Economic Update

A Closer Look at Q3 2022 Data Released: October 2022



Stock Market Performance



U.S. stocks continued their slide during the third quarter following a negative first half. Comparing the major indices, the Dow Jones Industrial Average fell the furthest, declining 6.2%, followed by S&P 500's drop of 4.9% and the NASDAQ's fall of 3.9%.

Persistently high inflation and rising interest rates continue to weigh on the equity markets. While the incoming news and fundamentals remained negative overall, the take-away for investors was something along the lines of "it could have been worse."

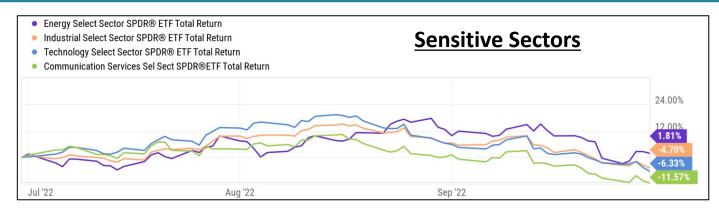
Outside the U.S., the major indices declines were much sharper. The developed international index slid 9.3% and the emerging markets benchmark dropped 11.4%.

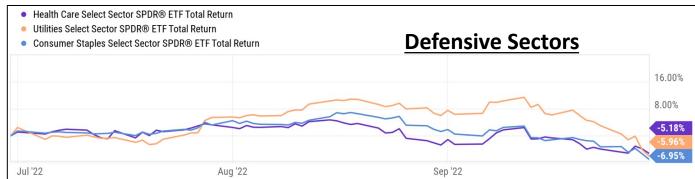
The non-U.S. markets continue to face many of the same issues challenging the domestic markets, but they have various other factors adding pressure on stock prices. For example, Europe continues to feel the impact for the Russia-Ukraine conflict as energy prices skyrocket and fears about the impending winter approach realization. Whereas China's markets have been plagued by rolling COVID-19 lock downs and hesitation around their "elections" with President Xi seeking a third term.

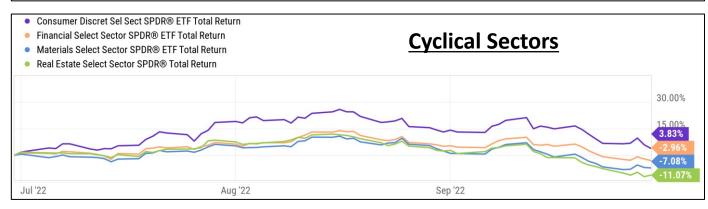




U.S. Sector Performance







It was a tough quarter for most industries. Only two of the eleven S&P sectors posted a positive return during Q3. Consumer Discretionary and Energy were up 3.8% and 1.8%, respectively. The other nine sectors were all in the red with Communication Services and Real Estate falling the farthest.

Following a rebound rally from the June lows, each of the sectors moved higher through mid-August before retreating over the remainder of the quarter.

Whether from declining valuations, concerns about lower future earnings or just nervous selling pressure, the message was clear that investors are growing more concerned about a looming economic slow and threat of recession on the horizon.

It remains to be seen whether peak investor pessimism has been reached. However, with every negative headline and each additional call for a looming recession, the market is one step closer to looking to what it expects comes next.



Asset Class Performance - Trailing Periods

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%

This table shows the performance of asset classes over different time frames. The U.S. Small Cap segment was the relative outperformer in Q3 posting the smallest decline and Commodities are still leading performance on a year-to-date basis despite a drop of over 10% in the quarter.

Even when taking into account the recent declines, the 3-, 5- and 10-year annualized returns are still positive and roughly in-line with longer-term averages.

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					

Emerging Markets investments saw the largest decline during the quarter. Followed by the real estate sector which began to feel the pressure of rising rates, especially in September when the index dropped 12.7%.

