

Preparing for the Future, Not Predicting It

In today's letter we share some perspectives on inflation, and the relationship between inflation and stock market multiples. We provide an update on the Shiller indicator (PE-10) which, per our wishes, is now supplemented with an inflation-adjusted view on equity valuations.

I hope you are doing well and enjoying what has been the rarest of seasons in New England, a true spring! As the economic skies have brightened, it seems that inflation has supplanted the pandemic as the number one [tail risk](#) facing stocks, and that has caused prices to gyrate over the last several weeks. The S&P 500 Index was up 7.7% in April, but so far in May it is down about 3%. Large cap growth stocks, which tend to be more sensitive to inflation risks, have declined about 7% from recent highs.

Our market updates aren't about predicting the future, but about helping you to prepare for it and what may come in the markets. That preparation is partly financial in nature, making sure you have staying power with your investments versus your competitors in the market. By taking a disciplined approach to capturing returns over the life of your plan, you can take advantage of competitors nearsightedness and garner an additional increment of return which we call "Behavioral Alpha." As such, our comments aren't meant to be prescriptive; making wholesale modifications to investments with every turn in the economic weather forecast is more likely to reduce than increase investment returns over the life of a financial plan, especially after taxes are figured.

The overarching objective for clients is to narrow the range of outcomes in a financial plan. Actively managing a portfolio in response to forecasts is likely to introduce more variables which may widen the range of potential outcomes in a plan.

Even if something seems "obvious" in the short run, like the impact that a surge in inflation may have on markets, it is important to remember that avoiding short term downturns isn't the objective. Volatility is a source of risk. Risk is what produces return – you've heard the adage that "risk and return are directly related." The idea is to "build the ark before it rains" by dialing in and accepting a suitable risk-return bargain through asset allocation policy, and then doing everything you can to stay on that track, including following disciplines like making sure you've got enough cash on hand to meet short term needs during a downturn. Investors running toward the exit sign on a bump in inflation simply may have taken on more risk than they can handle financially or psychologically, and it is just a bump *until actual evidence says otherwise*.

Operating on evidence -- what you know and can know -- rather than guesswork about the future is one of the fundamental differences between investing and speculation. It's always important to consider the "opportunity costs" involved in guesswork.

This is absolutely true -- since the S&P 500 was created in 1957, inflation has risen above 4% on nine occasions, and in eight of those cases the stock market was lower three months later. But are we making decisions for the next three months or quarters, or for the next decades and even generations?

Looking through that keyhole ignores the exponential growth in both the US economy and the stock market over that same period. For example, \$10,000 invested in the S&P 500 Index in 1957 would be worth \$5,400,000 today with dividends reinvested, a return of 10.34% per year, despite many serious episodes of inflation. The after inflation or "real" return is 6.3%. This illustration is not a prediction about the future course for stocks, but rather a reconciliation of the potential opportunity cost involved in following near-sighted market predictions, and that holds even if the forecasts for a big upturn in inflation turn out to be true, about which there is much doubt.

With that advice in mind, our letters over the last couple of quarters ("Watch out what you wish for") pointed to the *possibility* that, given all the monetary and fiscal stimulus in the financial system, a post-pandemic resurgence in the economy could result in shortages and rising prices (inflation). This in turn could lead to a correction in the markets even as earnings rebound, which may be counterintuitive. I'll explain the relationship between inflation and stock valuations below.

The tricky thing about forecasting inflation is that it is subject to many complex and interdependent variables, meaning inflation itself could be self-correcting. The Fed may respond by raising interest rates or by making subtle changes in monetary operations, which in turn may cause inflation expectations to drop. A mere change in the Fed's language may have an important psychological impact on inflation expectations. Even if the Fed doesn't act, the markets themselves may drive interest rates higher, which is already happening to some extent, and that could alter the outlook. Earlier this year investors fretted that the Fed would try to raise interest rates too early and choke off an economic recovery. But now it appears that investors are concerned the Fed may wait too long to raise rates and fail to stop inflation from taking hold.

Complicating matters further, potential tax increases are inherently deflationary and may work to offset pricing pressure. Pandemic related bottlenecks in supply chains and commodities are contributing to the higher inflation data and seem likely to pass with time, and there are low base effects when making comparisons with 12 months ago.

