

Introduction

There has been much discussion about the value of investing in dividend paying stocks versus investing in non-dividend paying stocks. The following analysis points to empirical evidence suggesting that Canadian dividend paying stocks offer superior risk/return characteristics when compared to Canadian non-dividend paying stocks as defined by those stocks or equities that comprise the S&P/TSX Composite Index. This analysis also includes observations about the fundamental characteristics of the securities from within each group, which support this view of the risk/return relationship.

It has been suggested that corporate actions affecting dividend decisions significantly impact stock price behavior. It has also been suggested that dividend-payers exhibit greater stability of earnings compared to non-dividend-payers and that non-dividend paying stock generally show higher growth potential. It is important to note that any such “debate” is separate from a debate comparing the value versus growth approach to investing, because dividend-payers may be included in both investment styles: growth and value. There is a preponderance of academic theories such as “a bird in a hand theory” and “dividend signaling theory” that favor dividend-payers over non-dividend-payers.

Management may choose not to pay dividends for many reasons. Conventional wisdom seems to suggest that a non-dividend paying company is likely to enjoy greater growth potential, using all internally generated cash flow to fund growth. However, given the risk versus the return of this group, one might question the wisdom of this accepted norm. Instead, one could ask whether a company may choose to not pay dividends because of the strength of its income statement or balance sheet - which might in turn be a reflection of the non-dividend constituents’ business model strength or its competitive position within its industry.

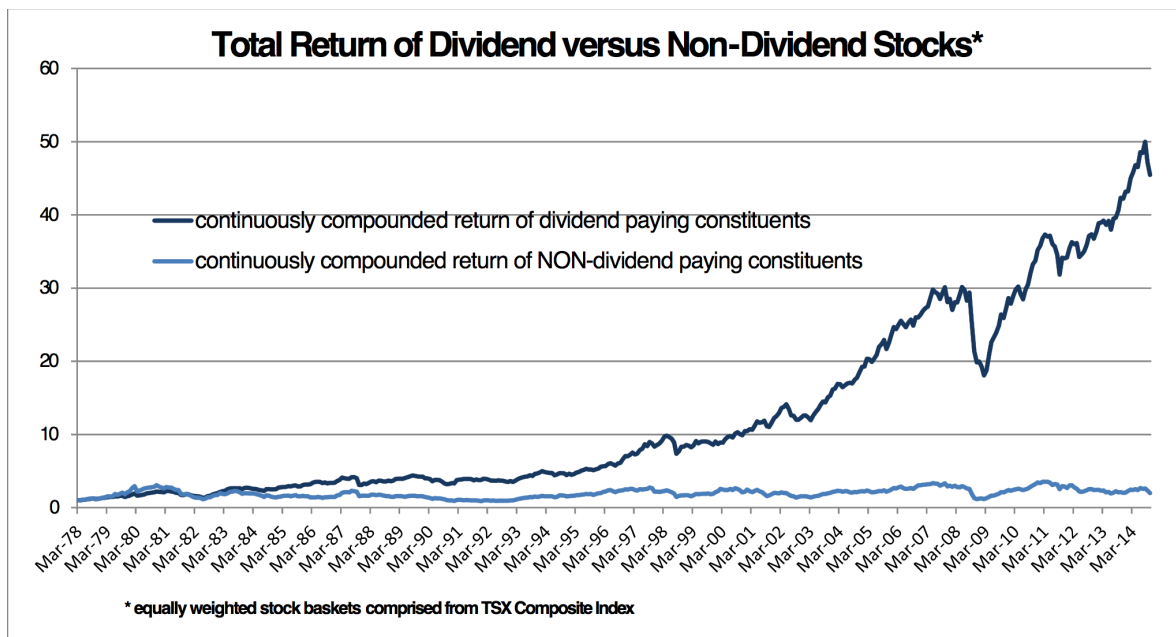
A pragmatic and objective approach to solving this dilemma might be to consider the historical perspective. To that end, this study will make use of unbiased evidence that is available from April 1978, as well as further granular analysis of fundamental characteristics based on data available commencing in 1998.

