



White Paper on Inflation and Investing

Absolutely! Money Matters Road Map for Investors

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Absolutely! Money Matters

Discussion Points

The focus of this white paper is on inflation, the durability of the current inflationary trend, and the risks and opportunities poised to investors. We will provide a brief historical view of inflation and its cause, with a focus on the 1970s. Finally, we will assess the potential risks to financial assets, and how to opportunistically take advantage of what may happen. We have taken a scientific approach to our analysis and conclusions.

Introduction

The trend in inflation has been altered into an upward trajectory, which will likely pose a significant risk for investor. Stock indices are overweighted with low inflationary benefitting companies. By examining the quantitative inputs of inflationary drivers, it is easy to believe that the trajectory of the inflationary trend may be strongly upward and durable. With inflation, stocks in general will struggle, additionally, if the Federal Reserve decides to be aggressive in dealing with inflation a bear market will occur as a result. It will become difficult to achieve positive returns in higher quality bonds that yield considerably below the rate of inflation. We see three scenarios (see the investing section) as to how the events will unfold, there are likely more, but these cover a large percentage of the probabilities. Investors will likely achieve the highest risk adjusted returns by using tactical management in their investment allocations no matter the scenario, and/or focus on the areas of the market that will benefit from inflation should it unfold as we currently expect.

Governments and central banks will likely begin to deal with the underlying factors that have built this strong inflationary foundation, in some fashion. Perhaps even more concerning to investors are political pressures, taking the short-term easy way, allowing this inflationary structure to snowball, this is what occurred in the 1970s, until Volker lowered the hammer. If central banks allow the inflationary pressures to continue it could cause an extended period of negligible returns for the major asset classes. If central banks become a little too aggressive than the market prefers in reducing money supply, it could cause a significant bear market. In either case it is a challenging environment for investors.

Background and History of Inflation

There are commonalities behind each of the three periods of hyperinflation during the last century. In 1914, when WW1 began, inflation was 1%, by the time it ended in late 1918 inflation was over 20%, (the Spanish



Figure 1: The Spanish Flu of 1918
WEAR A MASK Or Go To Jail

Flu began in February 1918). The United States saw a drop in the ability to supply goods and services to consumers, but at the same time an expansion due to the war's demand. What happened after the war and Spanish Flu is fascinating, a period of negative GDP growth during the depression of 1920-1921. Inflation fell to -11% in 1921. To follow was the Roaring Twenties, a great period of economic growth, driven by innovation and big productivity.

During WW2, inflation shot up to 10% in 1941, fell back down to 2-3% in 1943-1945, and then had a second wave, peaking the year after the war ended with inflation at 18% in 1946. During the war, the United States had the most command like economy the country has seen, boosting war production, and skyrocketing GDP growth. GDP crashed after the war. During WW2 the economy put in place a sizable amount of production capacity, leading to a couple of decades of growth with low inflation. The growth in the 1950s and 1960s used up much of that production capacity and with too much stimulus, inflation began a new cycle.

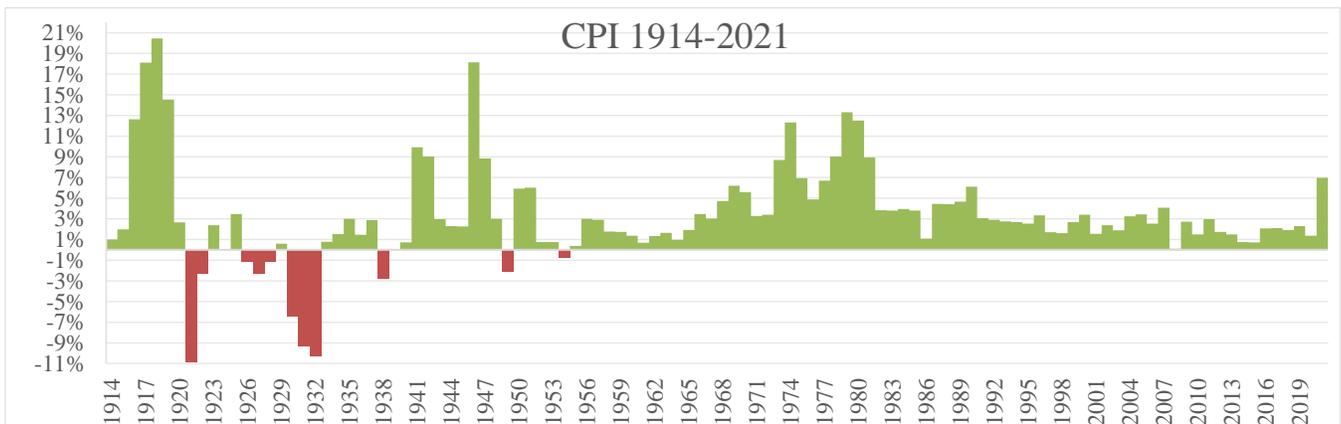


Figure 2

Data used for chart comes from Robert Shiller <http://www.econ.yale.edu/~shiller/data.htm>
Dec and Jan 2021 CPIs are estimated. Shiller's estimates 2021 CPI comes out to 6.97%.

The most significant period of inflation occurred in the 1970s, with the foundation put in place in the latter half of the 1960s, but it was exasperated in the early 1970s. In 1964, President Johnson implemented a major social spending plan called the Great Society, while concurrently needing to fund the Vietnam War. In 1966, inflation began accelerating, by 1970 inflation was over 5% annually. After these inflationary policies began, the P/E of the S&P 500 in 1968 was about 18x earnings and bottomed in 1982 at around 7.5x. When inflation began to take hold in the 1960s the yield on the 10-Year Treasury was around 4% and peaked at about 15% in 1981. In 1971, the United States completely severed the link between the dollar and gold, transitioning to a fully fiat currency. The Federal Reserve maintained an accommodative stance as Nixon influenced the Fed to pump even more money into the economy. The Arab Oil Embargo began in 1973, in which oil prices increased 10-fold from 1970 to 1980. Inflation from 1970-1980 averaged a whopping 7.9%, increasing in waves, and finally peaking in 1979 at 13.3%.

The Phillips Curve

There is an economic theory called the Phillips Curve, which stated, there is an inverse relationship between Unemployment and the Inflation rate, so as the Unemployment rate drops the rate of Inflation rises. The Phillips Curve was largely misused in the 1970s because of the incorrect assumption that the inflation rate and unemployment rate always have an inverse relationship. This was clearly shown not to be true.

