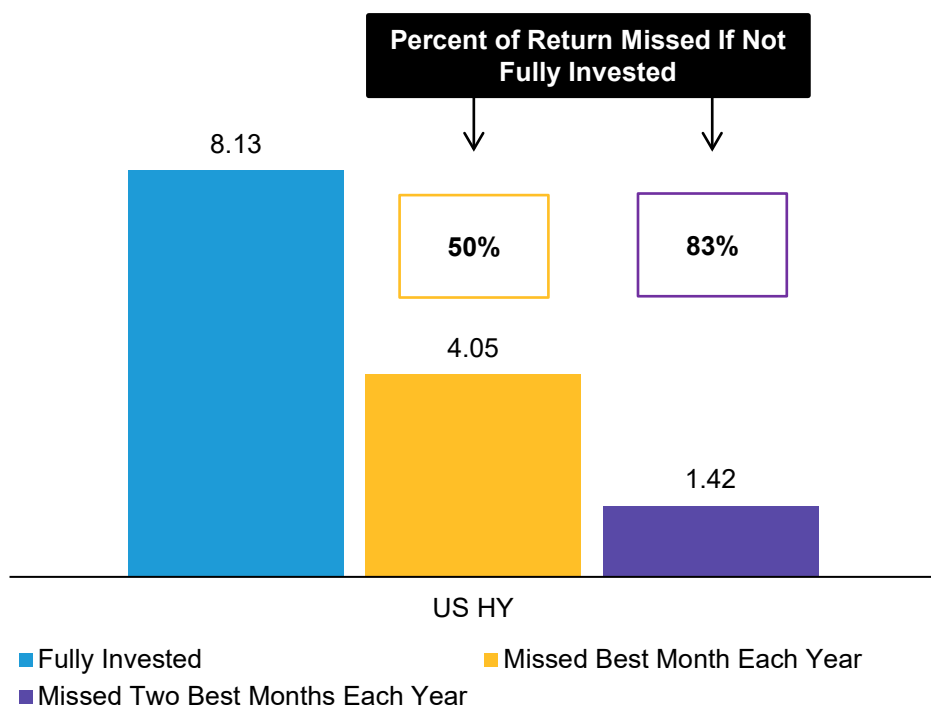
As of September 30, 2022

Source: Bloomberg and AB



# Trying to Time the Best Entry Point? You Could Miss Out on Most of the Returns

## Annualized Total Returns Since Inception



## High Yield Recovers Quickly with Strong Returns After a Drawdown

When Drawdowns Were...	
-5% or more (13 Instances)	
Average recovery time (in months)	5
Average 12-month return after drawdown	22%
Average 24-month return after drawdown	17%
-10% or more (Five Instances)	
Average recovery time (in months)	6
Average 12-month return after drawdown	41%
Average 24-month return after drawdown	25%

### Past performance does not guarantee future results.

Performance is based on US High Yield defined as Bloomberg US Corporate High Yield Index (inception date: July 1, 1983).

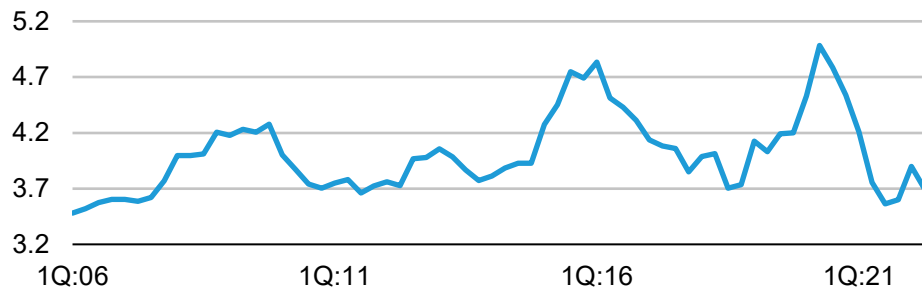
As of September 30, 2022

Source: Bloomberg and AB

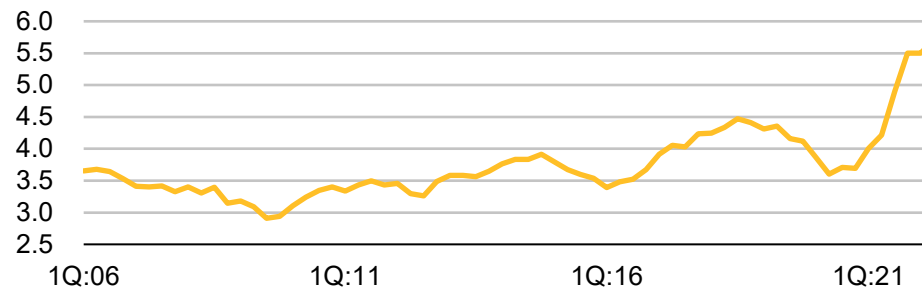


# US High Yield Fundamentals Are Expected to Remain Resilient

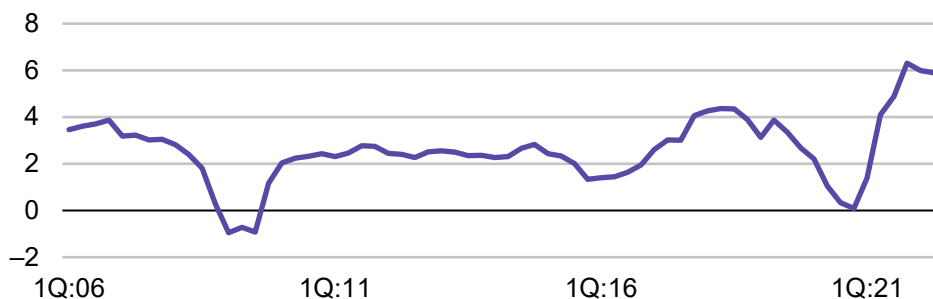
## Net Leverage (Debt/EBITDA)



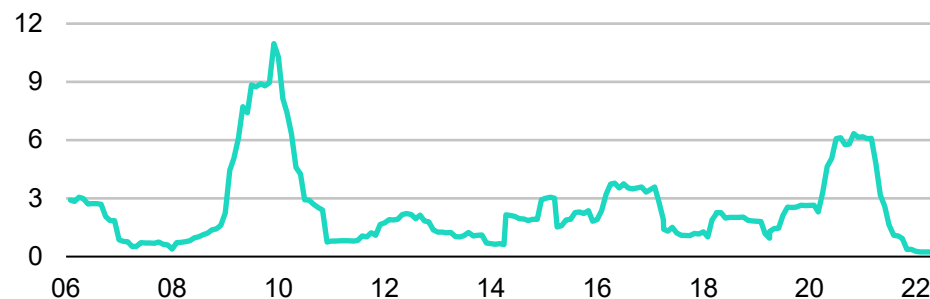
## Interest Coverage (EBITDA/Interest)



## Net Income Margin (Percent)



## Default Rates (Percent)



**Historical and current analyses do not guarantee future results.**

Ex financials. Data represent ~70% of ex financials US High Yield in market value. Metrics data are calculated using median.