Bonds continued to decline as interest rates rose leaving the longer duration (longer average maturity) Aggregate index with a loss of 4.8% and Municipal Bonds down 3.5%. Keep in mind that short duration bonds and funds experienced smaller declines.



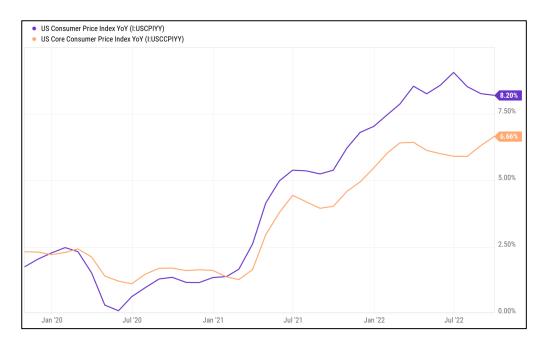
Asset Class Performance – Quarter by Quarter

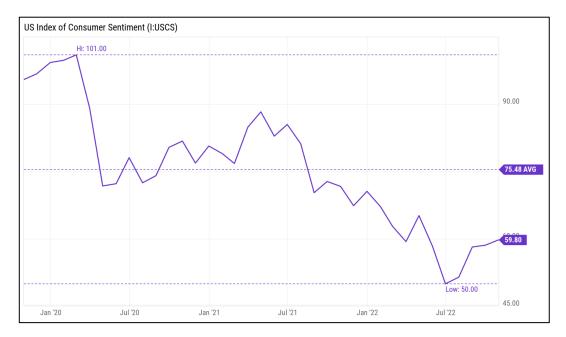
9/30/2022 Qtr Return	6/30/2022 Qtr Return	3/31/2022 Qtr Return	12/31/2021 Qtr Return	9/30/2021 Qtr Return	6/30/2021 Qtr Return	3/31/2021 Qtr Return	12/31/2020 Qtr Return	9/30/2020 Qtr Return	6/30/2020 Qtr Return	3/31/2020 Qtr Return	12/31/2019 Qtr Return	9/30/2019 Qtr Return	6/30/2019 Qtr Return	3/31/2019 Qtr Return
US Small -2.2%	Commodities 2.0%	Commodities 33.1%	US Real Estate 14.6%	Commodities 5.2%	Commodities 15.7%	Commodities 13.6%	US Small 31.4%	US Growth 13.2%	US Growth 27.8%	US Treasuries 8.2%	Emerging Markets 11.9%	US Real Estate 7.9%	US Growth 4.6%	US Real Estate 17.0%
Muni Bonds -3.5%	Muni Bonds -2.9%	US Value -0.7%	US Growth 11.6%	US Growth 1.2%	US Growth 11.9%	US Small 12.7%	Emerging Markets 19.8%	Emerging Markets 9.7%	US Small 25.4%	Aggregate Bonds 3.1%	US Growth 10.6%	US Treasuries 2.4%	S&P 500 4.3%	US Growth 16.1%
US Growth -3.6%	US Treasuries -3.8%	S&P 500 -4.6%	S&P 500 11.0%	US Real Estate 0.7%	US Real Estate 11.4%	US Value 11.3%	US Value 16.3%	S&P 500 8.9%	S&P 500 20.5%	Muni Bonds -0.6%	US Small 9.9%	Aggregate Bonds 2.3%	World exUSA 4.1%	Commodities 15.0%
US Treasuries -4.3%	Aggregate Bonds -4.7%	World exUSA -4.7%	US Value 7.8%	S&P 500 0.6%	S&P 500 8.5%	US Real Estate 7.9%	World exUSA 15.9%	US Value 5.6%	Emerging Markets 18.2%	US Growth -14.1%	S&P 500 9.1%	S&P 500 1.7%	US Value 3.8%	US Small 14.6%
