



CIO QUARTERLY COMMENTARY

Q3 2022

And the Beat Goes On

It's still (mostly) all about inflation

We won't spend this entire letter on inflation, as we may seem to have done for several quarters now, but we will give you a brief update. Inflation remains the biggest driver of financial markets, for good or ill. At their Jackson Hole meeting in late August and again in late September, various Fed members spoke strongly about the need to contain inflation, capped off by Jerome Powell's clear message that the Fed will raise rates until inflation falls, and keep them there until it's back toward the 2% target rate. His remarks were shorter, his focus narrower, and his message more direct – we will bring price inflation back down to 2%: "A failure to restore price stability would cause more pain than restoring it will cause." The market took this to mean that short rates are going up more than most had anticipated and may stay there for longer too. Longer run, 2 to 2.5% short rates may be appropriate once inflation comes back down toward target, but not now.

The notion that a restrictive monetary policy stance will be needed for some time has been repeated by several Fed members, including Powell in numerous speeches. Central banks are responsible for delivering low and stable inflation – price stability – and the Fed seems to now be all in. Inflation expectations have not yet become ingrained, and the Fed wants to make sure they don't become ingrained. "We must keep at it until the job is done," says Powell.

Markets are starting to price in higher rates for longer. This likely makes equity market rallies shorter and setbacks faster. Good economic news will be interpreted as "bad" because it will suggest the Fed's inflation battle will take longer. We've long believed a recession was likely (soft landings are hard to achieve) and remain believers. The sooner the Fed can cool inflation, the shallower the recession is likely to be.

As most of you know, we generally view markets with a glass half full approach. Over time, markets move up and to the right. Yes, we try to be realists too, but few truly successful investors bet against progress very often. That's what makes times like these so difficult. It is easy to find someone who thinks the clouds are about to



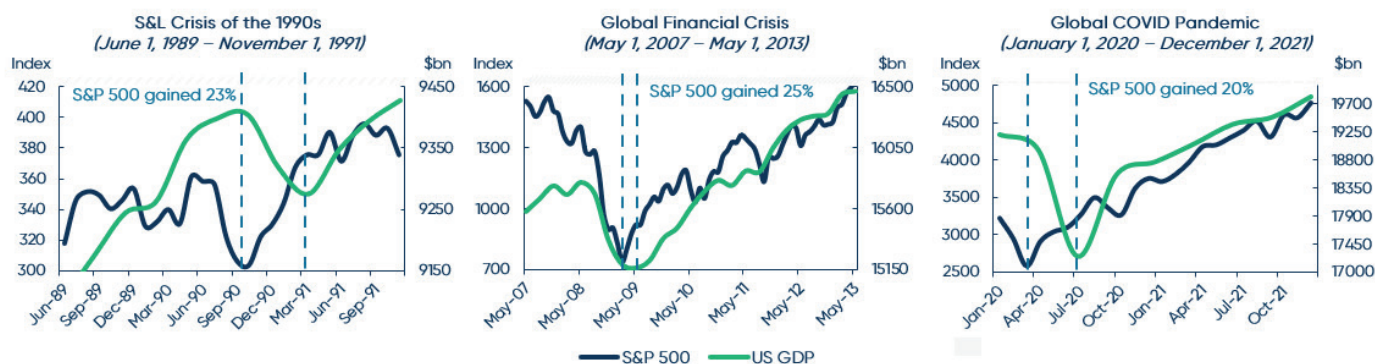


part and now is a good time to invest (which it may be, though we think it's still too early). As an example, as Fed policies have morphed over the last year or so, so too have Wall Street expectations. Paraphrasing one recent Wall Street forecast we read, the new higher expectations for Fed Funds (from a peak of 3.5% by 12/31/22 to a new peak of 4.25%) is causing this firm to make several adjustments to its expectations, including lowering its GDP growth forecast for next year to 1.1% from 1.5%, unemployment to 4.1% from 3.8%, and 2024 unemployment to rise to 4.2% from a previous expectation of 4.0%. We are not economists but suspect that if next year's GDP growth is only 0.4% weaker and unemployment only 0.3% higher than previously forecast, we will not see a rapid reduction in inflation.

Until a decline in the future path of inflation becomes much clearer, we expect markets will remain volatile as investor sentiment pushes markets back and forth. There are many factors which can drive inflation – supply side factors, the US dollar, overall financial conditions, fiscal policies, geopolitical developments, COVID, employment participation rates, among many others, and so we would be wary of anyone who submits he or she knows the path with certitude. We continue to be cautious in the face of still elevated inflation dynamics.

We'll leave our inflation discussion with a reminder from our Q2 quarterly investment update. These graphs demonstrate that stock market declines usually occur before recessions arrive, by an average of five to six months. Stock markets tend to bottom by an average of three to four months before recessions end. And the rally off the bottom before the economy turns up averages about 20%.

The Lag Between the S&P 500 and GDP Troughs Provides an Investment Opportunity¹



Keeping this in mind will hopefully help us buy low (lower) and sell high (higher) as the market goes through its normal economic and profit cycles.