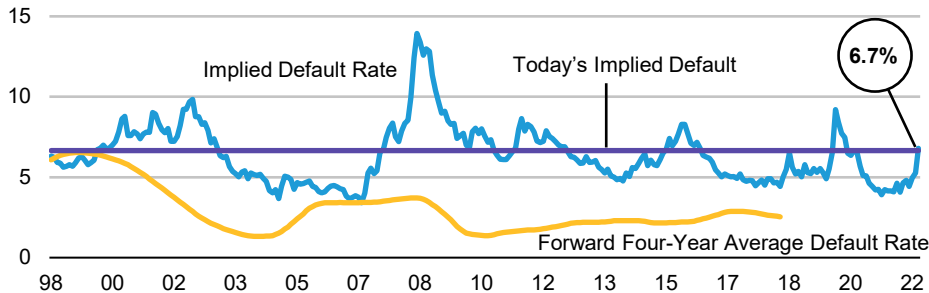
As of September 30, 2022

Source: Morgan Stanley, S&P Compustat and AB

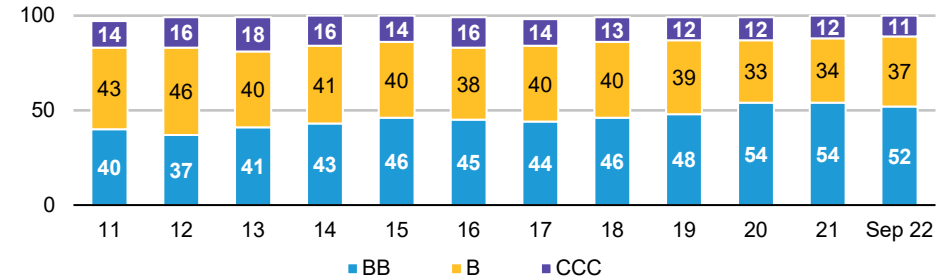


# Defaults Starting from a Strong Position While Most Increases Remain Below Average

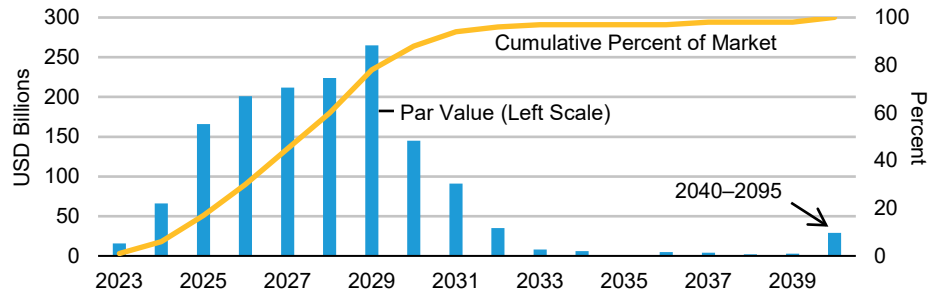
**Current Spread Levels Are Compensating for Highest Default Levels in the Last 25 Years (Percent)**



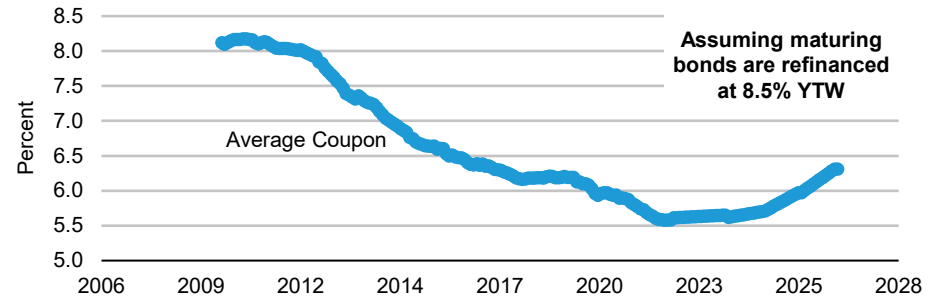
**The US HY Index Is Much Higher Quality Today**



**Only 20% of HY Market Maturing over the Next Three Years**



**Even if Yields Increase, Actual Interest Expense Should Not Increase Very Much (Percent)**



**Past performance does not guarantee future results.**

Implied default rates represented by Bloomberg US Corporate High Yield; high-yield market defaults by J.P. Morgan high-yield market default data; default rise by change from lowest default rate to highest in the period; average spread by the average OAS from Bloomberg US Corporate High Yield during the default rise period; high yield and assumed YTW by Bloomberg US Corporate High Yield 2% Constrained; average coupon by S&P US High Yield Corporate Bond Index Average Coupon  
As of September 30, 2022. Source: Bloomberg, J.P. Morgan and AB

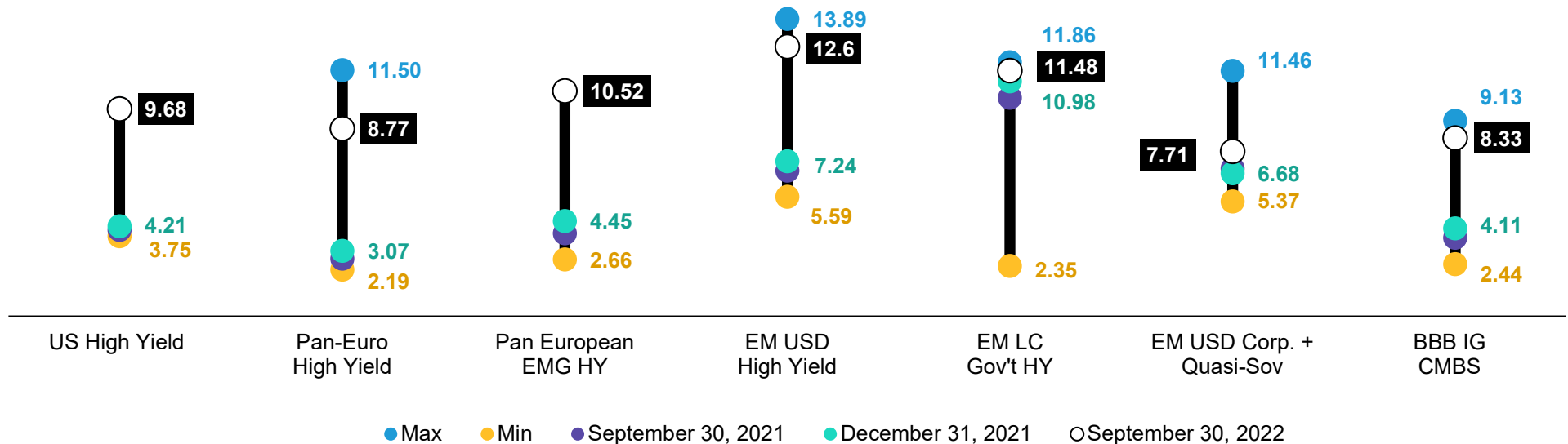




# Yields Almost Universally Near 10-Year Highs for Much of Bond Market

## 10-Year Yield-to-Worst Range

October 2011–September 2022



### Past performance does not guarantee future results.

CMBS: commercial mortgage-backed securities; EM: emerging markets; EMG: emerging; LC: local currency; USD: US dollar

Historical information provided for illustrative purposes only. US High Yield is represented by Bloomberg US High Yield Corporate Index; Pan-Euro High Yield by Bloomberg Pan-European High Yield; Pan-European EMG HY by Bloomberg Pan European EMG High Yield; EM LC Gov't HY by Bloomberg EM Local Currency Government High Yield; EM USD High Yield by Bloomberg EM USD Sovereign High Yield; EM USD Corp + Quasi-Sov by Bloomberg EM USD Corp + Quasi Sovereign High Yield; BBB IG CMBS by Bloomberg CMBS IG BBB Index.

