



CAPITAL MANAGEMENT

Dividend Growth as a Defensive Equity Strategy

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Introduction: The Case for Defensive Equity Strategies

Most institutional investment committees meet three to four times per year to review markets and investment performance. These committees will typically review their asset mix and compare current to target allocations. While the investment horizon for these institutional investments are very long-term, allocation decisions and potential changes to an investment program are subject to much shorter-term scrutiny.

Market volatility makes life difficult for members of these investment committees in several ways. First, the mathematics of compound investing makes larger investment losses costly and difficult to make up. For example, if an investment program loses 10 percent of its total market value, it needs an 11 percent return to get back to even. A 20 percent loss requires a 25 percent increase to get back to square one. During each of the two previous bear markets (the first starting in early 2000 and lasting through the end of 2002 and the second lasting from October 9th, 2007 through March 9th, 2009), the S&P 500 declined by 55 percent. This required a 122 percent increase following the loss to bring the S&P 500 back to the same level. While the S&P 500 did make it back more than 122 percent following the first bear market, through the end of June 2012, the S&P 500 is still 13 percent off of its October 9th, 2007 peak.

Greater volatility (as measured by the standard deviation of returns) reduces the ending wealth value of investments and drives a wedge between the simple average annual return and the geometric (i.e., compounded) annualized average return to an investment. This is evident in the following comparison of three potential investments (A, B and C) over a 20-year period (see Figure 1). Investment A produces an average (arithmetic) annual return of 8 percent with a 10 percent standard deviation. Investment B also earns an 8 percent average return, but with double the volatility (20 percent standard deviation). Investment C has Investment A's lower volatility, and actually gives up some return (1 percent) to achieve that lower volatility.

Comparing the two investments with the same average annual return of 8 percent but different annual standard deviations (10 percent and 20 percent), one finds fairly dramatic deviations in ending wealth values. The annualized average return is 7.5 percent for Investment A; it is only 6.0 percent for Investment B, due to B's higher volatility. Over a 20-year period, a \$1 million investment in the more risky strategy would generate an ending market value of \$3.2 million, whereas a \$1 million investment in the less risky strategy would

produce an ending 20-year value of \$4.2 million. So over the 20 years, the extra 10 percent annual volatility for the same average return would cost \$1 million, the amount of the original investment!

Figure 1: Comparative Return Streams (%)

Year	Investment A Annual Return	Investment B Annual Return	Investment C Annual Return
1	-6.0	-20.0	-7.0
2	12.0	16.0	11.0
3	10.0	12.0	9.0
4	-7.0	-22.0	-8.0
5	14.0	20.0	13.0
6	15.0	22.0	14.0
7	8.0	8.0	7.0
8	13.0	18.0	12.0
9	18.0	28.0	17.0
10	3.0	-2.0	2.0
11	10.0	12.0	9.0
12	6.0	4.0	5.0
13	-12.0	-32.0	-13.0
14	18.0	28.0	17.0
15	-10.0	-28.0	-11.0
16	21.0	34.0	20.0
17	23.0	38.0	22.0
18	7.0	6.0	6.0
19	5.0	2.0	4.0
20	12.0	16.0	11.0
Average Annual Return	8.0	8.0	7.0
Standard Deviation of Annual Return	10.1	20.1	10.1
Geometric Annualized Return	7.5	6.0	6.5
Value of \$1 Million Invested at End of 20-Years	\$4,273,985	\$3,212,138	\$3,542,465

In fact, comparing Investment B to C we see that even if we give up 1 percent of annual average return to reduce the annual standard deviation, we are still better off in terms of terminal wealth value (\$3.5 million compared to \$3.2 million). **Focusing on reducing volatility, even at the cost of lowering average annual return, could improve the final wealth level for investors¹.** But how does one do that? The only way to reduce overall volatility is to invest in less volatile or more defensive equities compared to the overall stock market.

