The Predictive Power of the P/E

On the illusion of causality.

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Q1 2023

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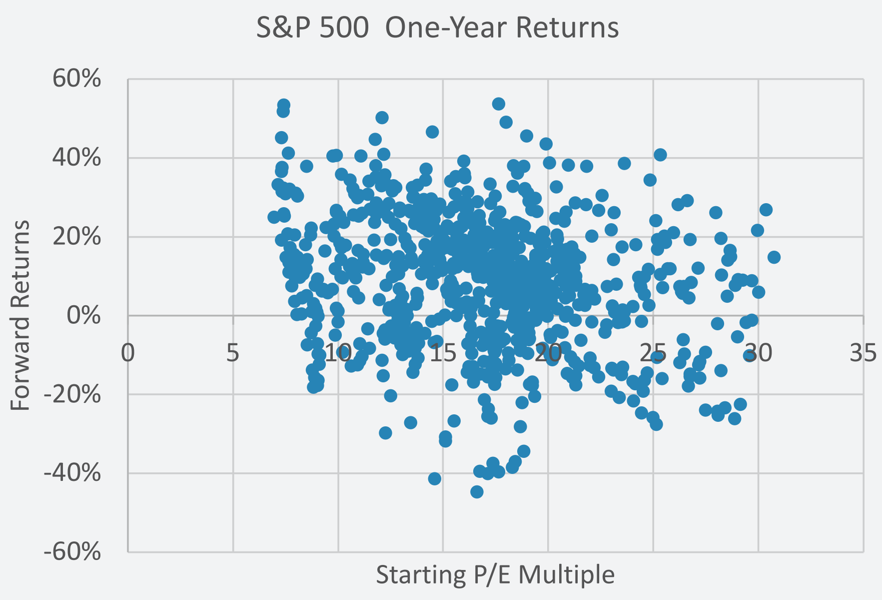
Raise your hand if you've heard someone say that the S&P 500's price-to-earnings (P/E) multiple is currently above its historical average—and so you should expect below-average returns going forward. I know I've heard this refrain quite a bit, especially recently.

There's a simple logic to it, built around the idea of mean-reversion. But I've not seen much actual data to support the claim, so I decided to take a look at the historical relationship between the market's earnings multiple and future returns.

The P/E's Predictive Record

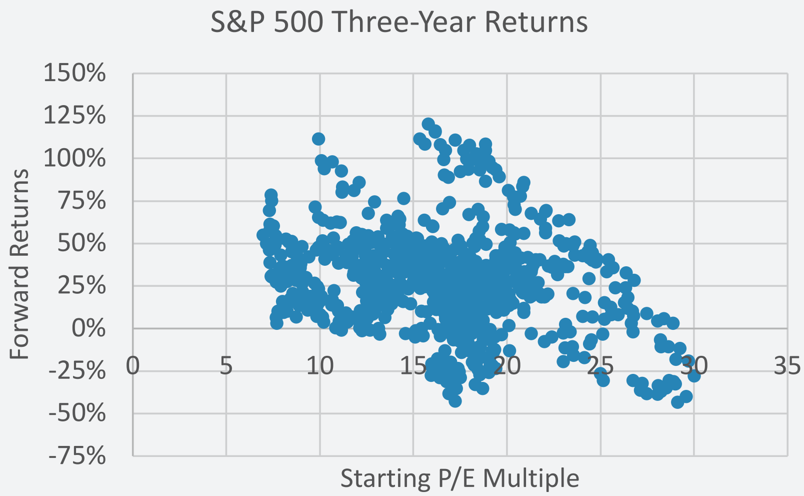
To begin, here's a scatter plot that pairs the S&P 500's trailing P/E multiple with forward one-year returns since the start of 1954.

One quick glance at the chart is all it takes to see that the market's current P/E has little predictive value for what returns investors are likely to realize in the subsequent 12 months. In fact, of the 61 instances where the P/E multiple was above 25x (that is, the top 7.4%), the market actually had a positive return 59% of the time. Those are not the type of returns you'd expect based on the idea that a high current multiple sets the stage for low future returns.



