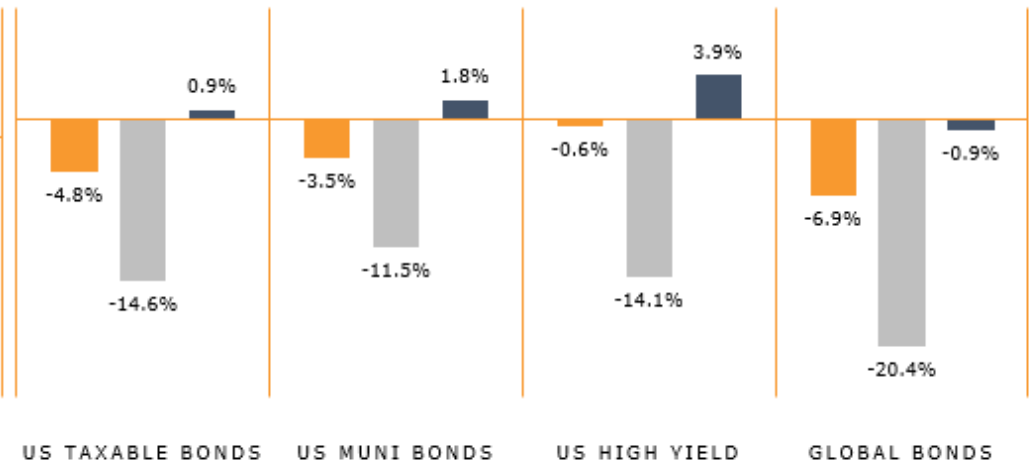
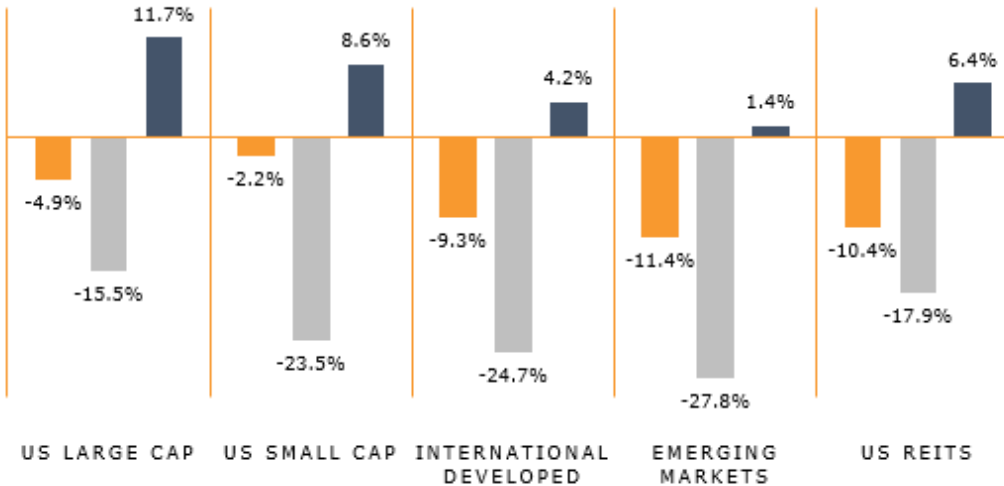


■ 3 Month: 09/30/22 ■ 1 Year ■ 10 Year*

EQUITY MARKETS HIGHLIGHTS

FIXED INCOME MARKETS HIGHLIGHTS



- Major asset classes suffered harsh losses in September. US High Yield Bonds delivered attractive relative returns, while US REITs and Emerging Markets were clear laggards in 3Q as interest rate volatility and policy uncertainty put pressure on asset classes most sensitive to higher interest rates.
- Weakness across asset classes from a 1-Year performance perspective has notably weighed on longer-term 10-year returns.
- Leading economic indicators were mixed, but the trend is increasingly bearish. Chicago PMI survey plunged unexpectedly in September which is the lowest print since June 2020.
- Some indicators, however, are softening, including Commodities, Retail Sales and Money Supply, consistent with an economy slowing from strong levels.
- The probability for a “soft landing” has been decelerating. Businesses typically endure significant margin compression, cash burn and balance sheet deterioration before reducing labor force.
- Inflation expectations are likely to remain unstable in the months ahead, as consumer uncertainty remains high and unlikely to wane in the face of continued global pressures on inflation.