As of September 30, 2022

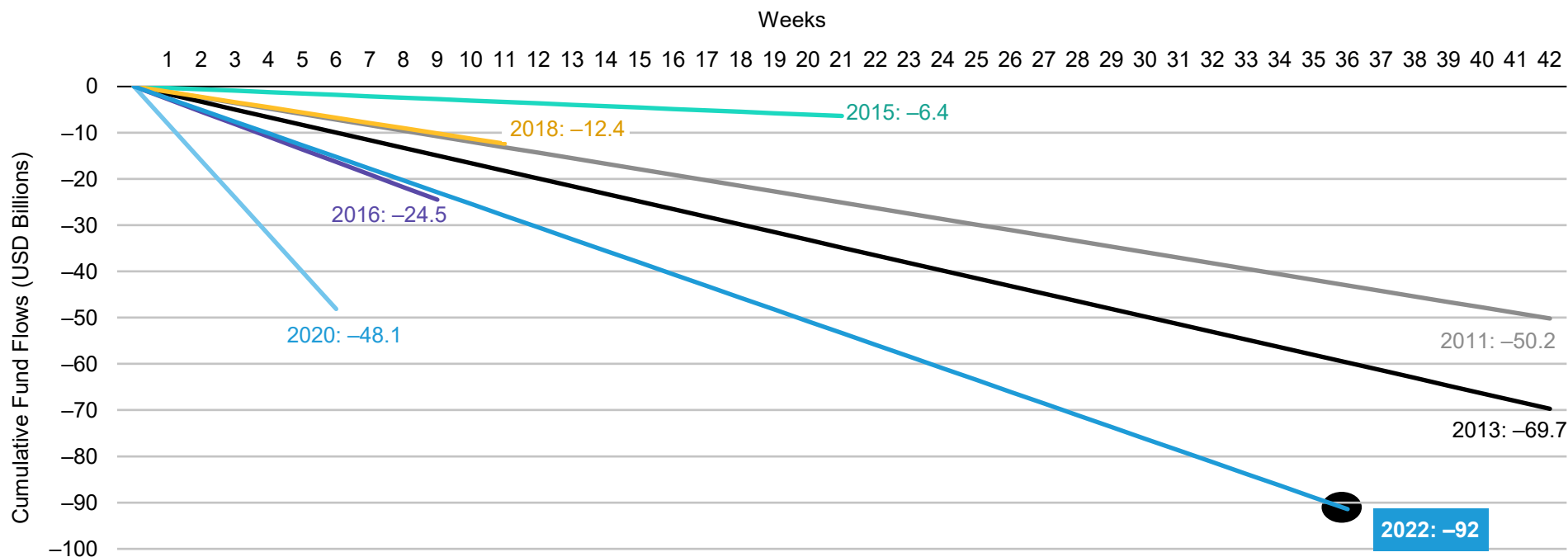
Source: Bloomberg, Morningstar and AB



# 2022 Outflow Cycle: The Largest on Record

The pace and severity have generated significant pressure in a retail-driven market

## Historical Municipal Market Outflow Cycles



**Analysis provided for informational purposes only and is subject to revision.**

As of September 30, 2022

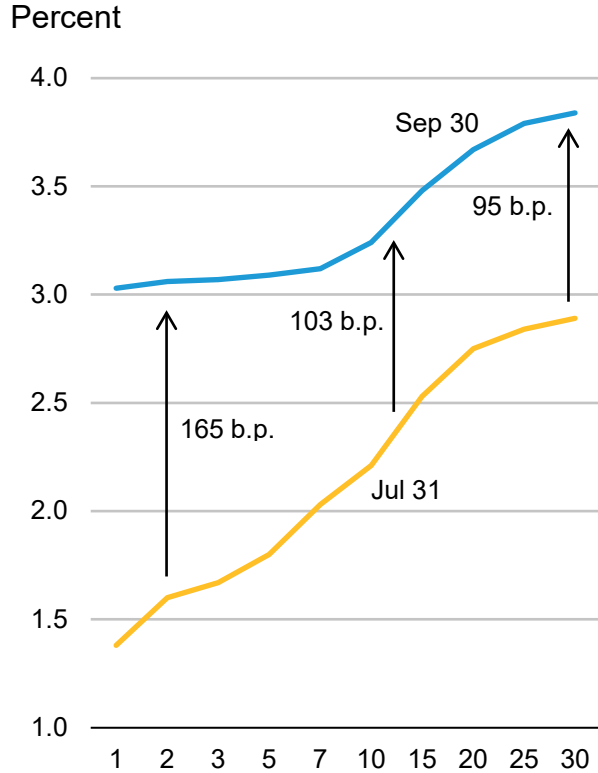
Source: J.P. Morgan, Refinitiv Lipper US Flows and AB



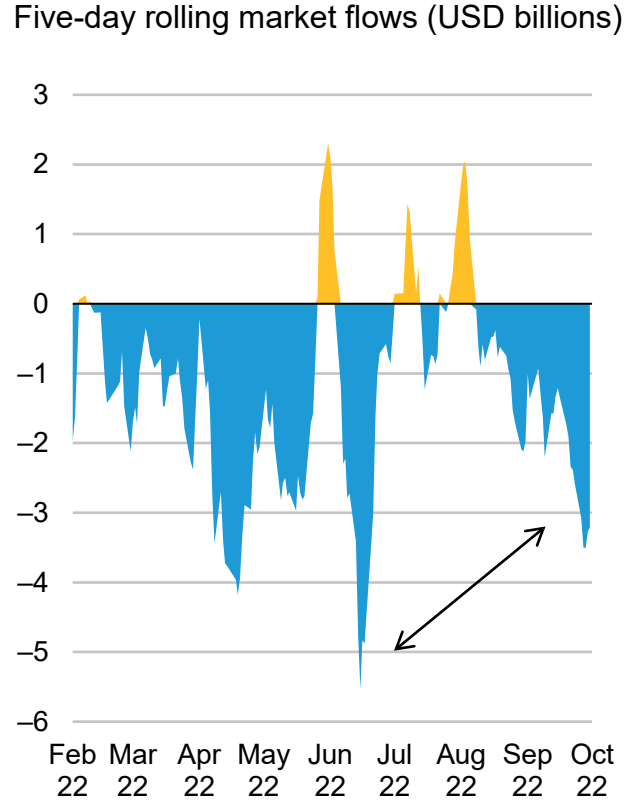
# Yields Continue to Rise, and Curve Has Flattened Significantly