During the period of stagflation in the 1970s, policy makers pushed for high inflation in aims to reduce unemployment; nonetheless, high unemployment continued. Policy makers did not understand the Phillips Curve. Clearly lower unemployment can cause higher inflation, but higher inflation does not lower unemployment, it had the opposite impact. This was a major policy mistake.

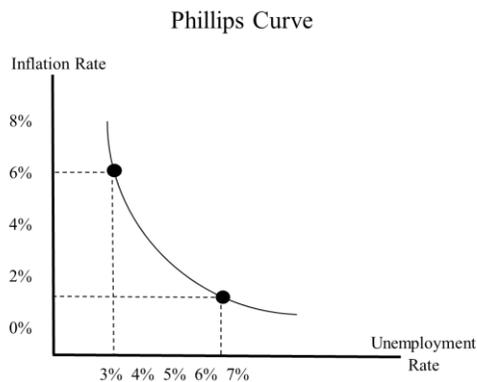


Figure 3

Rates 1960-1985

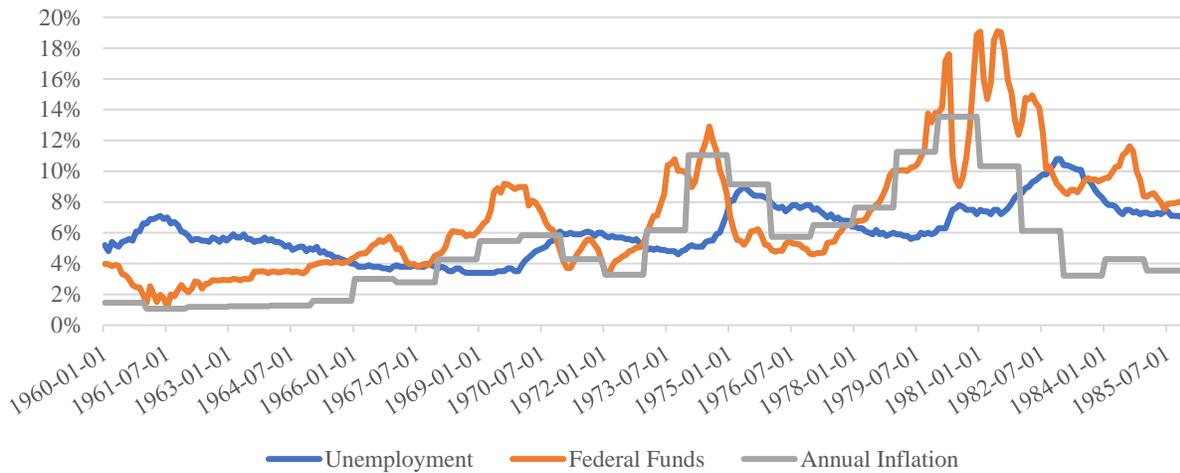


Figure 4

Federal Reserve Chairman Paul Volcker later went on to kill the inflation, previously created by misguided policy, by aggressively raising interest rates. The federal funds rate was raised to the highest rate in US history at nearly 20%. The cost was higher unemployment, sending the economy into twin recessions in the late 70s and early 80s (see Figure 17), and causing a bear market. It is difficult to imagine a similar environment of the 1970s, but perhaps some version of that period is in front of us.

What Causes Inflation? $MV=PQ$

Inflation is simple, it is created because supply and demand get out of balance. A supply shock, or simply supply not growing, can cause prices to rise. The other cause of inflation is demand pull inflation, which occurs when consumers have more money or demand which outstrips the existing supply. A rapid expansion of money supply by central banks, or government deficits, causes money to find a home in the purchases of goods, services, or investments.

An economy that is effectively incentivized (low tax rates, less regulations or other government hindrances) can expand supply to minimize inflation from too much money printing. When inflation heats up it is generally because of too much monetary or fiscal stimulus without the needed increase in productivity of an economy.

The Monetarist theory, created by Milton Friedman, is expressed by the formula $MV=PQ$ where M is the money supply, V is the velocity or average number of times per year the dollar is spent, P is the price of goods and services, and Q is the quantity of goods and services in an economy. This means Q is also the same as Real GDP, so PQ is equivalent to Nominal GDP, as is MV.

$$\begin{array}{ccccccc}
 M & * & V & = & P & * & Q \\
 \text{Money Supply} & & \text{Circulation per year} & & \text{Price per Unit} & & \text{Quantity Produced} \\
 \underbrace{\hspace{10em}} & & & & \underbrace{\hspace{10em}} & & \\
 \text{DEMAND SIDE} & & & & \text{SUPPLY SIDE} & &
 \end{array}$$

In the short run, the value of all four factors may change. In the long run, the velocity of money and the quantity an economy can produce does not change too significantly. Over a longer period, the frequency of purchases is relatively consistent as is the amount Real GDP can increase, historically averaging +3.3% annually. Hence why economists view V and Q as relatively constant. Essentially, this means prices need to increase when money supply out grows the economy's ability to meet a subsequent increase in demand

The trend of inflation and interest rates have trended downward for around 39 years and has clearly hit a bottom. During the past roughly 20 years, inflation has been modest, fueled by the slack in production capacity driven by technological efficiencies. The United States' steady economic growth can be attributed to the advancement in technology, allowing a moderate expansion in Q while simultaneously keeping P stable. With the maturity of the Amazon Economy (this was an advancement of disruptive technology providing goods at lower prices), along with newer constraints, the trend of inflation is clearly higher. Through history, we had other periods of great Q, or productivity growth, that finally ends due to government interference. Alternatively, it is swallowed up by too much stimulus or demand. If adjustments are not made now, inflation may persist for an extended period.

Inflation Today

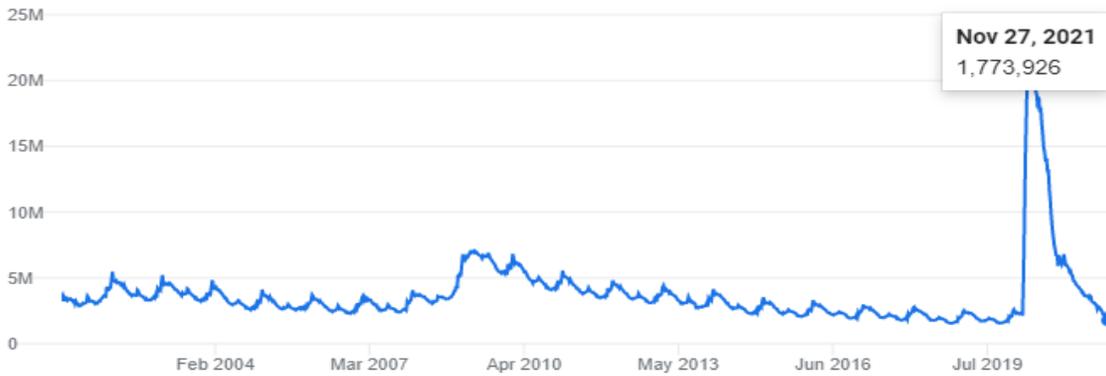
We will explain in detail, how the resulting lower labor participation rate due to government policy, has resulted in higher labor costs, which has lowered the Long Run Supply potential of the economy(see figure 7), i.e., it has diminished the economy's production capacity. The enormous expansion of money supply will over time fully work its way into the economy, raising the correlation between money and inflation, which results in inflationary pressures to continue for an extended period. The economy experienced the effects of a supply shock due to Covid, and the foundation for a significant inflationary cycle has been established by shrinking the production capacity of the economy and fueling demand with a tsunami of money expansion.

