



Why Dividend-Paying Stocks are Riskier than You Think

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by Larry Swedroe

As advisors shift allocations from bonds to high-dividend stocks, they are exposing their clients to equity market risk. But they are also increasing interest-rate risk. Investors in two of the biggest dividend ETFs – SDY and VIG – are among the most exposed to the surging demand for dividend-paying stocks.

Whether or not you think the Federal Reserve has done a good job of managing monetary policy, we likely all agree that it has been very successful in driving down interest rates, and keeping them down for far longer than anyone forecasted (including members of the Fed itself).

Unfortunately, while helping the economy recover, the Fed's actions have negatively impacted senior citizens who often depend heavily on interest income and savers in general. For them, safe fixed-income investments no longer generate the interest income needed to meet expenses. This is causing many to search for greater yields.

Seeking incremental yield means taking on greater risks – risks that are inappropriate for fixed-income assets whose main role is to dampen the overall portfolio risk to an acceptable level. All the typical strategies investors pursue in their search for yield have the potential to do serious damage. One such strategy is to invest in stocks that pay relatively high dividends. Moving assets from safe bonds to equities obviously involves incremental risk. However, today's investors are unwittingly taking on an additional type of risk – exposure to rising interest rates. This may be surprising because it goes against what classical financial theory has to say on the subject.

I'll begin my discussion on the risks of owning dividend-paying stocks versus safe bonds by reviewing the traditional financial view on dividends. I'll then review some recent research that explains why dividend-based investors are exposed to hidden risks. Lastly, I'll show that some high-dividend ETFs are particularly vulnerable.

Does dividend policy impact expected returns?

Since the 1961 publication of the paper "Dividend Policy, Growth, and the Valuation of Shares" by Franco Modigliani and Merton Miller, it has been accepted that a firm's dividend policy is irrelevant to expected returns because investors can transform income to capital gain and vice versa with no or

minimal costs according to their own preferences. They can do so by creating “homemade” dividends through realizing capital gains (i.e., selling shares).

The ability to create a self-made dividend was illustrated by legendary investor Warren Buffett in September 2011. After he announced a share buyback program for Berkshire, some market observers went after Buffett for not offering a cash dividend. In his shareholder letter, he explained why he believed the share buyback was in the best interest of shareholders. He also explained that any shareholder who preferred cash could effectively create dividends by selling shares.

There’s another advantage of homemade dividends – they’re more tax efficient than a “forced” dividend paid by a company. Taxes are only paid if you realize the gain, which you aren’t forced to do, and they are due only on the portion of proceeds that are the gain, not on the full amount, as is the case with a dividend.

As such, it follows that dividends should not be an explanatory factor in stock returns.

The explanatory power of dividends

Our understanding of stock returns was advanced further with the 1992 publication of Eugene Fama and Kenneth French’s paper, “The Cross-Section of Stock Returns.” Fama and French’s paper introduced the workhorse asset pricing model in finance, becoming what is generally referred to as the Fama-French three-factor model (the three factors are beta, size and value). In 1997, momentum was added and it became a four-factor model. That version of the model explains over 90% of the variability in returns of diversified portfolios.

If dividends played an important role in explaining returns, then the four-factor model wouldn’t work as well as it does since dividends are not one of the factors. If, in fact, dividends did add explanatory power beyond that of these four factors, the model would have been modified to include dividends as one of the factors. But it was not. And the reason is that stocks with the same “loading,” or exposure, to the four factors have the same expected return regardless of their dividend policy (as predicted by the Miller and Modigliani’s research).

This has important implications because about 80% of U.S. stocks don’t pay dividends. Thus, any screen that includes dividend stocks will result in portfolios that are far less diversified than if dividends were not included. Less diversified portfolios are less efficient because they have a higher potential volatility without higher expected returns (assuming the exposures to the factors are the same).

An emphasis on dividend-paying stocks increases the risks of investing in equities because of reduced diversification. We’ll now turn our attention to how dividends impact interest rate risk.

Dividend-paying stocks and sensitivity to interest rate risk

The traditional view in finance is that stocks that pay dividends are less sensitive to interest rates because the duration of their cash flows is lower than for non-dividend payers. By paying dividends, a firm provides cash flow sooner to investors than one that only pays cash when the stock is sold; hence,

the duration is lower.