Defensive Stocks via Dividend Growth

There are a number of ways of focusing on more defensive, less volatile stocks. An investor could focus on lower beta stocks which move less than the market or on stocks with lower historical standard deviations. One problem with these

¹ If we subtract 1.5% from Investment A's annual return and maintain the 10.1% standard deviation, we would generate the same ending value (\$3.2 million) at the end of 20 years as would investment B.

approaches is that beta and volatility of stocks change over time. For example, the current beta of the S&P 500 Value Index is 1.11; prior to the financial crisis in 2008, the beta of the S&P 500 Value Index was typically below 1.0 while the S&P 500 Growth Index exhibited a beta above 1.0. Value stocks used to be considered more defensive due to their lower beta. Now the S&P Growth Index has a beta less than one. Does that mean that Growth stocks are now less risky than Value stocks?

“Minimum Variance” portfolios also represent an approach to generating less volatile equity returns.² While focusing on finding optimal portfolios with the lowest level of volatility of returns, beta is lowered significantly (typically in the 0.6 to 0.7 range) and there is no notion of alpha or value-added at the stock level. While these portfolios are optimized to have the lowest standard deviations, the lack of some source of fundamental valuation (or reason for less variability in returns) leaves room for improvement in alpha. If these improvements in alpha more than offset the cost of having slightly higher than minimum variance in returns, it would be a more profitable and still less volatile approach than investing in a market index fund.

Another way to isolate stocks with less return variability is to focus on those stocks that have consistently *grown their dividends*. Before Standard & Poors and Russell created the first “style” indices in the early 1990’s, investors tended to distinguish between “value” and “growth” stocks by looking at a firms’ price/book ratio, price/earnings ratio or dividend yield. “Growth” firms tended to have high P/B and P/E ratios with no dividend payments. “Value” firms tended to pay dividends and have lower P/B and P/E multiples. Considering how both S&P and Russell have gone from single-rule classifications of Value-Growth stocks to their now multiple-factor and multiple-classification schemes, it is no surprise to find that “style” investing or even using beta can be misleading. However, investors can distinguish riskiness between dividend-growing stocks and non-dividend payers as well as dividend payers that do not exhibit growth.

Specifically, our research indicates that on average, the returns of companies which have exhibited consistent growth in their cash dividend payments over time are less volatile compared to the returns of companies that are less consistent in delivering dividends and significantly less risky compared to companies that do not currently pay dividends.

On top of that, companies with a track record of dividend growth can also provide the alpha “kicker” that is often missing from many Minimum Variance strategies.

² The seminal article on Minimum Variance Portfolios is by Clarke, Roger, Harinda de Silva, and Steven Thorley, “Minimum-Variance Portfolios in the U.S. Equity Market,” *Journal of Portfolio Management*, Fall 2006.

Selecting Less Volatile Stocks

Our research study focused on creating a less volatile universe of stocks (our "*Dividend Select Club*") by applying some proprietary dividend growth screens to the S&P 500 constituents.

In our analysis, all S&P 500 stocks are screened on the *Dividend Select Club* criteria on a quarterly basis starting at the end of December 1980 (dividend history starting in 1971). Monthly returns for the "Club" are calculated starting in January 1981.³

Over a nearly 31½ year period, the *Dividend Select Club* portfolio has outperformed the S&P 500 as Figure 2 indicates. Our results are significant in that focusing on the subset of stocks in the market that have consistently paid and grown their dividends produces not only positive alpha (relative to the market) but also a much lower standard deviation.