Aggregate Bonds -4.8%	Emerging Markets -11.3%	US Treasuries -5.6%	World exUSA 3.2%	US Treasuries 0.1%	World exUSA 5.9%	S&P 500 6.2%	Commodities 14.5%	World exUSA 5.0%	World exUSA 15.5%	S&P 500 -19.6%	Commodities 8.3%	Muni Bonds 1.6%	Aggregate Bonds 3.1%	S&P 500 13.6%
S&P 500 -4.9%	US Value -12.2%	Aggregate Bonds -5.9%	US Small 2.1%	Aggregate Bonds 0.1%	US Value 5.2%	World exUSA 4.2%	S&P 500 12.1%	US Small 4.9%	US Value 14.3%	World exUSA -23.1%	World exUSA 7.9%	US Growth 1.5%	US Treasuries 3.0%	US Value 11.9%
US Value -5.6%	World exUSA -14.4%	Muni Bonds -6.2%	Commodities 1.5%	Muni Bonds -0.3%	Emerging Markets 5.1%	Emerging Markets 2.3%	US Growth 11.4%	Commodities 4.6%	US Real Estate 14.0%	Emerging Markets -23.6%	US Value 7.4%	US Value 1.4%	Muni Bonds 2.1%	World exUSA 10.6%
World exUSA -9.1%	US Real Estate -14.7%	US Real Estate -6.4%	Muni Bonds 0.7%	World exUSA -0.6%	US Small 4.3%	US Growth 0.9%	US Real Estate 8.1%	US Real Estate 1.9%	Commodities 10.5%	US Real Estate -24.6%	Muni Bonds 0.7%	World exUSA -0.8%	US Small 2.1%	Emerging Markets 10.0%
Commodities -10.3%	S&P 500 -16.1%	Emerging Markets -6.9%	US Treasuries 0.2%	US Value -0.8%	Aggregate Bonds 1.8%	Muni Bonds -0.4%	Muni Bonds 1.8%	Muni Bonds 1.2%	Aggregate Bonds 2.9%	US Value -26.7%	US Real Estate 0.5%	US Small -2.4%	US Real Estate 1.1%	Aggregate Bonds 2.9%
US Real Estate -10.5%	US Small -17.2%	US Small -7.5%	Aggregate Bonds 0.0%	US Small -4.4%	US Treasuries 1.7%	Aggregate Bonds -3.4%	Aggregate Bonds 0.7%	Aggregate Bonds 0.6%	Muni Bonds 2.7%	US Small -30.6%	Aggregate Bonds 0.2%	Emerging Markets -4.1%	Emerging Markets 0.7%	Muni Bonds 2.9%
Emerging Markets -11.4%	US Growth -20.9%	US Growth -9.0%	Emerging Markets -1.2%	Emerging Markets -8.0%	Muni Bonds 1.4%	US Treasuries -4.3%	US Treasuries -0.8%	US Treasuries 0.2%	US Treasuries 0.5%	Commodities -42.3%	US Treasuries -0.8%	Commodities -4.2%	Commodities -1.4%	US Treasuries 2.1%

