

# DIVIDENDS:

## A REVIEW OF HISTORICAL RETURNS

***“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 have become one of the most researched topics in capital markets. The popularity of dividend-paying stocks is high, and for good reason: dividends can be a significant contributor to superior long-term investment results.

This general finding has been 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<sup>i</sup>. 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 17 countries averaged approximately 5%, while the average dividend yield of those countries during the period was 4.5%<sup>ii</sup>.

These findings are compelling for long-term investors, especially for institutions with very long investment time frames. However, most investors are also interested in performance and risk characteristics over shorter time frames. 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 from Kenneth French, based on original stock data from the US Stock Database ©2014 Center for Research in Security Prices (CRSP), the University of Chicago Booth School of Business and includes all equity securities listed on NYSE, Amex, NASDAQ and NYSE Arca during the time period. We utilized monthly and annual value-weighted total returns of non-dividend-paying US stocks and five portfolios of dividend-paying stocks from 1928 through 2013. The five dividend-paying portfolios are constructed using quintiles of the dividend-to-price ratio (dividend yield), with quintile 1 representing the lowest-yielding dividend payers and quintile 5 representing the highest. Portfolios were formed and rebalanced annually.

### 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 naive dividend-focused investment strategies.***



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## The Long Term

The chart below shows how an investment in each portfolio as of January 1928 would have grown through December 2013, with dividends 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. This is evident in the relatively higher Sharpe ratios of the dividend payers.

**Hypothetical Growth of 1 Million From January 1928 - December 2013**

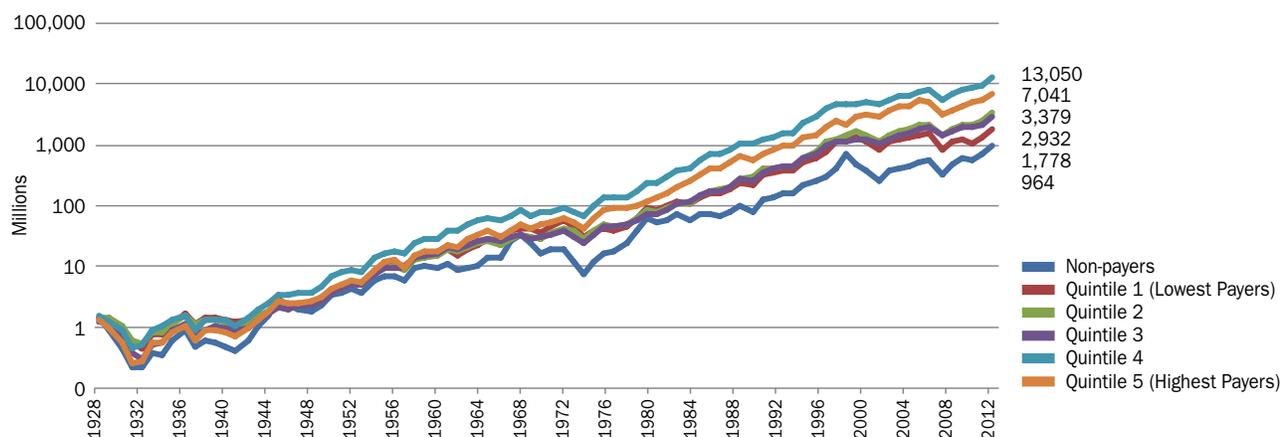


Table 1	Non-Payers	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Average Annual Total Return	8.32%	9.09%	9.91%	9.73%	11.65%	10.85%
Annualized Standard Deviation	33.78	23.03	19.51	20.79	21.42	24.26
Sharpe Ratio	0.14	0.24	0.32	0.30	0.38	0.30

Source: Kenneth R. French<sup>®</sup> and CRSP, 1/1/1928 - 12/31/2013

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

## 20-Year Horizons

Many investors have an investment horizon shorter than our sample illustrates. Furthermore, within the past 86 years, markets have gone through several boom and 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. 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 67 periods of 20 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 86-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. 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, and green high returns. In the volatility table (Table 4), red represents high volatility while green indicates low volatility. Thus in both tables green is more favorable than red.

