Market Review and Outlook
September 30, 2022

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Market Environment

September 30, 2022

- **Economy**
  - The Fed made a significant and explicit statement at their September meeting to convince markets they are serious about raising interest rates and holding them higher to fight inflation. Markets are adjusting to the new reality.
  - While economic activity is moderating in some sectors, the economy is not in the recession it is believed to be.
  - There is still significant activity and momentum in place from excessive stimulus of the past few years continuing to provide solid nominal level of activity.
  - Nominal GDP in Q2 was a strong 8.4%, which is 3.5% above the average rate since 1985, but with 9% GDP Price inflation, it results in a net -.6% GDP. Together with a decades low 3.5% unemployment rate, this level of activity supports continued inflationary environment. CPI remains above 8% after peaking at 9.1% in June.
  - Inflation has broadened with core CPI and PCE maintaining high levels and remaining well above expectations.
  - Continued strong demand for labor continues to put upward pressure on wages and overall inflation. The Phillips curve has been revived, and the Fed is highly focused on it.
  - Supply chains are in the late stages of normalizing after historic disruption due to excess demand. There remains many timing issues and other delivery and inventory related issues, but now more at the company level.
  - Input costs including commodities, raw materials, freight and transportation have come off their highs recently, but are still high while employment costs remain high, and companies are passing those costs along to final prices.
  - Payrolls should continue to increase as there continues to be more jobs available than people looking for work by almost 2 to 1. Jobs available have begun to decline as many have been filled and companies have started to cut back.
  - Consumer demand has shifted somewhat from goods to services, where labor is in short supply and wages are rising.
  - Demand for goods remains strong as consumers continue to be willing to pay higher prices.
  - Median Home prices have come down off their record above $400,000 as mortgage rates rise and purchases slow.
  - Corporate earnings season for Q3 is upon us, with valuations and expectations of earnings growth still too high.
  - Market valuations continue to be inflated from years of excess stimulus having flowed into financial assets that are in the process of correcting. Excess liquidity still needs to be extracted and will continue to pressure financial assets.
  - Geopolitical risks are rising rapidly with economic conditions deteriorating in many major countries.

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Market Environment

September 30, 2022

- **Policy**
  - The Fed is trying to catch up by hiking rates aggressively and has vowed to continue to do so even at the risk of recession to fight inflation. They fell so far behind the inflation curve they are struggling to get ahead of it.
  - The Fed tightened 75bp June, July, and September. They have communicated they will do 75bp again in November, with a 50bp hike in December and hold rates above 4% through 2023, using forward guidance as an additional policy tool.
  - Quantitative easing has been reduced to only reinvesting limited amounts of Treasury and Mortgage Backed Securities.
  - Fiscal policy was on hold amid high inflation and with massive funds already approved are yet to be used; however; congress recently passed more significant spending packages via the "Inflation Reduction Act" in August.
  - Energy policy has been harmful for both fossil fuels and alternative energy, resulting in less of each and higher inflation.
- **Markets**
  - Market Expectations for a Fed Funds rate above 4% by year end and holding through 2023 are solidifying, while expecting (hoping for) a pivot to ease by mid year have faded, pushing rates up significantly and prices of stocks, bonds, and other assets down – significantly.
  - Market interest rates have finally adjusted to current policy with short and intermediate term rates rising above 4%, but not long rates.
  - Mixed messages from Fed Chair Powell increased uncertainty and created significant market volatility through hope of a "pivot".
  - After a period of false hopes that the Fed would reverse course and stop tightening and begin to ease policy early next year, reality has set in and pushed stocks back down to new lows, ending the quarter at 3585 on S&P 500, near our targets set coming into the year.
  - The significant rise in interest rates, together with downward earnings guidance has weighed on stocks.
  - The S&P 500 was down -5% in Q2, and down -24% YTD. The Q3 decline was broad based, but with Value stocks actually underperforming as the rise in rates have begun to provide competition for income oriented, dividend paying value stocks.
  - Bond markets posted historic negative returns with the Aggregate Bond Index declining 14.8% YTD in total return as interest rates moved above 4% across all maturities out to 10 years.
  - Market and economic headwinds and tailwinds are coming together as the Fed accelerates rate hikes well above previous market expectations and inflation seeps deeper into the economy. **The Feds own rate targets are more than 1% higher than 3 months ago.**
  - To date, those companies that have increased prices, and have product to sell, have been rewarded.
  - Meanwhile corporate and mortgage yield spreads widened, furthering the overall bond market losses.
  - There has been nowhere to hide as even ultra short term maturities turned in negative performance.
  - This earnings season was a mix of companies able to continue to push costs through to consumers (or not), have the goods and services and workers to satisfy demand (or not), managing inventory (or not), and consumers willing to pay higher prices (or not).

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Market Outlook

September 30, 2022

- We are in the midst of perhaps one of the greatest policy mistakes, simultaneously on fiscal, monetary, and energy policy in history.
- The Fed has acknowledged their policy mistake and are moving aggressively to catch up, which is causing increasing levels of uncertainty and volatility. They have stated they are willing to risk a recession to control inflation.
- We feel inflation will continue to be a key focus of markets in the near term as it continues to rise above expectations and forces the Fed to increase ultimate rate targets, pushing rates higher and upsetting equity markets.
- Financial and risk assets have been the beneficiary of excess stimulus in the system for many years and are now faced with its removal. A secular shift is occurring and it is important to view markets and economic history in a 40 year window rather than a 3 year window.
- Volatility will surely continue amid rising rates with the 10-year Treasury reaching above 4% and a real risk of S&P 500 reaching 3200 or below, an additional 10% decline due to reduced forward earnings growth and declining P/E ratios from still high levels.
- We have begun to see significant declines and stress in unprofitable companies living off of free capital that is going away. Glimmers of unknown risk becoming known such as trouble in UK pensions due to unknown leverage, and CLO's may start to become evident.
- Evidence continues to show businesses are having to raise wages to attract workers, while also cutting back on service hours and production as the cost and unavailability of labor prevents business growth. The employment void has begun to close.
- Rising costs of labor, raw materials, transportation, and other input costs are being passed through, with CPI remaining above 8%. An open question will be the ability to pass through higher costs and maintain volume through all phases of production and delivery.
- With supply chains largely normalized, product and inventories are flowing back to market, however with higher input costs imbedded that will have to be passed through to final sales or reduced corporate profit margins and cash flow.
- Some input costs including raw materials and transportation via lower gas prices and progress on supply chains have moderated.
- As previously discussed, manufacturing will likely exhibit continued growth amid onshoring of supply chains and growth in logistics, new technology, including alternative energy, electric vehicles, efficient operations and transportation of goods and services.
- A recession as defined by two quarters of negative GDP growth has been achieved, where inflation is higher than nominal GDP. However, we feel the underlying nominal level of activity remains solid, and recession talk in a broader sense may be premature.
- The market level of short term interest rates have reached a level consistent with what we feel is an appropriate target of Fed Funds, while longer term interest rates may still have further to rise. Short-term, high quality securities over 4% yield present good value.
- The upcoming earnings season presents significant uncertainty as corporate results will be company specific and their ability to manage profit margins through cost controls and passing on higher prices.

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Investment Strategy

September 30, 2022

- We remain defensive in both equity and fixed income markets amid growing earnings pressures and rising interest rates.
- Inflation pressures are broad based and remain high as input costs such as wages continue to move higher, putting upward pressure on interest rates, while profit margins may contract as consumers begin to reject higher prices.
- We will be watching inflations impact on demand for elastic and inelastic consumption for clues on changing consumer behavior due to high inflation, and the implications across industries and companies.
- The ability of businesses to pass higher costs through to consumers, and consumers willing to pay may be hitting a threshold. Early indications have shown this impact hitting lower income but not yet higher income consumers.
- Investment strategy has been reducing overall equity allocation by harvesting gains/trimming positions in growth sectors and rebalancing to high quality dividend paying value stocks and short-term fixed income.
- **During Q3, investment strategy moved to more significant underweight equities to -15% relative to neutral strategic asset allocation. Given the heretofore rise in interest rates and having avoided much of the damage, an explicit reallocation overweight in Fixed Income was made from equity and fixed income cash.**
- **The fixed income allocation is focused on short term US Treasuries at now over 4% yield while also adding GNMA Mortgage-Backed securities (full faith and credit of US Government) at over 5%.**
- **We continue to underweight exposure to corporate credit given low incremental yield and risk of significant spread widening.**
- Within equities, Utilities, Banks and Energy are primary areas of focus with an "equal weight" strategy and minimal "FAANG+"
- Maintain Treasury Inflation protected securities (TIPS) as implied inflation remains well below reality and our expectations.
- As we move into Q4 2022, higher interest rates, inflation, energy costs, and a growing debt burden, there is a risk of decelerating economic activity, and earnings. Earnings growth expectations and P/E ratios remain high.
- As we see progress unclogging the supply chains, jobs getting filled in critical sectors, and pricing pressures ease, we will feel more comfortable increasing risk exposures; however, significant progress is needed.
- Geopolitical risks have increased recently and may have consequences on the global economy, particularly in Europe.
- Significant economic energy remains in the system that should mitigate risk of deep recession; however, will also maintain high inflation pressures, increasing uncertainty on corporate profits. Company specific management will be a differentiator.

Market Review

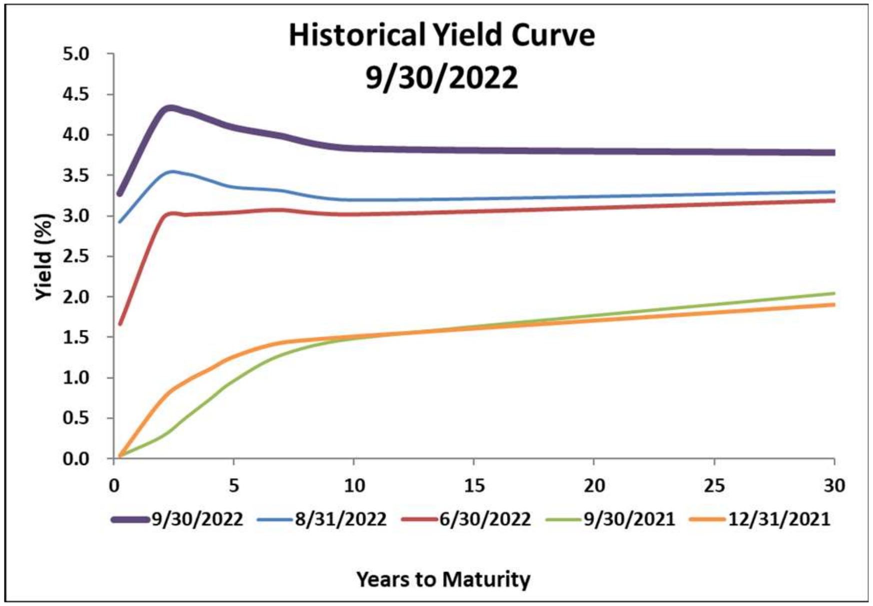
September 30th, 2022

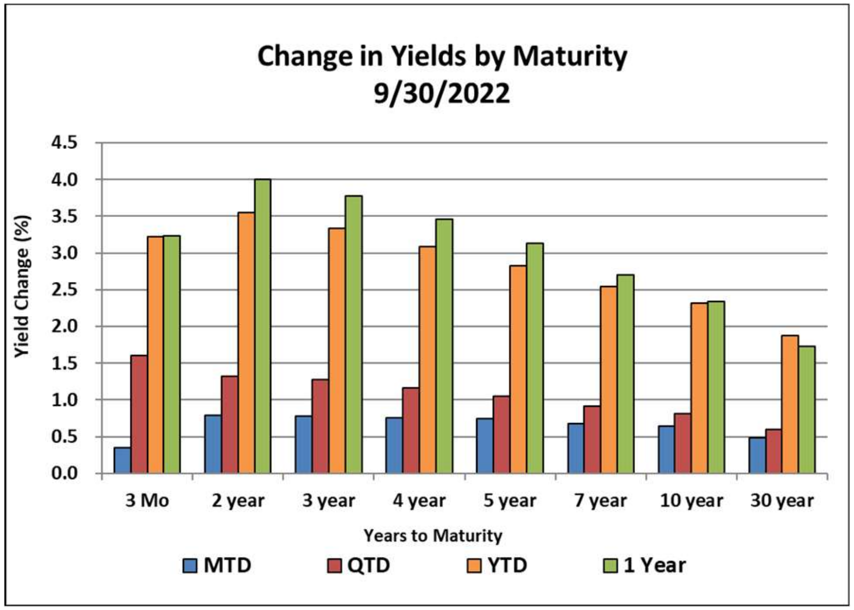
- Equity markets remain volatile as the S&P 500 dropped back into bear market territory at down -24% amid high inflation, aggressive Fed tightening, and significant rise in rates.
- Equity markets are being pushed around by individual company earnings guidance, reduced earnings growth expectations, and still high valuations.
- Interest rates rose significantly in Q3. The bond market total return is down -4.9% QTD and a record -14.8% YTD.
- Interest rates are responding to aggressive Fed tightening and higher inflation, and are not seeing a benefit from flight to quality from risk assets.