Data from Bloomberg.

But we all know that the market is prone to bouts of irrationality, so what if we instead look at the returns over the following three and five years?



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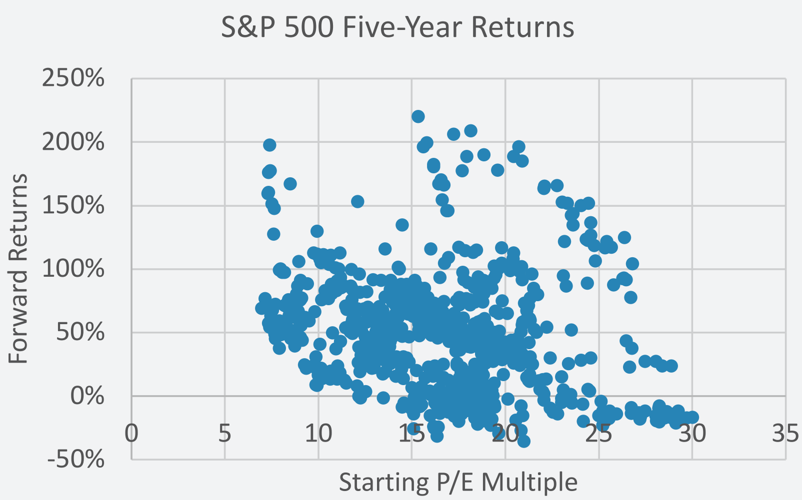


Data from Bloomberg.

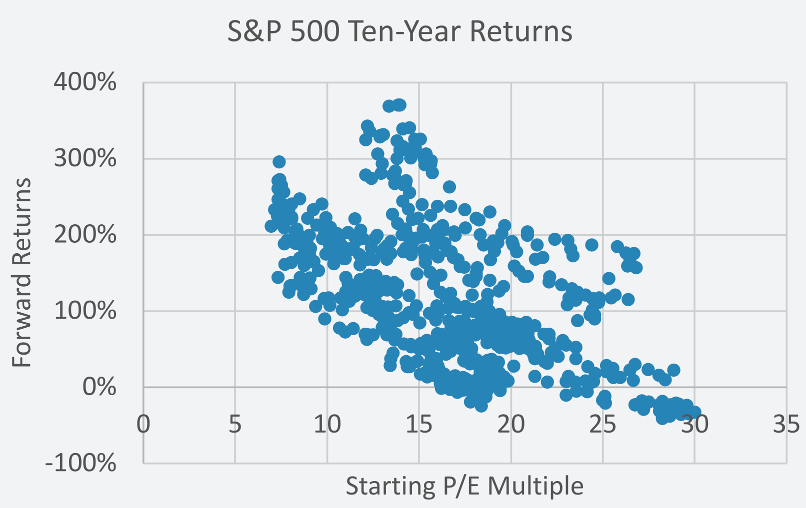
When we lengthen our time horizon, things start to look a little better, but there is still very little predictive power due to the wide range of outcomes for a given starting P/E.

For example, one standard deviation above and below the mean (which encompasses 68% of observed data) for an above-average P/E of 20x-25x corresponded with a forward three-year return compound annual growth rate (CAGR) of 16% and 3%, respectively, with the former being more than double the CAGR of the market from the start of 1954 through November 2022. In fact, almost 60% of the time a starting P/E in this range was followed by a three-year return that was greater than the long-term average.

Within the five-year return time frame, a starting P/E in the middle-of-the-road range of 15x-20x was associated with both seven out of the ten best and seven out of the ten worst five-year returns.