September was the fourth worst month in Muni performance in last 30 years

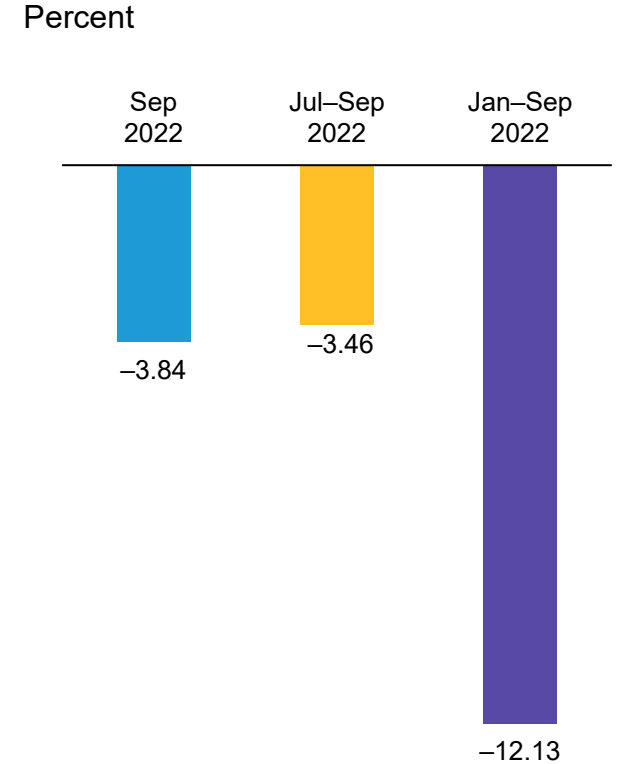
## AAA Municipal Yields



## Muni Outflows Continue to Increase



## Bloomberg Municipal Index



Forecasts are subject to change. There is no guarantee any investment objective will be achieved.

b.p.: basis points

As of September 30, 2022

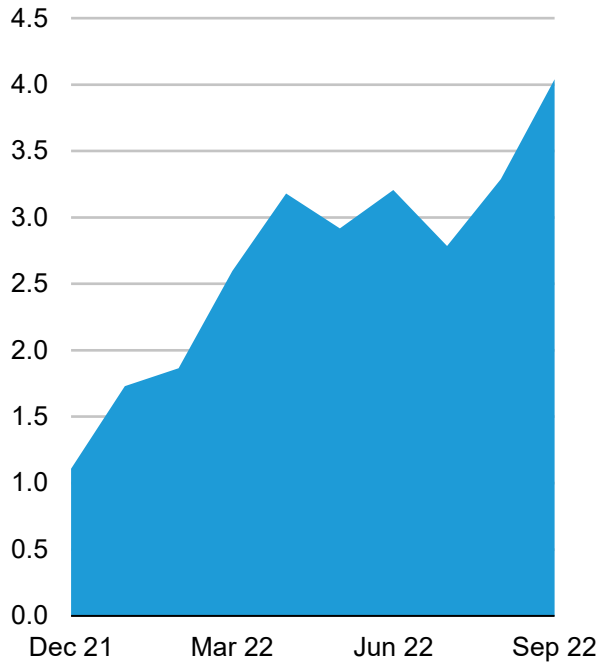
Source: Bloomberg, Morningstar, Municipal Market Data and AB



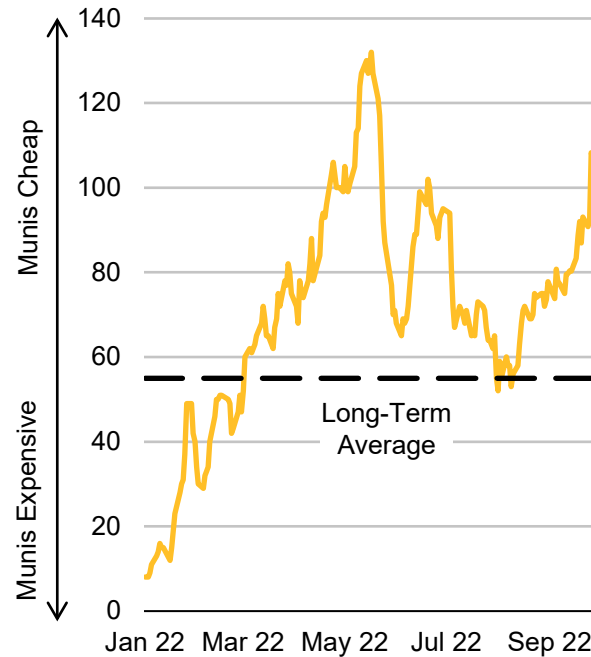
# Municipal Yields Have Nearly Quadrupled Year to Date

Muni valuations are attractive on a relative basis, which presents opportunity

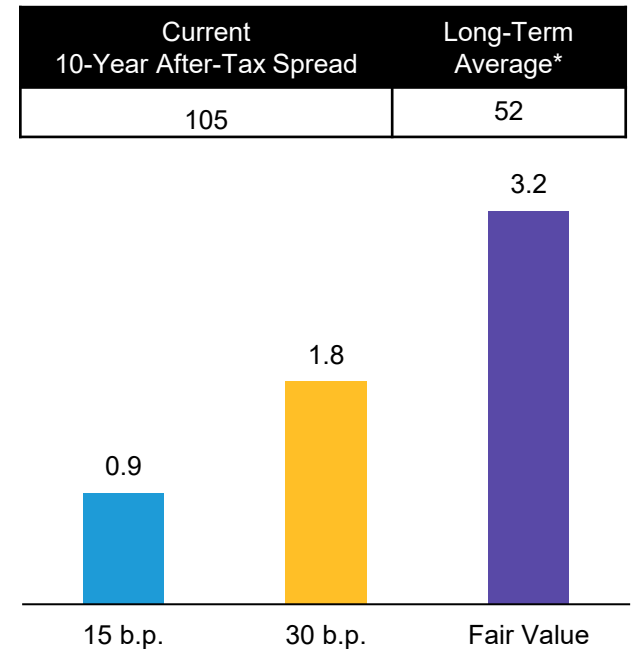
**Bloomberg Municipal Index Yield to Worst**  
Percent



**10-Year After-Tax Spreads**  
Basis points



**After-Tax Spread-Tightening Scenarios**



**Past performance does not guarantee future results. Numbers may not sum due to rounding.**

\*Five-year average. Analysis provided for illustrative purposes only and is subject to revision. Hypothetical analysis based on total return potential if after-tax spreads tighten.

Assumed portfolio duration of six years.