It is critical to maintain this long-term perspective -- the recent spike in inflation is taking place within a multi-decade, super-cycle of moderate growth, low inflation, and low interest rates. This is an entrenched trend that isn't going to turn easily, impelled by huge deflationary forces including aging populations, declining birth rates, globalization, and technological innovation, which is only accelerating. These forces are structural and large tax cuts, unprecedented money printing and global negative interest rates over the last 15 years have been unsuccessful in boosting GDP growth out of the 1-3% range. These policies have amounted to "spitting into the wind". You could argue that the pandemic may alter globalization dynamics to a degree, but it also has led to a decline in global birth rates and seems likely to drive further technologization.

Given this context, is the secular deflationary trend really coming to an end? Or are we merely experiencing a cyclical uptick in inflation? No one really knows, and the answer is not likely to be found in news headlines or nose to the ground economic analyses, which amount to supposition. Absent more evidence, it seems premature and probably unwise to assume a change in the long-term trend.

Having said that, the recovery from the pandemic and the sheer amount of money printed to stay a major recession may well result in a cyclical uptick in growth and inflation...and possibly to giving back some of the recent market gains.

There is an established inverse correlation between inflation and stock market earnings multiples¹. Note that the multiple is a function of both earnings and what investors are willing to pay for those earnings at a given time, which is influenced by many fundamental and psychological factors. The key factor is inflation expectations, and by extension, the interest rates paid by low-risk bonds which follow those expectations. The market multiple tends to be lower when inflation and bond rates are higher. The multiple tends to be higher when inflation and bond rates are low – which describes the current situation. These relationships don't work in perfect step over short terms, primarily because current prices are influenced by investors' expectations, but over longer periods the valuations revert to these fundamentals.

There is one unusual deviation to this relationship. When inflation has been extremely low or negative (~ below 1%), such as during the Great Depression or for a short period during the Great Recession, valuations have been suppressed.

Let's go back to data already provided -- since 1957 the market's nominal (before inflation) annual return was 10.3% and the real return (after inflation) was 6.3%. Inflation was about 4% during the period. If you go all the way back to 1887, the market's real return is about the same -- 6%. That is the "risk premium," the compensation for risk taken which investors expect to earn after inflation.

So now let's consider a scenario in which investors expect much higher inflation, like the early 1980s when future inflation expectations were about 10%. To net 6% after inflation, investors would have to earn a 16% annual nominal return -- a very high return relative to the long-term average of 10%. Given that scenario, investors collectively adjust downward the price they are willing to pay for stocks relative to corporate earnings – the price earnings multiple. Indeed, in 1982 the stock market multiple was in the low teens, very low compared to the long run average.

To put this in more relatable terms, let's make a tweak to the "price earnings ratio," which is calculated by dividing the stock price by earnings per share. No one outside of Wall Street uses such a calculation! Instead, let's flip the divisor and divide the earnings per share by the price which gives a more relatable "earnings yield," and which can then be compared apples to apples with bond yields or even real estate rental yields.

If you think of investment real estate, for example, you take the rent and divide it by the property value to get a yield. If you own a piece of real estate which pays \$25,000 in rent and the property is valued at \$500,000, the yield is 5%. If you own a \$10,000 bond that pays \$500 interest per year, the yield is 5%. In the same way, if you own a stock at \$20 per share and the company has earnings per share of \$1, the *earnings yield* is 5%. That's a lot easier than dealing with a price-earnings multiple of 20x.

Back in the early 1980's, because inflation was so high, investors could buy government bonds paying 10% interest. To take the risks associated with owning stocks, investors would require more earnings yield – they would pay lower prices for stocks relative to earnings. Using our example of a company with earnings of \$1, it wouldn't make sense to pay \$20 per share because that would produce an earnings yield of just 5% vs 10% for bonds. If instead an investor paid \$10 for the stock, the earnings yield would be 10%. Collectively, this is how investors set market valuations.

To recap the concept, when inflation is high stock investors will need to generate a higher return on earnings to net an acceptable real return, which can be accomplished by paying lower prices for stocks relative to the earnings. The inverse is also true. When inflation is low, investors don't need as high of a

¹ The market multiple or "[price earnings ratio](#)" is calculated by dividing the stock price by the company's earnings per share. You can also get the multiple for entire stock market, for instance, by dividing the S&P 500 Index price by the total earnings of the 500 companies in the index. Investors look at the market multiple to assess overall stock market valuations.

nominal return to net an acceptable after inflation return compared to bonds, and they are willing to pay higher prices.

This is descriptive of conditions today. Inflation has been at very low rates—around 2% on average -- for the last twenty years, and because of slow economic growth during the pandemic, inflation was below 1% for a period last year. The yields available on intermediate term bonds were below 1% and are now around 1.7%, still very low in historical context. Consequently, investors have been willing to pay higher prices for stocks.

