DIVIDENDS: A REVIEW OF HISTORICAL RETURNS

SUMMARY

- Dividend paying equities have historically provided higher cumulative returns with lower levels of volatility versus non-dividend paying equities over long-term holding periods.
- Dividend payers have outperformed non-dividend payers during moderate and severe market corrections, but have underperformed in sharp market recoveries.
- These findings are generally more pronounced for progressively higher levels of dividend yield.
- Investors must be wary of yield traps and naïve dividend-focused investment strategies.

"The prime purpose of a business corporation is to pay dividends regularly and, presumably, to increase the rate as time goes on."

— Benjamin Graham, *Security Analysis,* 1934

Introduction

Dividends are an important form of return to equity investors and, as such, have duly become one of the most researched topics in capital markets. The popularity of dividend paying stocks with investors is high and for good reason: dividends can be a significant contributor to long-term wealth creation.

This general finding has been well documented over various timeframes and markets. For example, one study examines the components of total equity returns of US stocks from 1802 to 2002. Over the 200-year period, dividends (plus real growth in dividends) accounted for fully 5.8% of the 7.9% total annualized return[i]. Another study examines the subject from a global perspective. Researchers at the London Business School found that, from 1900 to 2005, the real return across seventeen countries averaged approximately 5% while the average dividend yield of those countries during the period was 4.5%[ii].

These findings are compelling for long-term investors, especially for institutions with infinite or very long investment horizons. However, most investors are also interested in performance and risk characteristics over shorter horizons. For example, how do the risk/return profiles of dividend paying stocks compare with those of non-dividend paying stocks over various holding periods? How do dividend-paying stocks perform in down markets? During recoveries? We examine the historical evidence to answer these questions. Finally, we summarize some of the potential pitfalls associated with various dividend-focused investment strategies.

The Returns Data

This paper utilizes data sourced from Kenneth French with original stock data from the Center for Research in Security Prices US Stock Database. The universe includes certain equity securities listed NYSE, Amex, NASDAQ and NYSE Arca. We utilize monthly and annual value-weighted total returns of non-dividend paying US stocks and five portfolios of dividend paying US stocks from 1928 through 2010. The five dividend paying portfolios are constructed using quintiles of the dividend to price ratio (dividend yield), with quintile 1 (Lo 20) representing the lowest yielding dividend payers and quintile 5 (Hi 20) representing the highest. Portfolios are formed and rebalanced annually.

The Long-Term

The chart below shows how one dollar invested in each portfolio in January, 1928 would have grown through December, 2010, if any dividends paid were reinvested. Over the full period, all portfolios of dividend payers outperformed the portfolio of non-dividend payers. Other features are important to highlight. Generally, higher dividend yielding quintiles outperformed lower yielding quintiles. As shown in Table 1, the volatility of the dividend payers, as measured by annualized standard deviation, was significantly lower than that of the non-payers, and this is evident in the relatively higher Sharpe ratios of the dividend payers.