Theoretically, the argument can be made that investors in Canadian equity securities should only own Canadian dividend paying stocks as the Canadian equity content within a diversified portfolio of financial assets. At a minimum, Canadian investors should reserve a portion of their Canadian equity investment for a dedicated strategy based on dividend paying stocks.

Return Characteristics

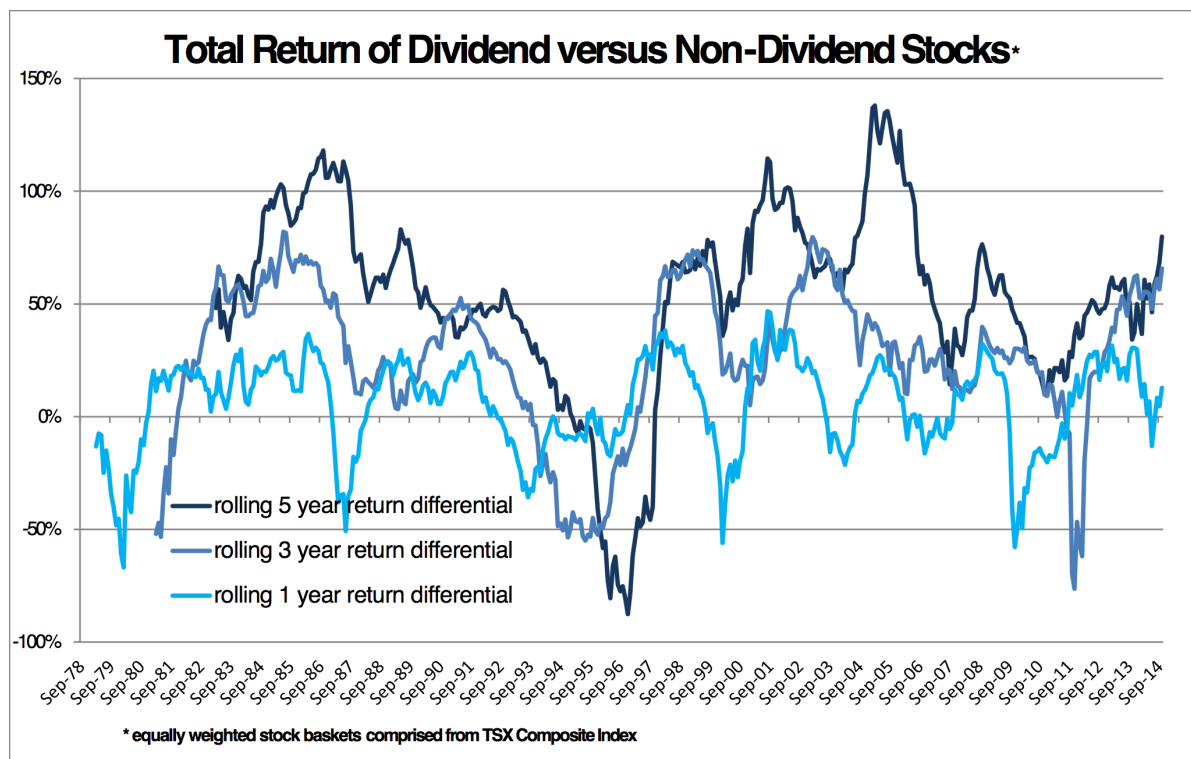
In the following analysis, an equally weighted portfolio of the entire dividend-paying universe of securities from within the S&P/TSX Composite Index is compared to an equally weighted basket of the non-dividend paying equity securities ¹. The portfolios are rebalanced monthly as to remain equally weighted and to remove survivor bias.

From April 1978 to October 2014, the equally weighted portfolio of dividend-payers has outperformed the equally weighted portfolio of non-dividend-payers by 9.1% annually or yielded 23 times the return. The chart, which follows, illustrates this outperformance.