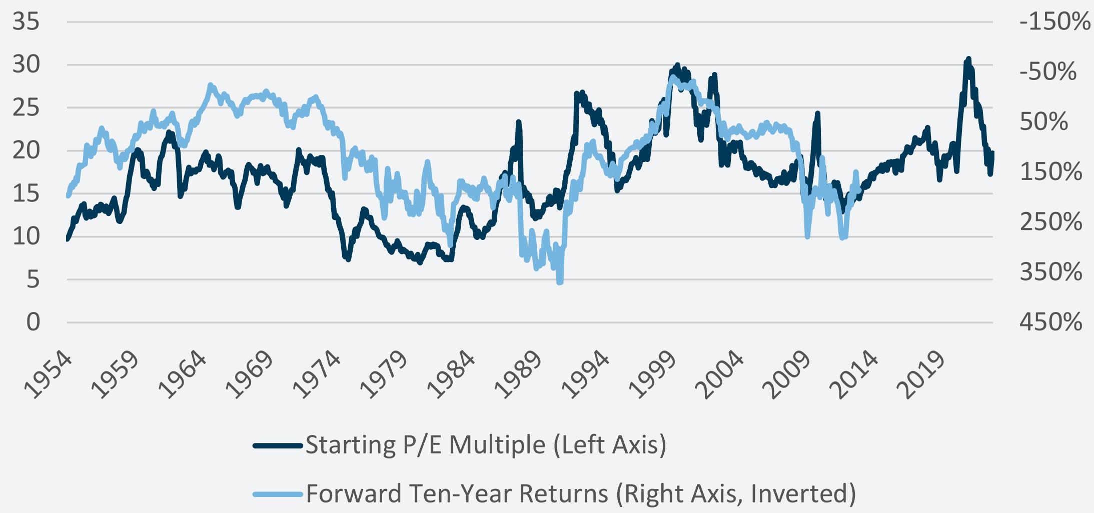
What About a 10-Year Time Frame?

Perhaps unsurprisingly, the P/E multiple had the most predictive power when looking at subsequent 10-year returns. However, the range of returns for any given P/E is still quite large, and research has shown that, with an R-squared of just 0.31, there are better predictors of future 10-year returns (though these too are far from perfect).



Data from Bloomberg.

Now these results might be surprising to you, especially if you look at a chart that plots the market's P/E and inverse returns (see top of the next page), since a high P/E is supposed to equate with lower future returns. If these two metrics appear to largely mirror one another, then why is it that the P/E has been such a poor predictor of future returns?



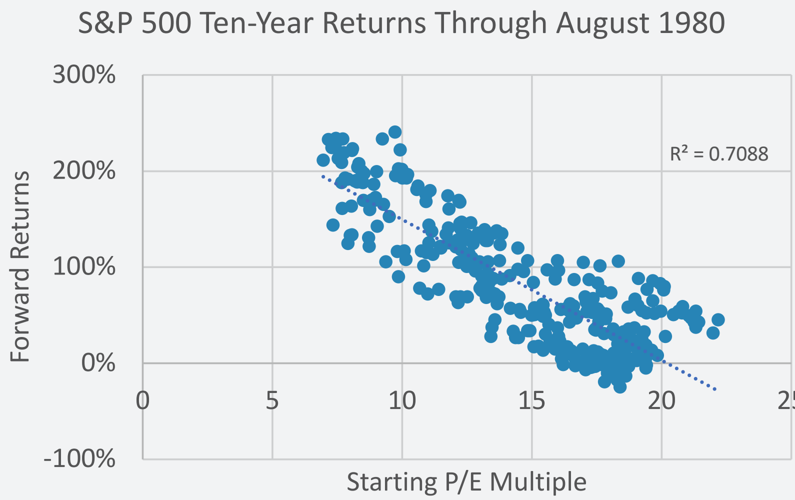
Data from Bloomberg.

Why Is the P/E a Poor Prognostication Tool?

The first and most obvious issue here is that in order for the P/E multiple to have predictive power for a given time frame, there needs to be consistency. If we want to be able to predict future market returns using this data point, we need to know what the current measurement is relative to not where it has been in the past, but where it will be one, three, five, or ten years from now. However, finance is not a hard science. There is no fundamental law stating that the average P/E ratio of the past is the true average around which all future measurements must fluctuate. We've seen exactly that, with the 10-year average P/E steadily drifting higher over these past several decades. (There's also no law that says this multiple expansion must continue at the same rate going forward.)