Hypothetical Growth of $1 From January 1928 – December 2010

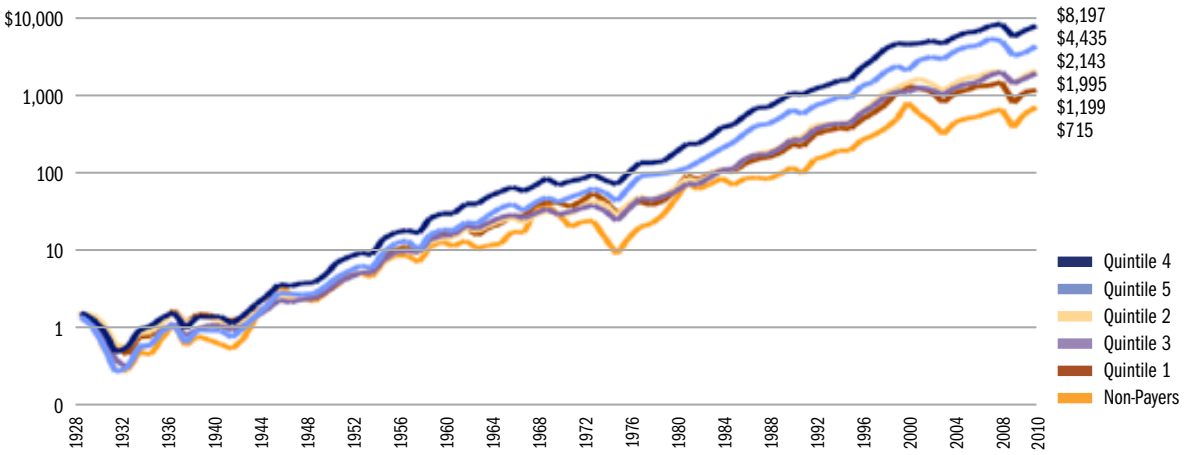


Table 1	Non-payers	Lo 20	Quintile 2	Quintile 3	Quintile 4	Hi 20
Annualized Total Return	8.24%	8.92%	9.68%	9.59%	11.47%	10.65%
Annualized Standard Deviation	34.10%	22.85	19.55%	20.99%	21.70%	24.74%
Sharpe Ratio	0.13	0.23	0.31	0.28	0.36	0.28

Source: Kenneth R. French© and CRSP. From 1/1/1928 - 12/31/2010.

Past performance does not guarantee future results. The hypothetical example is for illustrative purposes only and does not represent the returns of any particular investment. It is not possible to invest directly in an index.

20-Year Horizons

As pointed out in the introduction, many investors have an investment horizon shorter than 83 years! Furthermore, within the past 83 years, markets have gone through several boom, bust cycles. No doubt, the timing of investment can be critical to an investor's ultimate fortunes. In this section, we measure how dividend paying stocks have performed across various holding periods within the full sample. Arbitrarily, we have chosen to measure performance across 20-year periods, a realistic time frame for most long-term investors.

In the full dataset there have been 64 periods of twenty consecutive calendar years. Table 2 on the following page shows how the six portfolios stack up on annualized returns and standard deviations over the 20-year periods. Similar to the full 83 year sample, we find a direct relationship between dividend yield and total return. And again, volatility for dividend paying portfolios was lower than that of non-payers.

On the following page, we show a graphical representation of each 20-year holding period to gain additional insight. A color scale is used to measure the relative magnitude of returns and volatility. In the returns table (Table 3), the color red corresponds to low returns while green corresponds to high returns. In the volatility table (Table 4), red corresponds to high volatility while green corresponds to low volatility. Thus, in both tables, green is more favorable than red.

Table 2: Summary Statistics of 20 Year Periods	Non-payers	Lo 20	Quintile 2	Quintile 3	Quintile 4	Hi 20
Lowest 20 yr Annualized Return	1.07%	2.61%	2.85%	3.21%	4.56%	3.50%
Highest 20 yr Annualized Return	17.58	17.65	17.54	17.08	19.60	18.84
Average	10.22	10.84	11.32	11.58	13.49	13.17
Median	10.15	11.40	11.63	12.35	13.75	13.73
Average Annualized Std Dev.	32.39	20.44	17.42	17.96	19.08	21.14
Average Sharpe Ratio	0.19	0.34	0.43	0.43	0.50	0.44

Source: Kenneth R. French© and CRSP. From 1/1/1928 - 12/31/2010.

Past performance does not guarantee future results.