In the beginning of the COVID-19 pandemic, the United States experienced a supply shock. Initially, the aisles of the grocery stores were empty, no toilet paper to be found for months, and many essentials were unavailable. Total Demand for goods expanded due to consumers panic buying available goods. Both employers and employees that were working were overstretched with this higher demand, especially because there was not enough workers willing to work in this riskier COVID environment.

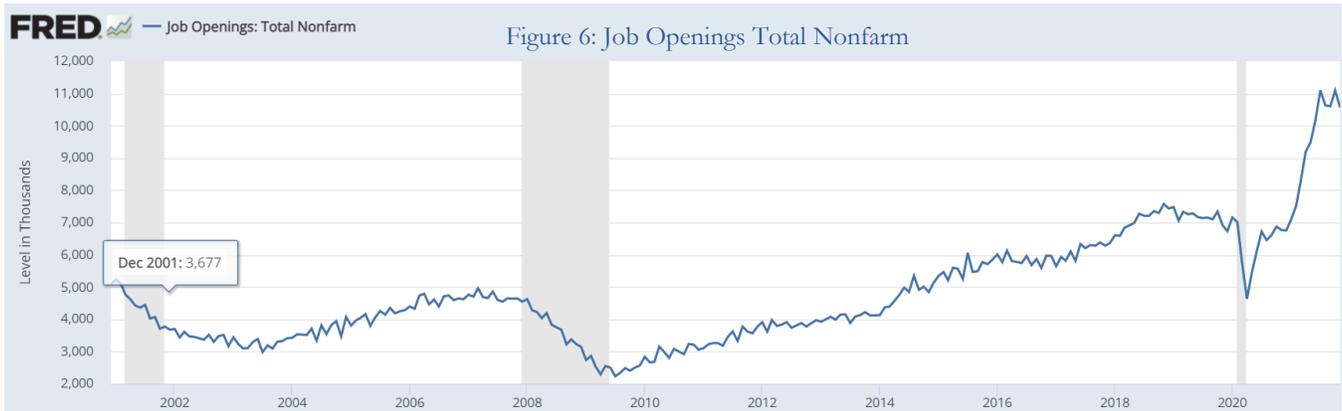
To compensate for this increase in demand, companies had to increase wages, attempting to increase the amount of employees willing to help businesses manufacture, transport, or restock inventory. This wage increase returns the economy to a more efficient state, just with higher prices. The result of the supply shock and need to remake the economy has caused a long-term uptick in inflation.

Over the course of the following months, the government forced many businesses to shut down due to the lockdown restrictions. This gave rise to a huge unemployment surge. As businesses that survived were able to open back up their doors, the worker has been able to dictate higher wages, however many workers have chosen not to reenter the workforce. This has caused a significant shortage of labor along with the diminishing benefit of productivity.

Figure 5: Unemployment Insurance Claims



As of November 2021, there were 10.5 million job openings in the U.S. and only 6.8 million unemployed, but only 1.8 million receiving Unemployment Insurance claims. There are significantly more jobs open than workers to fill the positions. This is full employment. We can see that labor has the upper hand in labor negotiations, where employers are forced to pay much more per hour of labor in many industries. With the current shortage of labor, wages are rising, creating an inflationary cycle hard to break.



The employment problem has largely been generated by the major failure of congress adding funds to unemployment benefits and holds to mortgage and student loan repayments. In some cases, this made it so workers were making more money on unemployment than they would by finding work. This resulted in employees wages becoming more elastic (employees were not as attracted to the wages due to the government providing other means) and employers wages becoming more inelastic (employers paid what they had to pay to attract employees, with a lower sensitivity to the cost). There were even more COVID relief programs that further vexed the problem, bringing money supply to insurmountable levels.

In Figure 7, you'll see a simplified graph of the US economy. Long-term employment has shrunk, causing a decrease in the total amount of output the country can produce. This is represented by the black "Long Run Total Supply" curve moving to the new output level at green curve labeled "New Long Run Total Supply". There is no longer any slack within the system within the quantity (Q) variable, in the equation $MV=PQ$.

A 38% increase in money supply has caused total demand in the long run to increase significantly, shifting the black "Original Total Demand" curve to the green "New Total Demand" curve. This huge injection increases prices quite significantly. We expect to see higher than normal inflation to continue for a long time because Quantity is only able to increase an average of 2-3% per year, whereas Price can adjust much more rapidly to compensate.