Market Review

Yield Curve – September 30th, 2022

- Q3 2022 saw rates rise significantly across the curve as the Fed accelerated rate hikes, increased terminal rate projections, and vowed to hold rates higher throughout next year.
- Short and intermediate rates adjusted significantly, by more than 1%, while long term rates also rose significantly amid reduced quantitative easing and pronounced Fed forward guidance.
- As inflation and expectations of Fed policy ratcheted higher, rates rose above 4%.
- The range of 4% - 4.5% short term rates is correctly pricing in expectations of 4.25% Fed Funds rate at year end 2022, however longer term rates may have further to go to reflect reduced QE and persistent inflation.

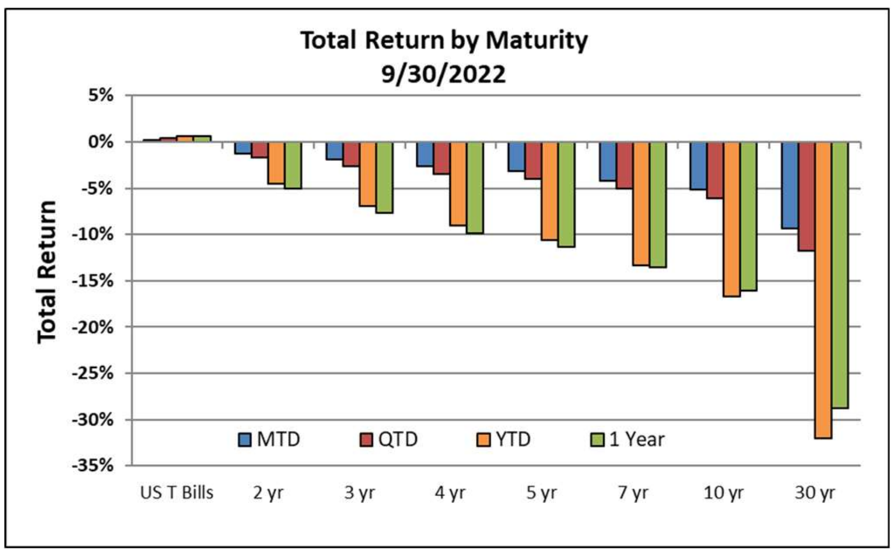


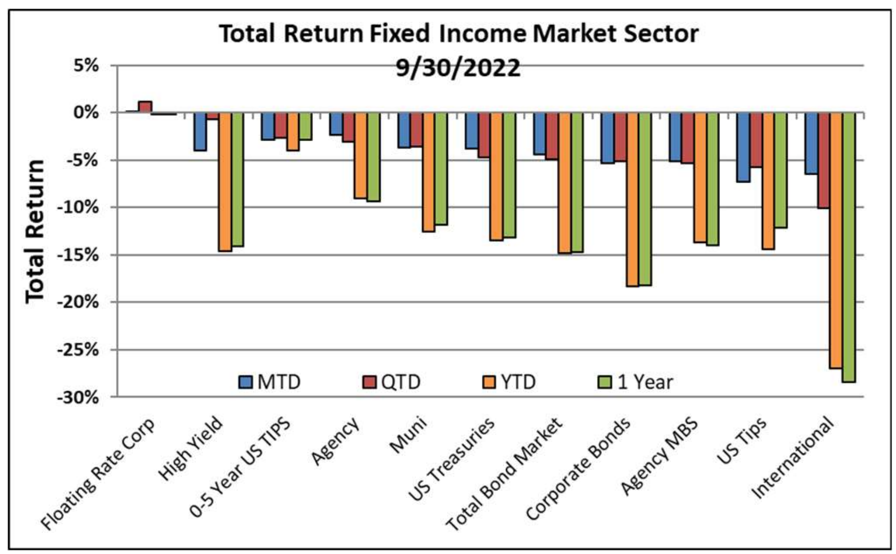


Market Review

Yield Curve and Sector Returns – September 30th, 2022

- The rise in rates in Q3 pushed total returns on Treasuries further negative, significantly so, particularly in longer term maturities (longer duration) with greater sensitivity to changes in interest rates.
- The losses across the bond market are some of the worst in history. The aggregate bond index is down -5% for Q3 and -14.8% year to date. There was nowhere to hide except floating rate notes.
- Corporate bonds and Mortgage-Backed Securities generated even worse returns than Treasuries as risk premiums widened. International bonds suffered the worst returns for Q3 and YTD.
- Despite higher inflation readings, even short term TIPS generated negative total returns in Q3.
- Longer term securities are still vulnerable with inflation high and the Fed still unwinding Quantitative easing. Short term rates may now have sufficient income to offset further price volatility.

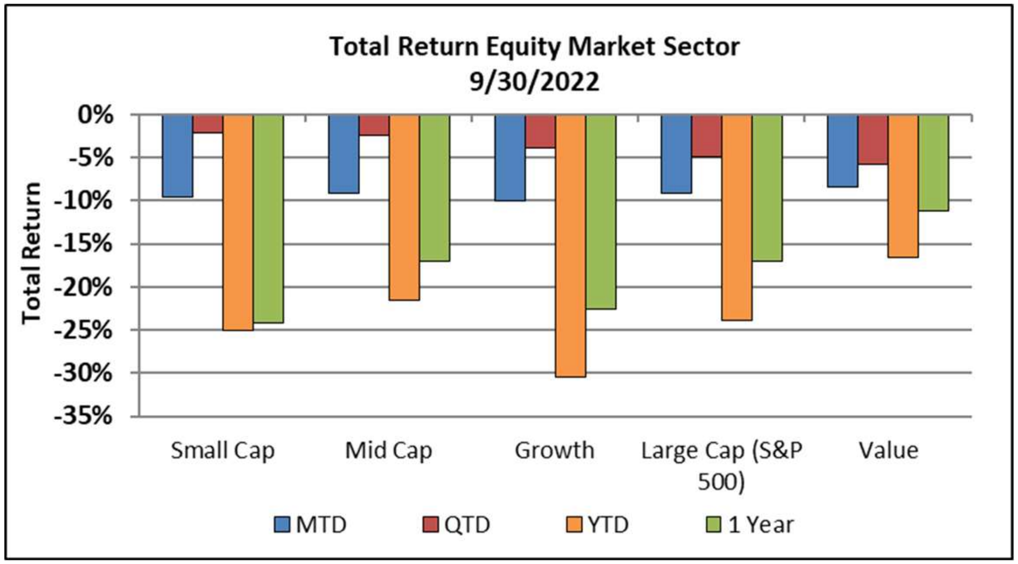


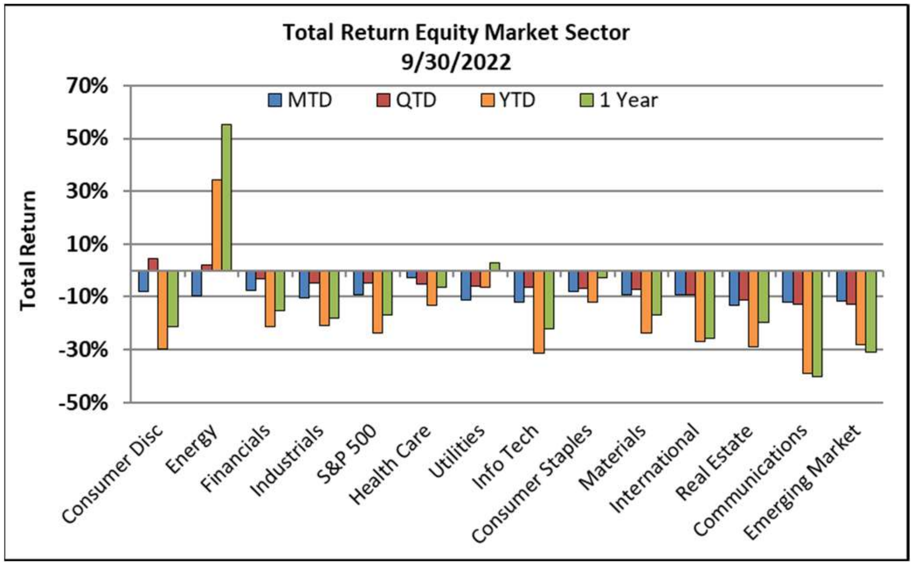


Market Review

Equity Market Returns – September 30th, 2022

- Equity market losses were broad based during Q3.
- For the Quarter, some Value stocks and sectors such as Real Estate and Utilities underperformed due to the rise in rates now providing competition for income oriented investments.
- Consumer discretionary stocks rebounded a bit in Q3, while energy, financials, and industrials stabilized relative to other riskier growth sectors during the quarter such as technology and communications.
- Within growth sectors, semi conductor companies, among others, provided guidance toward lower growth in sales and earnings.
- The energy sectors weathered a decline in oil and gas prices during the quarter, that have since stabilized; however the energy market remains a focus of the global economic environment.





Market Scoreboard

September 30th, 2022

Market Summary - September 30th, 2022					
Bond Market	**MTD**	**QTD**	**YTD**	**1 Year**	**Yield**
Total Bond Market	-4.5%	-4.9%	-14.8%	-14.8%	4.7%
US Treasuries	-3.8%	-4.7%	-13.5%	-13.2%	4.1%
US TIPS (Inflation Prot.)	-7.3%	-5.7%	-14.4%	-12.2%	2.0%
Corporate Bonds	-5.3%	-5.1%	-18.3%	-18.2%	5.7%
Floating Rate Corp	0.1%	1.2%	-0.2%	-0.2%	3.0%
US MBS Index	-5.1%	-5.4%	-13.7%	-14.0%	4.6%
High Yield Corporates	-4.0%	-0.7%	-14.6%	-14.1%	9.5%
Merrill Muni Index	-3.7%	-3.6%	-12.6%	-11.8%	3.4%
International Bonds	-6.5%	-10.1%	-27.0%	-28.4%	1.9%
Commodities/Other	**MTD**	**QTD**	**YTD**	**1 Year**	**End Value**
Oil (WTI)	-10.7%	-18.7%	12.9%	16.6%	79
Gold	-2.9%	-8.1%	-9.2%	-5.5%	1,661
Dollar Index	3.1%	7.1%	17.2%	19.0%	112

Market Summary - September 30th, 2022					
Stock Market Indices	**MTD**	**QTD**	**YTD**	**1 Year**	**End Value**
DOW Jones Avg.	-8.8%	-6.2%	-19.7%	-15.8%	32,845
NASDAQ Composite	-10.4%	-3.9%	-32.0%	-27.3%	12,391
Large Cap Core (S&P 500)	-9.2%	-4.9%	-23.9%	-17.0%	4,130
Large Cap Growth	-10.0%	-3.9%	-30.4%	-22.6%	2,744
Large Cap Value	-8.5%	-5.8%	-16.6%	-11.1%	1,435
Mid Cap Core	-9.2%	-2.5%	-21.5%	-17.1%	2,513
Mid Cap Growth	-8.8%	-0.7%	-25.5%	-21.9%	1,165
Mid Cap Value	-9.5%	-4.0%	-17.5%	-12.2%	826
Small Cap Core	-9.6%	-2.2%	-25.1%	-24.1%	1,885
Small Cap Growth	-9.0%	0.2%	-29.3%	-30.7%	8,409
Small Cap Value	-10.2%	-4.6%	-21.1%	-17.2%	15,042
Europe	-8.7%	-10.7%	-32.6%	-32.0%	410
England	-9.3%	-11.2%	-20.9%	-17.8%	7,423
Japan	-10.9%	-7.1%	-26.9%	-25.9%	28,792
Shanghi 300	-9.6%	-19.3%	-29.8%	-26.4%	4,170
International	-9.3%	-9.3%	-26.8%	-25.7%	1,937
MSCI China	-14.6%	-22.5%	-31.2%	-38.6%	492
Emerging Markets	-11.5%	-13.0%	-28.0%	-30.8%	40