Currently, the consensus earnings for 2021 for the S&P 500 is \$188. With the index trading at about \$4100, the price earnings multiple is 22, which is higher than the long-term average of about 18x. The earnings yield is just shy of 4.6%, which is significantly higher than the intermediate bond yield of 1.7%. On that basis, stocks are highly priced relative to history, but not irrationally so relative to bonds.

Clearly though, if inflation and bond yields rise, investors may demand a higher earnings yield in response. But it is important to see that the equation also depends on what happens with earnings. If higher inflation is accompanied by higher economic growth, stocks could do okay. The bad scenario would be if we experience “stagflation” – higher inflation and tepid earnings growth. Again, that is a short-term scenario and not necessarily indicative of what’s to come five or ten years from now, which is what you care about.

Also, my above analysis of current market valuations is based on current year earnings expectations. As we’ve discussed over the years, it is better to look at 10-year averages as Robert Shiller does with his CAPE or PE-10 ratio. Looking at things over longer periods of time minimizes noise in the data that may occur because, over shorter periods, prices and earnings can fluctuate widely such during recessions and sharply recovering periods, as with the recent pandemic and aftermath.

Shiller’s PE-10 shows stocks trading at a historically very high multiple of around 33, but as Shiller points out, that gives an earning yield of 3%. The spread between the earnings yield of 3% and the bond yield of 1.7% is about average for the last 20 years.

Based on that, Shiller believes that today’s stock market valuations are high in nominal terms, but they seem rational relative to bonds, and not “irrationally exuberant,” to borrow the phrase he used to warn about stock prices in the late 1990s, and about real estate in the mid-2000s. You can catch up on Shiller’s view in this recent NYT article.

As you know, TWM looks at the Shiller PE-10 model to help assess stock valuations in an historical context and to help guide current “tactical” equity exposure within the ranges defined in your Investment Policy Statement. Over the last seven years, we’ve become concerned that the data doesn’t adjust for inflation levels which, as explained, is critical to investors’ views – and our own views -- about stock valuations. We’ve shared this with clients in our letters over the years.

We’ll seek and ye shall find! As if hearing our issue, Shiller has added a component to his valuation indicator called the ECY or Excess Cape Yield. Now you know why I went to lengths to explain the relationship between inflation, interest rates and stock market valuations. The Shiller ECY compares the earnings yield on stocks with bond yields and tells the premium an investor might expect to earn by investing in equities over bonds. It is explained in detail in the above referenced article.

Again, the conclusion by the combined indicators is that stocks are highly priced, suggesting some caution is in order, but that valuations are still in a rational zone compared to bonds.

Considering that and other factors, discretionary managed portfolios are currently about 10% underweight in stocks. That is intended to keep portfolio risk in line with targeted levels as we assume

risk levels are higher when market valuations are higher. This means we are poised to become more opportunistic if stock prices drop.

In closing, I'd like to make a general comment about speculation, with a specific note on Bitcoin and cryptocurrency. As you may know, Bitcoin dropped precipitously in the last week based on several developments. The Boston Globe had this to say in today's paper: "At the end of the day, it dropped for the same reason it skyrocketed – it is primarily held by rank speculators who lack a thesis for ownership rooted in fundamentals or some definition of value."

That statement carries a lot of insight. Bitcoin produces nothing of value (and apparently Elon Musk suddenly realized crypto mining is bad for the environment) and, therefore, the basis for owning it relies purely on perceptions of value, and the hope that you can sell it to someone else at a higher price. As illustrated in today's letter, with stocks, real estate, or even bonds, when the trend goes against you there is a value floor based on earnings, rental income, and interest. You can speculate in stocks by buying crummy companies or by paying prices that are too far above the value floor. You can also speculate by jumping in and out of the markets based on guesswork and no hard evidence.

Speculation isn't "wrong," and it isn't un-American. It's also not likely to be profitable. But the keys to keep in mind about speculation is...you must understand that what you're doing is speculating ... you must keep a firm separation in your mind between your investments and your speculations.... and you must accept the consequences (probably losses).

Thank you for reading and please don't hesitate to send me an email or, even better, give me a call if you have questions, if your investment objectives have changed, or if want further explanation on your portfolio. I love talking about this stuff!

Team TWM is back in the office one day per week and we are gearing up to increase that to two days soon – just in time for summer!

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