Table 3: Annualized Returns

Red: Low Relative Returns
Green: High Relative Returns

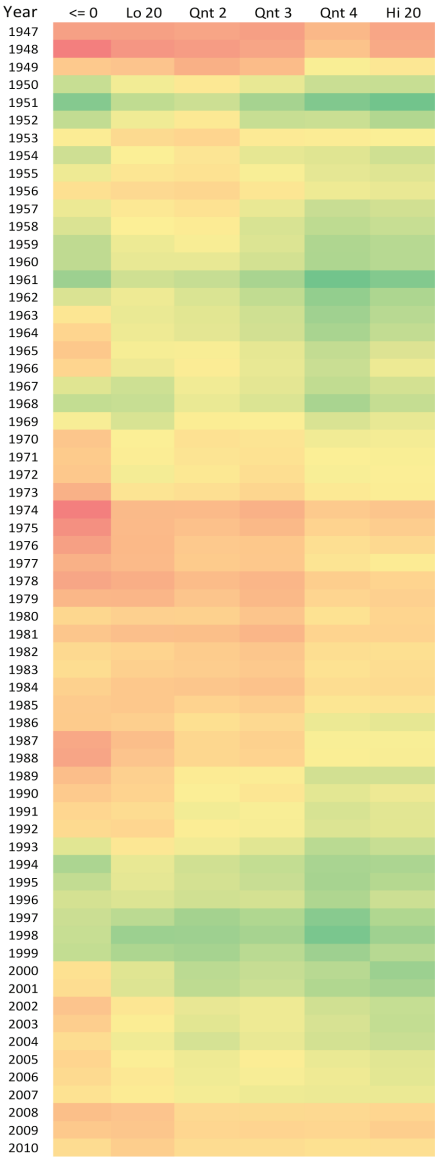
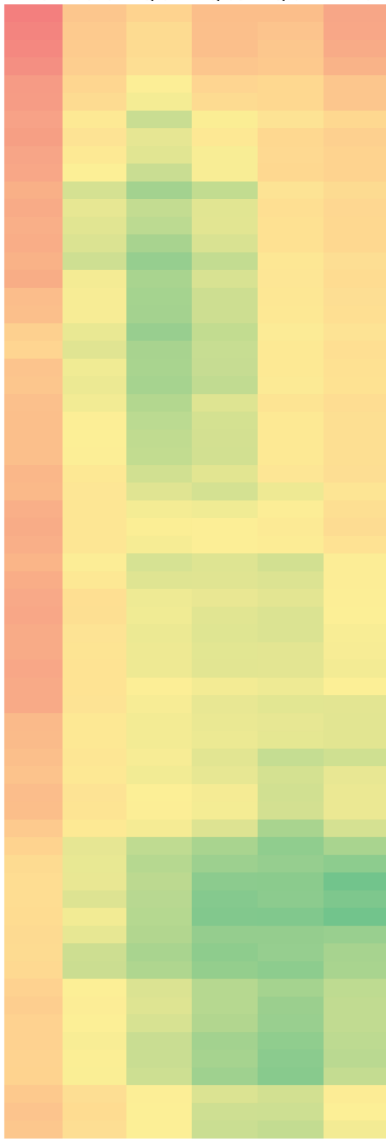


Table 4: Annualized Standard Deviation

Red: High Relative Volatility
Green: Low Relative Volatility



Source: Kenneth R. French© and CRSP. From 1/1/1928 - 12/31/2010.

Past performance does not guarantee future results.

Care must be taken in interpreting the year which represents the final year of the 20-year holding period. For example, 1998 represents the holding period from 1979 through 1998, a very favorable holding period for both returns and risk across all six portfolios. In contrast, 20-year periods ending in the late forties and mid seventies were among the worst for equity markets over the 83 year sample.

Reading the tables from top to bottom, the fluctuating intensity of green and red surfaces over time illustrates the timing risk of being invested in the equity markets with respect to both terminal wealth and volatility. As intuition might suggest, holding periods do matter. However, they are generally outside the control of investors.

Reading each table from left to right, a more interesting pattern emerges. Specifically, the right side of both tables shows generally higher green levels for any given holding period. This green bias indicates that dividend-payers have consistently outperformed non-dividend payers over 20-year periods and have done so with consistently lower volatility. This has meaningful investment implications because, unlike their holding periods, investors can control their asset allocation!

Nonetheless, any given 20-year holding period can contain several frightening market events that can jar an investor's confidence; the past 20 years has been no exception, as we illustrate below. Most investors are interested specifically in how their investments might perform during sudden, down markets. In the next section, we turn again to our full data sample to address this topic directly.

Performance in Down Markets

To identify "down markets", we utilized monthly data from a CRSP dataset that contained a "market" return from January, 1928 through December, 2010. We believe this series is the best available representation of a broad US market return. We used this series to determine all periods in which the market declined a cumulative 10% or more (a common definition for correction) in consecutive negative months. We then calculated the cumulative returns of the six portfolios for the same months the market was in a correction.

As defined herein, there were 45 market corrections during the period (10 corrections occurred during the last 20 years). Of these 45 periods, duration ranged from one month to seven consecutive months of negative monthly returns. Drawdown severity ranged from -10.0% to -42.3%. Because of the wide range of severities of these drawdowns, we've summarized the results based on ranges of severity in Table 5.