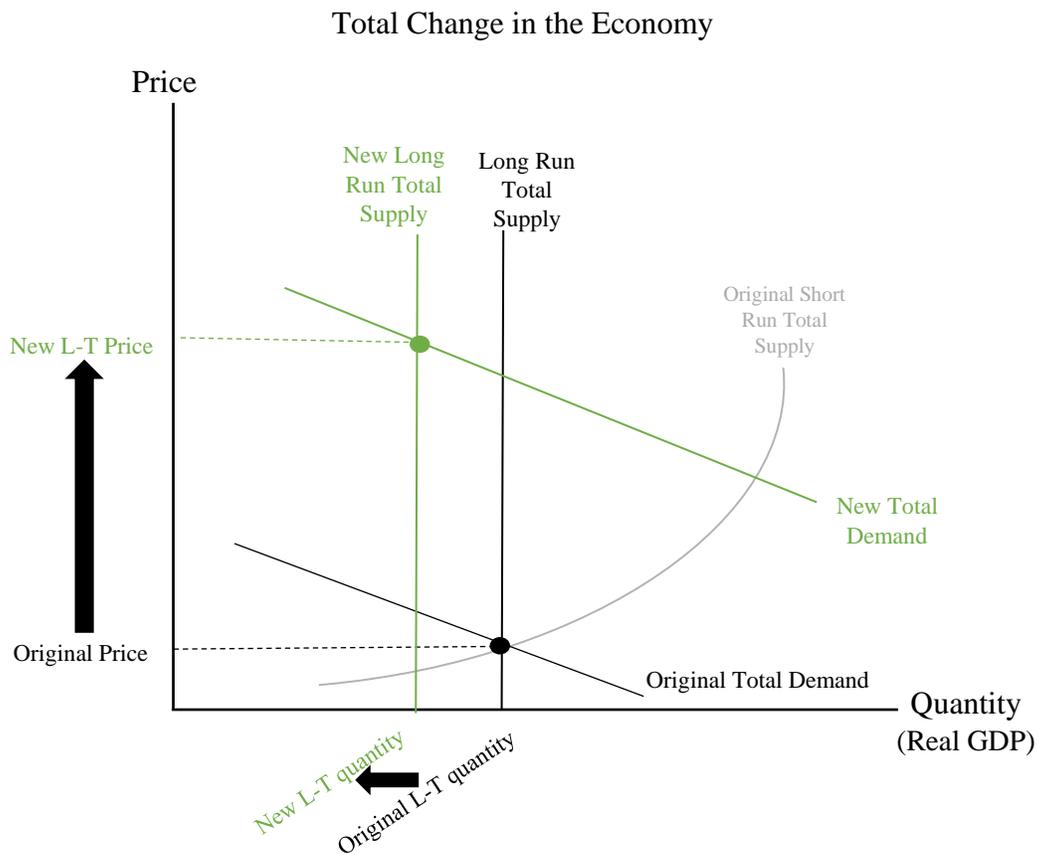
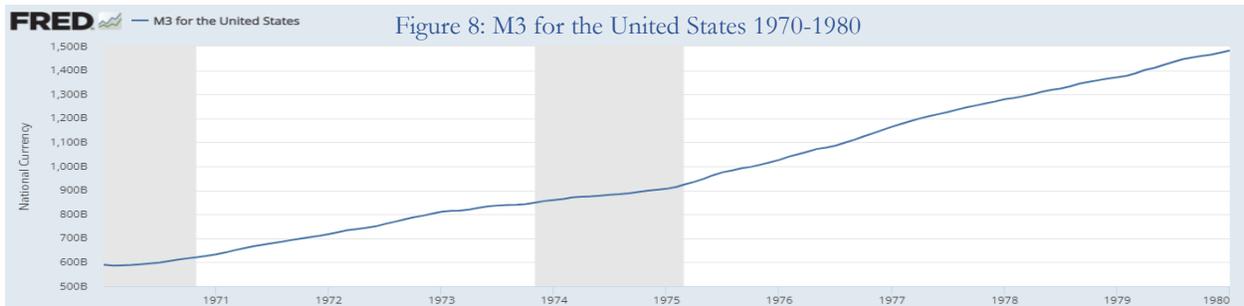


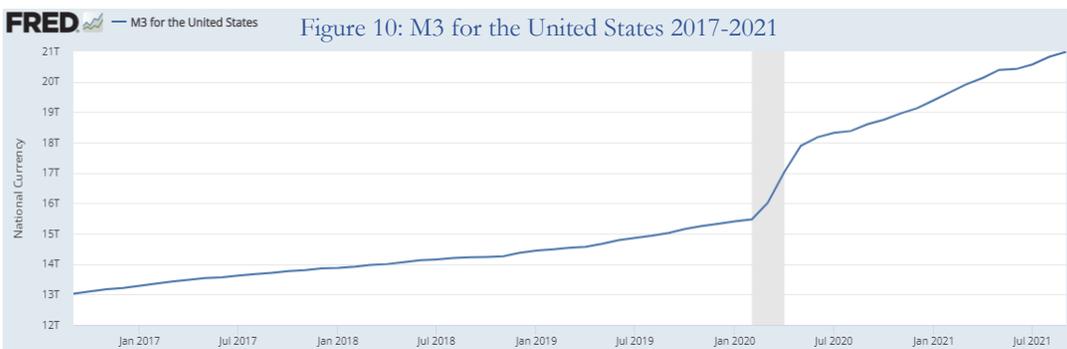
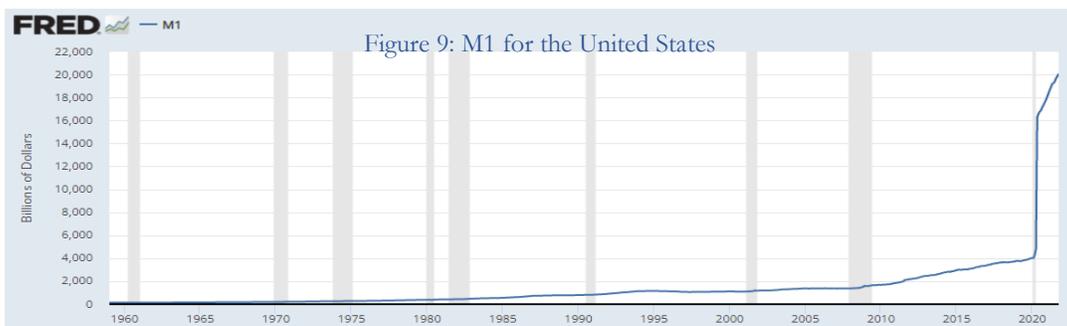
Figure 7

The Effects of Increased Money Supply

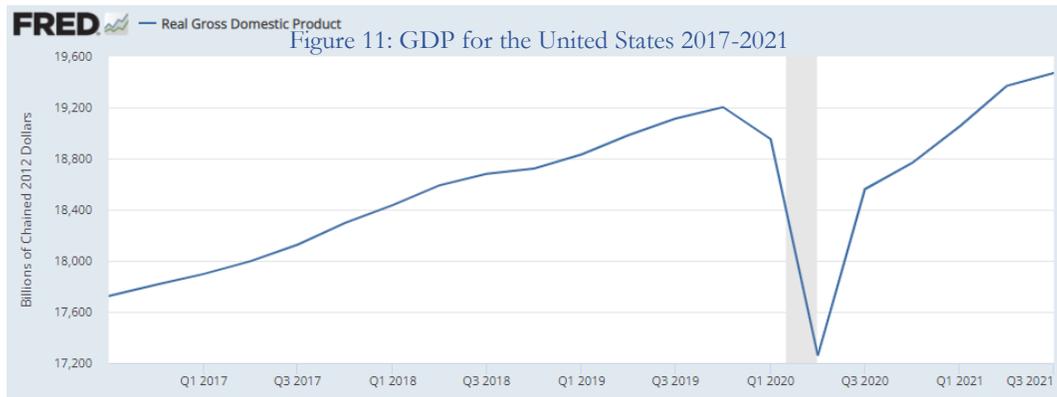
Similar policy mistakes are occurring now as in the 1970s, with excessive money growth. From 1970 to the end of 1979, M3 (a broad measure of money), expanded by 150%, or an average annual rate of 15%. Productivity growth slowed (due to inflationary pressures) and could not offset the aggressive expansion of monetary policy.