- Consumer sentiment declined rapidly over the last 6 months, reflecting concerns over the impact of inflation, even among higher-income consumers who have historically generated the lion's share of spending.
- The US Treasury Yield Curve is quickly flattening, meaning short term interest rates are moving up, closer to (or higher than) long term rates. This unusual occurrence, called a yield curve inversion, has historically been a very reliable indicator of an upcoming economic recession.
- Since World War II every yield curve inversion has been followed by a recession in the following 6-18 months, and recessions are naturally correlated with decreased stock market returns.
- The labor market is a coincident/slightly lagging indicator and may see material weakness over the next few months. The National Federation of Independent Businesses (NFIB) survey was very weak.
- The ISM Manufacturing PMI tends to lead S&P 500 earnings by six months. Historically, the ISM has fallen below 43 — a level typically consistent with double-digit earnings declines. Prior bear markets came after Fed tightening cycles. Should this relationship hold, the market could see new lows in the coming months.

*Annualized daily returns as of 9/30/2022

Source: YCharts, Inc.; underlying indices are S&P 500® TR Index, Russell 2000® TR Index, MSCI EAFE TR, MSCI Emerging Markets Index TR, Dow Jones US Real Estate Index TR, Barclays Municipal Bond Index, Barclays U.S. Aggregate Bond Index, Barclays U.S. Corporate High Yield Bond Index and the Barclays Global Aggregate Bond Index.

Market conditions and trends will vary. Past performance is no guarantee of future results. Investments cannot be made in an index.

Asset Class Snapshot		9/30/22
Asset Class	3 Month Return	
Global Bonds	-6.9%	
International Small Cap	-8.2%	
International Developed	-9.3%	
US REITs	-10.4%	
Emerging Markets	-11.4%	

Region Snapshot		9/30/22
Region	3 Month Return	
Latin America Stock	3.6%	
US Stock	-4.5%	
Global Stock Ex US	-9.9%	
Europe Stock	-10.1%	
Asia Pacific Stock	-11.2%	
Emerging Markets	-11.6%	

Equity Style Snapshot				9/30/22
3 Month	Value	Blend	Growth	
Large	-5.7%	-4.7%	-3.8%	
Mid	-5.5%	-4.1%	-2.6%	
Small	-3.9%	-2.6%	-0.8%	

Asset Class Summary								9/30/22
Asset Class	1 Week	1 Month	3 Month	YTD	1 Year	3 Year	5 Year	
US Taxable Bonds	-1.0%	-4.3%	-4.8%	-14.6%	-14.6%	-3.3%	-0.3%	
US Muni Bonds	-1.0%	-3.8%	-3.5%	-12.1%	-11.5%	-1.9%	0.6%	
US High Yield	-1.4%	-4.0%	-0.6%	-14.7%	-14.1%	-0.5%	1.6%	
Global Bonds	-0.7%	-5.1%	-6.9%	-19.9%	-20.4%	-5.7%	-2.3%	
International Small Cap	-2.6%	-11.0%	-8.2%	-29.1%	-28.6%	0.8%	-0.2%	