Table 5: Average Cumulative Returns Over Various Ranges of Market Drawdowns

Market Drawdown	Non-payers	Lo 20	Quintile 2	Quintile 3	Quintile 4	Hi 20
> = 30%	-44.83	-37.96	-32.88	-31.59	-30.45	-32.02
25 to <30%	-39.63	-27.92	-26.46	-31.53	-28.90	-30.87
20 to <25%	-32.95	-24.41	-20.68	-20.70	-19.42	-21.42
15 to <20%	-26.74	-17.12	-14.01	-11.50	-11.85	-11.65
10 to <15%	-19.94	-13.21	-12.09	-11.11	-10.81	-10.73
All Drawdowns	-28.29	-20.05	-17.52	-16.80	-16.22	-16.80

Source: Kenneth R. French© and CRSP. From 1/1/1928 - 12/31/2010.
Past performance does not guarantee future results.

These findings summarize the downside protection that dividend payers have provided historically during down markets. The relative advantage over non-dividend payers was larger in more moderate drawdowns. But, even during severe drawdowns, each quintile of dividend payers substantially outperformed non-dividend payers.

In another study, the Wall Street Journal cited market performance during 1981-82, 1990, 2000-02 and 2008, finding that dividend payers as a whole outperformed non-payers during the market routes of those years[iii]. These findings offer evidence to support the claim that the results generated from the full 83 year sample are in accordance with modern market history.

Downside protection is meaningful to most investors, due mainly to the speed and intensity of corrections (28 out of the 45 corrections in our sample were finished in three months or less). Many institutions are not able to reallocate a portfolio quickly in the midst of a downturn, due to size and rigidity of decision-making processes. Most non-professional investors may not have the real-time market knowledge or the necessary tools to act quickly. As such, a strong case can be made for maintaining a strategic allocation to dividend paying stocks, if only on the grounds of risk control.

Dollar Cost Averaging

Real equity returns have three components: the current level of dividend yield, real dividend growth and changes in valuation (moves in dividend to price ratios)[iv]. Because levels of dividend payments are more stable than valuations across the market cycle, dividends become a more important component of total return in down or stagnant markets. Research conducted by Wolfe Trahan Quantitative Research on the S&P 500 confirms that "…the effect of dividends is most noticeable in flat or down markets, as they help to mitigate price losses and provide a safety cushion for portfolios[v]." It stands to reason that the effect is stronger for higher yielding stocks.

Continuing to receive cash payments in down or stagnant markets is very valuable to investors. This idea can be extended to dollar cost averaging, a classic value investing discipline that advocates investing a fixed dollar amount of money at regular intervals. If dividends are regularly reinvested, more shares can be purchased during down markets than during up markets, reducing the average cost basis of shares held

over time. In a 2005 study of S&P 500 dividends, Jeremy Siegel coined the phrases, "Bear Market Protector" and "Return Accelerator", to refer to the process of recouping losses more quickly by reinvesting dividends in down markets[vi].

Dead Cat Bounce: Performance After Down Markets

Are there times when dividend paying stocks tend to underperform non-dividend payers? We turn again to the full returns sample for evidence. We examine the cumulative performance of each portfolio in the six months that follow a correction (as we have earlier defined it). We exclude those six month periods that may include the beginning of another >10% drawdown. Doing so yields 24 periods in the full 83 year sample, and 13 periods since 1970. As the results in Table 6 indicate, non-dividend payers have tended to substantially outperform dividend payers during these periods. These periods are often characterized by rapid market recovery.

Table 6: Average Cumulative Performance for Six Months Following >10% Drawdown

	Non-payers	Lo 20	Quintile 2	Quintile 3	Quintile 4	Hi 20
Full 83 year sample	+35.46	+26.49	+22.79	+24.14	+24.48	+24.49
Since 1970	+33.09	+26.15	+22.63	+22.27	+21.59	+19.80

Source: Kenneth R. French© and CRSP. From 1/1/1928 - 12/31/2010. **Past performance does not guarantee future results.**

The relative strength of non-dividend payers during market recoveries (and their relative weakness during corrections) is consistent with the claim that non-dividend payers have greater exposure to changing expectations regarding the business cycle.