The most basic form of money, M1, has increased 406% from January 2020 to November 2021. From the beginning of 2020 to October 2021, we saw M3 increase 38%. These are extraordinary expansion rates. If money expands by 38% in the formula $MV=PQ$ it is impossible for Q to increase at a rate to compensate so P or inflation has now begun. It's not likely to see this type of productivity growth unless it is over a decade or more, since productivity growth generally averages 2%-3% annually.



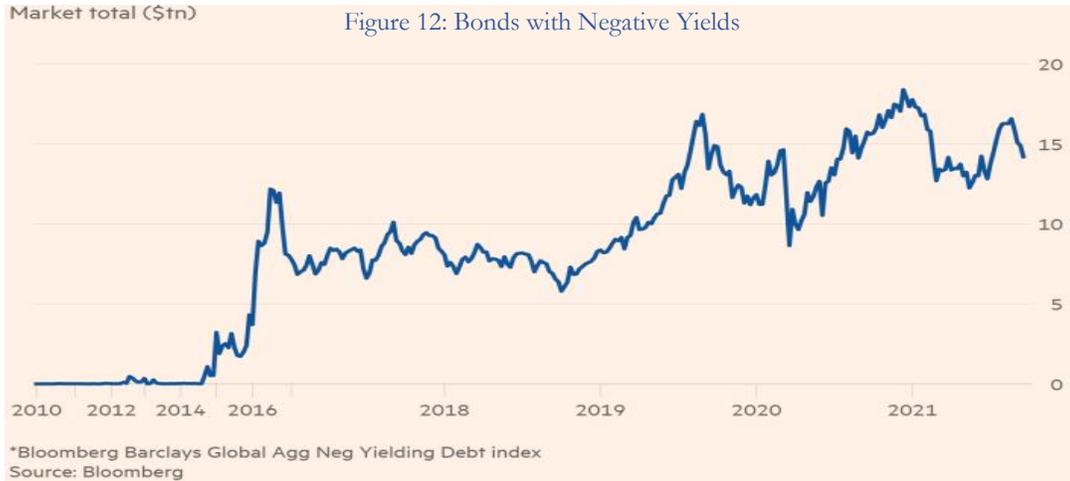
In real GDP terms, the economy is up about \$250 billion or 1.3%, from the peak, at the end of 2019, to the end of the third quarter of 2021, but Nominal GDP is up 6.7% (due to inflation), (driven by an increase in price (P)). We believe the economy is trying to offset the enormous increase in money supply (M) by an increase in prices (P), which the trend is just starting to surface within the economy.



Government Interference with the Markets

Globally, central banks and governments have created so much new money that inflation has been resurrected. This enormous wave of new money creation has likely altered the investment environment on a secular basis. The pain to reverse the current trend will be much less now, than waiting and allowing the inflationary mind frame to take hold. We do not think the Federal Reserve, nor the government leadership, will accept the pain needed to kill inflation, until it becomes a bigger problem.

Most money managers today and individual investors have not experienced a sustained rising trend of inflation nor a period of rising interest rates. Most investors are loaded with assets that perform well in low inflationary markets, examples are highly valued growth stocks and high-quality bonds, both of which don't typically perform well in high inflationary environments. The result of central banks' massive stimulus/money printing was something truly unexplainable with \$18 trillion in bonds with negative yields. These central bank policies have created the bubble of all bubbles in the bond market. A negative absolute return on a bond an investor holds to maturity should not exist.



The Federal Reserve's balance sheet has expanded by over 100% since 2020, up approximately \$4.5 trillion, which equals about 20% of the size of the U.S. Economy. This balance sheet expansion is an indirect injection of money printing into the economy, which will find its way into the economy in time.