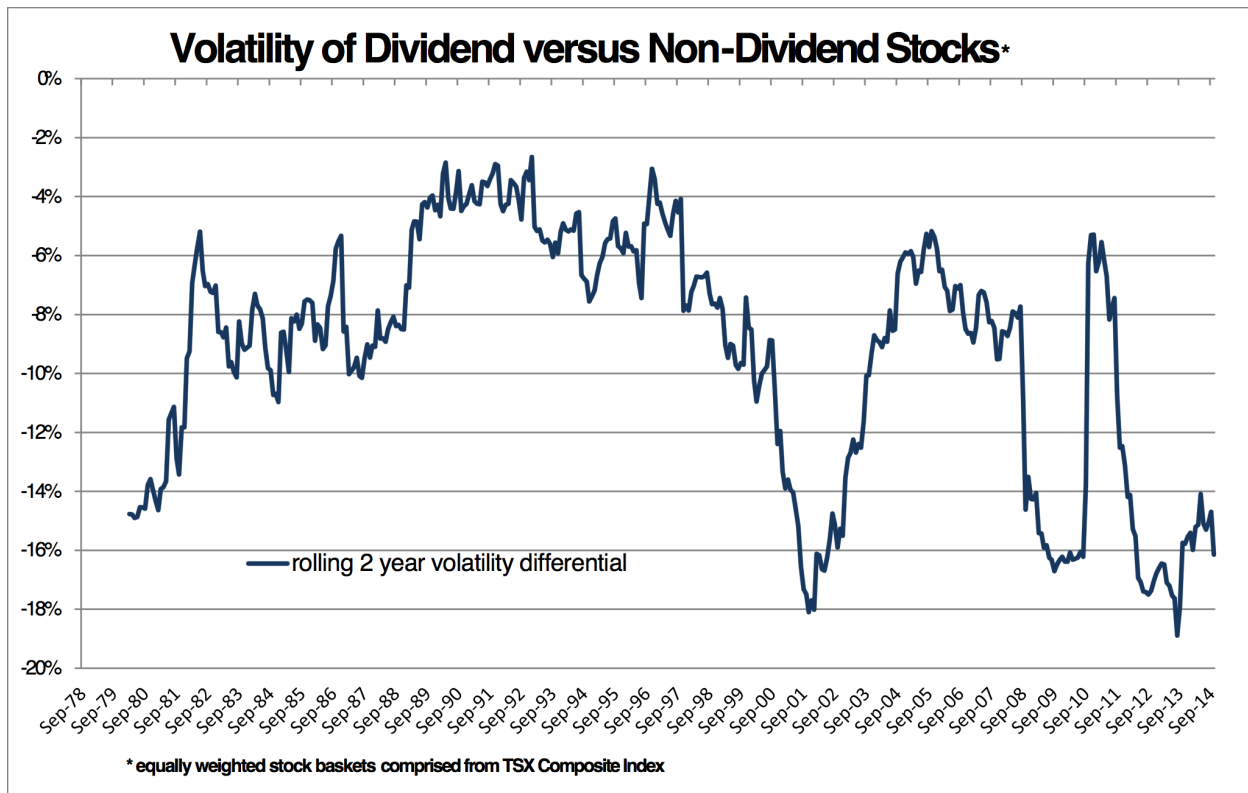
¹ An equally weighted basket is chosen to remove capitalization bias, which is a specific issue to the Canadian stock market.

While there are periods of outperformance by non-dividend paying stock universe found from within the S&P/TSX Composite Index for the history of data available for this study (April 1978 to October 2014), the simple majority (approximately 64% of all observations) of rolling one-year periods showed outperformance by the dividend-paying basket. In fact, about 85% of all rolling three-year periods and approximately 91% of all rolling five-year periods yielded superior returns for dividend paying stocks.



Risk Characteristics

Many investors tend to focus solely on returns; however, risk per unit of return is the more important consideration when constructing a portfolio and making investment choices. Focusing narrowly on risk for the moment and using the standard deviation of returns as a means to quantify risk, one can readily see that the risk measure of volatility expressed in annualized terms is far less for dividend paying stocks than it is for non-dividend paying stocks².