High-growth firms tend to have lower dividend payouts but higher future growth rates. That skews the distribution of their cash flows toward the most distant future. In contrast, firms with higher dividend payouts tend to have lower retention ratios and lower future growth rates. Thus, the timing of their cash flows is relatively sooner. As a result, a valuation model predicts that duration tends to be higher for stocks with lower dividend payouts. Thus, we should expect that dividend-paying stocks, especially those paying relatively high dividends, will be less sensitive to interest rate risk.

However, Hao Jiang and Zheng Sun, authors of the October 2015 study “Equity Duration: A Puzzle on High Dividend Stocks,” which covered the period from 1963 through 2014, found that the data was in direct opposition with traditional theory. They found that “the duration [in terms of sensitivity to interest rates] of the portfolios increases monotonically with the dividend yields. Stocks with high dividends tend to experience decreases in returns when long term bond yields increase, while those with low dividends tend to earn higher returns when interest rates hike up.”

During the period studied, when interest rates declined by 1.00%, high-dividend stocks experienced an increase in returns of 1.35%. In contrast, low-dividend stocks had a decrease in returns of 1.12%. And both effects were statistically significant at the 1% level. The difference in estimated duration between high- and low-dividend stocks is 2.46, with high statistical significance. The authors found the same pattern when they used dividend payout ratios (dividends divided by book equity) as an alternative measure of dividend payments. They also found that, not only did high-dividend stocks tend to have a long duration robust throughout the period, but also that the effect was particularly strong toward the end of their timeframe.

Interestingly, the authors discovered that their results weren't caused by high-dividend paying stocks having higher betas (more exposure to systematic equity market risk). In fact, they found that high-dividend paying stocks tend to have lower betas. And they also found that “despite the highly volatile correlation between aggregate stock market and bond market returns ranging from very negative to very positive the long duration of high dividend stocks remains stable in the past five decades.”

There is one more issue related to the dividend discount model and duration that we need to discuss: It doesn't take into account the uncertainty of cash flows. Risky securities may be less sensitive to interest rate changes and have shorter duration because the relative contribution from distant cash payments to the present value is small when compared to a risk-free security.

The link between cash-flow risk and dividends is strongly rooted in the dividend literature. Studies have found that companies are reluctant to distribute higher dividends if they face high uncertainty and may have to reduce the future dividend payment due to lower earnings. This leads to dividends being negatively related to firms' cash-flow risks. If stocks with higher dividends tend to have lower cash-flow risk, then their sensitivity to interest rate changes will be relatively greater. Investors' view that dividend-paying stocks are safer investments lowers the discount rate and increases the duration of the cash flows, increasing sensitivity to interest rate risk. This understanding helps explain why the data conflicts with traditional theory.

Another explanation for their findings is that the increased demand from investors seeking the greater cash provided by dividend-paying stocks has driven their valuations higher, lowering the discount rate applied to their expected returns (and the expected future return itself), thus lengthening their duration.

Interestingly, Jiang and Sun found that, in general, there is a tendency for institutional investors to avoid high-dividend stocks, which is consistent with findings from other studies that it's the individual investors who have a preference for high-dividend stocks. (See the appendix to this article for behavioral explanations for this preference.)

However, Jiang and Sun also found that under high-interest-rate environments (the 20% of quarters with the highest long-term interest rates), all the types of institutional investors they examined (banks, insurance companies, mutual funds, pension funds, endowments and investment advisors) tended to underweight high-dividend stocks in their portfolios relative to the market. On the other hand, under low-interest-rate environments (the 20% of quarters with the lowest long-term interest rates), the institutional aversion to high-dividend stocks universally shrank, with mutual funds and insurance companies overweighting high-dividend stocks in their portfolios relative to the market. This pattern was particularly pronounced for mutual funds. When interest rates were high, they underweighted high-dividend stocks relative to the market portfolio, and when interest rates were low, they overweighted high-dividend stocks.