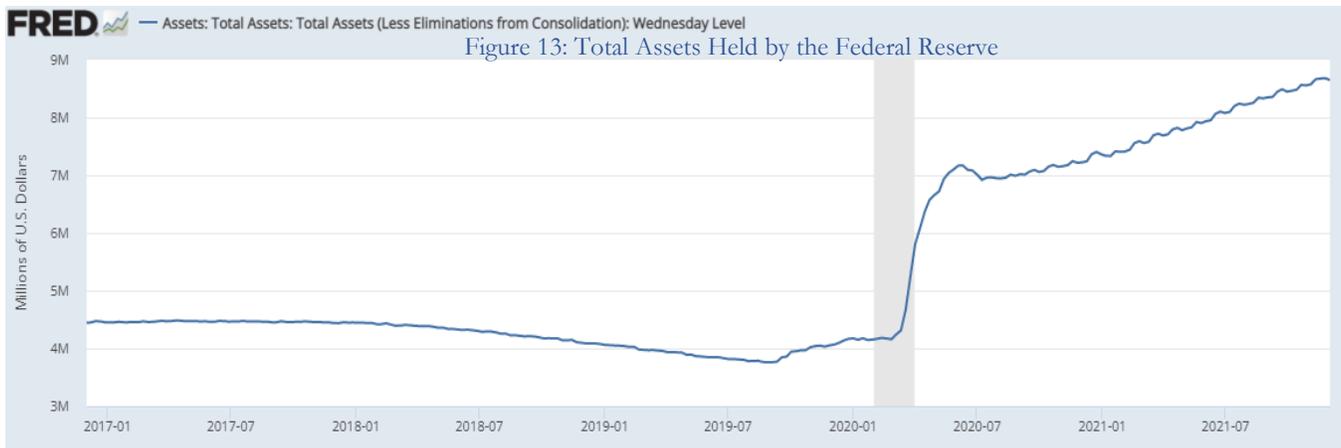
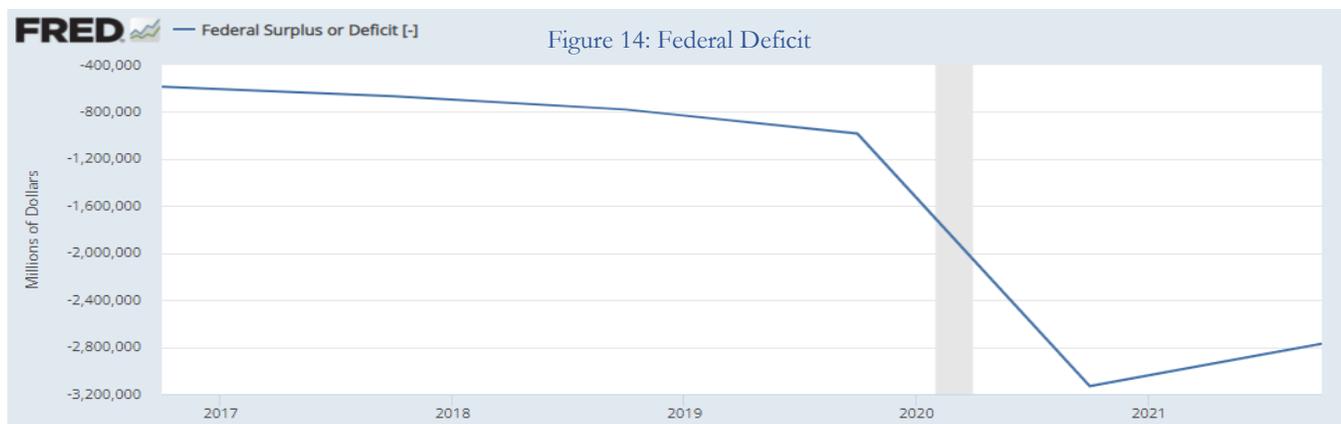
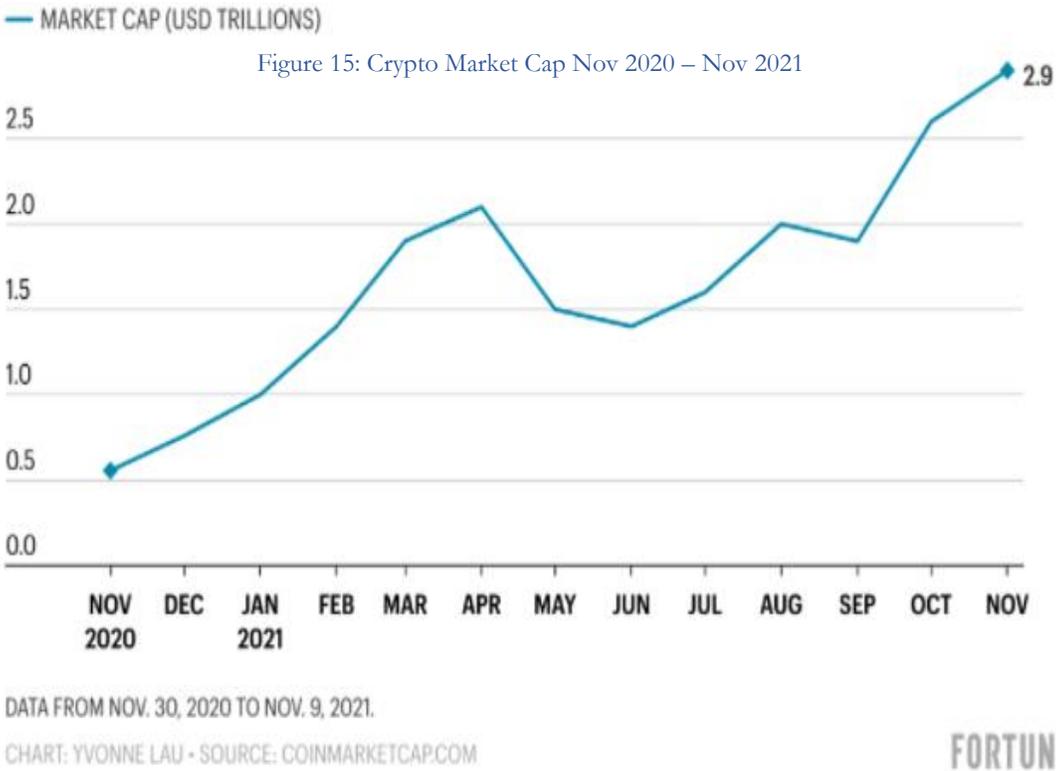


Figure 14 shows the Federal Fiscal Deficits during the past two years, which have been averaging about \$3 trillion per year. These deficits are staggering relative to any other time period. The deficit has been averaging roughly 15% of the economy, which is historically extremely high. Another example of aggressive money supply.



We have an observation that most investors do not consider. The reason \$3 trillion (now less due to the large drop in values) of crypto exists is because of two reasons: 1) central banks had such an aggressive policy causing some institutional investors to transition to the space and 2) the excess money pumped into the economy had to find a new home which was particularly comprised of new and younger investors bullish on crypto. Crypto currency was created as a new way of payment that could be used internationally, decentralized, and without having any financial institution behind it. It is not legal tender by nearly all countries. Owning a government bond had very little value, so why not hold money in crypto until interest rates rise to a meaningful level? This is another sign of a monetary bubble and creates a potential future economic problem.



Investing- Inflationary Cycle or Aggressive Federal Reserve Policy Shift?

It is more than clear the foundation has been established for a significant cycle of inflation. Inflation rose 7% in 2021. The Federal Reserve has maintained the Federal Funds rate at near zero, but has recently discussed raising interest rates and also shrinking their massive balance sheet by year-end 2022 (the Federal Reserve is currently expanding their balance sheet and the market does not seem to believe they will begin to shrink their balance sheet this year). The U.S. Federal Budget Deficit is expected to be \$1.66 trillion in 2022 (7.5% of the U.S. Economy), a very inflationary policy. Energy costs are a very important ingredient into all goods. With the massive push to green energy it is not prudent for an oil company to approve any long-term exploration. Energy costs could rise much higher than expected as supply falls (\$200 per barrel are not unrealistic with a little supply shock).

The Federal Reserve currently expects inflation to be 2.6% in 2022, however, we are seeing the circular relationship between inflation and higher labor costs. The Federal Reserve's estimate of 2.6% is likely to be way too low.

The Federal Reserve cannot wholly control inflation without extreme measures, the deficit is a very big problem, along with our domestic energy policy. It may take a couple of years for the Federal Reserve to even get to a neutral inflationary policy stance. In the meantime, the deficits will likely remain very elevated and the trend in energy costs do not appear to be slowing. For the Federal Reserve to bring down inflation to a more reasonable level they will have to be very aggressive in reversing their current policy. If the Fed wants to kill inflation, they can by shrinking the money supply via shrinking their balance sheet, the M in the Monetarist theory. The analogy to this is like chemotherapy, it works, but it will also kill most everything else with it (in the short-term this would be very bearish).