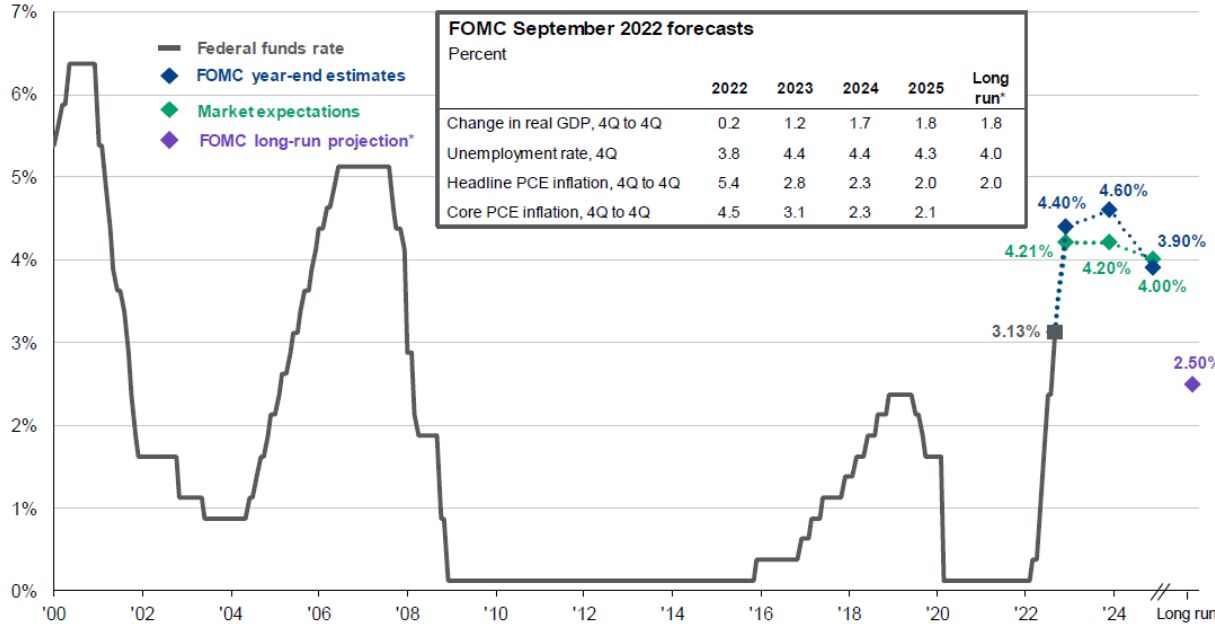
Equity Style Summary								9/30/22
Region	1 Week	1 Month	3 Month	YTD	1 Year	3 Year	5 Year	
Large Growth	-2.9%	-10.5%	-3.8%	-33.0%	-25.8%	9.5%	11.0%	
Large Blend	-2.8%	-9.2%	-4.7%	-25.0%	-17.4%	8.0%	9.1%	
Large Value	-2.7%	-7.9%	-5.7%	-14.6%	-6.6%	6.2%	7.1%	
Mid Growth	-1.1%	-9.8%	-2.6%	-32.7%	-27.4%	5.5%	7.7%	
Mid Blend	-2.2%	-9.9%	-4.1%	-25.4%	-19.5%	5.5%	6.7%	
Mid Value	-3.2%	-9.9%	-5.5%	-17.8%	-11.0%	4.9%	5.3%	
Small Growth	-0.2%	-9.0%	-0.8%	-30.5%	-30.1%	2.8%	5.7%	
Small Blend	-1.3%	-9.6%	-2.6%	-23.7%	-20.8%	5.0%	5.4%	
Small Value	-2.2%	-10.0%	-3.9%	-18.7%	-13.5%	5.7%	4.4%	