A perfect example of the dangers of assuming that historical relationships will continue to hold in the future is to rewind time back to the month that ultimately had the highest forward 10-year returns, August 1990. At this point, we only had forward 10-year returns up through August 1980, and so the first chart below shows the relationship between P/E and forward 10-year returns up till then.

As you can see, the ratio appeared to be quite good at predicting future returns (much better than today); you can understand why one might have been tempted to rely on this relationship when making investment decisions. The second chart shows the P/E ratio as well as the average (solid dark blue line) and trendline (dotted line) over this time frame. Neither had any clue about the life-changing returns investors were going to witness in the following decade, so if you had relied only on where the current multiple was relative to these two metrics, you would have concluded that future returns would likely be disappointing.



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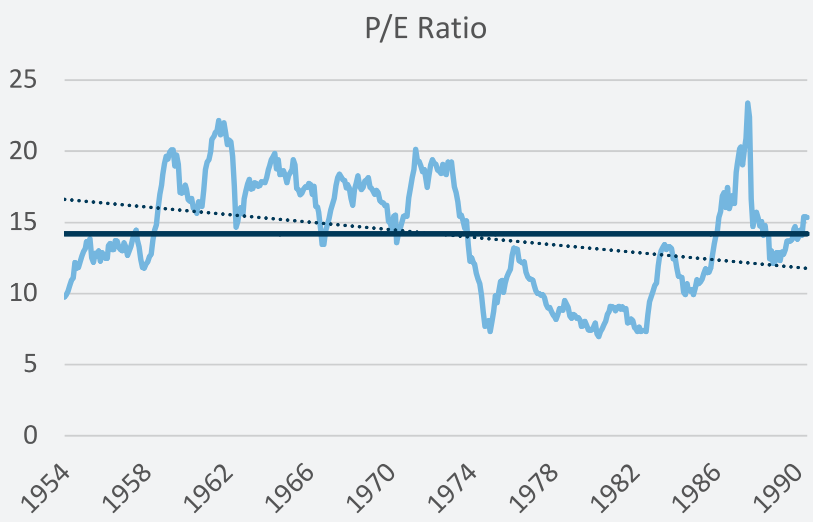

Data from Bloomberg.

Beware the Illusion of Causality

We hope this paper serves as another reminder to be skeptical of overly simplistic explanations for the market's behavior. Although we are fans of Occam's razor and trying to distill financial topics down to their core components, there are simply too many factors that play a role in determining the market's returns over any stretch of time—and so the risk of the illusion of causality between returns and a single variable is very, very high.

Let me explain with an example from the 1980s bull market. At 229%, the great bull market of 1982-1987 currently stands as the fourth-highest-returning bull market since 1928. And while it is true that the market was starting from a level of extreme pessimism, with a P/E of less than 10x, things were far from perfect.

Similar to today, inflation was of great concern for investors. Earlier calls for victory over inflation turned out to be premature, and it reaccelerated in the late 1970s. Though inflation was down from a high of 14.8% in 1980 to 5.9% in August of 1982, it was still well above the average of the preceding three decades and would actually finish only 0.1 below this average when the bull market ended in 1987. Even more surprising is what happened with earnings—often seen as the primary driver of stock returns over the long run. After adjusting for inflation, earnings for the S&P 500 actually decreased over this five-year stretch. Let that sink in. One of the strongest bull markets in the history of the S&P 500 occurred in a period of shrinking earnings.

The Lesson of the P/E's Predictive Limitations

This is another textbook case of the maxim "correlation doesn't imply causation"—and without causation, you can't confidently make forecasts.

Of course, we do believe that starting valuations matter for future returns—they most certainly do. But because it's impossible to know where valuations will end up three, five, or ten years from now, it's impossible to tell exactly how they will impact returns.

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