Three Scenarios:

- 1) **The Fed does not do enough to significantly reduce inflation.** The Federal Funds rates will need to stay above the inflation rate for a long enough period to slow the economy to a snail's crawl. With the Fed Funds rate currently at 0.0%-.25% and the rate of inflation currently at 7%, even if inflation moderates to 4%-5% it will take a long time for Fed Funds rate to go even above 3%. The result is inflation will remain elevated. We would expect to experience some form of a similar inflationary environment as the 1970s. The Federal Government will also need to push to expand productivity by reducing regulations and incentivizing low-cost energy production. This is not likely to happen during the next three years. The inflationary cycle of the 1970s lasted 14 years during which the markets experienced 3 major bear markets and four recessions.
- 2) **Our math maybe wrong about the magnitude of this inflationary cycle for some odd economic event that we do not currently see.** The labor participation rate could improve meaningfully alleviating some of the wage price pressures. The Federal Reserve may slow the economy enough that inflation moderates. Interest rates stay relatively low for an extended period. Perhaps the result is a flat to slightly negative quarter of GDP growth. Enough to cause a significant market correction. Inflation moderates as the economy moderates. This is what the market is currently discounting and is the most bullish of the three scenarios.
- 3) **Lastly, the Fed takes an aggressive approach by simultaneously increasing interest rates and shrinking their balance sheet.** The political environment is now very focused on inflation but is not likely understanding the pain of the medication needed to resolve the issue. Under this scenario we see a significant bear market.

We would not rule out any of the three scenarios, all three requires investors to likely reposition their portfolios. The risks in both the stock and bond market are high. There are clear signs of a bubble in the bond market and certain areas of the stock market have bubble type of high valuations, especially with the market's P/E multiple declining over time. We see Scenario One as the most likely to occur, followed by scenario three. Scenario two, the math and anecdotal support is just not there, but we keep an open mind as this is the market's current consensus view.

A significant decline in the stock market, would likely quickly feed on itself because of the “wealth effect” as such a high percentage of individuals are invested in speculative securities. As you can see by the chart below the stock market to GDP has never been this high, even when compared to the year 2000.

Figure 16: Ratio of Total Stock Market Cap to GDP

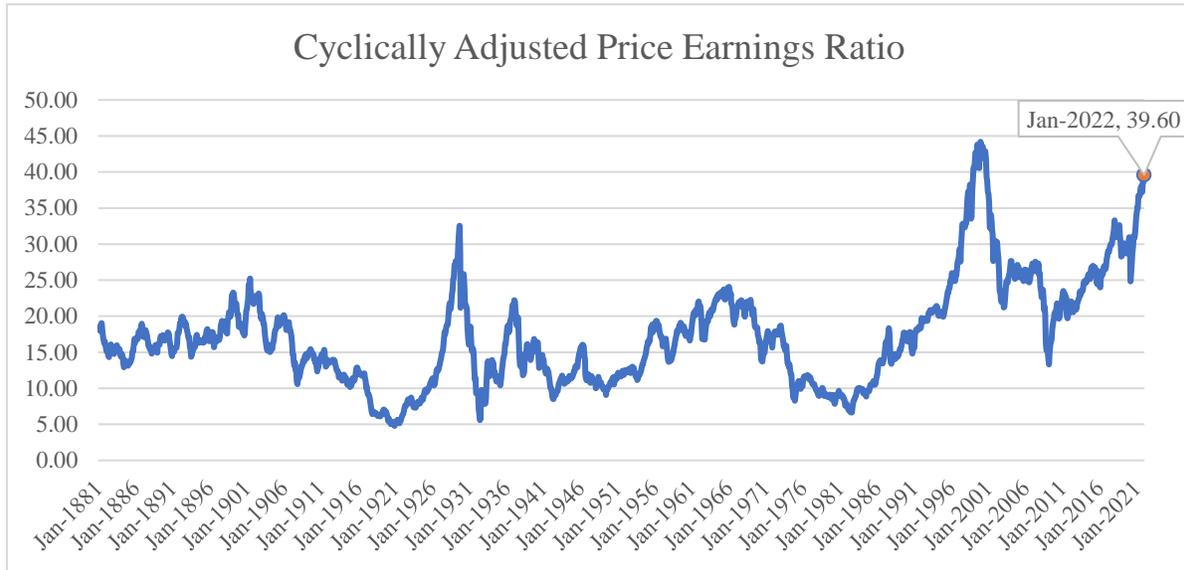


It is important to emphasize that even though interest rates increased in 1968 from around 4% to nearly 16% by 1980 and the P/E multiple declined from around 18 to a low of around 7, there were ways that investors made significant returns.

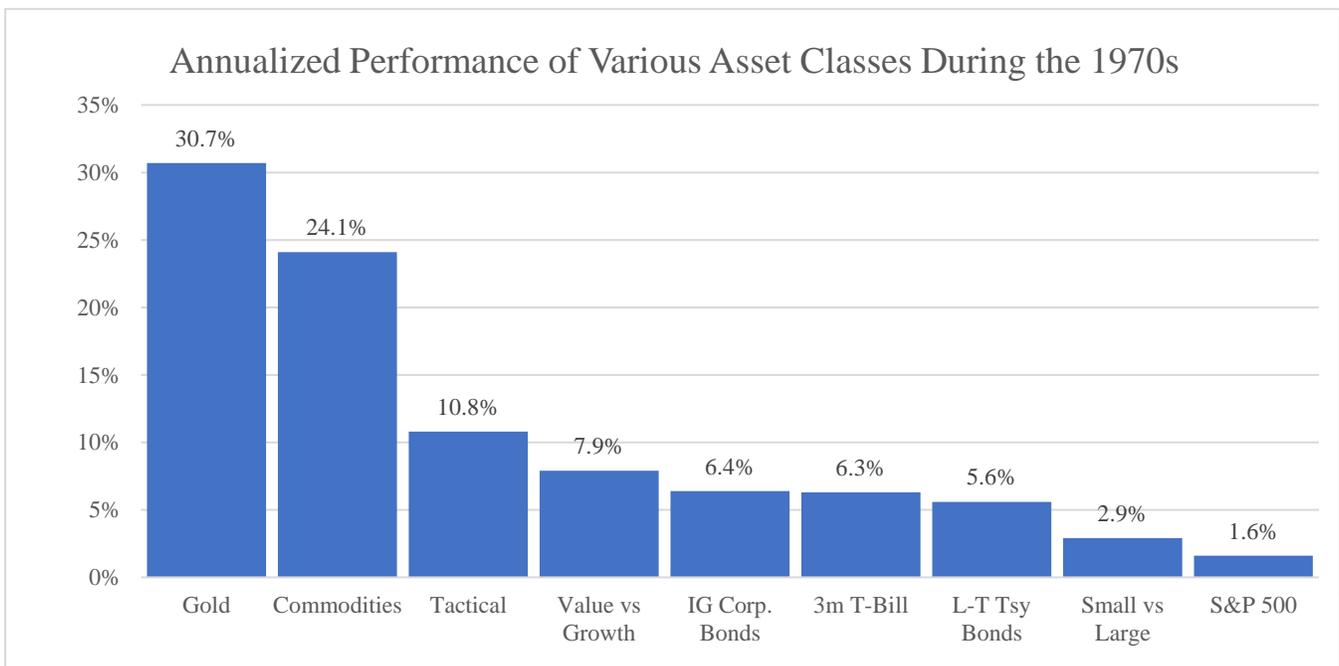
Figure 17: Yield on the 10 Year Treasury