As of September 30, 2020

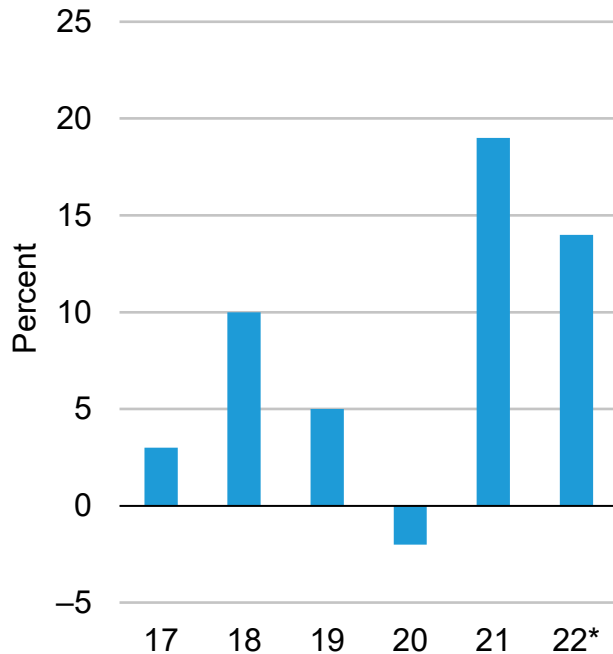
Source: Bloomberg, Municipal Market Data and AB



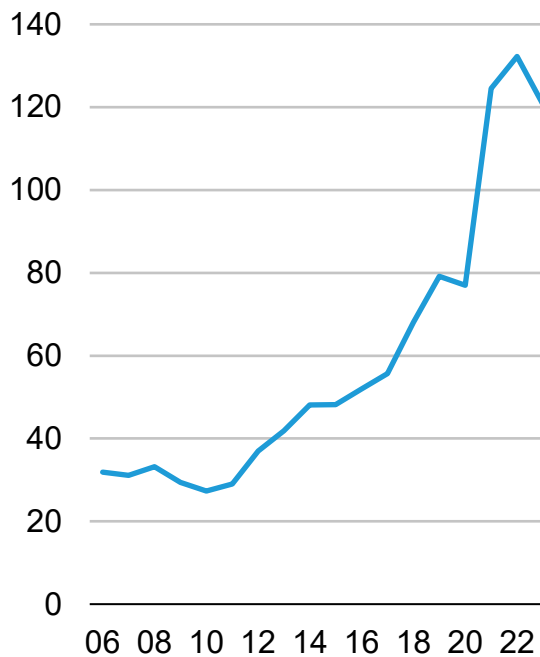
# Credit Fundamentals Are Strong in Municipals

State and local governments are well positioned to weather a potential recession

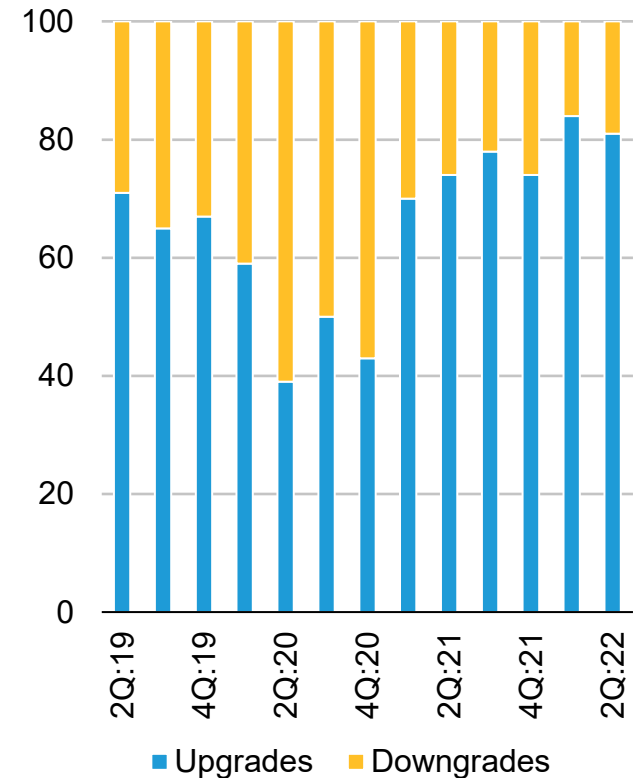
**Year-over-Year Change in Tax Revenue**  
All states



**State Rainy Day Fund Balances**  
USD billions



**Upgrades Have Outpaced Downgrades for Six Consecutive Quarters (Percent)**



**Past performance does not guarantee future results.**

\*Compares YTD through 2Q 2021 vs. the same time period in 2022

As of September 30, 2022

Source: Bloomberg, Moody's, National Association of State Budget Officers, US Census Bureau and AB

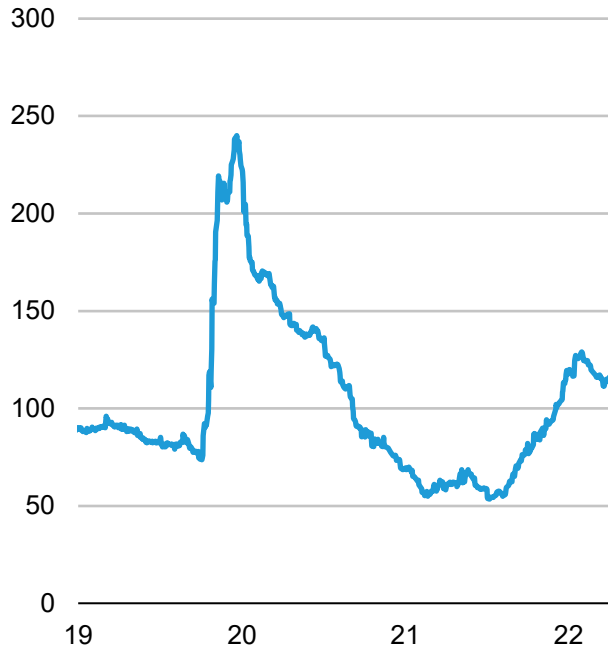


# Municipal Credit Has Begun to Catch a Bid

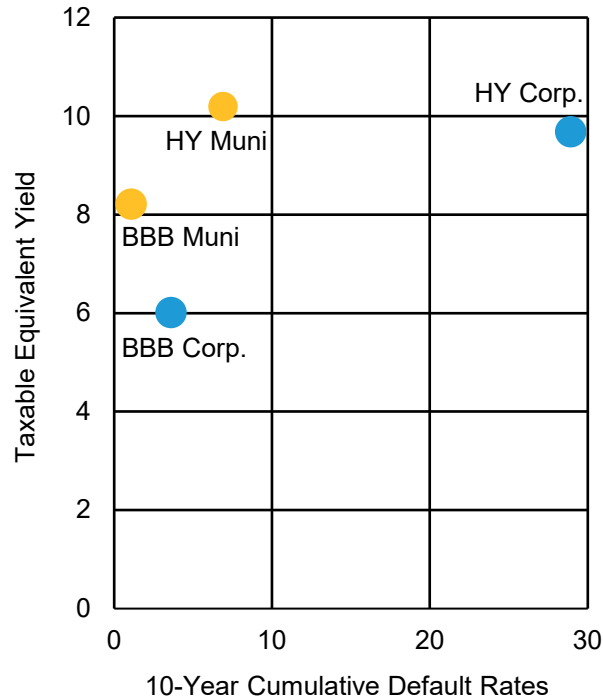
Excess carry + potential for spread compression = attractive opportunity