The investment implications of these findings are limited, however. From our data, it can be inferred that of the 45 corrections observed, 21 have led to another correction within a six month period or less. The stock market itself is a leading economic indicator that has signaled many false dawns. Investors can be whipsawed by attempting to game the onset of a sustained market recovery.

Too Much of a Good Thing?

Looking at the overall results, it's tempting to conclude that the highest yielding companies would have the best performance results, but the data in our sample don't support this conclusion. In the full 83 year sample, quintile 4 outperformed quintile 5, and did so with lower volatility. Over the 20-year holding periods, quintile 4 outperformed quintile 5 in 41 out of 64 observations, and had lower volatility in 58 out of 64 observations. Across all market corrections, quintile 4 outperformed quintile 5 in 25 out of 45 observations. Finally, following corrections, performance of quintile 4 was roughly similar to that of quintile 5.

Other studies that have measured the relative performances of portfolios segmented by yield have found similar results.

- In an earlier study referencing performance of the Compustat 1500 (largest 1500 publicly traded companies) from 1970 through 1996, the second to highest yielding quintile had the highest performance over the period[vii].
- In a Credit Suisse study, equal-weighted portfolios were formed on yield deciles of S&P 500 stocks from 1980 through July, 2006. Deciles 8 and 9 outperformed the highest yielding Decile 10[viii].
- Bank of America-Merrill Lynch divided Russell 1000 constituents into quintiles from 1984 to 2010, finding that the second highest yielding quintile provided the highest risk-adjusted returns[ix].

If there is generally a direct relationship between dividend yield and total return, why would the highest yielding group so often play second fiddle? Yield traps may be part of the answer.

Yield Traps

A close cousin to value traps, yield traps are found where dividend yields are high, but not sustainable. An unsustainably high yield can be the result of a substantial drop in the price of a dividend paying stock, where the market anticipates substantially lower future earnings of the issuer. Because earnings ultimately drive dividends, a sustained drop in anticipated earnings usually foreshadows a dividend cut or, in severe cases, bankruptcy. Yield traps can also arise slowly, when a company with deteriorating earnings fundamentals attempts to maintain its dividend policy. In such cases, the percentage of a company's earnings that are represented by dividend payments (the payout ratio) usually increases; a potential red flag for an analyst. In the aforementioned Credit Suisse study, researchers found that, for companies with a given level of yield, those with lower payout ratios (*i.e.* more earnings to support the dividend policy) tended to have higher returns[viii]. The finding is intuitive if one remembers that earnings sustainability is the source of dividend sustainability.

It stands to reason that many companies with unsustainably high yields will, eventually, end up in the highest yielding portfolios before making a dividend cut or declaring bankruptcy, thus hampering returns and increasing volatility within the highest yielding portfolios. This may help explain a portion of the relative underperformance of quintile 5 to quintile 4. Other factors, as discussed below, may also contribute.

Concentration Risks

A naive investment strategy, which represents another kind of yield trap, is to invest in the highest yielding stocks while ignoring the capitalization, sector and style concentrations that would inevitably result. An investor blindly pursuing this strategy could unwittingly be taking undue common factor risks. While discussions of concentration risks are generally outside the scope of this paper, a couple of examples provide some anecdotal support:

- A portfolio favoring allocations to high yielding sectors at the beginning of 2008 would likely have heavily overweighted financial services stocks heading into the financial crisis.
- In 2010, the strategy would heavily favor utilities stocks during an economic expansion, a group with earnings growth estimates substantially below all other sectors.

The Importance of Research

As we referenced at the beginning of this paper, dividends are a rich field of capital markets research. This paper has ignored other important dividend-related topics including:

- The importance of dividend policy to corporate management signaling.
- The pros and cons of returning cash to shareholders via dividends or share buy-backs.
- The use of retained earnings vs. external financing for core capital expenditures or acquisitions.

Very quickly, it can be seen that dividend policy is often dependent upon specific company characteristics, industry dynamics and the efficacy of management decision-making. In light of the above, we believe that investors can benefit from a fundamental investment approach that considers dividend policies in conjunction with the multitude of other important return factors.