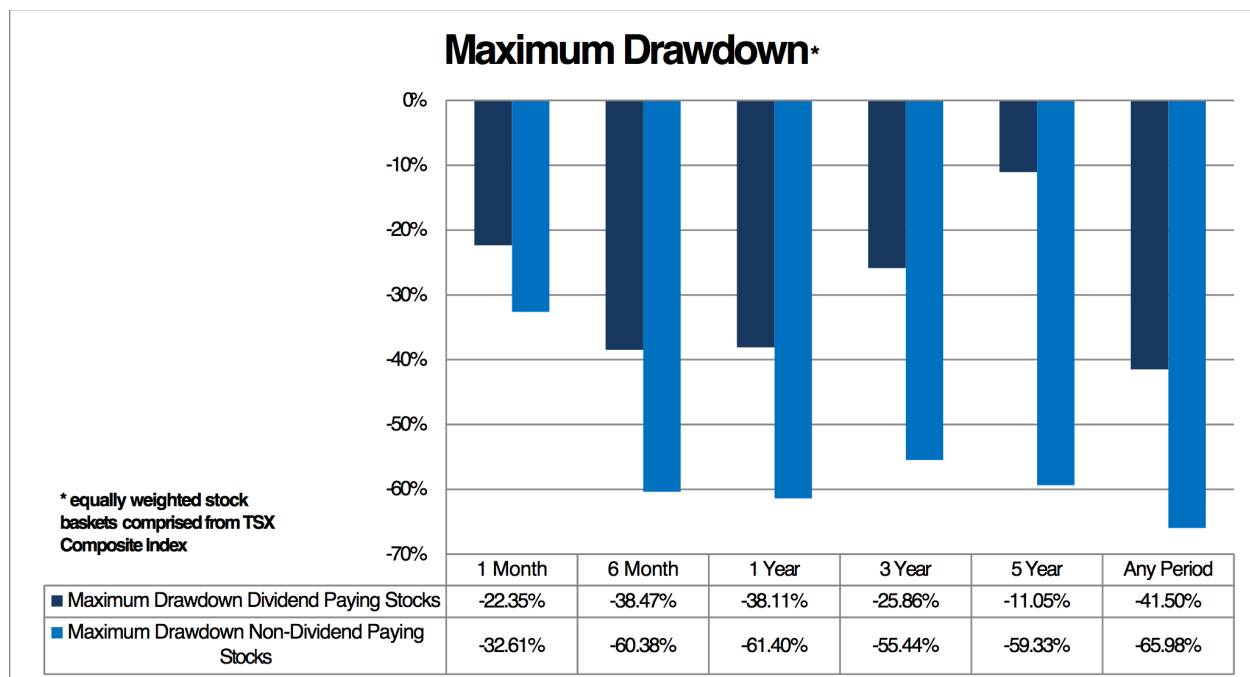


In the above chart, the rolling two-year volatility for the universe of non-dividend paying is subtracted from the same rolling two-year volatility for the dividend-paying portfolio. The chart depicts the simple difference of the two time series of volatility

² The return data from the S&P/TSX Composite Index are a monthly series. As such, two years for the rolling observations yields 24 data points for statistical sampling.

measures. One can quickly detect that the dividend-paying basket has always exhibited lower volatility compared to non-dividend paying universe.

Investment professionals will often consider “maximum drawdown” as an additional, complimentary lens to volatility as a measure of risk. In this data set the maximum drawdowns (the greatest negative percentage returns for any given period) were substantively less for the equally weighted dividend-paying universe compared to the non-dividend-paying universe, where “universe” are the stocks within the S&P/TSX Composite Index, divided into dividend paying versus non-dividend paying.