The authors determined that the preference for high-dividend stocks by mutual funds appears to be driven by the behavior of equity-income funds. Equity-income funds overweighted stocks in the highest dividend brackets and underweighted stocks in the lowest brackets. In addition, they found that the allocation between low- and high-dividend stocks by equity-income funds depended on the level of interest rates. When interest rates were low, income funds exhibited strong preferences for holding high-dividend stocks. However, when interest rates were high, income funds were more reluctant to overweight high-dividend stocks. Jiang and Sun further found that mutual fund investors send disproportionately more money to income funds when interest rates are low. The time-series correlation between excess flows into income funds over those into equity funds as a whole and long-term interest rates is -50%, and it is statistically significant at the 1% level of confidence.

The authors' analysis of flows across income funds indicates that "flows are sensitive not only to net fund returns but also to their dividend yields, and the influence of dividends on fund flows depends crucially on the level of interest rates. In particular, when interest rates are low, the tournament for clients' money among income funds rewards funds' ability to generate income (dividends), incremental to their ability to generate total return. The pressure of competition naturally leads income funds to reach further for dividends in low interest rate environments."

How popularity drives down returns

As I have been discussing, over the last six years we have seen an increase in demand for dividend-paying stocks. That increased demand has impacted valuations, which are the best predictors of future returns. Until recently, dividend-paying strategies -- especially a high-dividend strategy -- called for the purchase of value stocks. However, recent demand has changed that.

The table below shows three value metrics – price-to earnings (P/E), price-to-book value (P/B) and price-to-cash flow (P/CF) – for two of the market’s most popular dividend strategies, the SPDR S&P Dividend ETF (SDY), with almost \$13 billion in AUM, and Vanguard’s Dividend Appreciation ETF (VIG), with more than \$19 billion in AUM. VIG buys the stocks of companies with rapid growth in their dividends.

The table also shows the two large-cap value ETFs with the most assets under management, the iShares Russell 1000 Value ETF (IWD) and Vanguard’s Value ETF (VTV). Finally, I’ll compare the value metrics of these funds with that of SPY (the S&P 500 ETF). As you review the data, remember that the lower the price metric, the higher the expected return. The data is from Morningstar.

	As of Date	P/E	P/B	P/CF
SDY	10/30/15	19.0	2.3	9.8
VIG	9/30/15	17.2	3.2	10.8
IWD	10/30/15	15.5	1.5	7.4
VTV	9/30/15	14.9	1.7	7.9
SPY	10/30/15	17.0	2.3	9.6

The above data makes clear that the popularity of the two dividend strategies has led to a rise in the prices of these stocks and reduced their expected returns. No matter which value metric we look at, the expected returns for both SDY and VIG are now well below the expected returns of the two large value strategies, and even below that of the S&P 500.

Summary

Investors (and their advisors) reaching for yield by reallocating from bonds to dividend-paying stocks are not only taking on equity risk, but they are also, likely unwittingly, taking on duration risk at a time when interest rates are at historically low levels.

The study by Jiang and Sun documents how dividend payouts affect the competition among income funds for an investor’s assets and how the intensity of that competition varies across different interest rate environments. The insights they provide deepen our understanding of mutual fund behavior and its impact on capital markets.

Investors and advisors should be aware of how a preference for cash flow can lead to increasing the equity risk of the portfolio as well as the interest rate risk. In addition, the popularity of dividend strategies has led investors to buy stocks with relatively high valuations and, thus, relatively low expected returns.

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Appendix: Why do individual investors prefer dividends to capital gains?

Hersh Shefrin and Meir Statman, two of the leaders in the field of behavioral finance, attempted to explain the behavioral anomaly of a preference for cash dividends in their 1983 paper, “Explaining Investor Preference for Cash Dividends.” They offered a few explanations.

Their first explanation is that in terms of their ability to control spending, investors may recognize that they have problems delaying gratification. To address this, they adapt a “cash flow” approach to spending. They limit their spending to only the interest and dividends from their investment portfolio. A “total return” approach that would use self-created dividends would not address the conflict created by the individual who wishes to deny himself a present indulgence, yet is unable to resist the temptation. While the preference for dividends might not be optimal (for both diversification and tax reasons), by addressing the behavioral issue, it could be said to be rational. In other words, the investor has a desire to defer spending, but knows he doesn’t have the will, so he creates a situation that limits his opportunities and thus reduces the temptations.