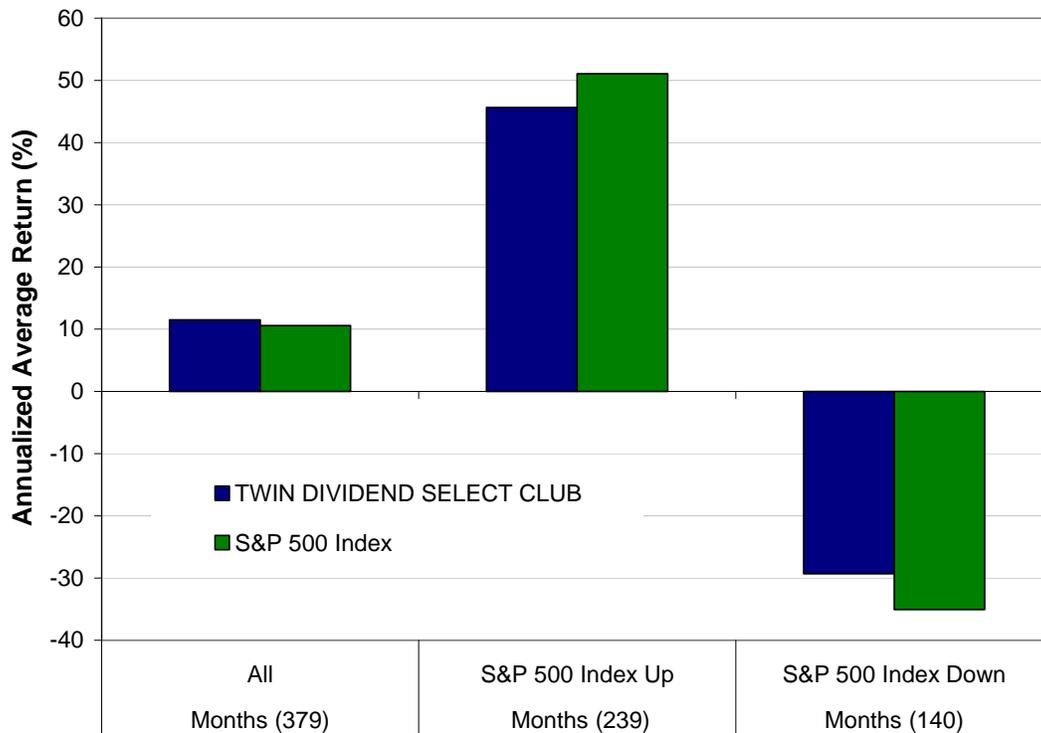
Figure 2: Risk and Returns (%), Periods Ending July 2012

	<i>TWIN Dividend Select Club</i> Stocks	S&P 500 Stocks
<i>Annualized Returns</i>		
<i>Through Latest Period</i>		
Jan-1981 --	11.51	10.62
<i>Annualized Risk</i>		
<i>Through Latest Period</i>		
Jan-1981 --	14.21	15.35
<i>Annualized Returns</i>		
<i>Selected Periods</i>		
1-YR	14.50	9.43
3-YR	15.85	14.01
5-YR	2.34	1.37
10-YR	6.01	6.43
<i>Annualized Risk</i>		
<i>Selected Periods</i>		
1-YR	12.47	17.86
3-YR	12.32	15.63
5-YR	15.86	18.97
10-YR	13.18	15.49

³ The S&P 500 Index is a float-capitalization-weighted representative measure of leading large-cap companies created and maintained by Standard & Poor's. The *Dividend Select Club* portfolio is constructed and maintained by TWIN Capital as a hypothetical benchmark portfolio and is not a publicly available index. Stock weights reflect market capitalization; overly large weights are capped at a threshold for diversification purposes. Refer to "Hypothetical Returns & Performance" in the Disclosures section of this paper for more information.

Dividend Select Club companies produce an earnings stream that is less volatile compared to the S&P 500 itself. If these companies did not produce consistent earnings growth over time, then they would not be able to meet the *Dividend Select Club* criteria. These less volatile companies do not keep pace with the S&P 500 when the market is rising significantly, but they do provide significant downside-protection (see Figure 3).

Figure 3: Up & Down Capture Analysis



The Dividend Select Club has historically captured 89 percent of the market's upside return and 84 percent of the downside return. Over 379 months (January 1981 through July 2012) the Club Portfolio has outpaced the S&P 500 Index by 0.9 percent annually.

The Case for the TWIN Dividend Select (Active) Portfolio

TWIN Capital manages an active product based on the *Dividend Select Club*. The *TWIN Dividend Select* active portfolio selects stocks from the "Club" members using the TWIN Equity Model (a measure of relative attractiveness which dynamically weights elements of Value, Growth and Quality).