Dividend-Payers versus Non-Dividend-Payers from a Portfolio Perspective

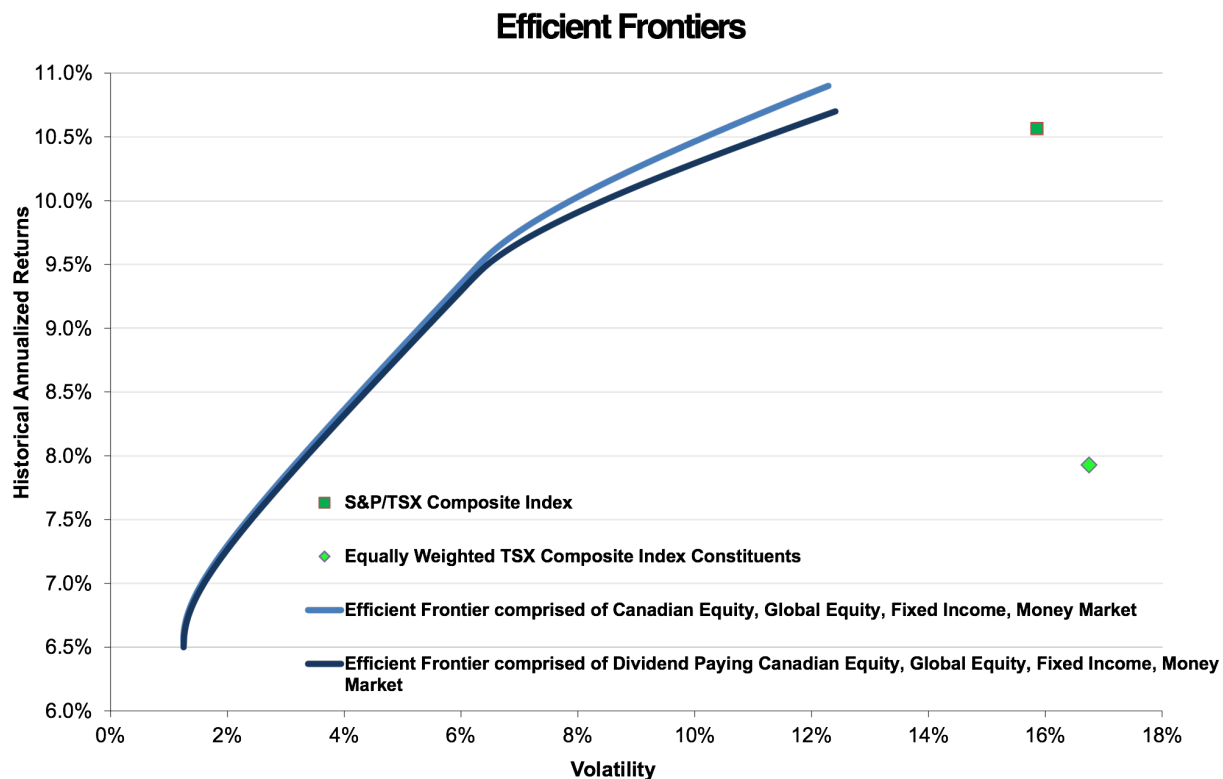
With higher returns and less risk, it should also hold true that the risk/return relationship of the dividend paying basket should be superior to that of the non-dividend paying basket. But which will offer better diversification benefits when combined with other asset classes?

To answer this question, two efficient frontiers were constructed using a mean/variance optimization technique³ -- both portfolios were constructed with traditional asset classes⁴ (money market, fixed income, global equity and Canadian equity). The S&P/TSX Composite Index as a representation of Canadian equities is used for one efficient frontier and the Canadian dividend paying stock universe (equally weighted) is used in the second efficient frontier.

The efficient frontier curve for the diversified portfolio including Canadian dividend paying securities as an asset class (in lieu of the S&P/TSX Composite Index as representation of the Canadian equity asset class) offered a much better risk/return opportunity set. Both are captured in the chart below.

³ The mean/variance optimization approach deployed for this exercise is a quantitative technique which utilizes the historical returns, standard deviations and the correlations amongst asset groups to determine the optimal asset mix, which is to maximize the historical return per unit of risk.

⁴ The measure of “traditional” assets are S&P/TSX Composite Index in respect of Canadian equity, MSCI World in respect of global equity, TMX/FTSE Universe Bond Index in respect of fixed income, and government of Canada treasury bills in respect of money market.