This visual shows historical quarterly asset class performance for the last 15 quarters.

The randomness of the chart makes a strong case for maintaining a well-diversified portfolio. Looking at the arbitrary color patterns, should reinforce the difficulty of "timing the market."

Attempting to determine with any consistency which asset class will outperform or underperform in a given quarter remains as difficult now as ever.

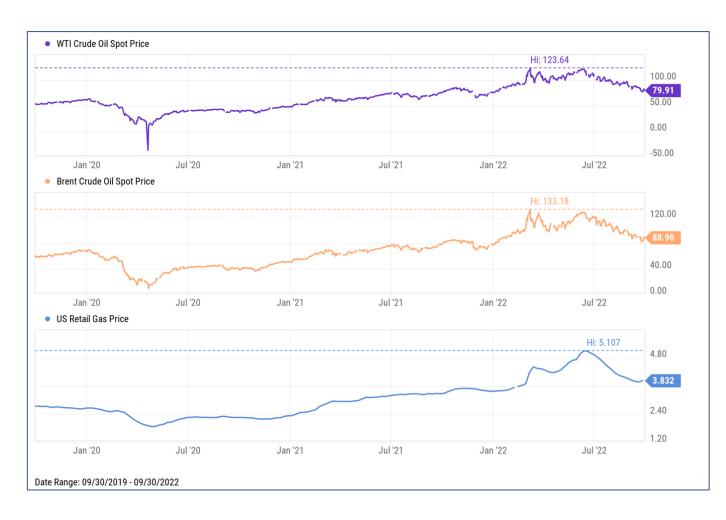




Inflation rates haven't increased in a few months, but year-over-year figures remain elevated. The Inflation Rate was 8.2% as of September, and Core Inflation logged a ten-year high of 6.63%.

The chart to the left shows the U.S. Consumer Price Index (CPI) year-over-year in blue declining from a recent high last quarter. However, the U.S. Core Consumer Price Index (Core CPI) in orange moved higher following a small decline last quarter. While the headline inflation over the past year is alarming, there are reasons to believe that inflation is beginning to moderate and consensus expectations are that this trend will continue into next year.

The chart to the right shows the U.S. Index of Consumer Sentiment rebounded in Q3 from its historic low's last quarter. This is one indicator that might prove to be a positive sign that persistent inflation has not taken hold of the U.S. consumer mindset (yet). As we have noted, the ongoing question for investors is whether inflation will remain at these elevated levels or if it will moderate back towards the 2% level of the last decade or so. Consensus seems to be predicting a moderation but only back to around 4-5%, not the unusually low levels of the past decade.



WTI & Brent Crude Oil hit highs in early 2022. However, Q3 reversed that trend with each spot price decreasing by over 25%.

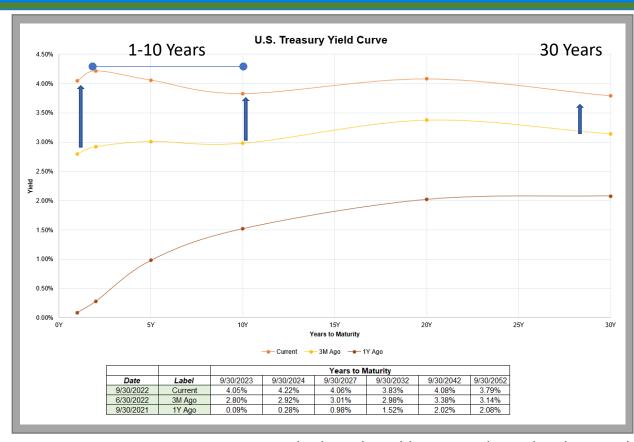
To better understand the idea of inflation moderating over the coming months it helps to look at the underlying components. The following represent approximately 80% of the CPI index and each seems more likely to slow or decline than to accelerate in the coming months:

- <u>Home Prices</u>: mortgage rates have jumped several points
- <u>Food Prices</u>: supply chain easing, Ukraine grain gets out
- <u>Car Prices</u>: chip shortage easing, bubble in used car price
- <u>Durables</u>: supply chain easing and inventory re-stocking
- <u>Job Market</u>: Companies announcing cuts & slowing hires
- Oil/Gas: Remain war dependent but prices have eased

The next round of numbers is anticipated to show continued moderation, meaning continued price increases but at a slower rate. The one caveat we will be monitoring is the potential "noise" created by Hurricane Ian. Natural disasters such as Ian can disrupt economic reports for a month or so as the number of unemployed individuals may jump in the short-term, prices for related rebuilding materials can see a near-term spike, etc.