The second explanation is based on what is called “prospect theory.” Prospect theory (also referred to as loss aversion) states that people value gains and losses differently. As such, they will base decisions on perceived gains rather than perceived losses. If a person were given two equal choices, one expressed in terms of possible gains and the other in terms of possible losses, he or she would more likely choose the former. Since taking dividends doesn’t involve the sale of stock, it’s preferred to a total return approach that may require self-created dividends through sales. The reason is that sales might involve the realization of losses, which are too painful for people to accept (they exhibit loss aversion). What investors can fail to realize is that a cash dividend is the perfect substitute (with the exception of any transaction costs, which today are very small) for the sale of an equal amount of stock, whether the market is up or down, or whether the stock is sold at a gain or a loss. It makes absolutely no difference. It’s just a matter of how the problem is framed. In short, it’s form over substance. Whether you take the cash dividend or sell an equivalent dollar amount of the company’s stock, you will have the same amount invested in that stock. It’s just that with the dividend, you own more shares, but at a lower price (reduced by the same amount as the dividend), while with the self-dividend, you own fewer shares but at a higher price (because no dividend was paid).

As Shefrin and Statman pointed out in their paper, “by purchasing shares that pay good dividends, most investors persuade themselves of their prudence, based on the expected income. They feel the gain potential is a super added benefit. Should the stock fall in value from their purchase level, they console themselves that the dividend provides a return on their cost.” The authors write that if the sale involves a gain, the investor frames it as “super added benefit.” However, if a loss is incurred, the investor frames it as “a silver lining” with which he can “console himself.” The fact that losses loom much larger in investors’ minds, and that they wish to avoid them, leads to a preference for taking the cash dividend and avoiding the realization of a loss.

Shefrin and Statman offer yet a third explanation: regret avoidance. They ask you to consider two cases:

1. You take \$600 received as dividends and use it to buy a television set.
2. You sell \$600 worth of stock and use it to buy a television set.

After the purchase, the price of the stock increases significantly. Would you feel more regret in case one or in case two? Since cash dividends and self-dividends are substitutes for each other, you should feel no more regret in case two than in case one. However, evidence from studies on investor behavior demonstrates that for many people the sale of stock causes more regret. Thus, investors who exhibit aversion to regret have a preference for cash dividends.

Shefrin and Statman go on to explain that people suffer more regret when behaviors are taken than when behaviors are avoided. In the case of selling stock to create the homemade dividend, a decision must be made to raise the cash. When spending comes from the dividend, no action is taken, and thus less regret is felt. Again, this helps explain the preference for cash dividends.

The authors also explain how a preference for dividends might change over the investor's lifecycle. As was mentioned earlier, the theory of self-control is used to justify the idea of spending only from the cash flow of a portfolio, never touching the principal. Younger investors, generating income from their labor capital, might prefer a portfolio with low dividends, as a high-dividend strategy might encourage dissavings. On the other hand, retired investors, with no labor income, would prefer a high-dividend strategy for the same reasons, to discourage dissavings (spending from capital). A study of brokerage accounts found that there was, in fact, a strong and positive relationship between age and the preference for dividends.

While the preference for cash dividends is an anomaly that cannot be explained by classical economic theory, which is based on investors making "rational" decisions, investors who face issues of self-control (such as a predilection for impulse buying) may find that the personal benefits provided by avoiding the behavioral problems could make a cash dividend strategy a rational one for them. For all other investors, it's more efficient to use a total return approach (using homemade dividends, when needed, to supplement the interest and dividends generated by the investment portfolio). For those interested in learning more about this issue, Vanguard's research team has a [good paper on this subject](#). Their recommendation, like my own, is that investors not use a cash flow approach, which can lead to the focus on dividends. Instead, investors should consider utilizing a total return approach after first deciding on an asset allocation based on their unique goals and objectives and ability, willingness and need to take risk. According to the paper, "this decision should be the investor's highest priority." They should then stick to their plan, rebalancing along the way as needed.

In short, the total return approach avoids the problems created by focusing on dividends – specifically less diversification, less tax efficiency and, as discussed above, more sensitivity to interest rate risk.