Market Review

Yield Curve Scenario Analysis – September 30th, 2022

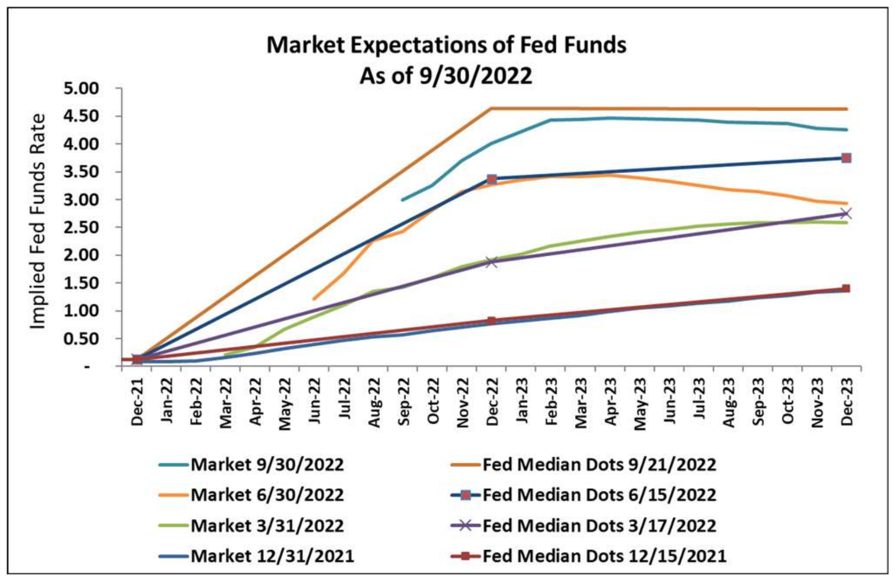
- While it may feel like rates have risen significantly over the past year, past tightening cycles have seen 400 basis point increases in rates. Rates remain relatively low by long term historical norms.
- Short term rates have now moved about 400 basis points, consistent with other tightening cycles.
- The rise in inflation currently dwarfs anything seen since 1984, so further upward rate moves are possible.

Market Review

Monetary/Fed Policy – September 2022

Federal Reserve Median Economic Projections As of 9/30/2022					
Change in GDP	**Actual**	**2022**	**2023**	**2024**	**Longer Run**
September 2022 Projection		0.2	1.2	1.7	1.8
June 2022 Projection		1.7	1.7	1.9	1.8
Mar. 2022 Projection		2.8	2.2	2.0	1.8
Actual Q1 2022 yoy/qoq	**3.5%/-1.6%**				
Unemployment Rate					
September 2022 Projection		3.8	4.4	4.4	4.0
June 2022 Projection		3.7	3.9	4.1	4.0
Mar. 2022 Projection		3.5	3.5	3.5	4.0
Actual June 2022	**3.6%**				
PCE Inflation					
June 2022 Projection		5.4	2.8	2.3	2.0
June 2022 Projection		5.2	2.6	2.2	2.0
Mar. 2022 Projection		4.3	2.7	2.3	2.0
Actual May 2022	**6.3%**				
Core PCE Inflation					
June 2022 Projection		4.5	3.1	2.3	
June 2022 Projection		4.3	2.7	2.3	
Mar. 2022 Projection		4.1	2.6	2.3	
Actual May 2022	**4.7%**				
Projected Policy Path- Fed Funds					
Septmeber 2022 Projection		4.4	4.6	3.9	2.5
June 2022 Projection	1.6	3.4	3.8	3.4	2.5
Mar. 2022 Projection	0.4	1.9	2.8	2.8	2.4

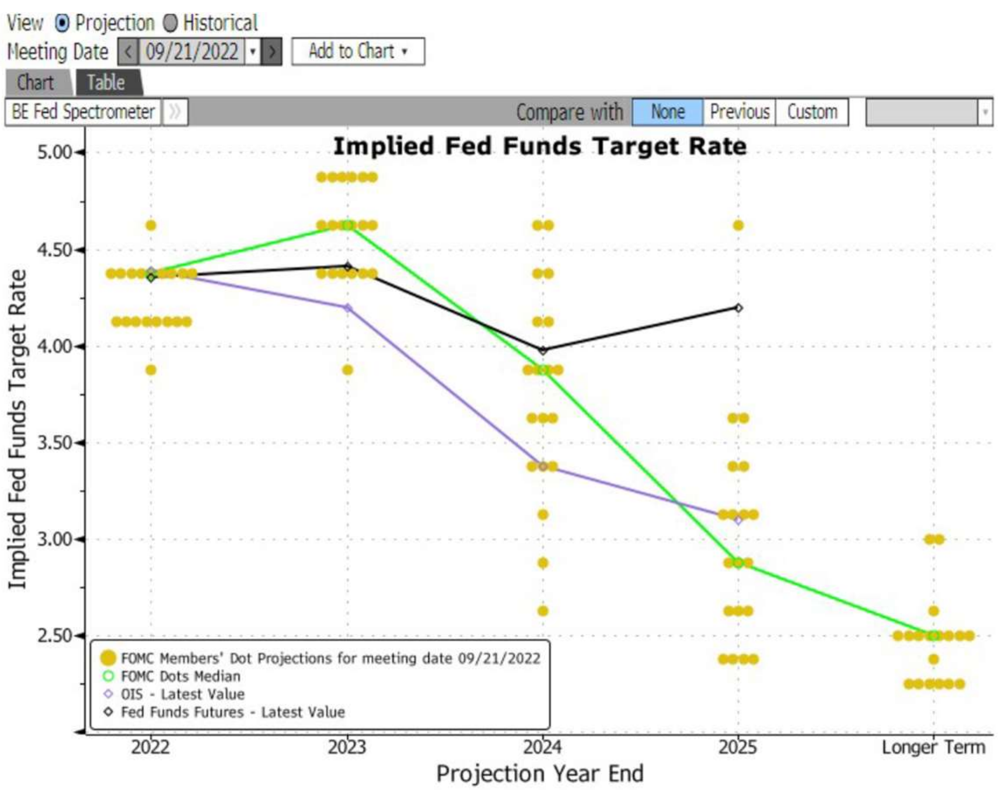
- The Fed hiked interest rates to a range of 3-3.25% in its September Meeting and made a significant statement.
- Governors have pulled forward timing of the future rate hikes, with expectations of a fourth consecutive 75 bps hike in November, 50bp in December, then holding for all 2023.
- The Fed continues to chase reality in their economic projections and reacting by shifting policy rate expectations accordingly.
- The market has adjusted to the idea there will be no “Fed Pivot” and they will hold rates higher through 2023.



Market Review

Monetary Policy – September 2022

- All Governors agreed with the decision to raise interest rates 75bp for the third time, and all Governors are expressing agreement to raise above 4% by year end and hold through 2023.
- The Feds Dot Plot shows all Fed Governors thoughts on where rates will be at each time period, with the median suggesting a rate just under 4.5% by year end 2022, and over 4.5% and holding in 2023.
- Inflation expectations have risen but long-term inflation implied by TIPS remains well below actual inflation and our expectations.



Current Fed Funds Rate
3.08

10 Year Tip	10 Year UST	Implied Inflation Premium
1.30	3.71	**2.41**

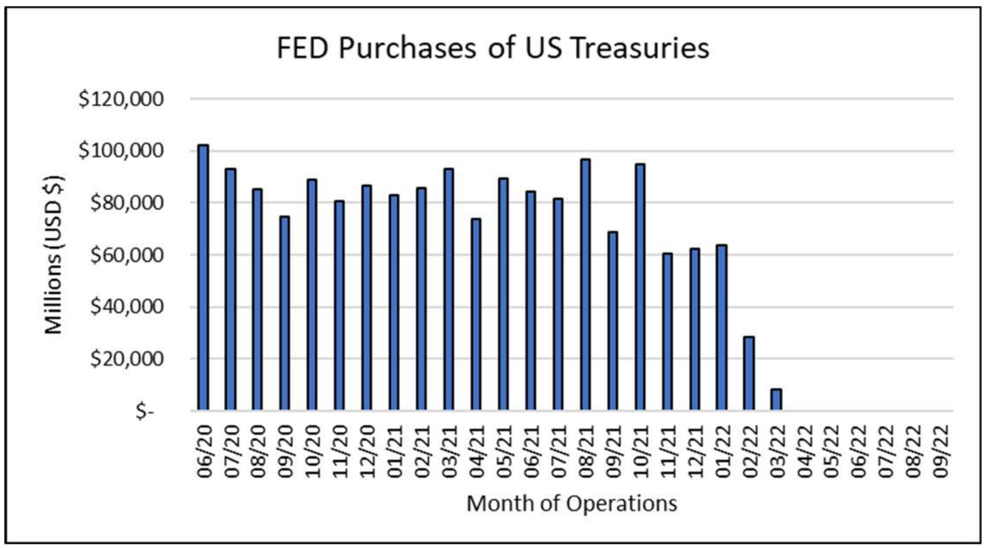
5 Year Tip	5 Year UST	Implied Inflation Premium
1.49	3.94	**2.45**

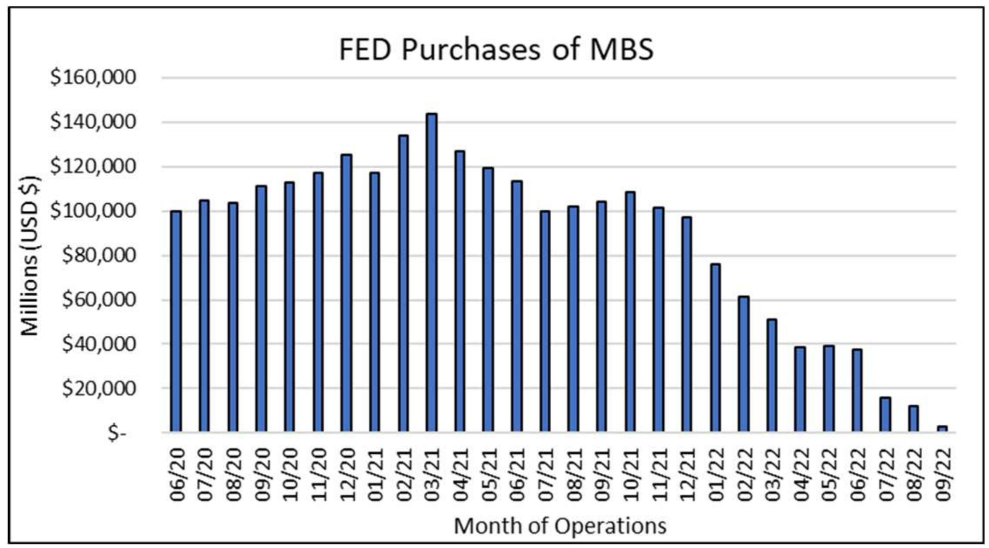
2 Year Tip	2 Year UST	Implied Inflation Premium
1.85	4.12	**2.27**

Fed Purchases

June 2022

- The FED stopped purchasing US Treasuries in March of 2022 and is finally bringing its Mortgage Purchasing operations to a close; only operating as necessary to facilitate the MBS settlement process.
- The Fed Purchased $31 Billion in Mortgages during Q3 2022.
- In sum since 6/1/2020 the Fed has purchased: $1.684 Trillion in US Treasuries and $2.477 Trillion in Mortgage-Backed Securities to "maintain liquidity" and further stimulate the economy, which is currently running with inflation accelerating through 40-year highs.
- The FED may still rollover at auction maturities of US Treasuries that exceed its monthly cap of balance sheet run down.