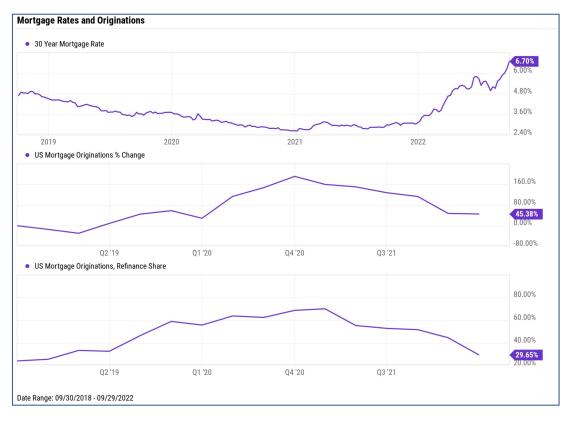
Interest Rates

Name	9/30/2022	6/30/2022	3/31/2022	12/31/2021
US High Yield CCC Effective Yield	16.84% 🛆	14.95% 🛆	9.67% 🔼	7.96%
US High Yield B Effective Yield	9.84% 🛆	9.54% 🛆	6.11% 🛆	4.75%
US High Yield BB Effective Yield	7.72% 🗻	7.17% 🔺	4.74% 🗻	3.40%
US Corporate BBB Effective Yield	6.10% 🛆	5.09% 🛆	3.89% 🛆	2.60%
30 Year Treasury Rate	3.79% 🔺	3.14% 🔺	2.44% 📤	1.93%
US Corporate AAA Effective Yield	4.76% 🛆	3.80% 🛆	3.01% 🛆	2.03%
US Corporate AAA Effective Yield	4.76% 🛆	3.80% 🔺	3.01% 🔼	2.03%
US Corporate A Effective Yield	5.43% 🛆	4.34% 🛆	3.34% 🛆	2.11%
10 Year Treasury Rate	3.83% 🔺	2.98% 🔼	2.32% 🔼	1.52%
5 Year Treasury Rate	4.06% 🛆	3.01% 🛆	2.42% 🛆	1.27%
2 Year Treasury Rate	4.22% 🛆	2.92% 🔼	2.28% 🔼	0.73%
1 Year Treasury Rate	4.05% 🛆	2.80% 🛆	1.63% 🛆	0.38%
6 Month Treasury Rate	3.92% 🔼	2.51% 🔼	1.06% 🔼	0.19%
3 Month Treasury Rate	3.33% 🛆	1.72% 🛆	0.52% 🛆	0.05%
Effective Federal Funds Rate	3.08% 🔺	1.58% 🛆	0.33% 🛆	0.07%



Treasury Rates continue to rise across the board, and by so much on the short-end that the yield curve has flattened past the point of inversion.

The 5-Year Treasury Rate ended Q3 at 4.06%, greater than both the 10-Year Rate's 3.83% yield and the 30-Year's 3.79%. November 2007 marked the last time the 5-Year was above 4%. An inverted, and flatter, yield curve can indicate uncertainty about economic growth in the long term.



The beginning of 2021 saw the lowest 30-year mortgage rates in decades. Since then, mortgage rates have shot higher, ending Q3 at 6.7%. Both the current and near-term outlooks for home sales continued to fall in Q3, according to data from the National Association of Home Builders (NAHB) and Wells Fargo.

Last quarter the real estate market appears to have "frozen." Overall activity is down as refinancing no longer makes sense for most homeowners and new origination has slowed as buyers are trying to digest the doubling of mortgage rates while sellers are coming to the realization that in most areas prices will need to come down some and in others, maybe quite a bit more.

While home price appreciation will likely moderate in the coming months/quarters, this appears to be a normal correction within the business cycle and not something along the lines of the credit bubble back in 2008-2009.