¹ Michael Cembalest, Eye on the Market, "Dearly Beloved," JPMAM, June 7, 2022. US GDP measured in real terms.



Private Equity Returns

Several of you have asked how Private Equity (PE) returns can be so much better than public equity market returns during a bear market. It's a good question with no simple answer, but we'll offer a few observations. First, PE valuations always lag by a quarter or more as managers go about updating their valuation models. Because public markets zig and zag every day, the PE folks tend to cut off expected tops and bottoms of public markets. Second, in this valuation effort they use multiple factors including public market comparables; but also, private market comparables and transactions; recent private market fundraising valuations, and growth of revenue and cash flows plugged into a discounted cash flow model. What matters most is the valuation they get on exit: the "what would you sell it for" value. In private markets, assets only get sold when the owner wants to sell. This is why private market transaction volumes shrink so much during stock market declines. It's also why long-time PE investors say to us, "What makes you think a short-term price where only a few percent of a company can be purchased is the right price for the entire company? The right price is the one at which you can buy the whole company."

If public market prices continue to fall, we expect PE values will also fall. However, as opposed to public markets, we would expect private markets to slowly adjust with small reductions in value over many quarters as general partners adjust to the new reality, and as the operations of the underlying companies are affected by the same macro factors as public equities, namely a cooling economy and relative scarcity of capital. The uncertain nature of how prices are determined, and illiquidity of private investments are two reasons they may not be for all investors.

Crypto Currencies

We wrote about crypto 18 months ago and concluded then that it was not worth investing in. Specifically, we were referring to Bitcoin at that time. Since our letter, many really smart people have totally disregarded our advice and continue to pursue careers in this still new (in our minds) area. Many of these people are creative and talented software engineers with designs on changing the future for the better. We've continued to monitor the space and we are still looking for a crypto asset that "earns a profit" or the equivalent thereof. Although we haven't found a profit generator yet, there is so much smoke today in the crypto world that we suspect there will at some point be a fire. Not that crypto will become as successful or



important as the internet, but something in that direction seems more likely than the entire crypto ecosystem just disappearing in the next 3 to 10 years.

There is one recent development worth a short explanation, Ethereum's most recent upgrade, known as "the merge," which has been many years in the making and successfully occurred on September 15, 2022. Ethereum, the second largest crypto asset by market cap, transitioned from a proof-of-work to a proof-of-stake consensus mechanism. This upgrade has at least two major expected benefits. First, it will reduce Ethereum's energy consumption by more than 99%. Second, "the merge" upgrade is intended to only be a part of Ethereum's long-term road map of core upgrades, which collectively will greatly increase the number of transactions it can process per second from 15 to 100,000. Exponential increases in transaction processing speed combined with exponential decreases in power usage and other applications written on top of Ethereum are expected to encourage a jump in new consumer and industrial applications that utilize Ethereum.

This should be a good thing for the crypto/blockchain ecosystem in general and may ultimately even lead to an application that "earns a profit." We believe this "merge" could be a catalyst for crypto currencies and blockchain work. In the meantime, crypto prices are off about 60% to 80% over the last year. Low prices with a possible catalyst are always much more interesting than the converse.

In the quarterly update where we discussed crypto extensively, careful readers may recall we also discussed meme stocks. We, focused on Gamestop (GME), concluding similarly to avoid it. GME has since declined 47% or so, but with several excellent trading opportunities for its fans along the way. We plan to continue to avoid meme stocks. These stocks may be entertaining to watch and likely provide some insights to the level of ebullience in the marketplace overall, however, we don't believe them to be good long-term investments.

The US Dollar

A few of you have asked us about the recent strength of the US dollar (USD). On a trade weighted basis, the USD hit a 20-year high this month. Prognosticators attribute the rise to a combination of several things. First, our economy seems to be holding up better than most any other in the world – the so called "cleanest dirty shirt." Second, our interest rates are higher than most any other major country, making our bond returns relatively more attractive – to own them you first have to





buy USD that you can then use to buy US bonds (or stocks). Third, most oil trades in USD, so as oil prices rise, so does USD demand (although at some point the causality does appear to reverse, whereby a high USD puts a cap on rising oil prices). Fourth, the Fed's quantitative tightening program has kicked in, whereby the Fed is selling treasuries and mortgages off its balance sheet and receiving USD back from the buyers. These transactions may at the margin be shrinking the supply of USD in the market as well. Finally, some investors also view the USD as a safe haven during times of war.

Several things happen when the USD rises significantly versus other world currencies. The USD value of foreign investment holdings declines. Similarly, foreign goods become less expensive for US consumers, potentially making now a good time for Americans to visit Europe or American companies to import foreign goods, etc. US goods also become more expensive to foreigners, in exactly the opposite way, encouraging them to find cheaper alternatives. After a brief interval, we should therefore expect the US trade deficit to rise. This trade imbalance pushes more USD into the world, producing a moderating influence on the USD rise. Many argue that for countries that handle inflation responsibly (most do, but perhaps not places such as Turkey and Argentina), currency fluctuations are only just that, fluctuations. In time, the value of currencies should revert to some sort of normal, suggesting now might be a great time for you to pick up that Gucci bag you've always wanted.