We construct a portfolio of 80 to 100 names. As with most of our other strategies, we employ TWIN's *Fundamental Tilt*®, which offers dynamic tracking error and active style targeting relative to the S&P 500. This active portfolio has lower volatility, similar to that of the Club. It was launched in

June of 2010, and has performed real-time as shown in Figure 4 (June 2010 through July 2012):

Figure 4: TWIN Dividend Select Performance, Net Composite

Dividend Select				
Period	Portfolio (%)	S&P 500 (%)	Value-Added	
Jun-10	-3.60	-5.24	1.64	
Jul-10	6.36	7.01	(0.65)	
Aug-10	-3.18	-4.51	1.33	
Sep-10	7.45	8.92	(1.47)	
Oct-10	3.25	3.81	(0.56)	
Nov-10	0.99	0.01	0.98	
Dec-10	5.12	6.68	(1.56)	
Jan-11	1.96	2.37	(0.41)	
Feb-11	3.21	3.43	(0.22)	
Mar-11	0.91	0.04	0.87	
Apr-11	3.96	2.96	1.00	
May-11	-0.67	-1.13	0.46	
Jun-11	-0.95	-1.67	0.71	
Jul-11	-2.71	-2.03	(0.68)	
Aug-11	-2.61	-5.43	2.82	
Sep-11	-4.07	-7.03	2.96	
Oct-11	8.47	10.93	(2.45)	
Nov-11	2.02	-0.22	2.24	
Dec-11	1.57	1.02	0.55	
Jan-12	1.34	4.48	(3.14)	
Feb-12	3.16	4.32	(1.17)	
Mar-12	1.85	3.29	(1.44)	
Apr-12	-0.18	-0.63	0.45	
May-12	-4.20	-6.01	1.81	
Jun-12	3.88	4.12	(0.24)	
Jul-12	2.05	1.39	0.66	
<i>Since 6/1/2010 Inception</i>				
Annualized Risk	12.04	16.07	5.30	
Annualized Return	16.82	13.83	2.98	

Please see disclosures on page 7.

Over this same period, the *TWIN Dividend Select* active portfolio has captured 83 percent of the market's upside, and only 62 percent of the downside return.

Objective: More Return with Less Risk

The *TWIN Dividend Select* active portfolio, like the *Dividend Select Club*, has the objective of providing more return with less risk. It takes its cues from the *Dividend Select Club* in terms of lower volatility, but aims at improving returns further by bringing TWIN Capital's systematic model-based stock selection approach and *Fundamental Tilt®* into the mix.

This sort of defensive equity strategy should be of interest to any institutional investment committee.

Disclosures

PAST PERFORMANCE IS NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. INVESTMENTS ARE NOT GUARANTEED AND MAY LOSE VALUE.

TWIN Capital Management, Inc. ("TCM") is a registered investment advisor who started business in April 1990. Investment performance for Composites appearing in this material was derived from a monthly asset-weighted rate of total return calculation, using asset-weighted cash flow methodology. These monthly asset-weighted returns were then geometrically linked to create time-weighted quarterly and cumulative period returns. Composite returns include all discretionary accounts managed within the defined investment styles during the periods presented. More information regarding composite construction or historical investment performance is available upon request to TCM. The U.S. dollar is the currency used to express performance. No provision was made for the effect of federal or other taxes on the returns presented, as they will vary from investor to investor.

Unless otherwise noted, the performance of all indices and composites referenced herein include reinvested dividends and income. All indices referenced herein are passive, and do not reflect fees or expenses. Investors may not be able to invest in the indices directly. TCM performance results may reflect estimates for the most recent month(s). Graphs and charts included in this material are for informational purposes only and are not intended to serve as the basis for any investment decision.