	Housing Indicator Review										
		Last Release			1 Mo. Ago			3 Mo. Ago		1 Yr. Ago	
Overall	Indicator Name	Date	Frequency	Value	1 Mo. Ago	% Change	3 Mo. Ago	% Change	1 Yr. Ago	% Change	
_	Case-Shiller Home Price Index: National	9/27/2022	monthly	305.3	306	- 0.24%	302	1.22%	264	15.79%	
_	US Housing Starts	10/19/2022	monthly	1,439	1,566	▼ -8.11%	1,575	▼ -8.63%	1,559	▼ -7.70%	
	US Building Permits	10/19/2022	monthly	1,564	1,542	1.43 %	1,696	- 7.78%	1,615	- 3.16%	
	US New Single Family Houses Sold	9/27/2022	monthly	685	532	28.76%	636	7.70%	686	- 0.15%	
_	US Pending Home Sales Index	9/28/2022	monthly	88	90	- 2.00%	100	▼ -11.24%	117	-24.19%	
	30 Year Mortgage Rate	10/13/2022	weekly	6.70%	5.55%	2 0.72%	5.70%	17.54%	3.01%	122.59%	
	US Households	8/2/2022	monthly	128,111	128,027	0.07%	127,410	0.55%	126,338	1.40%	

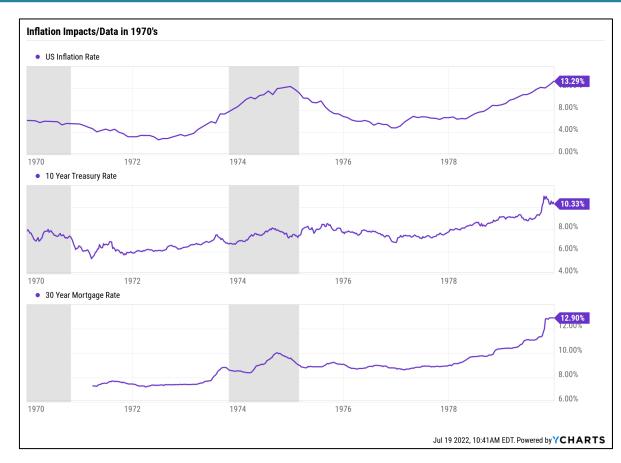


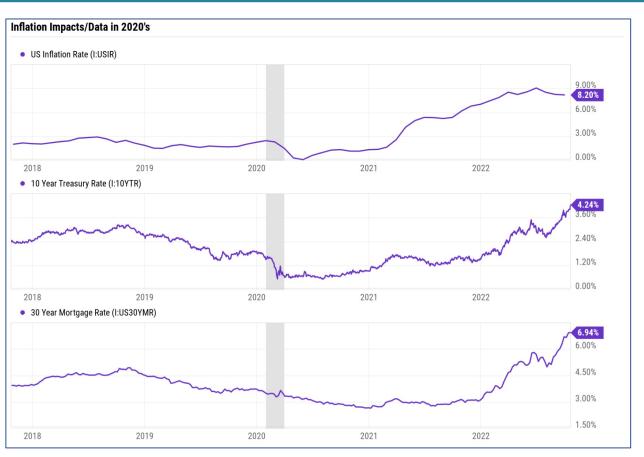
Leading Indicator Summary & Trends



This table is a heatmap of various economic data points which are considered leading indicators and shows their trends over time. The first three columns show a quarter-by-quarter change, whereas the following columns show annual changes in the data.

This data seems to support the theory of well-known, independent economic analyst Ed Yardeni. He has suggested that the U.S. is experiencing a "rolling recession." He describes this as an economy in which different industries are afflicted at different times. He also believes that inflation maybe following a similar rolling script with different measures capturing relatively higher or lower levels of inflation at different times.





We used these charts last quarter to compare the inflation experience of the 1970's to our current situation. The chart to the right has been updated through the middle of October. While the comparison is certainly not apples-to-apples, the late 70's/early 80's is worth looking at as this was the last time the U.S. faced inflation at these levels.

The greatest fear for The Fed is that the expectation of inflation becomes entrenched in the consumer mindset. That would shift what continues to appear like a short-term issue that requires attention but not extreme action into a situation more akin to the 70's.



Where Do Things Go From Here?