## BBB Municipal Credit Spreads

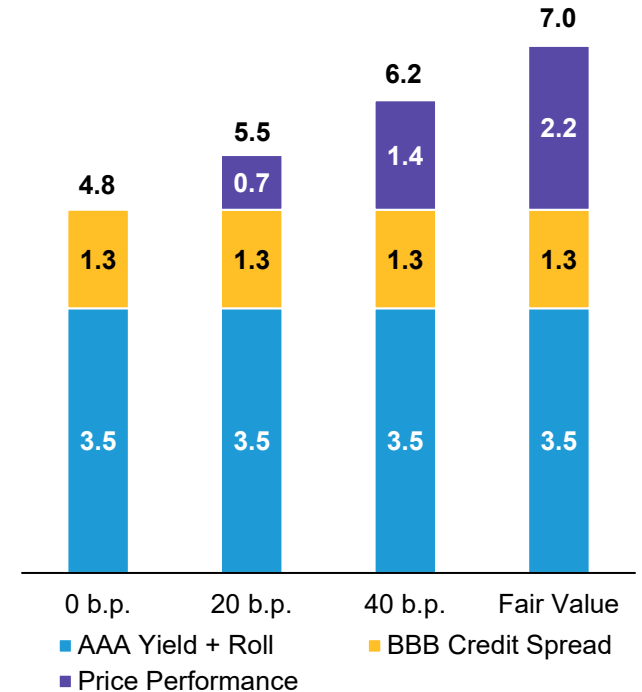
Basis points



## Compelling Yield Pickup vs. Default Risk



## 12-Month Spread Compression Scenario Analysis (Percent)



### Past performance does not guarantee future results.

Analysis provided for illustrative purposes only and is subject to revision. Hypothetical analysis based on total return components. There is no guarantee any investment objective will be achieved. Characteristics are subject to change. Numbers may not sum due to rounding. Twelve-month scenario analysis assumes reversion to the long-term average of BBB credit spreads of 70 basis points and an assumed duration of nine years.

As of September 30, 2022

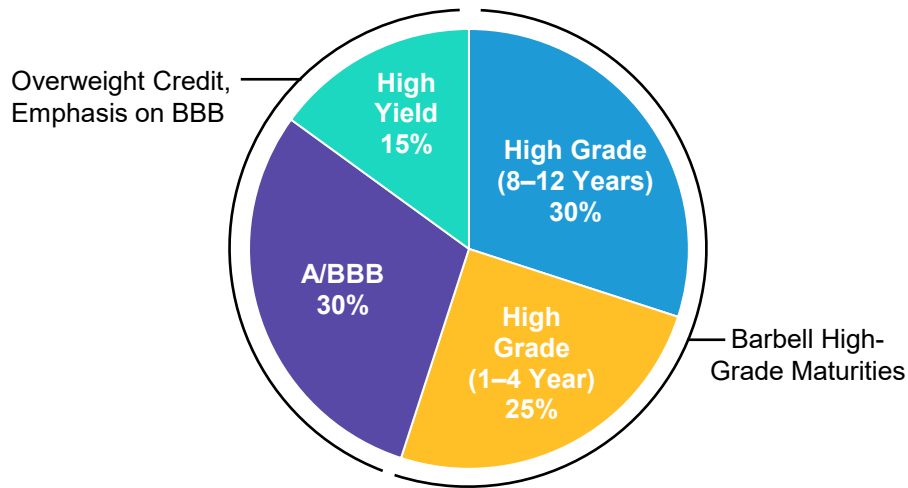
Source: Bloomberg, Municipal Market Data and AB



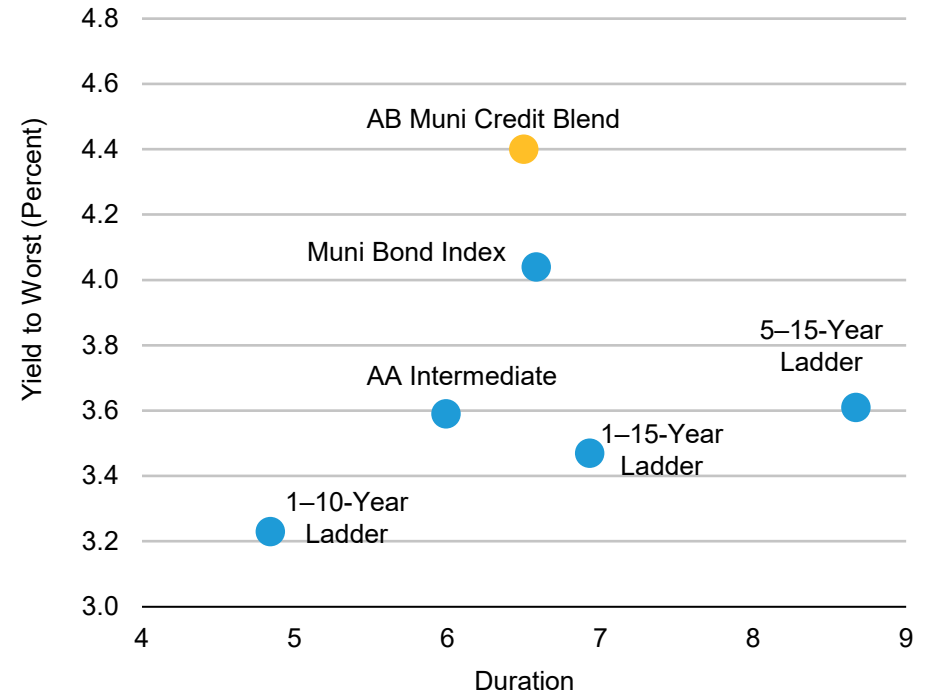
# Portfolio Construction for Today's Environment

Overweight municipal credit with emphasis on BBBs, duration neutral vs. benchmarks

## AB Municipal Credit Blend



## Bond Ladders Fall Short



### Current analysis does not guarantee future results.

AB Muni Credit Blend is a blend of Bloomberg Muni Credit indices: 55% high grade, 30% A/BBB and 15% high yield.

