

Global Perspectives, April 2019: What Return Should You Expect on Your Portfolio?

No matter what you're investing for, financial planning requires that you make a lot of assumptions. Whether you're managing a university endowment or building a nest egg for your own retirement, you need to estimate how much new money will be invested in your portfolio, and at what points, as well as how much will be withdrawn and when. You'll probably also need to make some assumptions about inflation and tax rates over time. One of the most important assumptions you'll make is what kind of return you'll get on your investments, since the return over time is what determines how much you can take out compared with how much you put in.

Expected Returns for Stocks

In recent decades, U.S. stocks have produced strong returns. If you had invested \$10,000 in the stocks comprising the S&P 500 index from April 1949 to the end of March 2019, reinvesting all dividends, the initial investment would have grown to \$1,890,826. That equates to an average annual total return (dividends plus price gains) of 7.8% per year over the last 70 years. Of course, consumer prices have also risen incessantly over the period, so the actual purchasing power of the initial investment hasn't grown nearly as much. Subtracting the average annual rise in the consumer price index (CPI) over the period, the inflation-adjusted or "real" total return was a more modest 4.2% per year. All the same, that means the purchasing power of the initial investment doubled about every 17 years. (Taxes also would have eaten into the returns, but because of the volatility in tax policy and the wide disparity in tax exposure among investors, we don't try to adjust for taxes in this study.)

For financial planning, the problem is that you can't just assume the stock returns of the past will continue into the future. That approach is especially dangerous because of the temptation to "cherry pick" a historical period whose returns were especially strong, even if they aren't likely to be repeated. For example, from the bottom of the last bear market in March 2009 to its recent record high in April 2019, the S&P 500 produced an inflation-adjusted total return of approximately 14.5% per year. At that rate, the purchasing power of an investment would double in just five years! However,

that return was during a relentless bull market, rather than a full cycle. Another problem with extrapolating past performance is that it doesn't take into account the possibility that one-time structural changes in the society, economy, or financial markets might have affected those gains. If so, they probably won't be repeated. So just how do you know what return to assume?

For long-term financial planning, we think the key is to focus on the future stock returns that can be reasonably expected given the actual economic and financial trends observable when you're making your forecast. These expected future returns can be quite different from the actual returns of the past, and they're likely to be different from the returns that will be realized in the future as well. As discussed above, there can be one-off events that produce extraordinarily good or bad performance, and those events can be impossible to predict ahead of time. There can be "happy accidents" like a stock-friendly change in the law or regulations. One example of this is the Security and Exchange Commission's adoption of Rule 10b-18 in 1982, which allowed companies to buy back stock without being accused of price manipulation. The resulting buyback craze has almost certainly been a major reason for the recent strong performance of stocks. On the negative side of things, there are also cataclysms, like economic depressions or wars, which can decimate stocks. In the short term, stocks are regularly whipsawed by surging or plunging demand as investors become risk-seeking or risk-averse. For all these reasons, we forecast the expected long-term returns for a broadly diversified portfolio of stocks like the S&P 500 based on just two observable drivers, consistent with academic research:

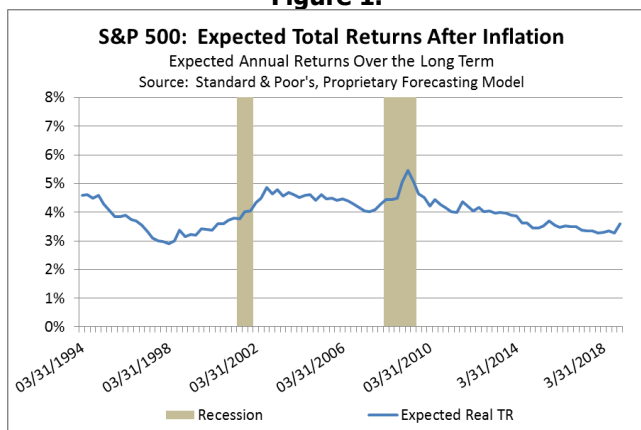
Current Dividend Yield. The first building block of our return forecast is simply today's dividend yield on the S&P 500. The only adjustment we make is that we strip out any dividend cuts that occur in times of economic stress or recession. After all, firms typically reverse those dividend cuts relatively quickly after the economy is back on its feet. The figure we use is the actual dividend yield on the S&P 500 in the latest quarter or, if the average dividend has been cut, the dividend yield computed using the previous maximum dividend. The adjusted dividend yield for the fourth quarter of 2018 stood at 2.14%.