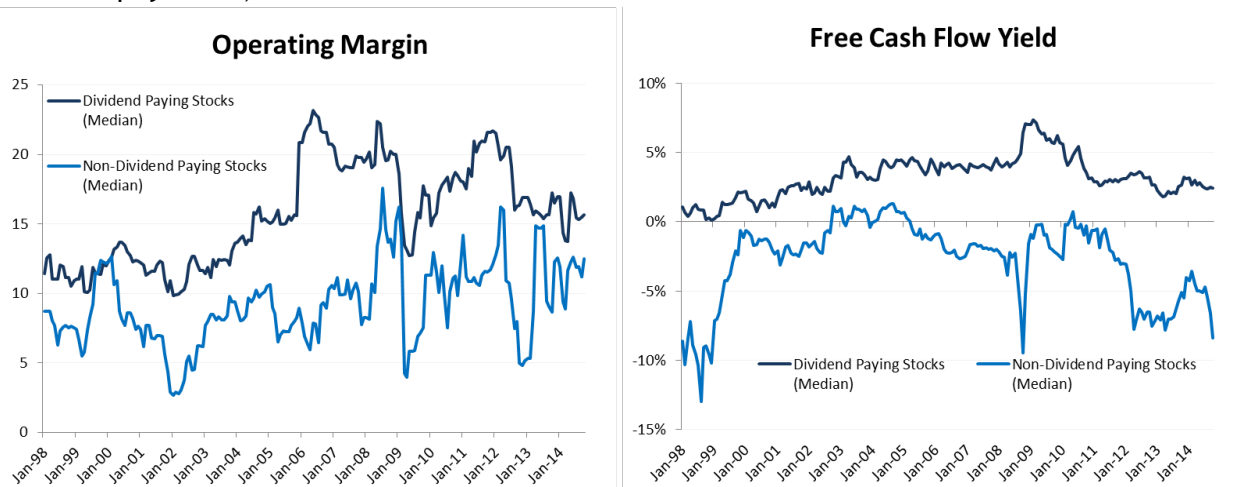
The efficient frontier that uses the entire dividend paying stock universe within the S&P/TSX Composite Index (equally weighted) rather than the S&P/TSX Composite Index as representation of the Canadian equity asset class provides a clearly superior risk/return trade off or opportunity set to build a diversified portfolio of global assets. It should be noted that in this exercise the dividend paying Canadian stocks as an “asset class” are not contrasted to the non-dividend paying stocks. This would have yielded a far superior differential amongst these efficient frontiers, as the dividend paying stocks are a material component of the S&P/TSX Composite Index.

Fundamental Characteristics

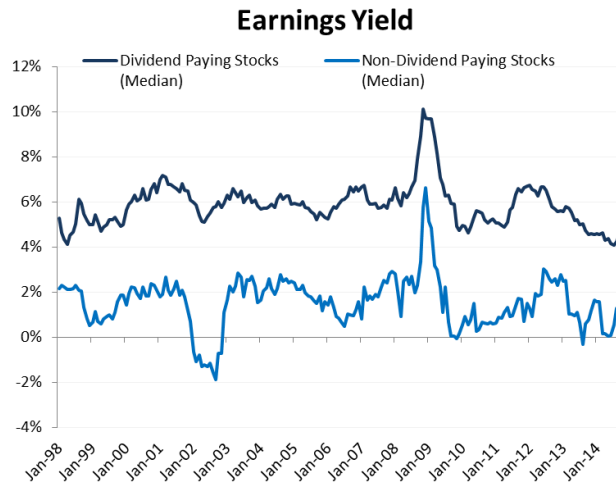
In postulating that investors in Canadian equity securities should at a minimum reserve a portion of their investment dollar for a dedicated strategy based on Canadian dividend paying stocks, this paper suggests dividend paying stocks in general tend to display favorable fundamental characteristics that effectively represent an expression of the underlying

companies' business, fundamental health and competitive position within their respective industries. As such, they generally provide for the conditions that allow for superior returns and lower risk over long-term investment horizons.