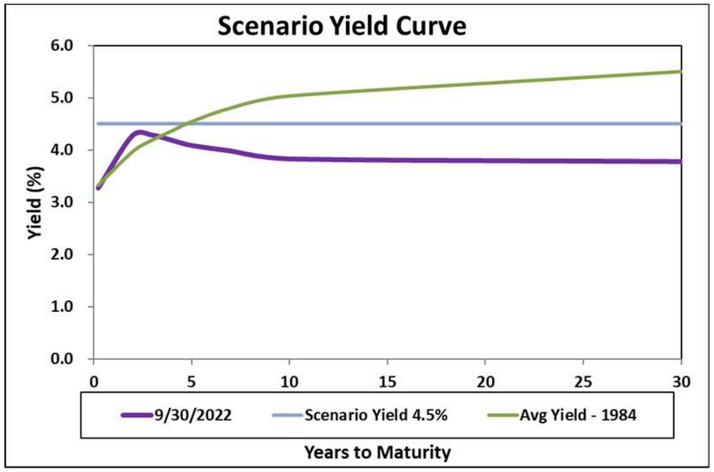


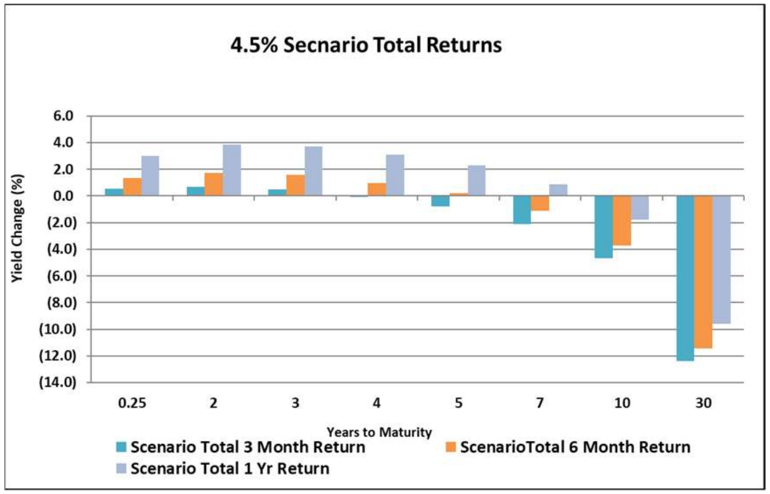


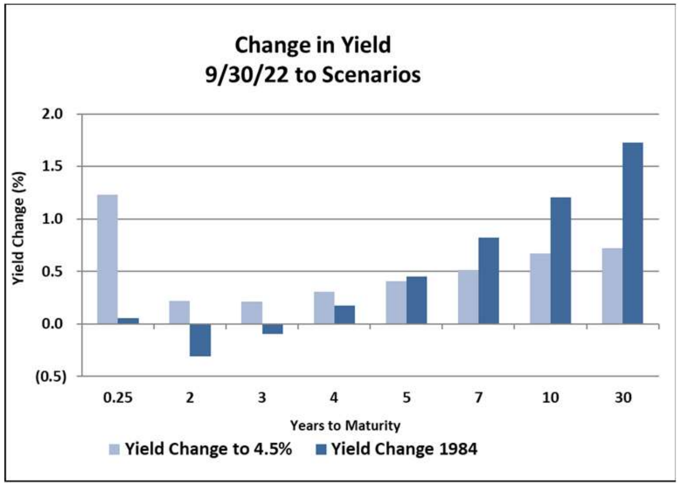
Market Review

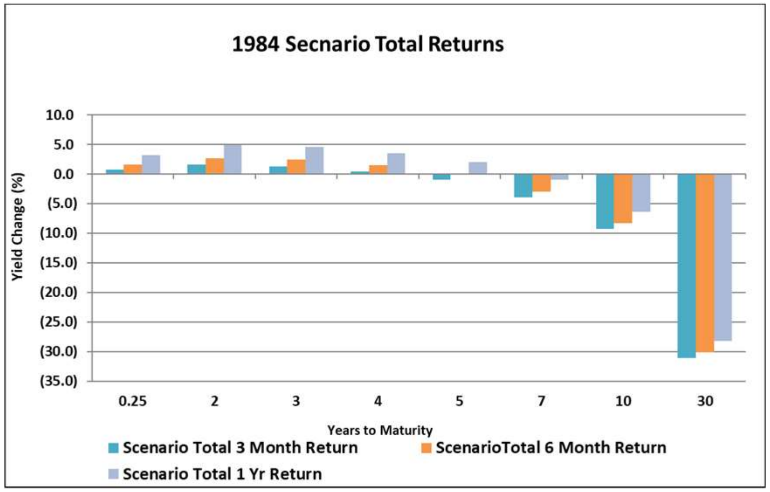
Yield Curve Scenario Analysis – September 30th, 2022

- Given the recent rise in rates above 4%, the higher current level of income in shorter term maturities is better able to offset a decline in price from any further rate increases. In scenarios moving rates to 4.5% and to their average yield curve since 1984, shorter term maturities still generate positive returns, where longer term maturities remain vulnerable.









S&P 500 Index - Trailing

- The S&P 500 had a bottom-up operating EPS of $204.98 as of 6/30/2022, implying a P/E of 17.5x as of the 9/30/2022 close price of $3585.62 and a year-over-year earnings growth of 16.8%
- The bottom-up operating EPS of the S&P 500 as of 9/30/2022 is expected to be $207.76, implying a P/E of 17.3x as of the 9/30/2022 close price of $3585.62. This incorporates the expected earnings growth of 9.5% year over year, and 5.3% for the Q3 22.
- Change in this quarter's earnings growth doesn't have a large impact on the index price at the current P/E, but if earnings season misses expectations, the market would likely move towards a lower P/E multiple which would have a large impact on index price.
- Historically, quarterly earnings almost always beat analyst estimates outside of periods of recession; however, recession probabilities are rising.

		YoY Growth
	6/30/2022	**16.8%**
	Rep. EPS	**$204.98**
P/E	19.5	$3,996
	18.5	$3,791
	17.5	**$3,586**
	16.5	$3,381
	15.5	$3,176

		Q3 EPS Growth Rate					
	9/30/2022	7.1%	**5.3%**	3.5%	1.8%	0.0%	-5.00%
	Rep. EPS	$208.68	**$207.76**	$206.81	$205.90	$204.98	$202.38
P/E	19.3	$4,019	$4,001	$3,983	$3,965	$3,948	$3,898
	18.3	$3,810	$3,793	$3,776	$3,759	$3,743	$3,695
	17.3	$3,601	**$3,586**	$3,569	$3,553	$3,538	$3,493
	16.3	$3,393	$3,378	$3,362	$3,348	$3,333	$3,290
	15.3	$3,184	$3,170	$3,156	$3,142	$3,128	$3,088

*Source: S&P Dow Jones Indices

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S&P 500 Index Forward

- The Next Twelve Months P/E ratio for the S&P 500 is 15.39 as of 9/30/2022 based on S&P Dow Jones Indices Operating EPS Estimate of $232.98 and a 12.1% earnings growth rate.
- We believe consensus estimates have failed to be revised to an appropriate level, making the market to appear cheaper than it is, assuming 14.5% year-over-year growth in EPS for CY 2023.
- Our expectations of earnings growth are significantly slower than market consensus.
- If P/E remained at current levels (15.4), but earnings failed to meet consensus expectations and had a more modest growth rate of 0-5% for CY 2023, it would imply an index price of $3,132-$3,326
- We believe the most likely scenario is 2023 earnings growth between 0% and 4% and a P/E between 15 and 16, with a risk of lower earnings growth and market P/E bringing S&P to around 3200.
- Year-Over-Year EPS Growth is shown on the top row, P/E is shown on the left.
- Growth Rates are based off the S&P Dow Jones Indices estimates for 9/30/2022 and 12/31/2022, which are $207.76, and $208.12, respectively.

9/30/2023	16.1%	**12.1%**	8.0%	4.0%	0.0%	-5.00%
Rep. EPS	$241.30	**$232.98**	$224.41	$216.08	$207.76	$197.37
17.4	$4,196	$4,052	$3,902	$3,758	$3,613	$3,432
16.4	$3,955	$3,819	$3,678	$3,542	$3,405	$3,235
15.4	$3,714	**$3,586**	$3,454	$3,326	$3,197	$3,038
14.4	$3,472	$3,353	$3,229	$3,109	$2,990	$2,840
13.4	$3,231	$3,120	$3,005	$2,893	$2,782	$2,643

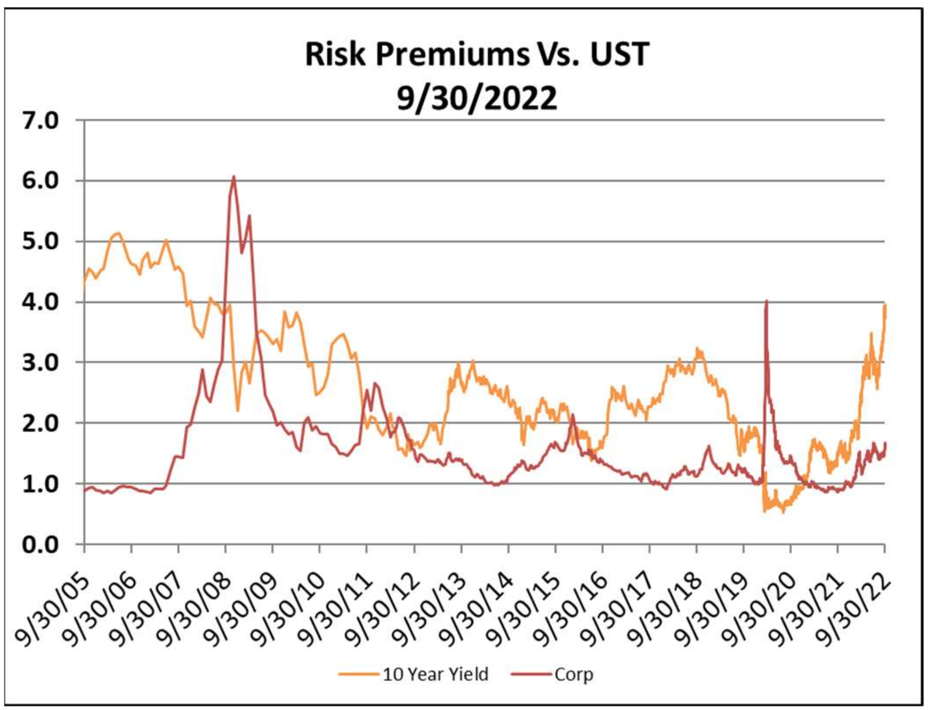
12/31/2023	19.3%	**14.5%**	9.6%	4.8%	0.0%	-5.00%
Rep. EPS	$248.25	**$238.29**	$228.03	$218.08	$208.12	$197.71
17.0	$4,232	$4,062	$3,887	$3,718	$3,548	$3,370
16.0	$3,984	$3,824	$3,659	$3,500	$3,340	$3,173
15.0	$3,735	**$3,586**	$3,431	$3,281	$3,132	$2,975
14.0	$3,487	$3,347	$3,203	$3,063	$2,924	$2,777
13.0	$3,239	$3,109	$2,975	$2,845	$2,715	$2,580

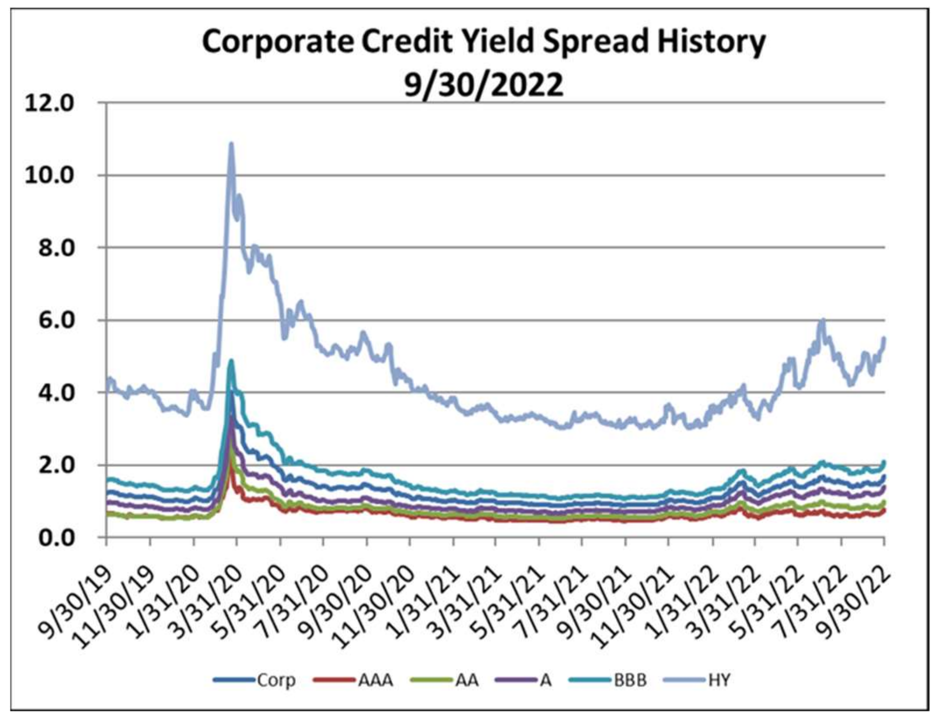
*Source: S&P Dow Jones Indices

Market Review

Yield Spreads – September 2022

- Corporate, Muni & MBS spreads widened as all risk assets sold off in Q3, furthering the negative returns in the bond market. The deeper the credit the greater the widening.
- Corporate credit conditions have been strong; however, supply chain issues, increased costs (both financial/funding costs & operational costs), margin pressures, reduced operating ability, and/or lower cashflow may increase risk.