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Expected Dividend Growth. Although we closely track the current trend in gross domestic product (GDP) and its components, that effort is largely geared toward understanding where the economy is in its current cycle. For longer-term, secular trends, the key metric is the inflation-adjusted value of output per hour worked, i.e., real productivity growth. Academic research shows productivity growth is the best indicator of long-term profit trends in the economy, and, by implication, the best indicator of expected growth in real dividends. Although the rate of U.S. productivity growth has slowed compared with the decades right after World War II, the decline has been relatively gradual. To project future productivity growth, we therefore use a “blended” rate consisting of the average productivity growth rates over the last 20 years and the last 5 years. Similar to the case with dividends, productivity typically falls during recessions, so we use an adjusted measure that strips out the impact of any temporary productivity declines. Using this method, we currently project that the future real growth in productivity (and hence dividends) will average 1.45% per year over the long term.

Forecasted Long-Term Returns. Adding up today’s dividend yield of 2.14% and our current forecast of real productivity/dividend growth of 1.45%, we think you could reasonably expect the total return on a broad portfolio of stocks like the S&P 500 to be about 3.59% per year over the coming decades, after inflation (but not counting taxes). That would suggest the purchasing power of the portfolio would double in about 20 years. As shown in Figure 1, that’s not quite as low as the expected returns during the Technology Boom of the late 1990s, but it is historically weak. Not surprisingly, the very best expected returns typically come around recessions and their related bear markets.

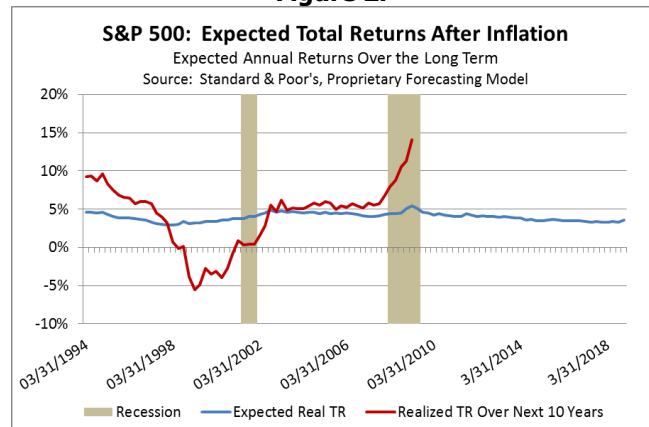
Figure 1.



A Note on Realized Short-Term Returns. Although our long-term forecasting methodology is elegant and well supported by academic research, we emphasize that

it only produces a forecast of the returns to be expected over many years. The actual realized returns experienced over shorter timeframes could be much higher or lower as stock demand fluctuates. As shown in Figure 2, the actual realized total return on the S&P 500 from any given point in time to ten years later is almost always different from the expected long-term return at that point.

Figure 2.

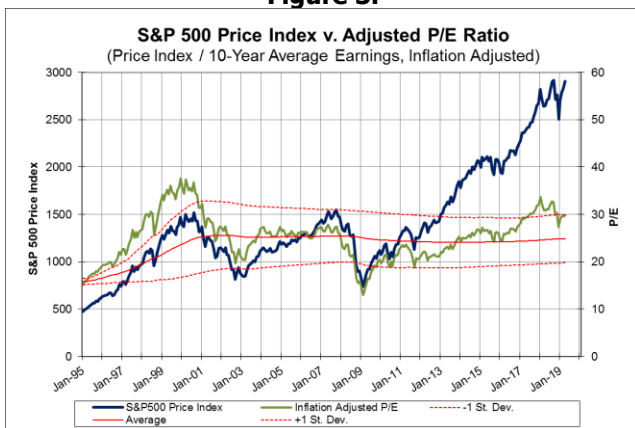


In fact, there’s good reason to believe that average total stock returns could be weaker than our long-term forecast over the ten years or so following the publication of this report. That’s because of extraordinarily rich pricing and profitability at present, which could well “revert to the mean” and fall back down toward longer-term historical averages as the current economic cycle matures and eventually ends. For instance:

- **P/E and P/D Ratios.** As might be expected after many years of continued economic growth and steady stock price gains, the price that investors are willing to pay for a dollar of earnings or dividends is now unusually high. In Figure 3, for example, the S&P 500’s cyclically-adjusted price/earnings ratio (P/E ratio) currently stands at approximately 30. That’s a level that has been held only about 16% of the time since the mid-1990s, and only about 10% of the time since 2005. We think that means there is considerable risk that investors will at some point consider the ratio “too high” and sell off stocks in response, producing capital losses that would offset some of the returns from dividends or dividend growth.
- **Dilution/Buybacks.** In recent years, stock analysts have gained a better appreciation for the fact that stock returns can be heavily impacted by new or established firms issuing more stock. Over many decades up to the recent past, academic research suggests such stock issuance would

“dilute” corporate earnings so much that the earnings or dividends per share on the S&P 500 might be reduced by as much as 2% per year. More recently, the opposite has been the case: Companies facing uninspiring investment opportunities or wanting to manage their taxes have become strong buyers of their own stock. By doing so, they reduce the number of shares in the marketplace. Every dollar of earnings or dividends is then divided by a smaller number of shares, so earnings or dividends per share rises and investors bid up the shares to match. The boom in stock buybacks appears to be a major reason for the continued bull market that has lasted from March 2009 to the present. The problem is that companies tend to sharply reduce buybacks when the economy falters and profits start to shrink. As the current U.S. economic expansion starts to lose momentum, there is a greater and greater chance that buybacks will eventually dry up and make stocks look much less palatable. In that case, prices would likely fall and produce capital losses.

Figure 3.



- **Elevated Profit Margins.** Finally, multiple indicators suggest corporate profitability may currently be unsustainably high. Looking at the broad economy, for example, Figure 4 shows that the ratio of U.S. corporate profits to GDP is currently above average. Similarly, Figure 5 shows that operating profit margins for the companies in the S&P 500 are similarly elevated. These high profit levels probably reflect not only the current cyclical expansion, but also company-friendly public policies over recent decades, such as reduced tax rates for businesses and a broad program of deregulation versus earlier decades. The risk here is that rising income disparity could give more power to populist politicians who would roll back those benefits for companies. If companies again faced higher taxes and more stringent regulation,

corporate earnings and profit margins would likely fall, cutting stock values and creating capital losses.

Figure 4.

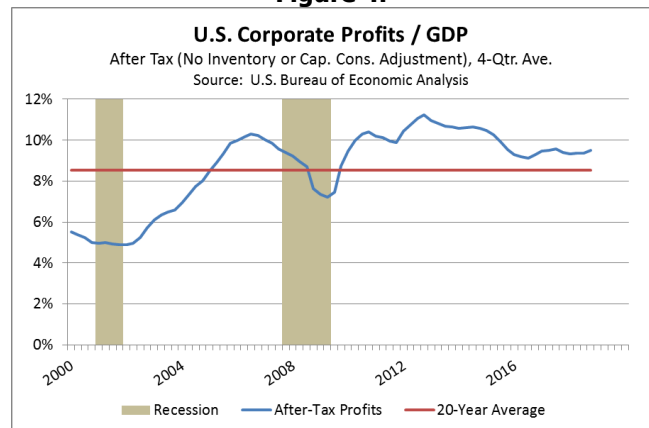
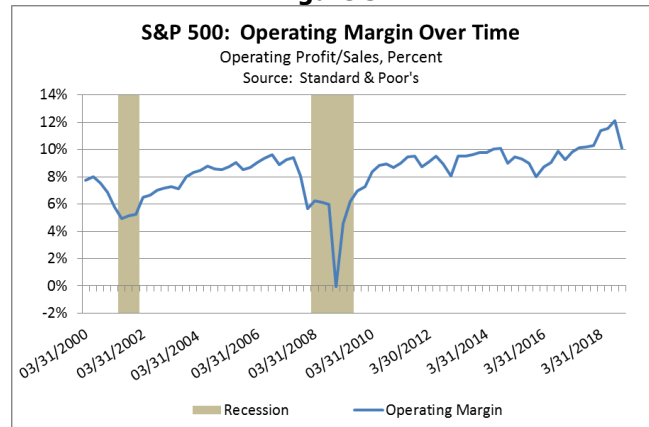


Figure 5.