Q3'22 TOI: The Fed and navigating uncertainty

Federal funds rate expectations

FOMC and market expectations for the federal funds rate

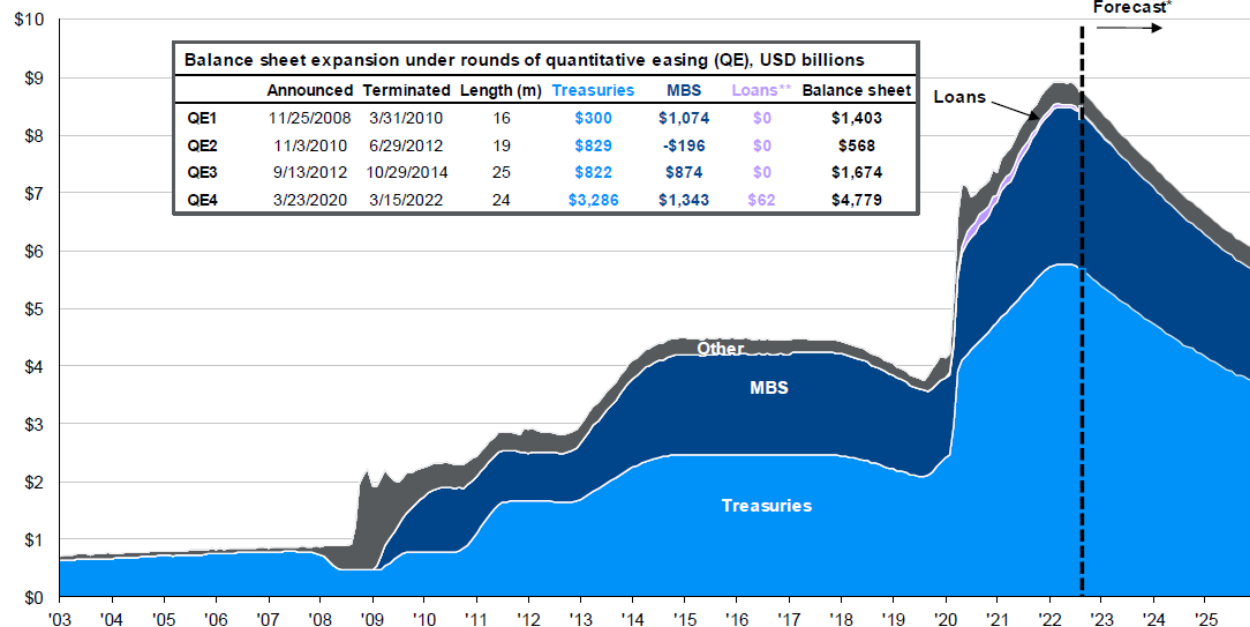


- Given an extremely tight labor market and high inflation, the FOMC raised its policy target interest rate significantly in 2022.
- At its May meeting, the Fed announced it will begin reducing the size of the balance sheet in June 2022.
- Mechanically, the Fed will reduce its securities holdings by not reinvesting the funds it receives from maturing securities. Instead, it will redeem the maturing security, which