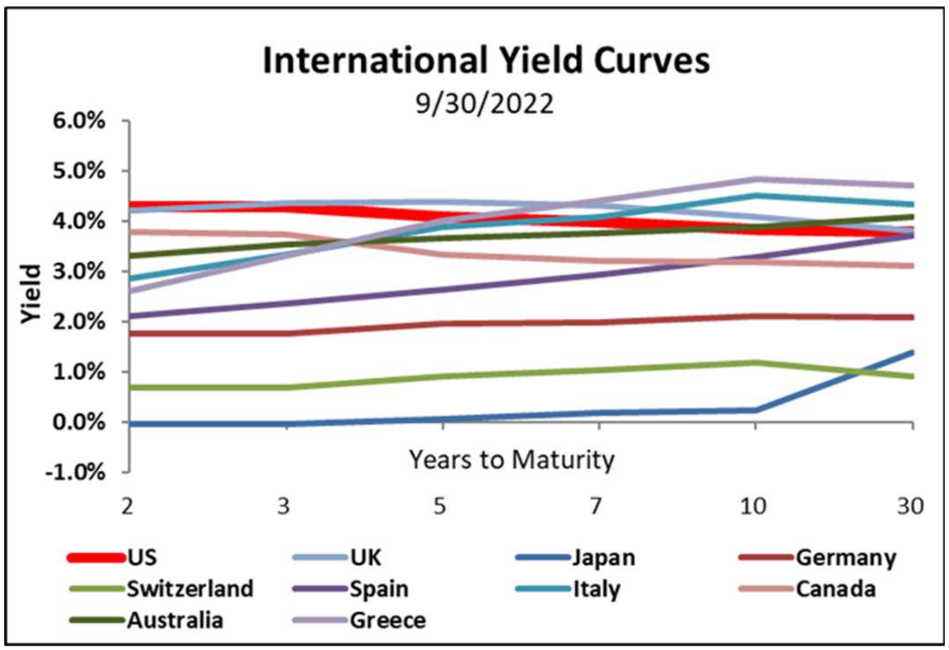


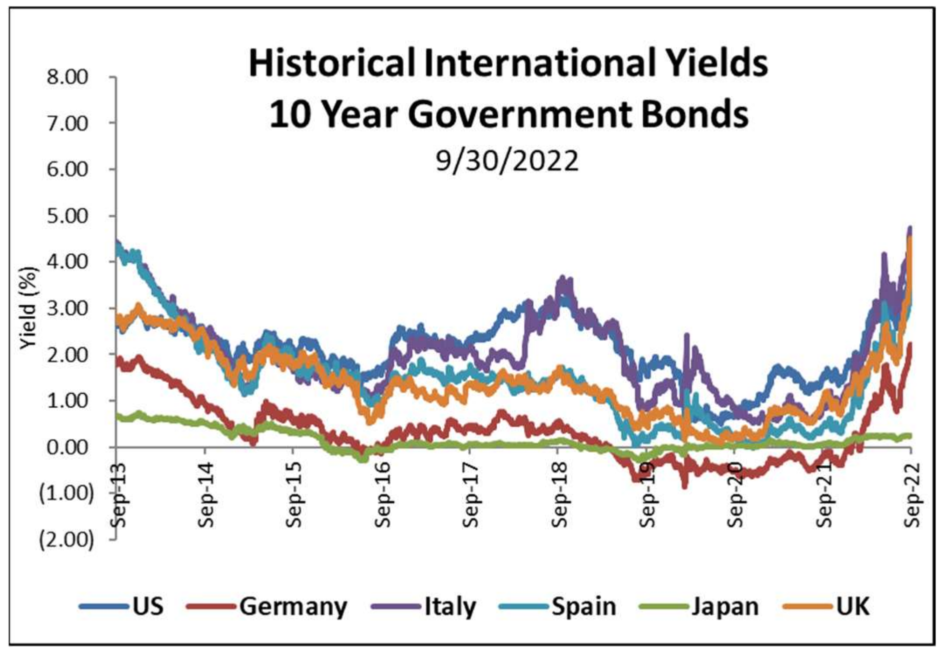


Market Review

International Yield Curves – September 2022

- Inflation has become a global phenomenon and interest rates are rising globally
- Central banks have differed on their response as some, such as Europe remain passive.
- The US continues as one of the highest yielding developed countries. These interest rate differentials also contribute to a strengthening dollar.
- Stress is becoming apparent in some areas such as peripheral Europe, the UK and emerging markets and are reflected in sharply higher longer term interest rates.

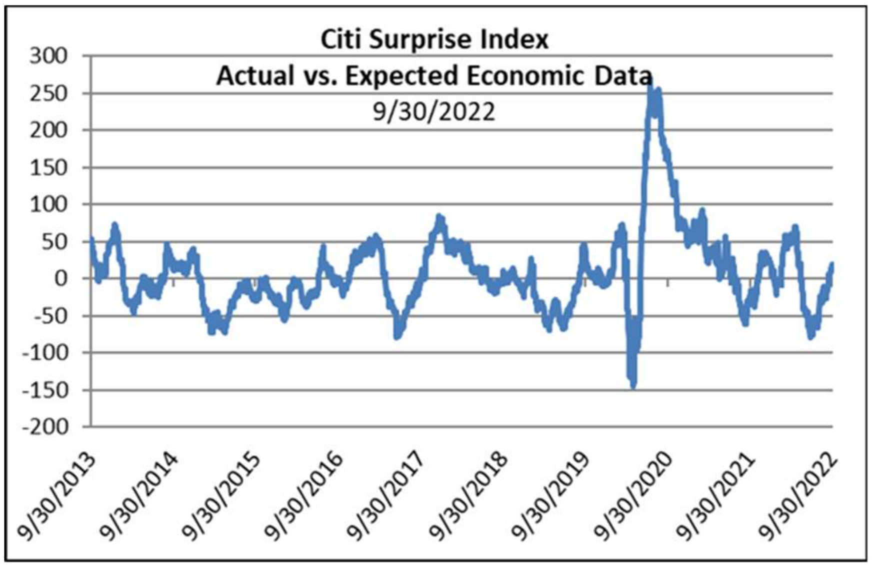




Economic Environment

September 2022

- Robust economic activity has moderated but remains strong in nominal terms.
- Economic activity remains strong in the US YOY, however has been negative net of inflation YTD.
- Global GDP has moved from strong growth across the globe to much more varied, with some countries being impacted more than others depending on impact of inflation and the Russian invasion of Ukraine.
- Inflation has moved higher around the globe with expectations of future inflation continuing to rise due to significant stimulus, the increased cost of doing business, and continued supply chain woes.



GDP YoY % Change			
		One Year	
	Q2 2022	Ago	Change
US	1.80	12.50	(10.70)
Eurozone	4.10	14.40	(10.30)
Germany	1.70	10.40	(8.70)
France	4.20	18.60	(14.40)
Italy	4.98	16.67	(11.69)
UK	4.40	24.30	(19.90)
Canada	4.30	4.80	(0.50)
Mexico	2.05	19.90	(17.85)
Australia	3.60	9.80	(6.20)
Japan	1.60	7.30	(5.70)
China	0.40	7.90	(7.50)
Russia	(4.10)	10.50	(14.60)
Brazil	3.20	12.30	(9.10)

**Canada GDP as of 7/31/2022*
**All other GDP as of 6/30/2022*

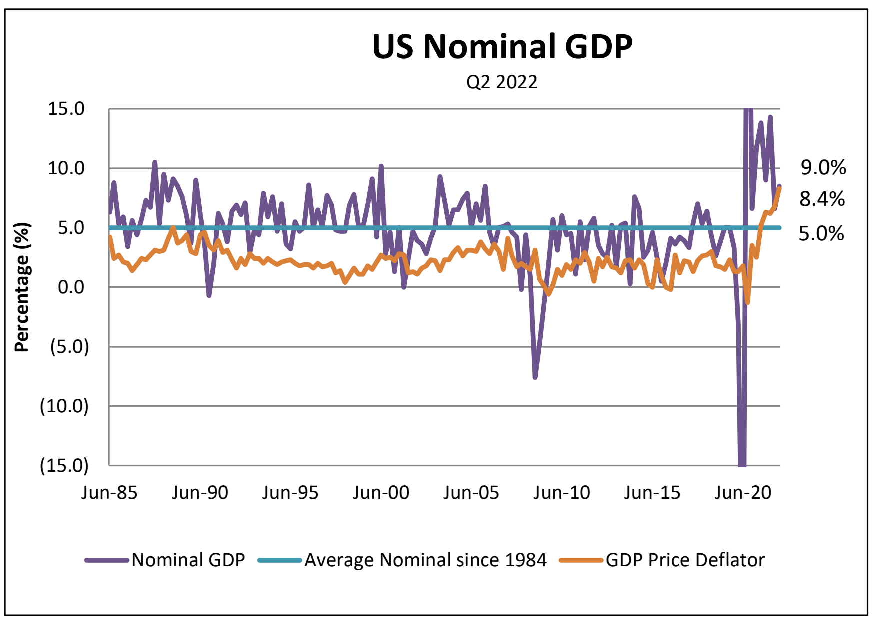
Inflation YoY % Change			
		One Year	
	May-22	Ago	Change
US	8.30	5.30	3.00
Eurozone	10.00	3.40	6.60
Germany	10.00	4.10	5.90
France	5.60	2.20	3.40
Italy	8.90	2.50	6.40
UK	9.90	3.20	6.70
Canada	7.00	4.10	2.90
Mexico	8.70	5.59	3.11
Australia	3.60	9.80	(6.20)
Japan	3.00	(0.40)	3.40
China	2.50	0.80	1.70
Russia	14.30	6.68	7.62
Brazil	8.73	9.68	(0.95)

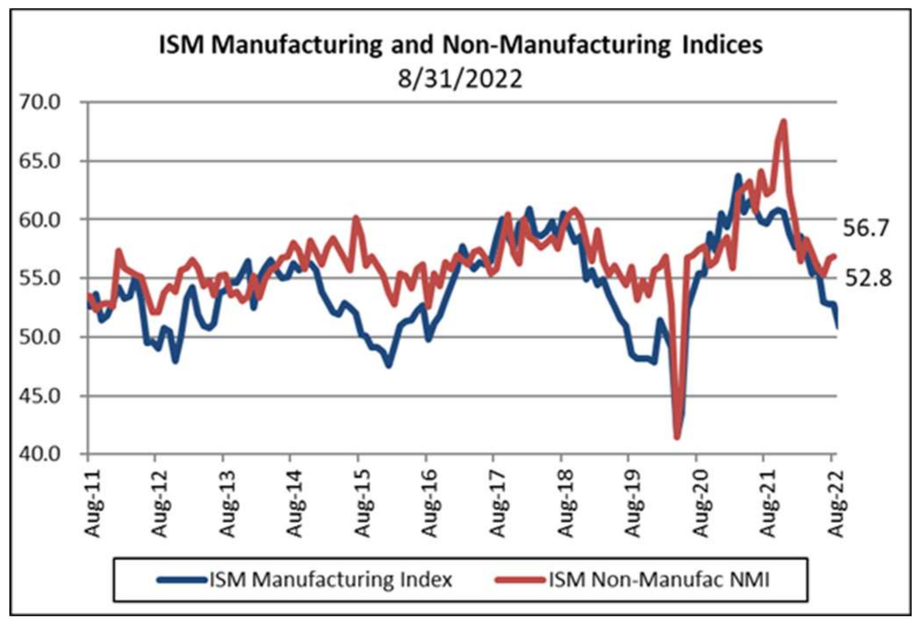
**US, UK Canada, & Japan, China, Russia, Brazil as of 8/31/2022*
**Australia CPI as of 6/30/2022*

Economic Environment

September 2022

- US Economic activity remained historically robust in Q2 with a Nominal GDP growth rate of 8.4%.
- The average Nominal GDP growth rate since 1984 has been 5%.
- This extraordinary level of activity resulting from the excess monetary and fiscal stimulus of the past number of years has generated a historically high level of inflation of 9%.
- The net result has been a net negative GDP over the past two quarters of -1.6% and -.6% by virtue of the inflation rate being higher than the growth rate, both being at historically high levels.
- Economic nirvana is near the historic averages or around 5% Nominal GDP, 2.5% inflation, for a net GDP of 2.5%. These periods have provided for relatively stable overall economic environment.