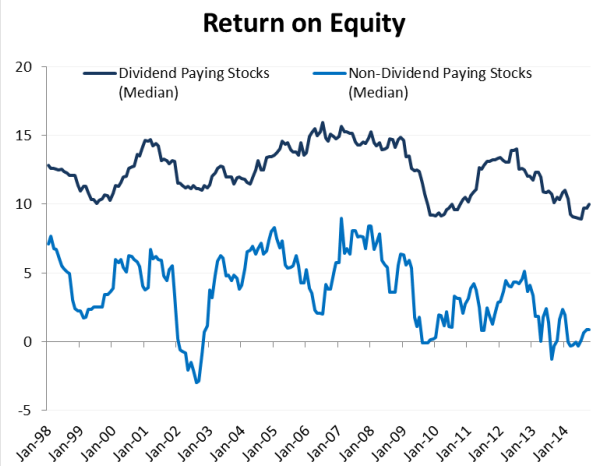
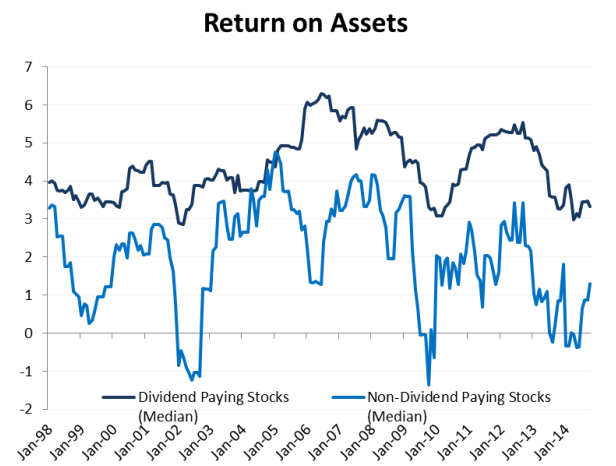
Fundamental data for the stocks within the S&P/TSX Composite Index were available for this study from 1998 and would appear to support this hypothesis. Dividend paying stocks tend to be less expensive and have stronger income statement metrics. For this exercise, the median factor value was used to make comparisons amongst the two groups. Operating margins tend to be higher for the dividend paying stocks, and not surprisingly, free cash flow is also superior and can be used to facilitate payments to investors (servicing debt or making dividend payments).



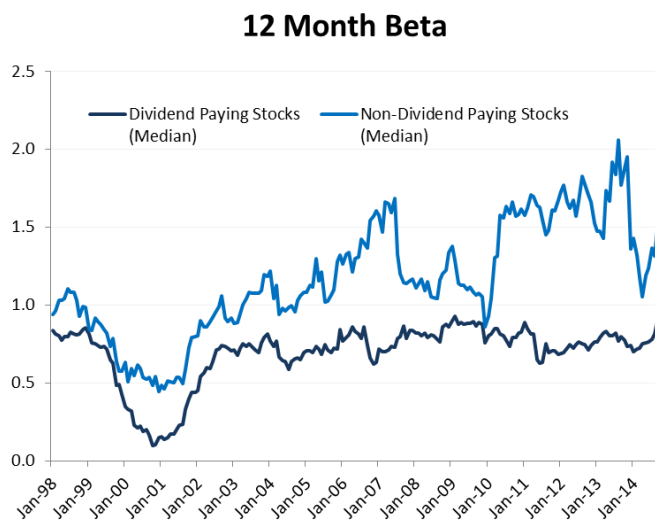
The median dividend paying stock also tends to be “less expensive,” offering a higher earnings yield.



The median dividend paying stock tends to reward investors with higher return on assets and higher return on equity.