will reduce the amount of the Fed's securities holdings and the size of its balance sheet. (Source: St. Louis Fed)

- Over the most recent QE4 period, the monthly pace of purchases was \$80 billion for Treasury securities and \$40 billion for agency MBS.
- Overall, securities holdings more than doubled, from about \$3.9 trillion in early March 2020 to \$8.5 trillion in May 2022. As a percent of GDP, the holdings rose from 18% to 35%. (Source: St. Louis Fed)

The Federal Reserve balance sheet

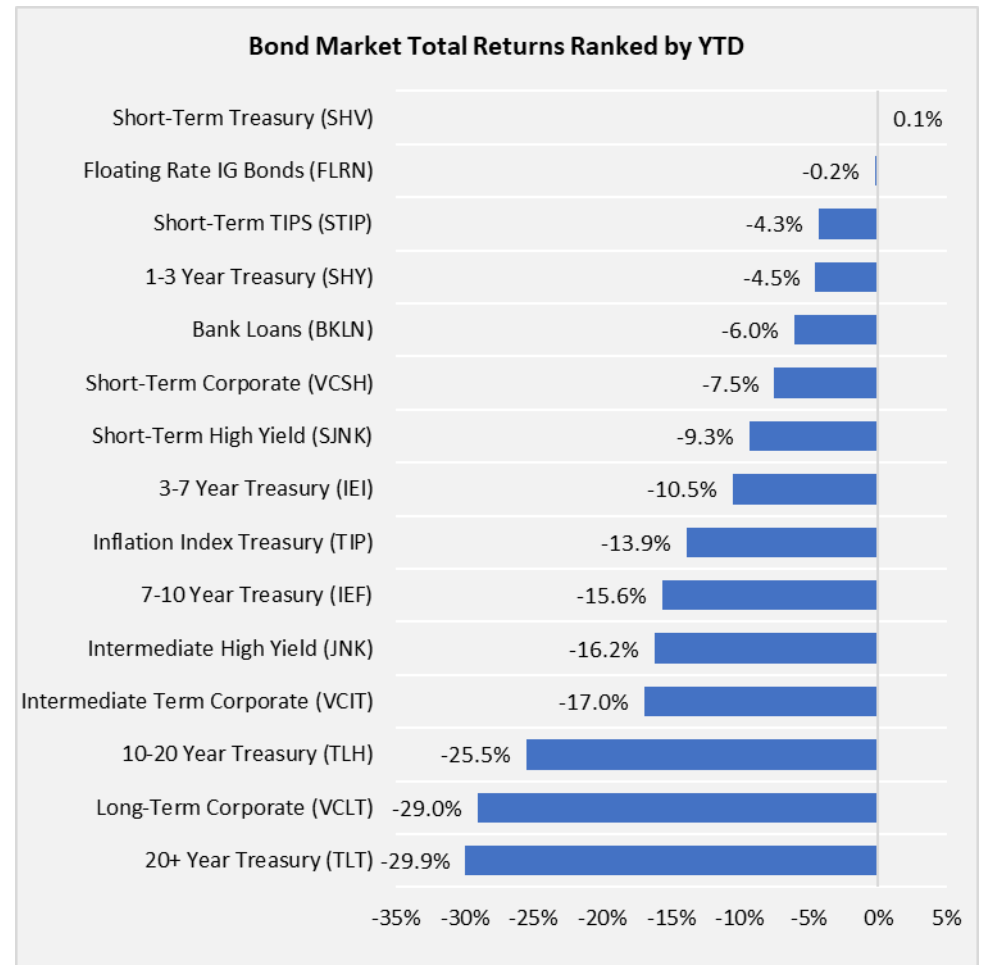
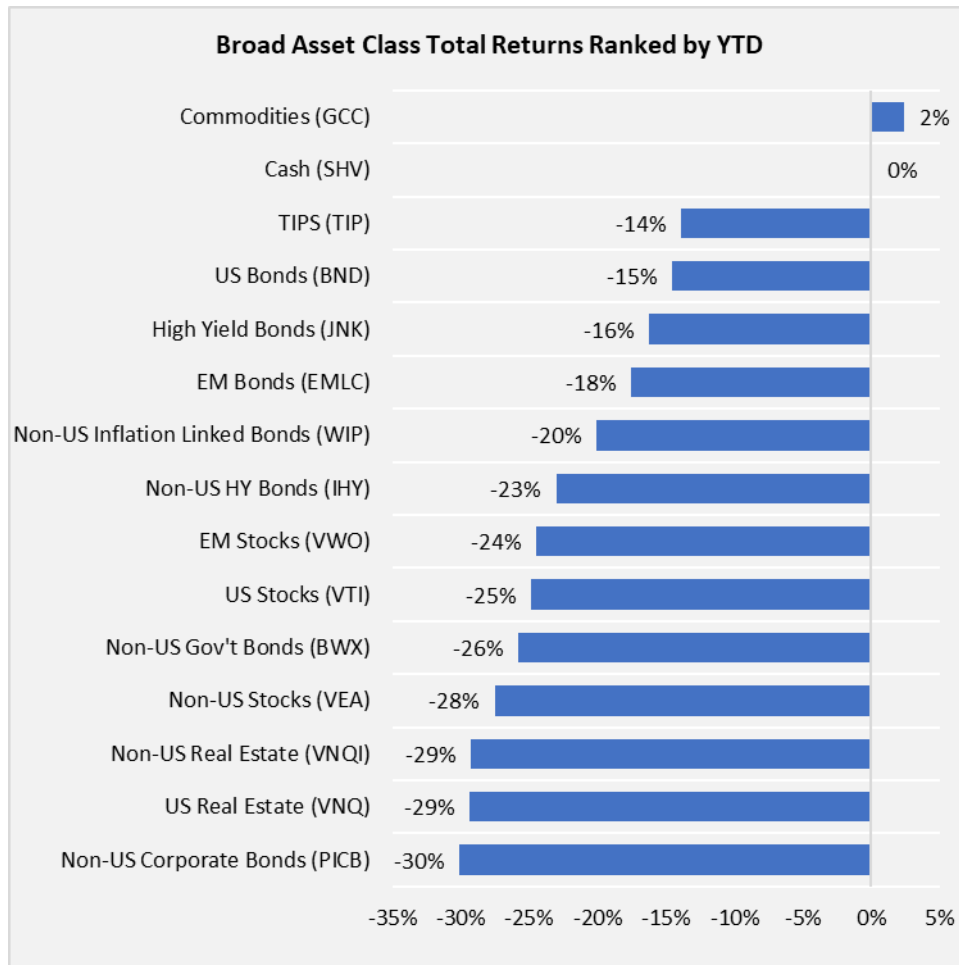
USD trillions