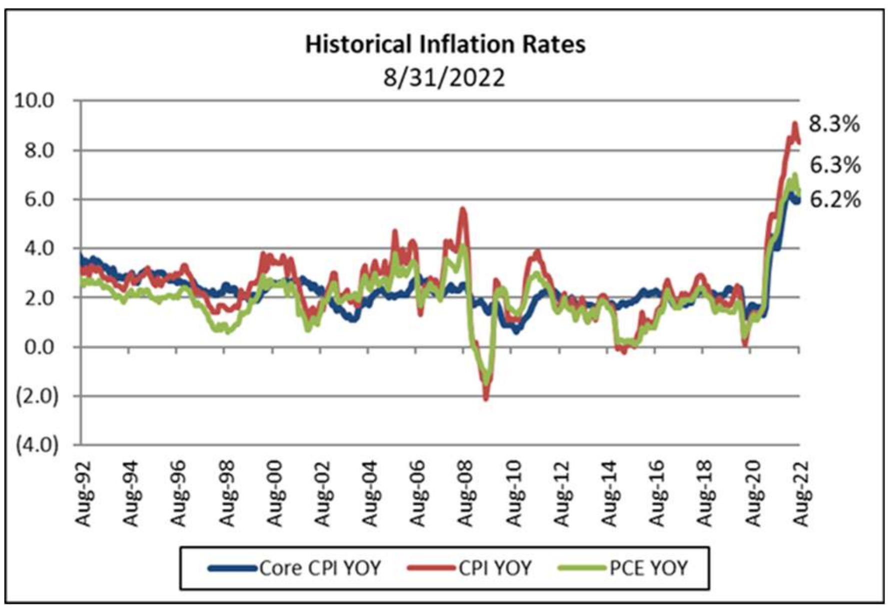


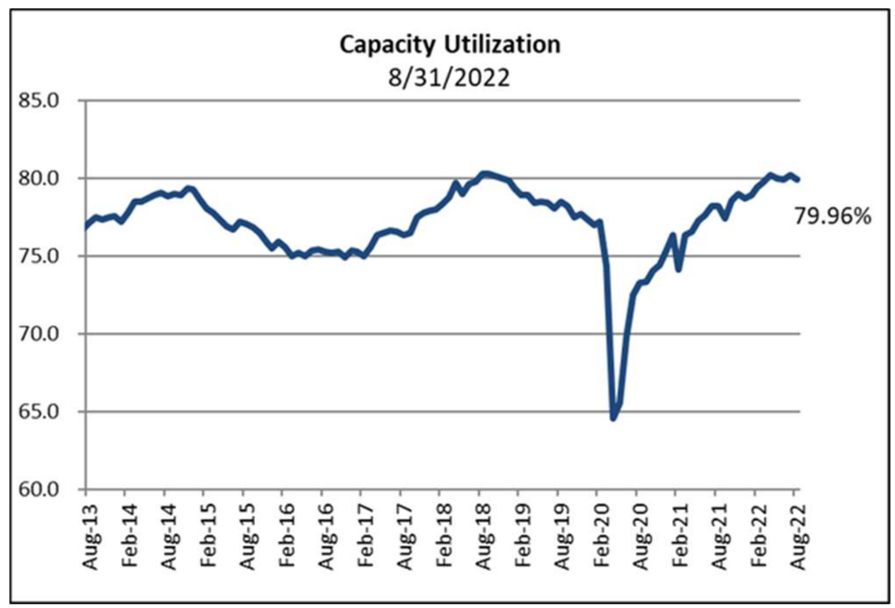


Economic Environment

Employment and Inflation – September 2022

- Inflation levels continue to rise and broaden with continued strong nominal economic activity and as supply chain disruptions normalize. Demand for higher wages by a tight labor force is contributing to higher costs, as are energy and other input costs.
- Expectations of inflation are increasing as input costs are being passed through at an increasing rate, resulting in demand for higher wages – potentially sparking a classic wage-price spiral.
- Capacity utilization has steadily increased as factories come back online; however, overall expansion of capacity is limited by worker and material shortages.

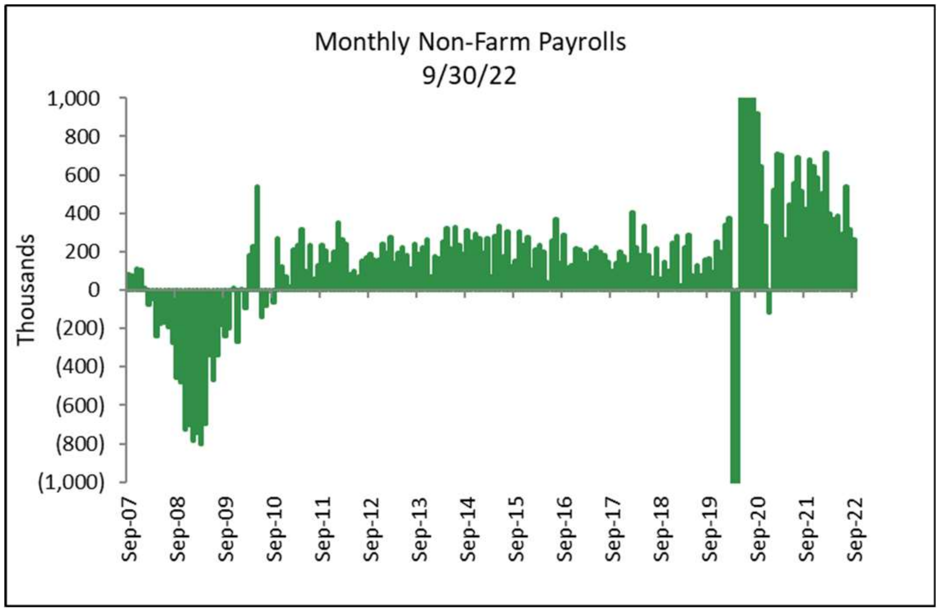


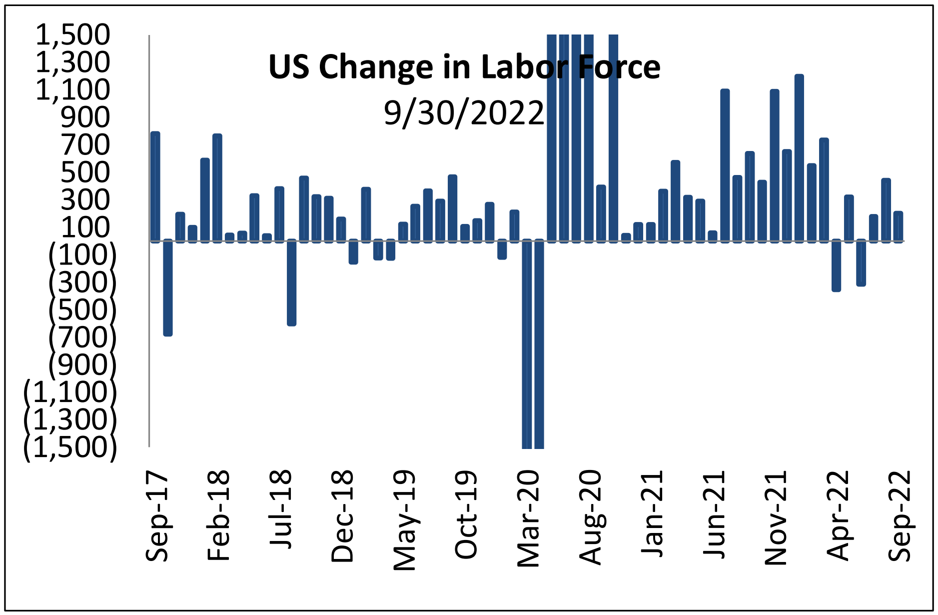


Economic Environment

Employment – Monthly Payrolls – September 2022

- Monthly payrolls additions continue at strong levels, above 250,000, filling the significant number of open positions across industries as people get back to work.
- The labor force continues to grow as people continue to return to work. Much work is still needed to fill available jobs. Weekly unemployment claims remain at extremely low levels.
- During the reopening of the economy significant number of jobs were being filled with workers returning to the labor force, which continues, but at a slower rate as available jobs are being filled and the participation rate is back near pre pandemic levels.

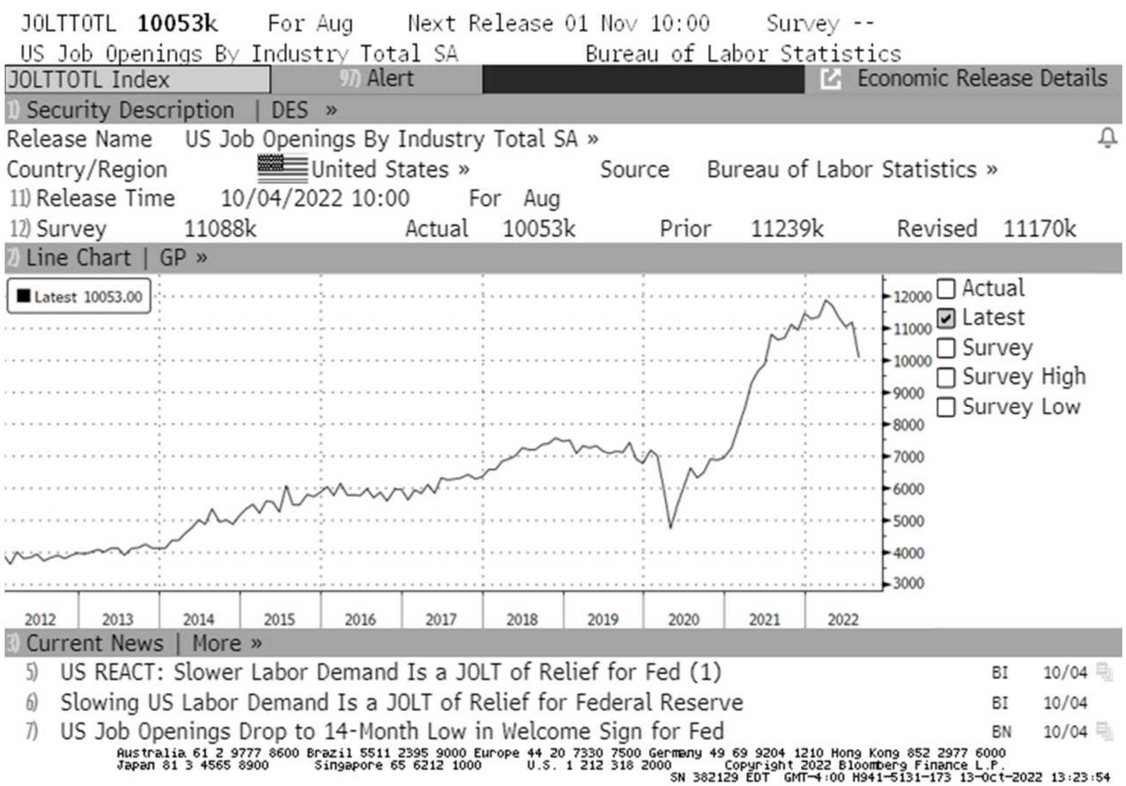




Economic Environment

Employment – Monthly Payrolls – September 2022

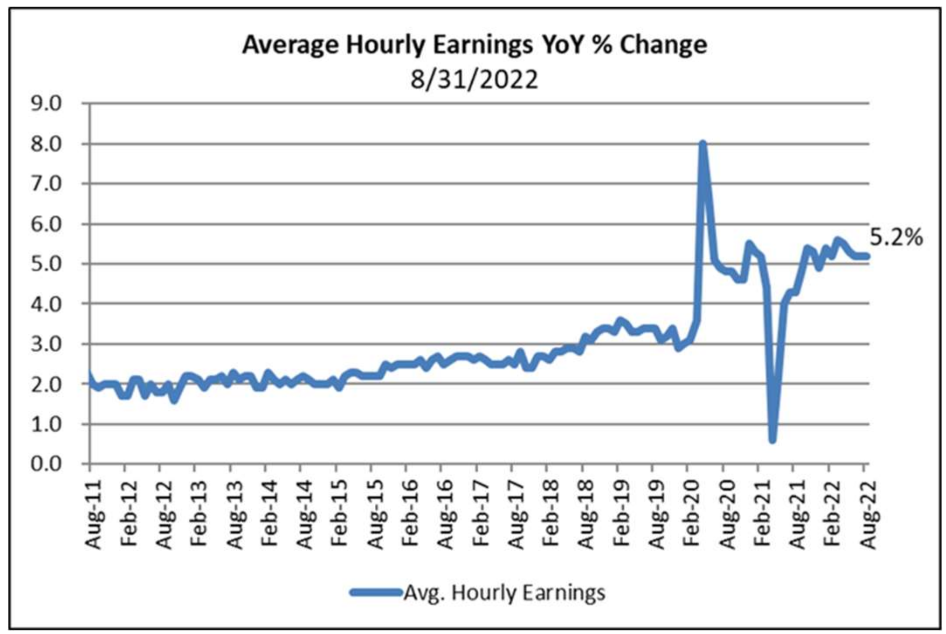
- The number of jobs available reached a level of 2 jobs for every unemployed person.
- The number of available jobs is being filled by re-entrants to the labor force and otherwise unemployed people, and companies cutting job postings due to moderating business.
- As the jobs available continues to decline for the above reasons, wage pressures should sibside flowing through to less inflationary pressure. There is a ways to go.