As of September 30, 2022

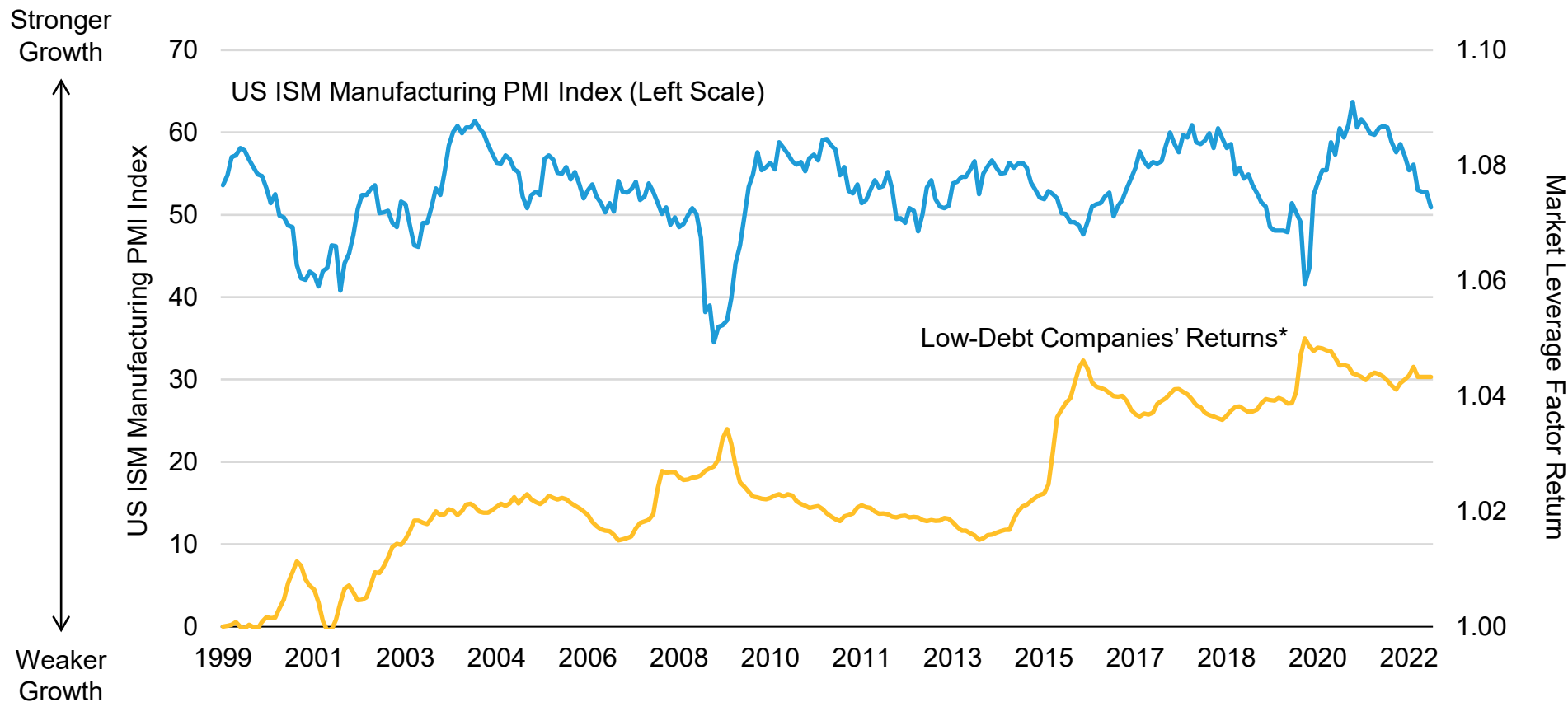
Source: Bloomberg and AB



# Appendix



# Quality Balance Sheets Support Performance in Weak Economies



## Past performance does not guarantee future results.

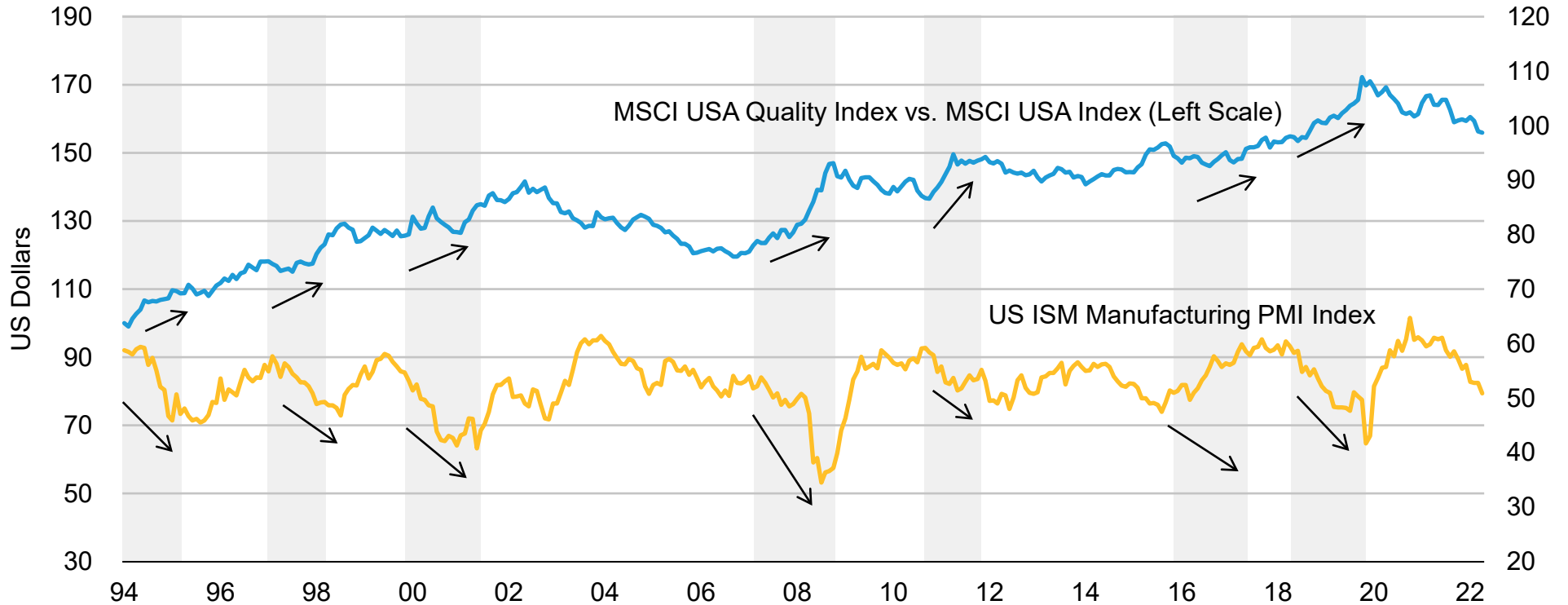
\*Based on the market leverage factor, which favors low-leverage companies over high-leverage companies. It is computed as net debt/(net debt + market value of equity). The chart shows the duration times spread-adjusted cumulative return of a factor-weighted, industry-neutral long/short portfolio in the US high-yield bond universe.

Through September 30, 2022

Source: Bloomberg, Piper Sandler and AB

# Slower Economic and Earnings Growth Calls for a Quality Bias

Quality works in times of uncertainty and slower economic growth



**Historical analysis and current forecasts do not guarantee future results.**

December 31, 1994 = \$100

As of September 30, 2022

Source: Bloomberg, MSCI and AB



# Disclosures and Important Information

Hypothetical, back-tested or simulated performance has many inherent limitations only some of which are described herein. The hypothetical performance shown herein has been constructed with the benefit of hindsight and does not reflect the impact that certain economic and market factors might have had on the decision-making process. No hypothetical, back-tested or simulated performance can completely account for the impact of financial risk in actual performance. Therefore, it will invariably show better rates of return. The hypothetical performance results herein may not be realized in the actual management of accounts. No representation or warranty is made as to the reasonableness of the assumptions made or that all assumptions used in constructing the hypothetical returns have been stated or fully considered. Assumption changes may have a material impact on the returns presented. This material is not representative of any particular client's experience. Investors should not assume that they will have an investment experience similar to the hypothetical, back-tested or simulated performance shown. There are frequently material differences between hypothetical, back-tested or simulated performance results and actual results subsequently achieved by any investment strategy. Prospective investors are encouraged to contact the representatives of the investment manager to discuss the methodologies (and assumptions) used to calculate the hypothetical performance shown herein.