Asset class returns – YTD 2022

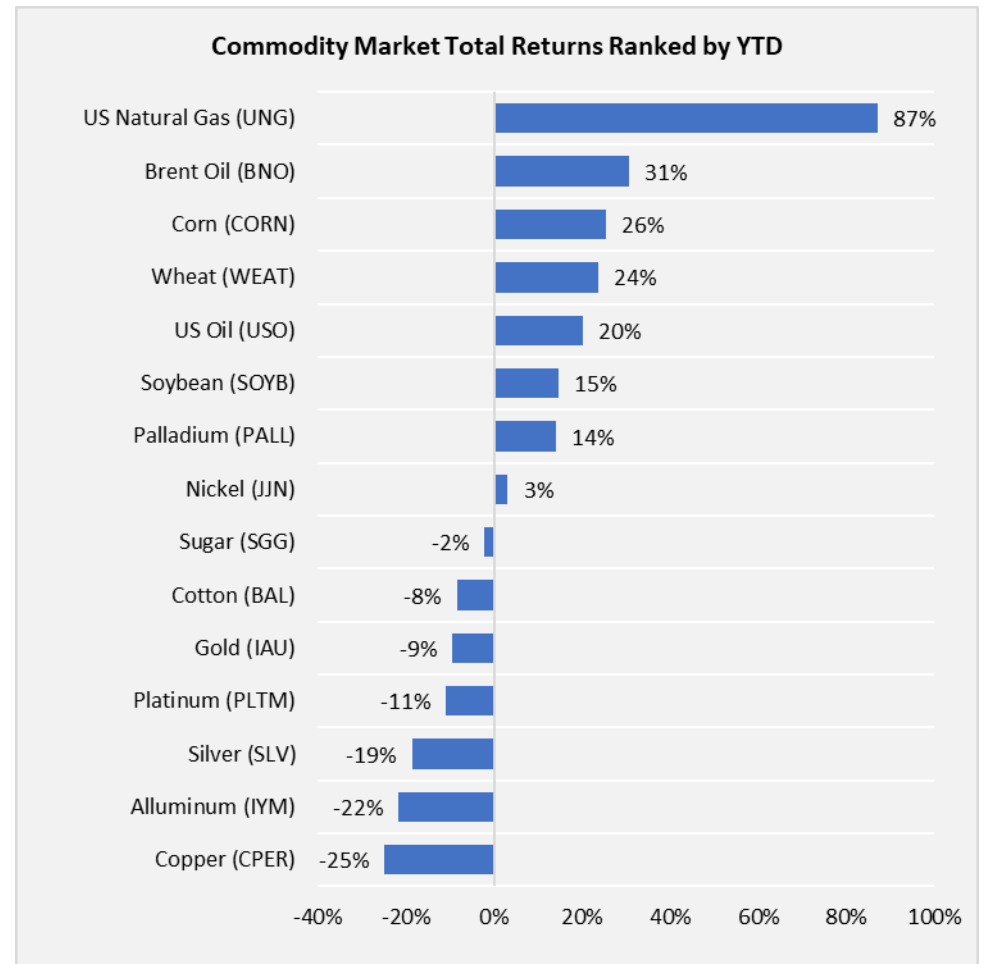
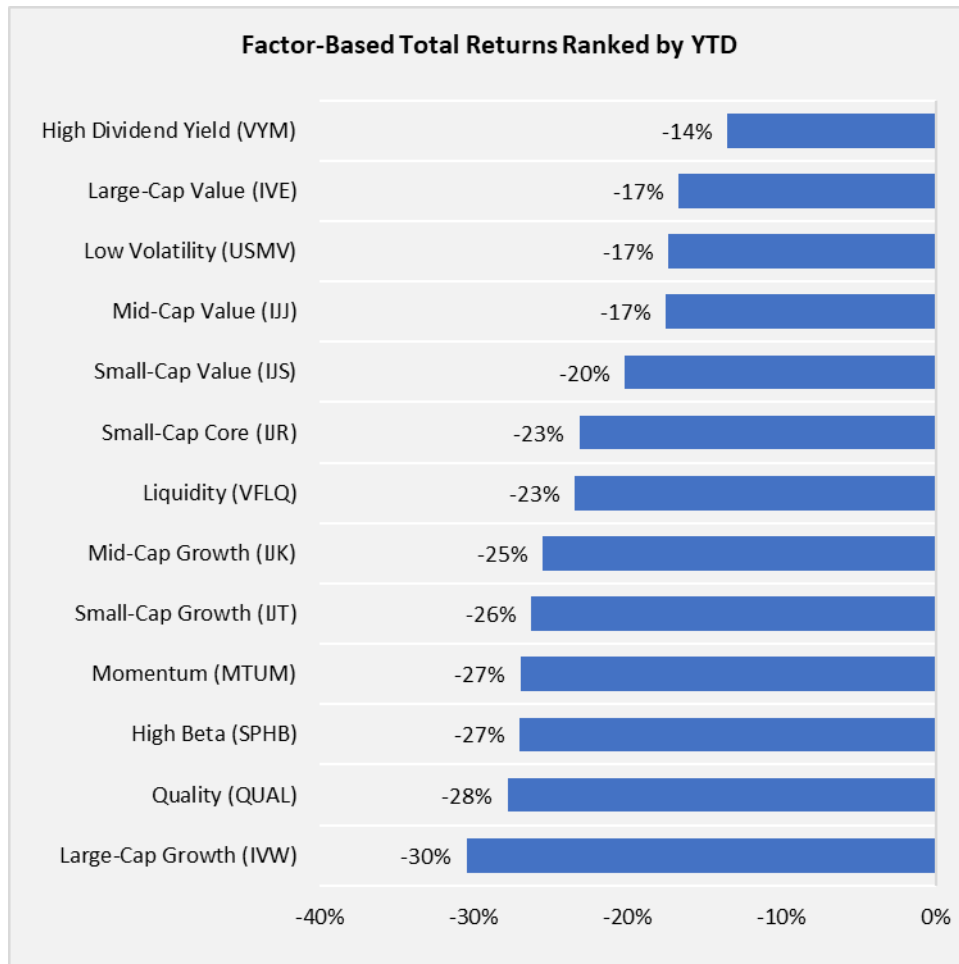
Trailing Total Returns – As of September 30, 2022 (*Showing ETFs as proxies)