When The S&P 500 is Down 25% or Worse Since 1950

				Cumulative Forward Returns After Market Bottom					
Peak	Trough	Decline	Days Peak-to- Trough	1-year	3-year	5-year	10-year		
12/12/61	6/26/62	-28%	196	34%	59%	76%	107%		
11/29/68	5/26/70	-36%	543	44%	56%	31%	60%		
1/11/73	10/3/74	-48%	630	35%	55%	76%	163%		
11/28/80	8/12/82	-27%	622	58%	84%	225%	309%		
8/25/87	12/4/87	-34%	101	21%	45%	92%	336%		
3/24/00	10/9/02	-49%	929	33%	54%	100%	87%		
10/9/07	3/9/09	-57%	517	68%	102%	178%	305%		
2/19/20	3/23/20	-34%	33	76%	?	?	?		
1/3/22	9/30/22	-25%*	270*	?	?	?	?		
	Average	-38%	427	46%	65%	111%	195%		

Last quarter we highlighted the actions of then Fed Chair Paul Volker in the late 70's and early 80's. Noting that the peak-to-trough decline was 27% from late 1980 into 1982 and compared that to the approximately 25% decline through June (and also the end of the third quarter.) We went on to explain that the entire decline was recouped in the following 4 months as the market rallied following the suggestion that the Fed may shift tactics.

We recently received this data provided by AMG Funds that shows each period the S&P 500 has declined 25% or more since 1950 and the cumulative returns following the market reaching its low point.

While no one enjoys the downturn, it does argue for at least keeping a portion of long-term assets invested and beginning to consider when to rebalance or invest additional funds into the stock market. RiverGlades continues to wait for additional clarity as it relates to intermediate-term inflation and the likelihood of unanticipated Fed interest rate increases in the future.

*Current market trough to date

Source: AMG Funds, FactSet, S&P 500 (Price return)

Where Do Things Go From Here?



The chart to the left shows the S&P 500 Shiller CAPE Ratio going back to 2005. Yale Professor Robert Shiller created this variation of the traditional P/E Ratio to account for the cyclicality of earnings. Rather than simply taking the trailing year's earnings as is done with the traditional P/E, the CAPE Ratio averages the past 10 years earnings and adjusts for inflation. This provides another lens, a longer term one, through which valuation can be analyzed.

The chart clearly shows that the CAPE Ratio was hitting a high point not seen in the past 20 years at the beginning of the year. However, the ratio had been over it's average levels for almost a decade. The most current data shows it has dropped back to 28 just above its longer-term average of 26. While the ratio could certainly drop below it average, the chart shows just how far valuations have already come down since the beginning of the year.

The next few quarters will remain data dependent, but RiverGlades outlook is relatively constructive all things considered. While late to the game, The Fed is now making consecutive 0.75% interest rate hikes to address inflation while at the same time talking the market up when it has a few bad weeks and talking the market down when it begins to get overly bullish. As such, volatility is likely to continue, but something along the lines of a soft landing looks likely.

- •All investment strategies have the potential for profit or loss. Changes in investment strategies, contributions or withdrawals may materially alter the performance and results of your portfolio.
- •Different types of investments involve varying degrees of risk, and there can be no assurance that any specific investment will either be suitable or profitable for a client's investment portfolio.
- •Economic factors, market conditions, & investment strategies will affect the performance of any portfolio there are no assurances that it will match or outperform any particular benchmark.
- •The information contained herein has been obtained from sources believed to be reliable, but the accuracy of the information cannot be guaranteed.
- •This is not to be considered a solicitation for the purchase or sale of any individual security or investment strategy.

YCharts is not registered with the U.S. Securities and Exchange Commission (or with the securities regulatory authority or body of any state or any other jurisdiction) as an investment adviser, broker-dealer or in any other capacity, and does not purport to provide investment advice or make investment recommendations by or through the Content found on the Site or otherwise. The Site and the Content are provided for the sole purpose of enabling you to conduct investment research. Other uses of the Site and the Content are expressly prohibited. Full disclosure: https://ycharts.com/about/disclosure



For more information, please visit https://rivergladesfo.com/

Q3 2022

Released October 2022