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## **Important Risk Information Related to Investing in Equity and Short Strategies**

All investments involve risk. Equity securities may rise and decline in value due to both real and perceived market and economic factors as well as general industry conditions.

A short strategy may not always be able to close out a short position on favorable terms. Short sales involve the risk of loss by subsequently buying a security at a higher price than the price at which it sold the security short. The amount of such loss is theoretically unlimited (since it is limited only by the increase in value of the security sold short). In contrast, the risk of loss from a long position is limited to the investment in the long position, since its value cannot fall below zero. Short selling is a form of leverage. To mitigate leverage risk, a strategy will always hold liquid assets (including its long positions) at least equal to its short position exposure, marked to market daily.

## **Important Risk Information Related to Investing in Emerging Markets and Foreign Currencies**

Investing in emerging-market debt poses risks, including those generally associated with fixed-income investments. Fixed-income securities may lose value due to market fluctuations or changes in interest rates. Longer-maturity bonds are more vulnerable to rising interest rates. A bond issuer's credit rating may be lowered due to deteriorating financial condition; this may result in losses and potentially default, or failure to meet payment obligations. The default probability is higher in bonds with lower, noninvestment-grade ratings (commonly known as "junk bonds").

There are other potential risks when investing in emerging-market debt. Non-US securities may be more volatile because of the associated political, regulatory, market and economic uncertainties; these risks can be magnified in emerging-market securities. Emerging-market bonds may also be exposed to fluctuating currency values. If a bond's currency weakens against the US dollar, this can negatively affect its value when translated back into US-dollar terms.

## **Bond Ratings Definition**

A measure of the quality and safety of a bond or portfolio, based on the issuer's financial condition, and not based on the financial condition of the fund itself. AAA is highest (best) and D is lowest (worst). Ratings are subject to change. Investment-grade securities are those rated BBB and above. If applicable, the Pre-Refunded category includes bonds which are secured by US government securities and therefore are deemed high-quality investment grade by the advisor.

# Index Definitions

Following are definitions of the indices referred to in this presentation. It is important to recognize that all indices are unmanaged and do not reflect fees and expenses associated with the active management of a mutual fund portfolio. Investors cannot invest directly in an index, and its performance does not reflect the performance of any AB mutual fund.

- **Bloomberg Barclays Global Aggregate Corporate Bond Index:** Tracks the performance of investment-grade corporate bonds publicly issued in the global market and found in the Global Aggregate. (Represents global corporate on slide 2.)
- **Bloomberg Barclays Global High-Yield Bond Index:** Provides a broad-based measure of the global high-yield fixed-income markets. It represents the union of the US High-Yield, Pan-European High Yield, US Emerging Markets High-Yield, CMBS High Yield and Pan-European Emerging Markets High-Yield indices.
- **Bloomberg Barclays Global Treasury Index:** Tracks fixed-rate local currency government debt of investment-grade countries. The index represents the treasury sector of the Global Aggregate Bond Index.
- **Bloomberg Barclays Global Treasury: Euro Bond Index:** Includes fixed-rate, local-currency sovereign debt that makes up the Euro Area treasury sector of the Global Aggregate Bond Index. (Represents euro-area government bonds on slide 2.)
- **Bloomberg Barclays Global Treasury: Japan Bond Index:** Includes fixed-rate, local-currency sovereign debt that makes up the Japanese treasury sector of the Global Aggregate Bond Index. (Represents Japan government bonds on slide 2.)
- **Bloomberg Barclays Municipal Bond Index:** A rules-based, market value-weighted index engineered for the long-term tax-exempt bond market. (Represents municipals on slide 2.)
- **Bloomberg Barclays US Aggregate Bond Index:** A broad-based benchmark that measures the investment-grade, US dollar-denominated, fixed-rate, taxable bond market, including US Treasuries, government-related and corporate securities, mortgage-backed securities (MBS [agency fixed-rate and hybrid ARM pass-throughs]), asset-backed securities (ABS), and commercial mortgage-backed securities (CMBS).
- **Bloomberg Barclays US Corporate High-Yield Bond Index:** Represents the corporate component of the Bloomberg Barclays US High-Yield Index. (Represents US high yield on slide 2.)
- **Bloomberg Barclays US Treasury Index:** Includes fixed-rate, local-currency sovereign debt that makes up the US Treasury sector of the Global Aggregate Index. (Represents US government bonds on slide 2.)
- **Credit Suisse Leveraged Loan Index:** Tracks the investable market of the US dollar-denominated leveraged loan market. It consists of issues rated 5B or lower, meaning that the highest-rated issues included in this index are Moody's/S&P ratings of Baa1/BB+ or Ba1/BBB+. All loans are funded term loans with a tenor of at least one year and are made by issuers domiciled in developed countries.

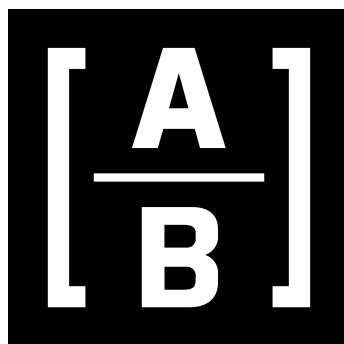
## Index Definitions (cont.)

- **HFRI Equity Hedge Index:** Investment managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.
- **J.P. Morgan Emerging Market Bond Index Global:** A benchmark index for measuring the total return performance of government bonds issued by emerging-market countries that are considered sovereign (issued in something other than local currency) and that meet specific liquidity and structural requirements. In order to qualify for index membership, the debt must be more than one year to maturity, have more than \$500 million outstanding, and meet stringent trading guidelines to ensure that pricing inefficiencies don't affect the index. (Represents emerging-market debt on slide 2.)
- **MSCI EAFE Index:** A free float-adjusted, market capitalization-weighted index designed to measure developed-market equity performance, excluding the US and Canada. It consists of 22 developed-market country indices. (Represents EAFE on slide 2.)
- **MSCI Emerging Markets Index:** A free float-adjusted, market capitalization-weighted index designed to measure equity market performance in the global emerging markets. It consists of 21 emerging-market country indices. (Represents emerging markets on slide 2.)
- **MSCI Europe ex UK Index:** Captures large- and mid-cap representation across 14 developed markets countries in Europe. With 345 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across European developed markets, excluding the UK.
- **MSCI Japan Index:** Designed to measure the performance of the large- and mid-cap segments of the Japanese market. With 321 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.
- **MSCI United Kingdom Index:** Designed to measure the performance of the large- and mid-cap segments of the UK market. With 97 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.
- **MSCI World Index:** A market capitalization-weighted index that measures the performance of stock markets in 24 countries.
- **Russell 1000 Index:** A stock market index that represents the highest-ranking 1,000 stocks in the Russell 3000 Index, representing about 90% of the total market capitalization of that index.
- **Russell 2000 Index:** Measures the performance of the small-cap segment of the US equity universe. It is a subset of the Russell 3000 Index, representing approximately 8% of the total market capitalization of that index. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. (Represents US small-cap on slide 2.)

## Index Definitions (cont.)

- **S&P 500:** Includes a representative sample of 500 leading companies in leading industries of the US economy. (Represents US large-cap on slide 1.)

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