Factor and Commodity returns – YTD 2022

Trailing Total Returns – As of September 30, 2022 (*Showing ETFs as proxies)





Periodic Table of Asset Class Returns

Asset Class Trailing Total Returns – As of September 30, 2022

YTD Total Return	1 month Total Return	3 month Total Return	6 month Total Return	1 year Total Return	3 year Total Return	5 year Total Return	10 year Total Return
Commodities 21.8%	US Treasuries -3.5%	US Small -2.2%	Muni Bonds -6.3%	Commodities 23.6%	Commodities 12.2%	US Growth 12.2%	US Growth 13.7%
Muni Bonds -12.1%	Muni Bonds -3.8%	Muni Bonds -3.5%	US Treasuries -8.0%	US Value -11.4%	US Growth 10.7%	S&P 500 9.2%	S&P 500 11.7%
US Treasuries -13.1%	Aggregate Bonds -4.3%	US Growth -3.6%	Commodities -8.5%	Muni Bonds -11.5%	S&P 500 8.2%	Commodities 7.8%	US Value 9.2%
Aggregate Bonds -14.6%	Commodities -7.8%	US Treasuries -4.3%	Aggregate Bonds -9.2%	US Treasuries -12.9%	US Value 4.4%	US Value 5.3%	US Small 8.6%
US Value -17.8%	US Value -8.8%	Aggregate Bonds -4.8%	US Value -17.1%	Aggregate Bonds -14.6%	US Small 4.3%	US Small 3.6%	US Real Estate 6.0%
S&P 500 -23.9%	World exUSA -9.2%	S&P 500 -4.9%	US Small -19.0%	S&P 500 -15.5%	World exUSA -0.7%	US Real Estate 3.4%	World exUSA 4.1%
US Small -25.1%	S&P 500 -9.2%	US Value -5.6%	S&P 500 -20.2%	US Real Estate -18.2%	Emerging Markets -1.7%	Muni Bonds 0.6%	Muni Bonds 1.8%
World exUSA -25.9%	US Small -9.6%	World exUSA -9.1%	Emerging Markets -21.5%	US Growth -22.6%	Muni Bonds -1.9%	World exUSA 0.1%	Emerging Markets 1.4%
Emerging Markets -26.9%	US Growth -9.7%	Commodities -10.3%	World exUSA -22.2%	US Small -23.5%	US Real Estate -1.9%	US Treasuries -0.2%	Aggregate Bonds 0.9%
US Real Estate -28.6%	Emerging Markets -11.7%	US Real Estate -10.5%	US Real Estate -23.7%	World exUSA -23.5%	US Treasuries -3.1%	Aggregate Bonds -0.3%	US Treasuries 0.5%
US Growth -30.7%	US Real Estate -12.7%	Emerging Markets -11.4%	US Growth -23.8%	Emerging Markets -27.8%	Aggregate Bonds -3.3%	Emerging Markets -1.4%	Commodities -3.9%