The US Dollar Index: Value of the USD Versus Major World Currencies (January 31, 1967 to September 30, 2022)²



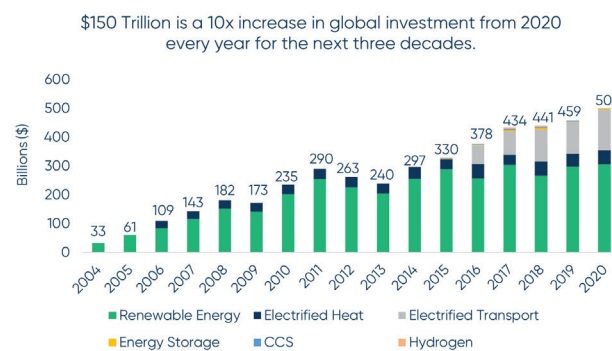
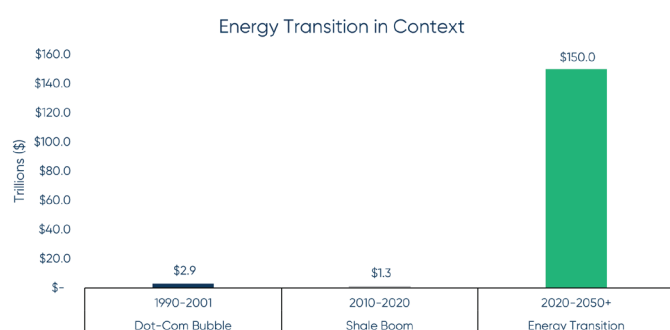
² Source: Bloomberg: DXY Currency - January 31, 1967 to September 30, 2022. The US Dollar index measures the value of the US dollar relative to a basket of top 6 currencies: EUR, JPY, GBP, CHF, CAD, and SEK.



Toward Cleaner, Greener Energy

We have spoken about greenflation in previous letters. We believe the transition to cleaner, greener energy sources will be expensive and take time. We won't argue here for or against but will try to add dimension and offer some sense of the magnitude of this transition, as reported by consulting firm McKinsey in January of this year. McKinsey estimates additional global spending of \$150T, or \$3.5T per annum (on top of the current annual energy spend of \$5.7T), will be required to achieve net-zero carbon emissions by 2050 (see chart below).

The Capital Intensity of the Energy Transition³



Crunching through some rough estimates, this incremental spend represents an increase of 15% to 20% above current taxes domestically and globally. These numbers are 50 to 100 times larger than the cost of the Dot-Com Bubble or the Shale Boom and will, we believe, keep upward pressure on inflation as we pursue both current energy and build out the infrastructure of our green energy future. The alternative of not reducing carbon emissions is estimated to result in destructive temperature increases, with 2050 global GDP estimates being reduced by the current size of the entire US economy. (The current size of the US economy is one-eighth of the projected 2050 global GDP).

Recently, the oddly named Inflation Reduction Act (the Act) passed into law, which many call a game changer. The \$369B earmarked for energy security and climate change is small compared to what's needed, but the framework the Act creates (we want to build critical infrastructure like batteries here in the US) and the potential funding it can help provide/augment are important signposts for entrepreneurs as they plan new enterprises to meet these challenges. The Act also seems to encourage entire green energy supply chain construction here in the US and

³ Source: "Inconvenient Truths," Pickering Energy Partners Investments, October 19, 2021.





suggests that practical solutions to current energy challenges could be met with US sourced energy.

Whether you are for or against the clean energy transition, the world is heading in that direction. Many huge new industries and companies will be created. If the Act helps the US get ahead of other countries in the race to develop the best, lowest cost clean energy solutions, then it helps create or replace millions of US jobs in the future. It may also create some fabulous investment opportunities along the way. Our country has always been a leader in new technologies and we're hoping this Act, wrongly named, can jump start us toward doing just that.

Finally

Summing up, we think it is still too early to increase equity exposure, but we are heartened to see the Fed going all in to fight inflation. Inflation is the arch enemy that must be defeated before markets can return to their traditional winning ways. The sooner this happens the better. In the meantime, we are likely to remain very near our target asset allocation weights. We are looking for opportunities to increase exposure in equities, as always, and starting to debate whether there may finally be an opportunity to extend duration in our fixed income holdings too. This is the first time in many years that we've seriously entertained that idea! While we are not there yet, the idea of actually earning a positive real return from the fixed income portion of our portfolio is encouraging (though getting to today's yield levels has cost holders of 30-year Treasuries 30% of their principal this year). To be clear, on balance we still like hedge fund prospects better than bond prospects. Lastly, similar to fixed income, other assets have materially declined in price and/or their growth prospects have improved, making the go forward investment landscape begin to appear more appealing.

As always, we very much appreciate the opportunity to help manage your capital and to help you achieve your organization's goals. We are here to assist you in any way possible, so please reach out and let us know how we can help.

Your TIFF Investment Team





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