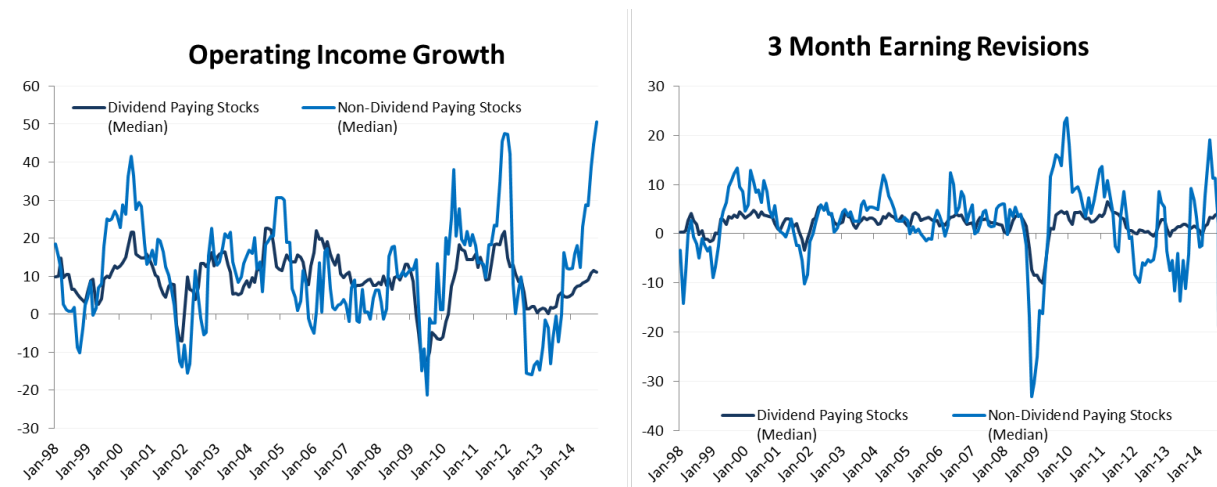


Given this characterization of the dividend-paying universe, this group may be expected to experience greater predictability and stability of business conditions as well as a certain “independence” of the stock price behavior. One can measure “independence” from the vagaries of the stock market using beta⁵. The median dividend paying stock over this time horizon and data set tends to have far lower beta than non-dividend paying stock.



⁵ Beta is a measurement of a dependent variable's (i.e. the dividend paying stock price) volatility relative to an independent variable (S&P/TSX Composite Index). Beta is measured here as the 12-month percent change in the price of the dependent variable given a 1% change in the independent variable. This reveals if the dependent variable moves in step with the independent variable; where a beta of 1 indicates perfect alignment. Beta is a measure of risk; the higher the beta, the higher the risk.

As noted above, there are distinct periods of superior returns for non-dividend paying stocks in the data sample used. Non-dividend paying stocks offer unique characteristics that provide opportunity for superior returns to dividend paying stocks and as such, it would not be rational for investors to forgo these opportunities and only invest in dividend paying stocks despite the theoretical argument to the contrary suggested at the outset. The reward for greater risk is superior returns from time to time. This is, however, an argument for active management versus passive management, which is a topic for a different paper.



It can be readily observed that the opportunity for growth tends to be better in the non-dividend paying group and earnings revisions tend to be superior when they are positive. It would therefore be rational for investors to be willing to “pay more” (lower earnings yield or higher price earnings multiple) for non-dividend paying stocks from time to time. However, it should also be noted that there is greater volatility to both the income growth and earnings revisions (as such reiterating the “risk” theme to the non-dividend paying universe).

Conclusion:

Canadian dividend paying stocks from within the S&P/TSX Composite Index have historically exhibited superior risk/return characteristics relative to the corresponding non-dividend paying stock. The theoretical argument is powerful and any investor in Canadian equities should consider a dividend strategy for a portion of Canadian equity investment when looking to construct a diversified portfolio.

Since 1998 (the point from which data were available for this study), fundamental data for the Canadian dividend-payers exhibit higher median operating margins and superior median valuation characteristics as measured by free cash flow yield and the earnings yield. The median return on assets and the median return on equities were constantly higher for dividend-payers than for non-dividend-payers. Additionally, fundamental risk characteristics such as beta and earnings growth variability favor dividend payers over non-dividend-payers. The predictability of earnings was also less volatile for the dividend paying group as shown by the lesser volatility in earnings revisions.

Based on the weight of the evidence, specifically the superior risk/return and fundamental characteristics of Canadian dividend paying stock, investors in Canadian stock should at a minimum reserve a portion of their investment for a dedicated strategy based on Canadian dividend paying stocks.