TCM's strategies invest in equity securities; therefore they are expected to experience significantly greater volatility in monthly and annual returns than would likely occur if they invested solely in cash-like investments, and may lose value. Because the portfolios invest in equities, they are subject to additional risks such as stock market risk, investment style risk, and manager risk. Stock market risk is the chance that stock prices overall will decline over short or even long periods. Stock markets tend to move in cycles, with periods of rising prices and falling prices. Investment style risk refers to the chance that returns from the types of stocks in which the strategies invest will trail returns from the overall stock market. As a group, mid- and large- cap stocks tend to go through cycles of doing better or worse than the stock market in general. The periods have, in the past, lasted for as long as several years. Manager risk refers to the chance that the adviser will do a poor job of selecting the securities in which the strategies invest.

BENCHMARK & INDEX INFORMATION

The S&P 500 Index is a representative measure of 500 leading companies from leading industries; the index is a benchmark for the large-cap segment of U.S. equity market. Company weights in the index are proportional to firms' available market capitalization (price times available shares outstanding). A Committee at Standard and Poor's maintains the index with a focus on liquidity and investability.

Benchmark comparison: benchmarks should be used for purposes of comparison only, and the comparison should not be understood to mean that there will necessarily be a correlation between TCM's returns and the benchmark's returns. Furthermore, the volatility of the benchmark may be materially different from TCM's actual portfolio. Where market and/or index data is presented, it has been obtained from a variety of sources deemed reliable. These sources may include some or all of the following: Russell Investments, FactSet Research Systems, and Ford Equity Research. TCM assumes no responsibility for the accuracy of this data.

MEASURES OF RELATIVE INVESTMENT ATTRACTIVENESS

The TWIN Equity Model™ (the "Model") is a quantitative, multiple element model developed by the Investment Manager to predict expected future returns. The Model currently combines a proprietary set of value, growth and earnings quality characteristics into a composite score for its measure of investment attractiveness. Financial statement data, analysts' earnings forecasts, price and returns data, plus data on earnings sustainability are obtained from several sources believed to be accurate. The elements of the Model and the specific data items incorporated into the composite score have changed materially over time. There is no guarantee the predictions of the Model will be realized. In the event that security returns deviate substantially from the expectations of the Model, losses may result.

Where Model performance and returns to specific Model rank groups are presented, it should be understood that these results do not represent actual trading and that they may not reflect the impact that material economic and market conditions may have had on TCM decision-making. Unless explicitly noted, results omit the impact of trading costs and were not necessarily constructed in real-time over the entire horizon presented.

HYPOTHETICAL RETURNS & PERFORMANCE

The long-run performance presented by TCM for the TWIN Dividend Select Club, other dividend-related groupings of stocks and other custom benchmarks is hypothetical. Prospective investors are advised to consider a number of important factors when reviewing this type of back-tested information. The reported performance was derived from the retroactive application of sets of rules with the benefit of hindsight. There are inherent limitations with this type of data (e.g., performance results do not represent actual trading) and results are sensitive to the period of analysis

chosen. TCM did not offer the trading strategies throughout the entire periods presented and different economic conditions might have impacted the adviser's decision-making when using the rules to manage actual client accounts. While the sets of rules have been applied consistently to generate the latest results, these rules and associated trading strategies have evolved over time. The performance presented does not reflect the deduction of advisory fees, brokerage or other commissions, mutual fund exchange fees, and other expenses a client would have paid. Investors are reminded of the potential for loss as well as profit.

DEFINITIONS & CALCULATIONS

Annualized Returns are calculated as the compound geometric average monthly returns. The geometric average is the monthly average return that assumes the same rate of return every period to arrive at the equivalent compound growth rate reflected in the actual return data. The results are annualized by raising the sum of one plus the compound geometric average monthly return to the twelfth power and then subtracting one.

Standard Deviation measures the dispersion of uncertainty in a random variable (in this case, investment returns). The higher the volatility of investment returns, the higher the standard deviation will be in any given case. For this reason, standard deviation is often used as a measure of investment risk. Values are calculated by applying the traditional sample deviation formula to monthly return data, and then annualized by multiplying the result by the square root of twelve.