Figure 18: P/E Multiple S&P 500



Below (Figure 19) is a chart of the returns for select asset classes during the 1970s. Gold increased roughly 10-fold in the 1970s, but there were unusual monetary de-linking with the dollar that made gold in strong demand as inflation rose. These circumstances do not exist today, and we do not see gold performing anywhere close to what happened in the 1970s. We see rare metals as the new gold. Commodities in general perform well with inflation and believe that would hold true today. We are seeing significant inflation in commodities currently. To make a bet on inflation an investor should own commodities, we would do so through an ETF that we have identified.



Tactical investing is made for volatile markets. Tactical strategies are portfolios that limit the downside during falling markets yet capture a significant portion of the appreciation when markets are rising. Due to this defensive mechanism, tactical strategies generally have much lower volatility than the market. Tactical strategies, unlike just owning a portfolio of stocks or ETFs, would perform well under all of our scenarios. Tactical strategies should be the core of a portfolio.

Value and small cap companies tend to benefit as prices rise as they are generally in industries that can pass along price increases. Growth stocks benefitted greatly from a low inflationary environment and have valuations that are excessive. Value and small cap did not perform due to the lack of inflation, have low valuations, and should be strong relative performers.

Given the low level of yields of high-quality bonds, they likely will perform poorly as interest rates ratchet upward. Real estate will have the same headwind, but because of rising commodity prices and wages we believe real estate will be a good investment after an initial adjustment.

Our Top Investment Themes

- 1) Tactical Equity Managed Portfolios- low risk approach to ensuring an attractive return**
- 2) Commodities, in particular rare metals- offensive bet on inflation**
- 3) Value stocks that benefit from inflation- would suggest also having this exposure in a tactical strategy**
- 4) Lower rated investment grade bonds- 5 years or less**
- 5) Small cap stocks especially with tactical money management**

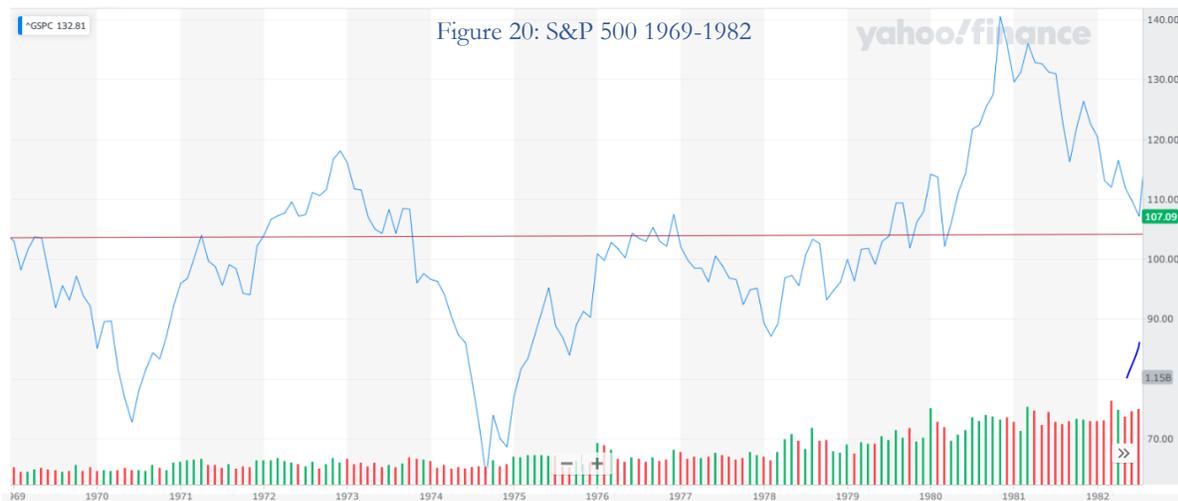
When the Federal Reserve was tightening monetary policy in 2018 by both raising interest rates and shrinking their massive balance sheet, the S&P 500 fell by about -18%, in a very short three-month period. The balance sheet is so enormous it is a scary thought to shrink it, and interest rates are so low, by normalizing interest rates it would have a huge impact on asset values.

During the inflationary period of 1968-1982 there were four recessions and three significant bear markets, buy and hold does not work.

Bear Market Declines

- 1968-1970 -36.06%
- 1073-1974 -48.20%
- 1980-1982 -27.11%

From 1969 through mid-1982 the S&P 500 was essentially flat over 13.5 years



We did a rough calculation of just simply using the 200-day moving average during the decade of the 1970's to see the difference between a buy and hold approach and a tactical approach (Figure 21). The Tactical model was up 109% cummulative and the buy and hold approach for the S&P 500 was up only about 28%. The way to stay ahead of inflation, if it does continue, is through the Tactical Strategies.

Figure 21: S&P 500 1970-1979 with Tactical Buy and Sell Points



Very large swings in the stock market caused by inflation, while not allowing meaningful appreciation, is a very good environment for tactical managers, but not a buy and hold model. Higher inflation is bad news for longer-duration assets like Treasuries, Corporate Bonds, Municipal Bonds, and High P/E Growth Stocks. Bonds are particularly exposed to a shift in inflation and a rise in interest rates, as the yield is so very low. Inflation and a bubble combined are tricky for bonds!

Investment Themes to Avoid

- 1) **High Quality Bonds**
- 2) **Highly Value Growth Stocks-we believe there will continue to be innovative growth stocks to own**
- 3) **Buy and Hold of Stock Indices or Funds**
- 4) **Cryptocurrency**

This is our road map through this uncertain period. A tactical portfolio should be a profitable path. Inflationary investments will depend largely on the Federal Reserve's tenacity and Federal Government policy.

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