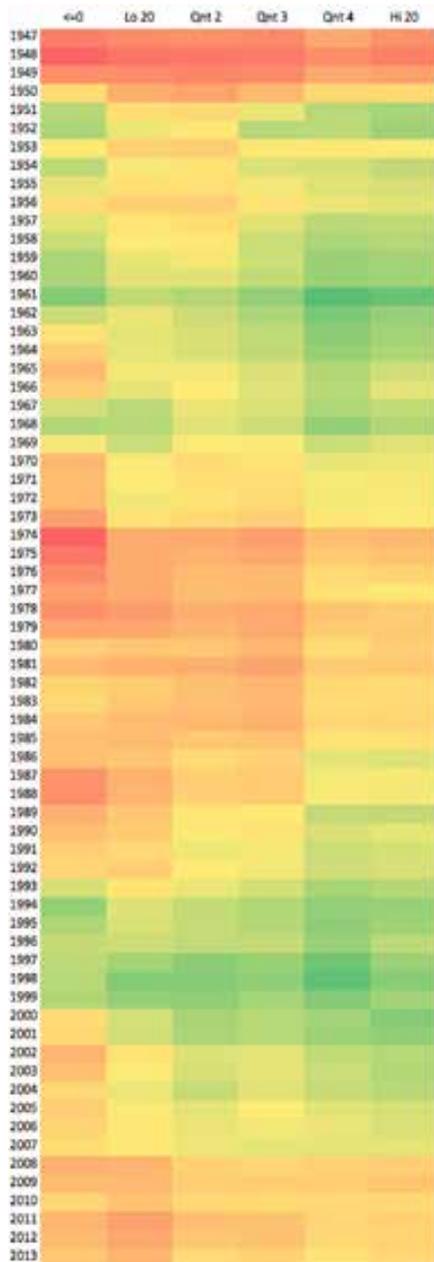
**DIVIDENDS: A REVIEW OF HISTORICAL RETURNS**

Table 2: Summary Statistics of 20-Year Periods	Non-Payers	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Lowest 20-yr Average Annual Total Return	1.03%	2.56%	2.84%	3.11%	4.44%	3.32%
Highest 20-yr Average Annual Total Return	17.62	17.65	17.54	17.11	19.52	18.88
Average	10.13	10.66	11.23	11.48	13.32	13.04
Median	9.91	11.35	11.39	12.12	13.24	13.57
Average Annualized Standard Deviation	32.27	20.66	17.53	17.88	18.98	20.98
Average Sharpe Ratio	0.19	0.33	0.42	0.43	0.49	0.44

Source: Kenneth R. French<sup>®</sup> and CRSP, 1/1/1928 - 12/31/2013

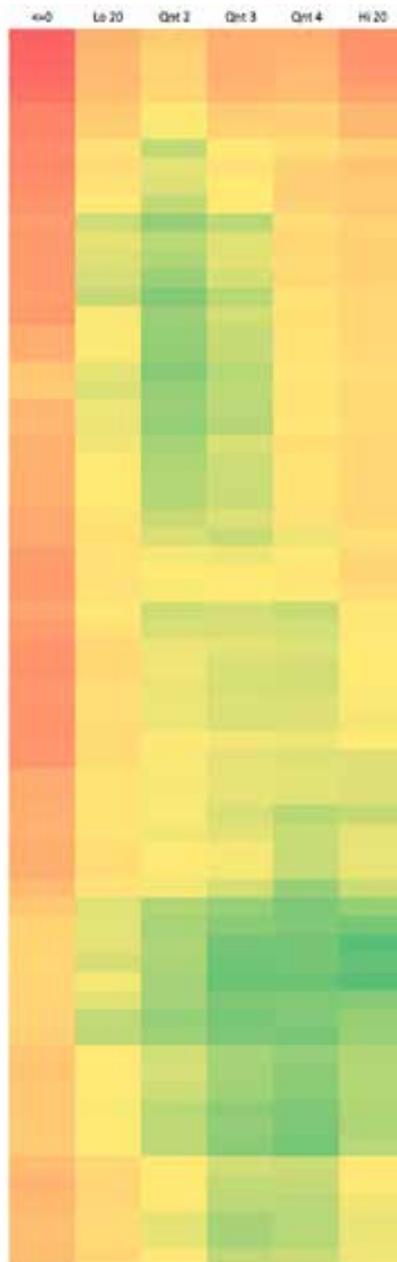
**Table 3: Annualized Returns**

Red: Low Relative Returns  
Green: High Relative Returns



**Table 4: Annualized Standard Deviation**

Red: High Relative Volatility  
Green: Low Relative Volatility



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, generally a very favorable holding period for both returns and risk across all six portfolios. In contrast, 20-year periods ending in the late 1940s and mid 1970s were among the worst for equity markets over the 86-year sample.

Reading the tables from top to bottom, the fluctuating intensity of green and red surfaces illustrates the timing risk of being invested in the equity markets with respect to both terminal returns 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 generally 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 may contain several frightening market events that can jar an investor's confidence. The past 20 years have been no exception. Most investors are interested specifically in how their investments might perform during sudden down markets.

Source: Kenneth R. French<sup>®</sup> and CRSP, 1/1/1928 - 12/31/2013; based on rolling 20-year periods

**Past performance does not guarantee future results.**

### 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 2013. We believe this series is the best available representation of a broad U.S. market return, and used it to determine all periods in which the market declined a cumulative 10% or more (a common definition for a market 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.

There were 46 market corrections during the period (11 corrections occurred during the past 20 years). Of these 46 periods, duration ranged from one month to seven consecutive months of negative monthly returns. Because of the wide range of severities of these drawdowns—ranging from -10% to -42%—we’ve summarized the results in Table 5.