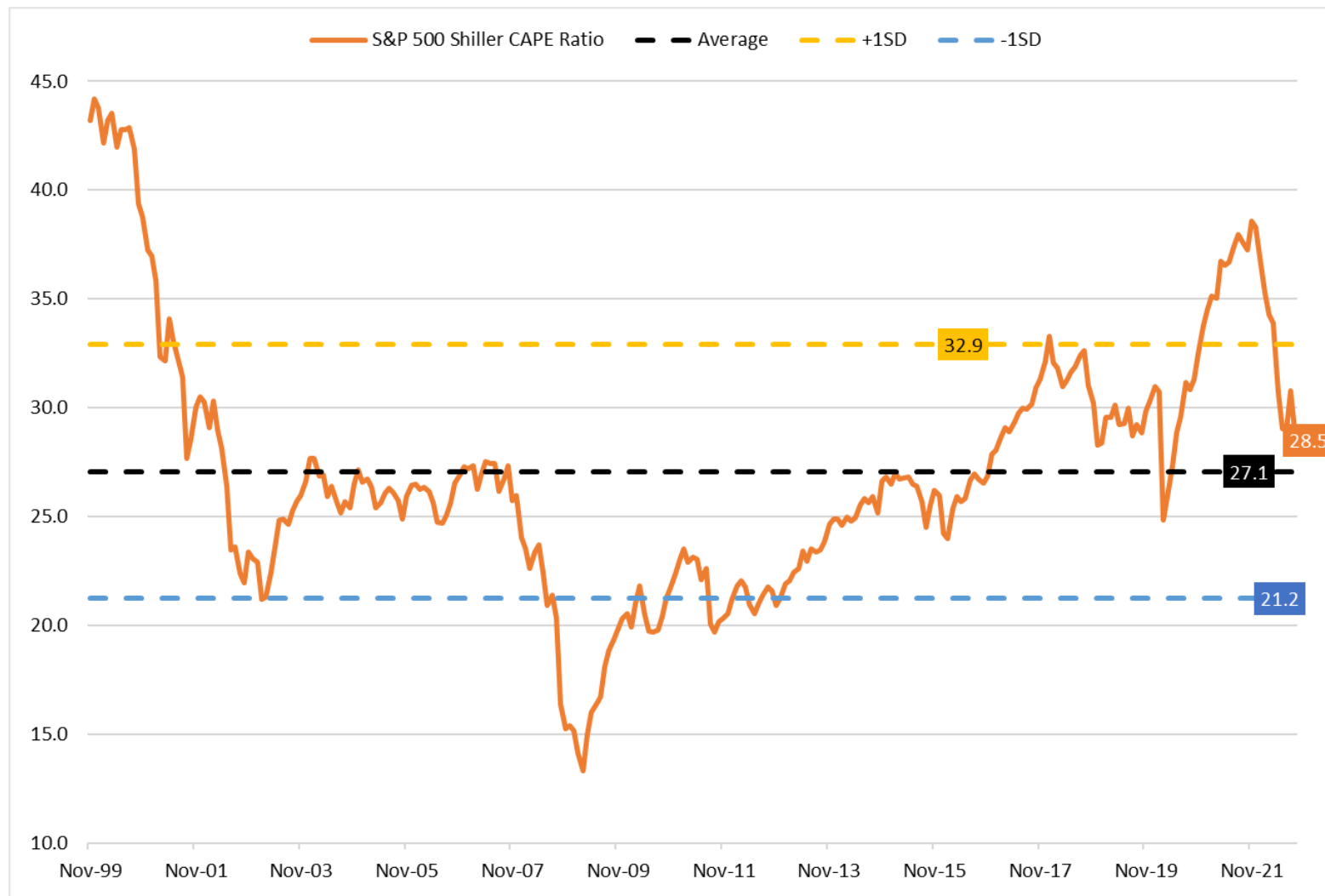
Asset	Index
US Real Estate	Dow Jones US Real Estate Index Total Return
US Growth Stocks	Russell 1000 Growth Total Return
Commodities	S&P GSCI Total Return
US Small Cap	Russell 2000 Total Return
S&P 500	S&P 500 Total Return
US Value Stocks	Russell 1000 Value Total Return
World ex USA	MSCI World Ex USA Total Return
Emerging Markets	MSCI Emerging Markets Total Return
Aggregate Bonds	Barclays US Aggregate Total Return
Muni Bonds	Barclays Municipal Bond Total Return
US Treasuries	Barclays US Treasury Total Return



US Equity Market Valuations

S&P 500 Schiller CAPE Ratio – As of September 30, 2022

- Stocks have fallen due to rich valuations and inflation weighing real earnings.
- The Schiller CAPE Ratio is an alternative measure to the P/E ratio. CAPE smooths earnings over 10-years to reduce “false-positive” signals and is adjusted for inflation.





US Treasury Yield Curve

US Treasury Yield Curve

	Today	6 Mo Ago	Last Year	2 Years Ago
3 Month Treasury Rate	4.04%	0.81%	0.06%	0.11%
6 Month Treasury Rate	4.39%	1.27%	0.06%	0.12%
2 Year Treasury Rate	4.43%	2.46%	0.44%	0.14%
3 Year Treasury Rate	4.43%	2.68%	0.72%	0.18%
5 Year Treasury Rate	4.21%	2.79%	1.16%	0.32%
7 Year Treasury Rate	4.12%	2.85%	1.43%	0.53%
10 Year Treasury Rate	4.01%	2.85%	1.59%	0.76%
20 Year Treasury Rate	4.27%	3.12%	1.99%	1.30%
30 Year Treasury Rate	4.04%	2.95%	2.01%	1.52%