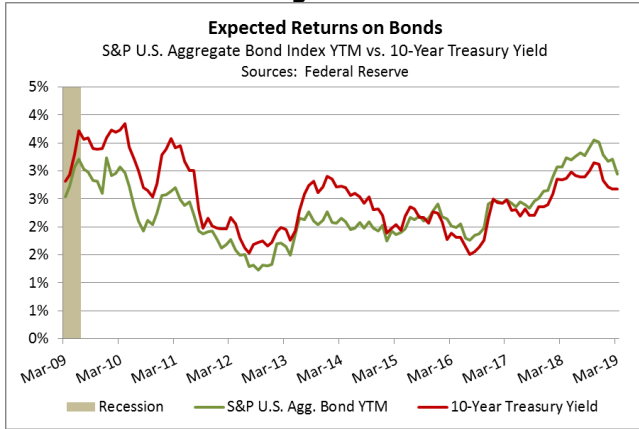
Expected Returns for Bonds

Fortunately, calculating the expected future return on bonds is much easier than calculating the expected return on stocks. Our method, based on academic research, assumes that a fixed-income investor can hold a bond until the date when it matures (at which point he or she will receive the par value of the bond) or until the first date when it can be “called” by the issuer (at which point the holder will likely receive something very close to the nominal par value). In the meantime, the investor will receive a yield equal to the annual interest income divided by the price paid. Mathematically, that means that a broadly diversified bond portfolio can be expected to produce an average annual return approximated by its “yield to maturity.” We simplify further by assuming that the current yield on a portfolio of bonds will approximate its return over time (see Figure 6).

At the end of 2018, the S&P U.S. Aggregate Bond Index (which is designed to track a broad group of bonds

ranging from U.S. Treasuries and Agency bonds to investment-grade corporate obligations) had a nominal yield to maturity of approximately 3.29%. Subtracting our estimate of future inflation of approximately 1.84%, we therefore believe that the reasonably expected return on a broad portfolio of investment-grade bonds should be about 1.45% per year over the long term.

Figure 6.



Summary and Conclusion

Since investors typically diversify their portfolios broadly across both bonds and stocks, a common point of reference is a supposed portfolio consisting of 60% stocks and 40% bonds. Putting together the expected returns calculated above, we estimate that such a "60/40" portfolio currently would have an expected total return of 2.74% over the coming decades, after stripping out the impact of inflation. That would suggest that the blended portfolio's purchasing power would double about every 26 years (see Table 1).

We suspect the expected returns discussed here will sound disappointingly small to many investors. We even wonder if some investors might be so discouraged by these modest projections that they'll be tempted to give up on investing for important goals like retirement or financing their children's college education. But we don't think that's the point. Since the expected returns discussed here reflect a "buy and hold" strategy where the investor simply buys the broad indexes and holds on to them through thick or thin, the obvious question is whether some other strategy might do better. We think the obvious answer is to use smart investment tactics and strategies to try to do better. For example, we believe an investor is likely to gain incremental additional return by modestly tilting his or her portfolio toward areas that research shows can produce better-than-average returns over the long term, such as the stocks of companies that are relatively small or that exhibit high profitability ("quality"), low volatility, or good price momentum. Another tactic that we think would be even more important is to adopt moderately "active" management such as we practice ourselves. We think it's important to closely monitor global economic and financial market trends and take action when the indicators point to a significant change in trend. We pay particular attention to those economic and financial indicators that historically signal a potential downturn in stocks. When the "preponderance of the evidence" in these indicators suggests a downturn is more likely, we believe in proactively cutting stock exposure in order to reduce losses, as we did ahead of the stock rout in the fourth quarter of 2018. Going forward, we'll continue working hard to adopt these portfolio tilts and risk adjustments in an effort to get better returns over time.

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Lead Portfolio Manager

Table 1.

Calculating "Reasonably Expected Long-Term Returns"	
Expected Annual Total Returns, After Inflation	
Stocks (S&P 500)	
Current Dividend Yield	2.14%
Plus Exp. "Real" Dividend Growth Per Year	1.45%
Total "Real" Stock Return Per Year	3.59%
Bonds (S&P U.S. Aggregate Bond Index)	
Current Yield to Maturity	3.29%
Minus Exp. Inflation	-1.84%
Total "Real" Bond Return Per Year	1.45%
Blended Return for a "60/40" Portfolio	2.74%