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

	Non-Payers	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
> = 30%	-44.73%	-37.98%	-32.90%	-31.55%	-30.49%	-32.09%
25 to <30%	-40.08	-27.97	-26.50	-31.50	-29.06	-30.77
20 to <25%	-33.04	-24.46	-20.77	-20.69	-19.57	-21.42
15 to <20%	-26.74	-17.57	-14.58	-12.14	-11.56	-11.83
10 to <15%	-19.91	-13.51	-12.26	-11.24	-10.94	-11.03
All Drawdowns	-28.14	-20.24	-17.65	-16.91	-16.15	-16.63

Source: Kenneth R. French<sup>©</sup> and CRSP, 1/1/1928 - 12/31/2013  
**Past performance does not guarantee future results.**

These findings summarize the downside protection that dividend payers have historically provided 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 1981-1982, 1990, 2000-2002, and 2008, finding that dividend payers as a whole outperformed non-payers during the market routs of those years<sup>iii</sup>. These findings offer evidence to support the claim that the results generated from the full 86-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 46 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 lack the real-time market knowledge or the necessary tools to act quickly. A strong case can thus be made for maintaining a strategic allocation to dividend-paying stocks, if only on the grounds of risk management.

### 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)<sup>iv</sup>. 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.”<sup>v</sup> It stands to reason that the effect is stronger for higher-yielding stocks.

Continuing to receive cash payments in down or stagnant markets can be 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 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<sup>vi</sup>.

### 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, examining the cumulative performance of each portfolio in the six months following correction. We exclude those six-month periods that may include the beginning of another >10% drawdown. Doing so yields 24 periods in the full 86-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, which are often characterized by rapid market recovery.

We believe 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.

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

	Non-Payers	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Full 86 year sample	35.54%	26.34%	22.79%	24.14%	24.38%	24.34%
Since 1970	33.46	25.97	22.26	21.75	20.46	18.78

Source: Kenneth R. French<sup>®</sup> and CRSP, 1/1/1928 - 12/31/2013

**Past performance does not guarantee future results.**

The investment implications of these findings are limited, however. From our data, it can be inferred that of the 46 corrections observed, 23 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 predict 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 doesn't support this conclusion. In the full 86-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 43 of 67 observations, and had lower volatility in 61 of 67 observations. Across all market corrections, quintile 4 outperformed quintile 5 in 25 of 46 observations. Finally, following corrections performance of quintile 4 was roughly similar to that of quintile 5.

Other studies that have measured the relative performance 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-highest-yielding quintile had the strongest performance over the period<sup>vii</sup>.
- 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<sup>viii</sup>.
- Bank of America-Merrill Lynch divided Russell 1000<sup>®</sup> constituents into quintiles from 1984 to 2010, finding that the second-highest-yielding quintile provided the strongest risk-adjusted returns<sup>ix</sup>.

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. This 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 attempts to maintain its dividend. 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 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) tended to have higher returns<sup>viii</sup>. 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 and thus hampering returns and increasing volatility within those 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.

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. For example, 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.

### **The Importance of Research**

Dividends are a rich field of capital markets research. While this paper does not address them, other important dividend-related topics include:

- 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.

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 Price/Earnings 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.

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

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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.

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all buy and  
sell decisions

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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.

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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.

## Definitions

**Correction** is a drawdown of greater than 10%.

**Dividend Yield** is a ratio that shows how much a company pays out in dividends each year relative to its share price.

**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.

**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.

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

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## Footnotes

- <sup>i</sup> Arnott, Robert D., "Dividends And The Three Dwarfs," Editor's Corner, Financial Analysts Journal, 2003.
- <sup>ii</sup> "The Worldwide Equity Premium: A Smaller Puzzle" by Elroy Dimson, Paul Marsh and Mike Staunton, 2006.
- <sup>iii</sup> "Dividend Payers Return to the Fore," Wall Street Journal, November 21-22, 2009.
- <sup>iv</sup> "Divvyng up returns," Buttonwood, The Economist, September 2, 2010.
- <sup>v</sup> Wolfe Trahan Quantitative Research, October 22, 2010.
- <sup>vi</sup> The Future for Investors, Jeremy J. Siegel, Crown Business, 2005, p. 128.
- <sup>vii</sup> Contrarian Investment Strategies: The Next Generation, David Dreman, Simon & Schuster, 1998, p. 168.
- <sup>viii</sup> "High Yield, Low Payout," Credit Suisse Quantitative Equity Research, August 15, 2006.
- <sup>ix</sup> "Dividend yield: secular and cyclical tailwinds," Quantitative Strategy Update, Bank of America Merrill-Lynch, September 28, 2010.

Data Source: Kenneth R. French, ©2014 Center for Research in Security Prices (CRSP), the University of Chicago Booth School of Business, 1/1/1928 – 12/31/2013. Includes all equity securities listed on NYSE, Amex, NASDAQ and NYSE Arca during the time period.

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There is no assurance that dividend paying stocks will mitigate volatility. Neither dollar cost averaging nor dividend paying stocks can eliminate the risk of experiencing investment losses.

Dividends are not guaranteed and a company's future ability to pay dividends may be limited. A company currently paying dividends may cease paying dividends at any time.

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