Economic Environment

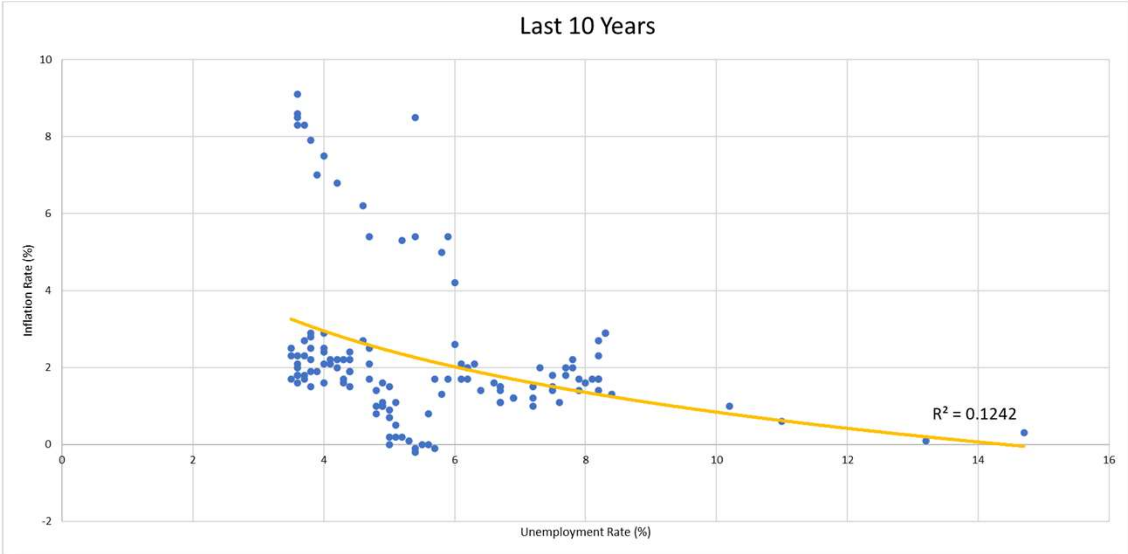
Employment and Inflation – September 2022

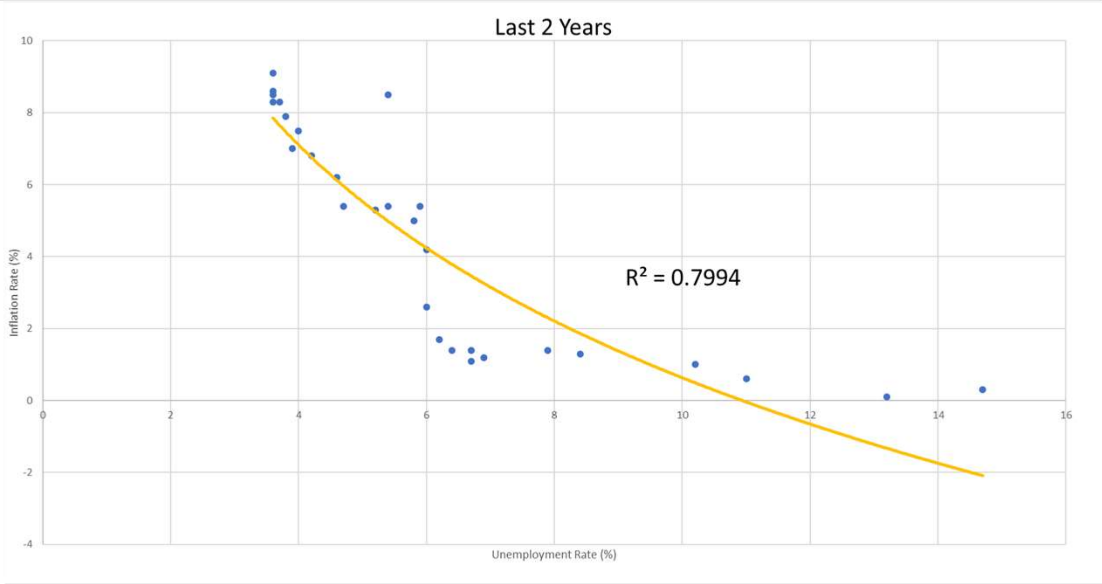
- The prime working age participation rate has been increasing and is back near pre pandemic levels.
- There are currently about 1.9 jobs available for every person unemployed, increasing employee turnover and pushing up wage pressures.
- The pandemic related frictions in the labor market such as remote work, required vaccination mandates, child care and worker choices have mostly faded but still exist to various degrees.
- Average hourly earnings have risen amid the competition for workers and the need to provide incentive to bring people into the workforce; real hourly earnings are negative given high inflation.



Economic Environment Employment and Inflation – September 2022

- In the last two years, the Phillips Curve has re-emerged.
- Frustrated by higher prices, workers are bargaining for higher wages.
- Unemployment will continue to decrease as firms raise wages and hire employees to match robust consumer demand, a result of the excess stimulus policies during the pandemic.
- Real wages have fallen as inflation has risen, and as prices continue to rise due to supply chain shocks and high demand, expect further upward pressure on wages.





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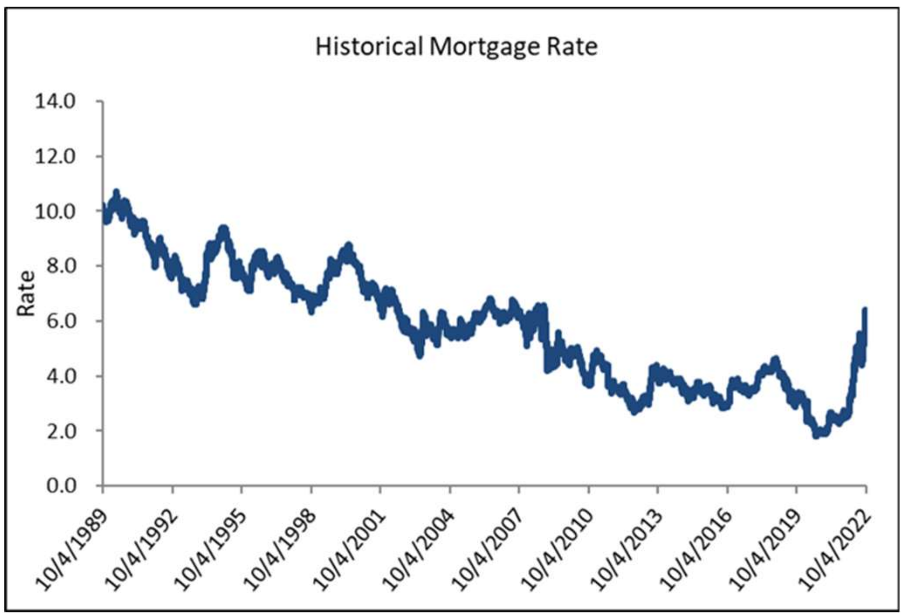
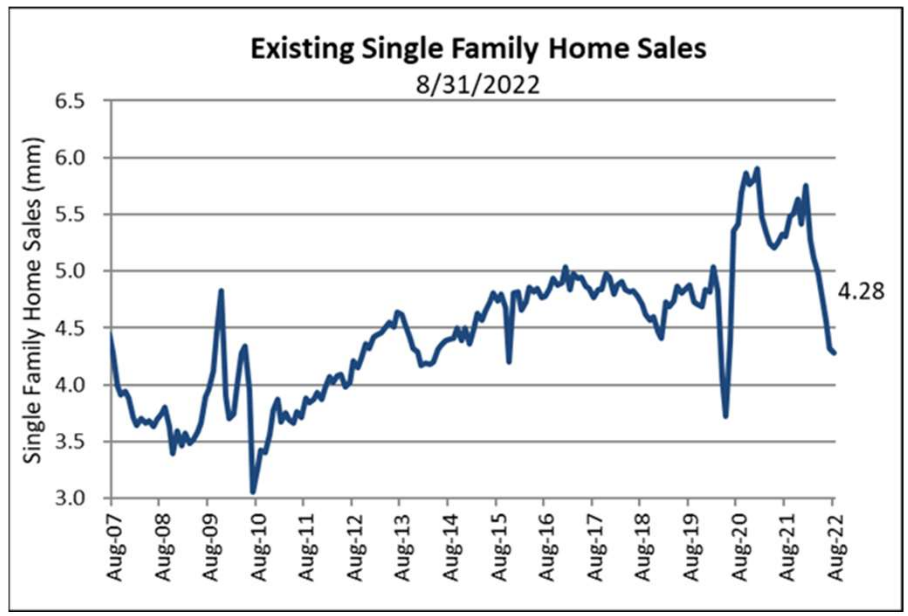
Economic Environment

Mortgage Rates and Housing – September 2022

- Mortgage rates have been rising and have returned closer to more normal levels.
- The rise in mortgage rates along with record high home prices has reduced home affordability. While demand remains high, overall home sales have been significantly reduced.
- Demand remains strong, however the slowdown in purchases has restored some inventory with prices leveling off.