The 10 Principles of Value Investing™

At Heartland, we specialize in company level research to examine all important factors of return. We have found, through experience, that many dividend paying companies have other positive return attributes, from quality management to attractive valuation multiples, low debt and quality earnings. These are embodied in Heartland's 10 Principles of Value Investing™, the proprietary framework we use to assess all potential investments.

Low Price in Relation to Earnings
Historically, low P/E stocks have outperformed the overall market and provided investors with less downside risk relative to other equity investment strategies.

Low Price in Relation to Cash Flow
Strong cash flows give a company greater financial flexibility. In the hands of capable management, it can be the foundation for stronger earnings and, in turn, higher stock prices.

Low Price in Relation to Book Value
Book Value is a company's total assets minus liabilities. Low Price /Book Value stocks offer investors potential downside risk protection. It often suggests sentiment about a stock or sector is overly negative.

Value of the Company
We endeavor to appraise the intrinsic value, or private market value, of each portfolio company. Our goal is to make investments at a significant discount to our estimate of true value.

Financial Soundness
We prefer investing in companies that are not encumbered by long-term debt. During difficult periods, such low-debt companies are able to direct cash flow to investments in operations, not interest expense.

Together, these Principles drive all buy and sell decisions

Catalyst for Recognition
We look beyond simply discovering undervalued stocks. We identify specific catalysts that we believe will cause a stock's price to rise, closing the gap between a current stock price and the company's true worth.

Capable Management and Insider Ownership
Meaningful and increasing stock ownership by company officers and directors can be tangible evidence of their personal commitment, and aligns their long-term interest with the shareholders interest.

Sound Business Strategy
We meet with hundreds of senior executives to understand and evaluate their strategy. It is also typical for us to speak with customers, suppliers and competitors.

Positive Earnings Dynamics
We favor companies with improving earnings and upwardly trending estimates, as earnings tend to drive stock prices.

Positive Technical Analysis
Technical analysis is a tool useful for avoiding stocks that may already be subject to speculation. We are attracted to stocks that have "bases," trading within a narrow price range which has typically followed a down trend, or bear market.

Data Source

Copyright 2011 Kenneth R. French© with original stock data from the Center for Research in Security Prices US Stock Database. The universe includes certain equity securities listed NYSE, Amex, NASDAQ and NYSE Arca.

Definitions

Drawdown is the peak-to-trough decline during a specific record period of an investment, fund or commodity. A drawdown is usually quoted as the percentage between the peak and the trough.

Correction is a drawdown of greater than 10%.

Risk (Standard Deviation) is a measure of volatility of returns and is computed as the square root of the average squared deviation of the returns from the mean value of the return.

Sharpe Ratio is the excess return (portfolio return minus the risk free return) divided by the standard deviation of excess returns. The ratio measures the relationship of reward to risk in an investment strategy.

S&P 500 Index is an index of 500 U.S. stocks chosen for market size, liquidity and industry group representation and is a widely used U.S. equity benchmark.

All indices mentioned are unmanaged. It is not possible to invest directly in an index.

Footnotes

[i] Arnott, Robert D., "Dividends And The Three Dwarfs," Editor's Corner, Financial Analysts Journal, 2003.

[ii] "The Worldwide Equity Premium: A Smaller Puzzle" by Elroy Dimson, Paul Marsh and Mike Staunton, 2006.

[iii] "Dividend Payers Return to the Fore," Wall Street Journal, November 21-22, 2009.

[iv] "Divvying up returns," Buttonwood, The Economist, September 2, 2010.

[v] Wolfe Trahan Quantitative Research, October 22, 2010.

[vi] The Future for Investors, Jeremy J .Siegel, Crown Business, 2005, p. 128.

[vii] Contrarian Investment Strategies: The Next Generation, David Dreman, Simon & Schuster, 1998, p. 168.

[viii] "High Yield, Low Payout," Credit Suisse Quantitative Equity Research, August 15, 2006.

[xi] "Dividend yield: secular and cyclical tailwinds," Quantitative Strategy Update, Bank of America Merrill-Lynch, September 28, 2010.

For questions regarding this paper, please contact Matt Alexander, CFA, CAIA, Director of Marketing Research. malexander@heartlandfunds.com

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