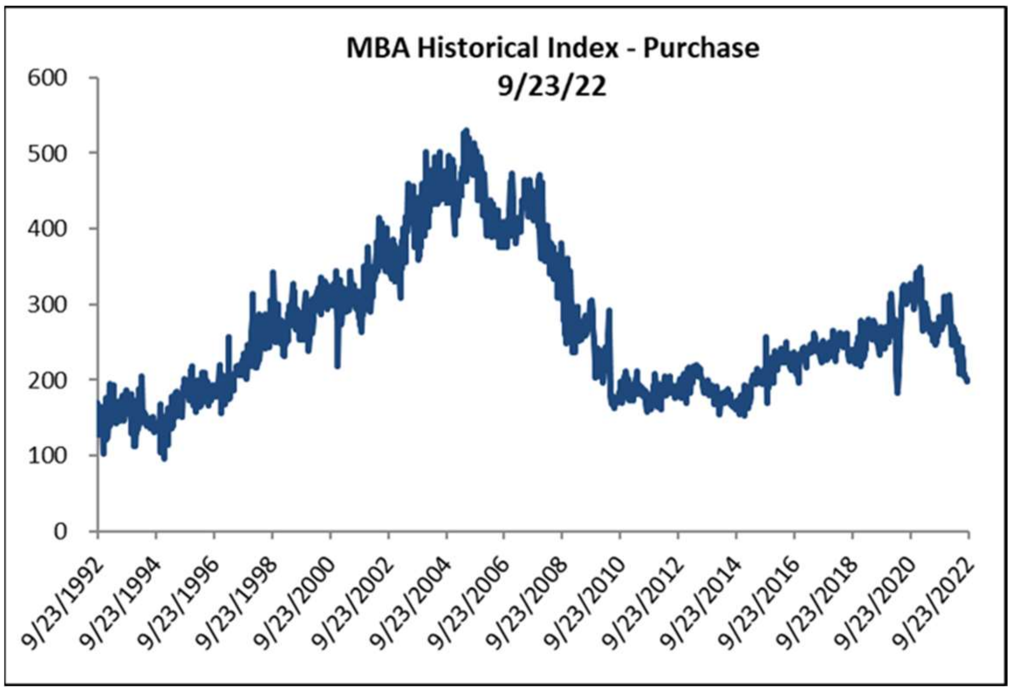


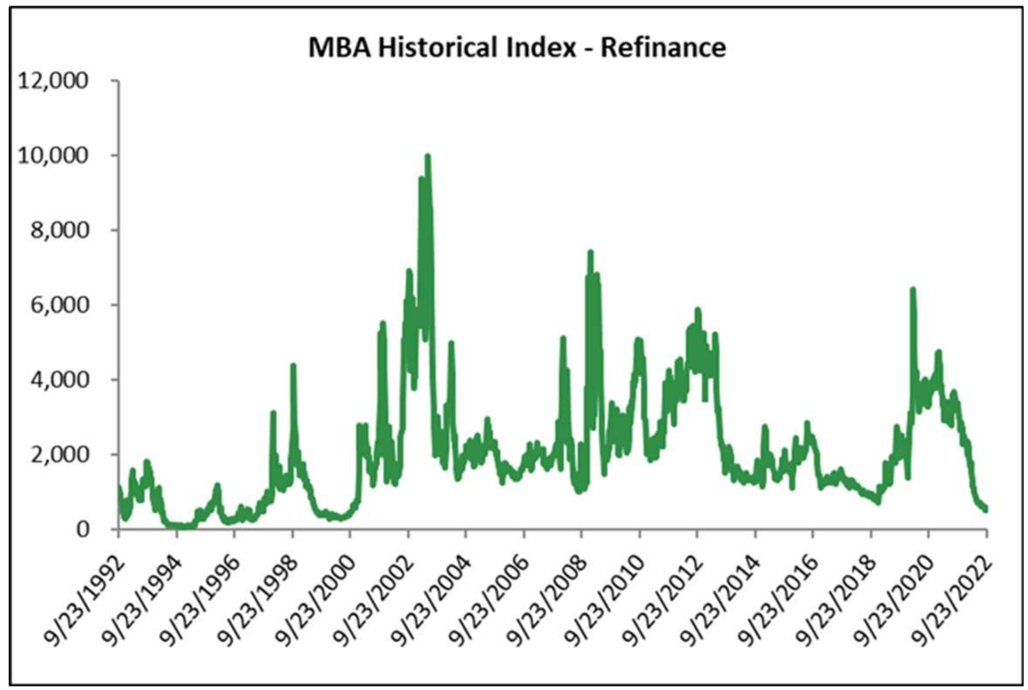


Economic Environment

Mortgage Rates and Housing – September 2022

- Mortgage Purchases have decelerated recently as a lack of inventory, rapid home price appreciation, and recently high mortgage rates has reduced demand.
- Mortgage Refinances have slowed over the past year as rising interest rates make it less economic to refinance mortgages.

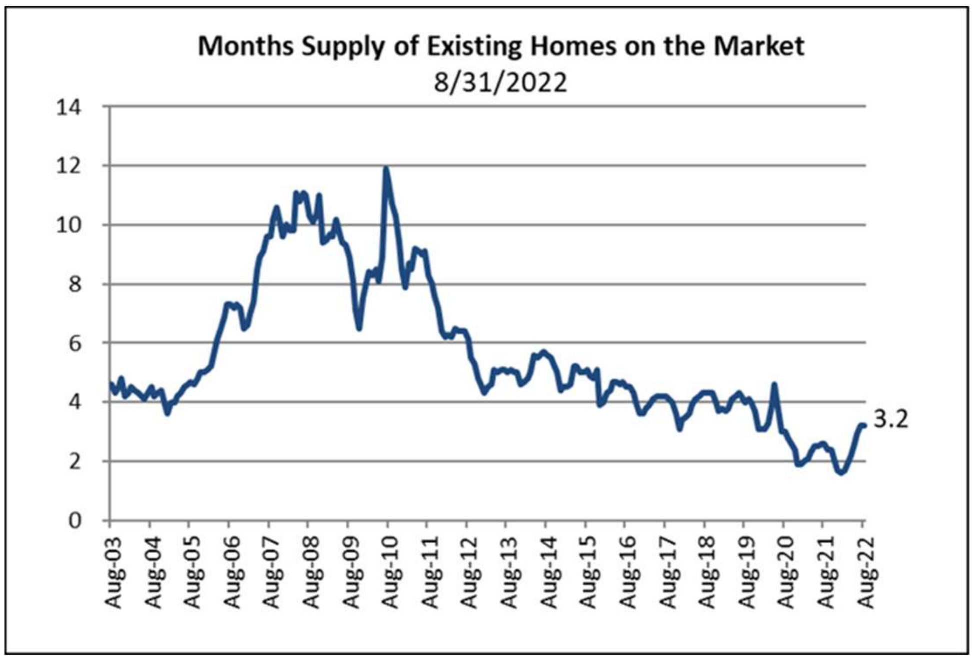


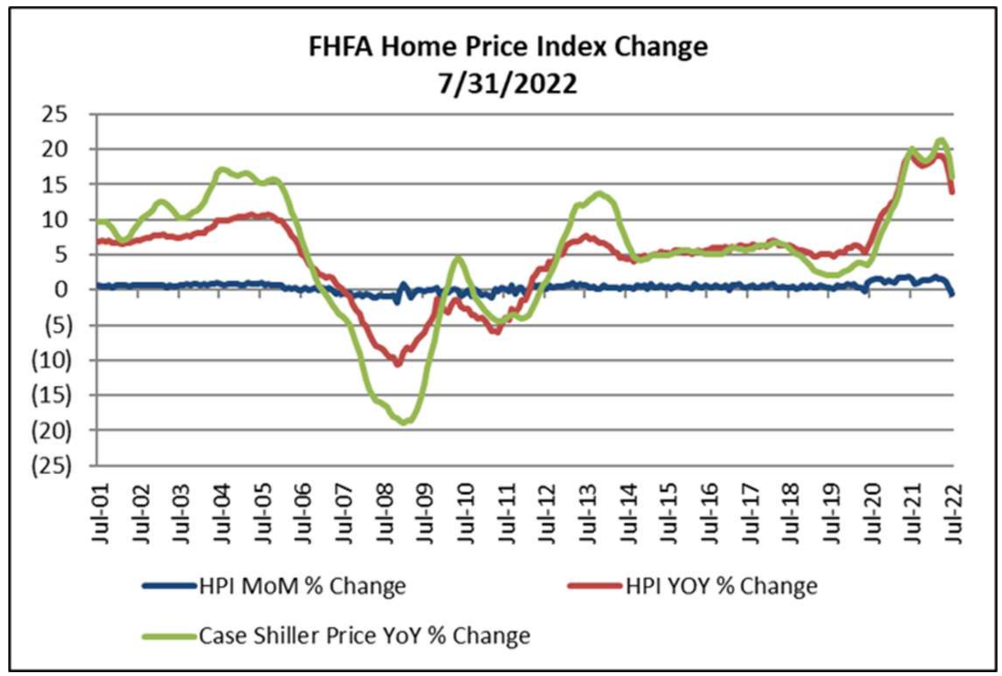


Economic Environment

Mortgage Rates and Housing – September 2022

- With the shortage of materials and labor, it had been difficult for existing home supply to increase; some supply chains are normalizing and sales slowing, causing an uptick in housing inventory.
- The high demand for housing had also pushed home prices up over 20% vs. year ago levels. The pace of home purchases and price gains had been broad based, but is cooling off.
- The higher rates and slower home purchases has caused home prices to begin to decline from record levels.

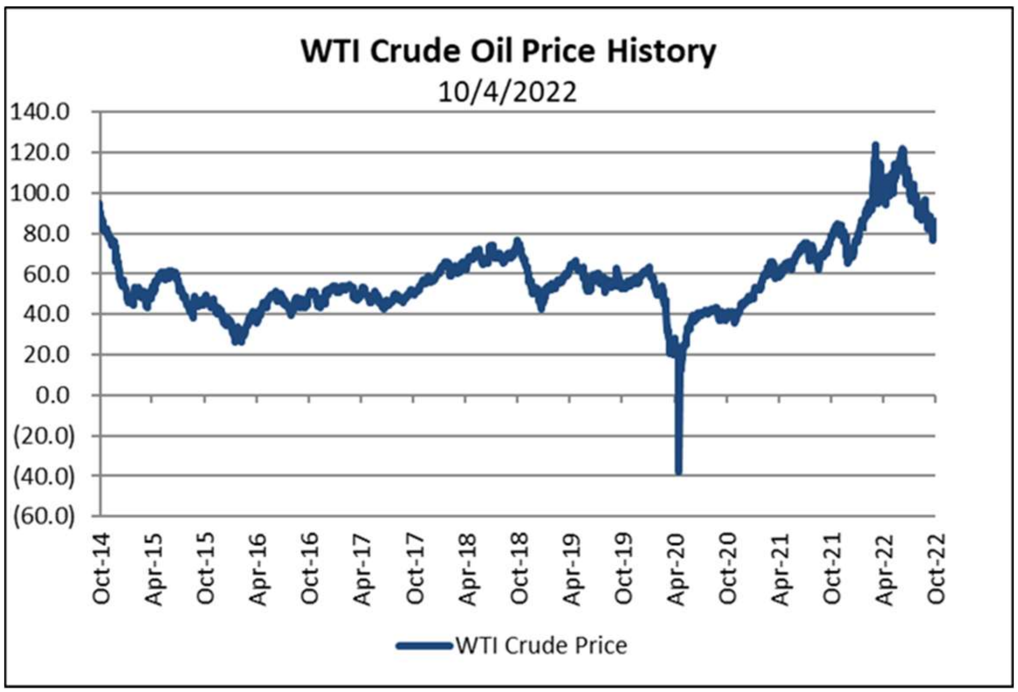


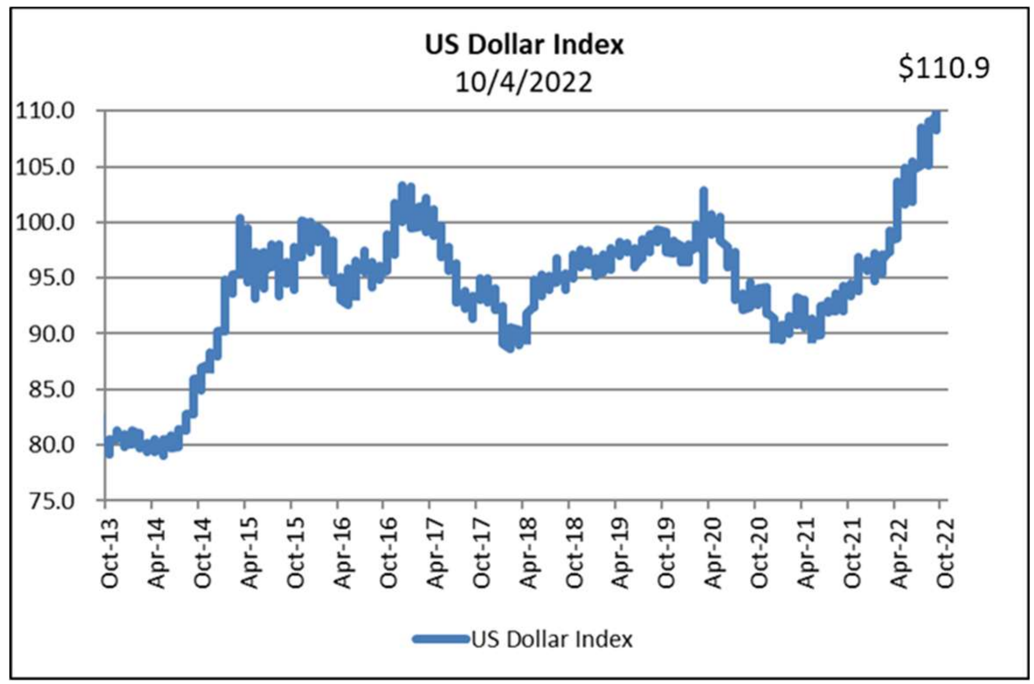


Economic Environment

September 2022

- The shift in policy to limit exploration, production, and distribution of oil and gas has led to a supply/demand imbalance and increasing energy prices.
- The increase in energy prices has been exacerbated by the Russian invasion of Ukraine.
- The drive toward "green" energy is actually being hampered by supply chain disruptions and the accelerating costs for all energy, impairing investment and development.
- The Dollar continued to strengthen due to the relative strength of the US economy and higher interest rate differentials relative to global rates.





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