

University of Nevada, Reno

Which one is better: Investing in High Dividend or Low Dividend stocks?

A thesis submitted in partial fulfillment of the
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Abstract

The subject of this study is the profitability of an investment strategy focused on high dividend yield stocks, medium divided yield stocks and low dividend yield stocks from the Dow Jones Industrial Average 1987-2012, which were rebalanced annually until 2012. I follow the study of Michael B. O'Higgins, who analyzes the “Dog of Dow” investment strategy, and proposes that an investor annually select the ten Dow Jones Industrial Average stocks whose dividends are the highest fraction of their price for investment. The results demonstrate that the portfolios composed of high dividend stocks are capable of better performance than medium and low dividend stocks during twenty-six years. The results presented in this study have an important implication for investors regarding their investment choices. The high dividend yield stocks in the Dow Jones Industrial Average outperform the low dividend yield stocks over the period of study.

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Introduction:

Practitioners and investment analyzers are interested in the ability to predict stock returns. In particular, they look into what kinds of stocks perform better, paying special attention to dividends. Many studies have found dividend payments to be an important predictor of future stock prices. For instance, Chan and Lankonishok (2004) examined investing in value stocks or growth stocks. Their results suggest that, even after taking into account the experience of the late 1990s, value investing generates superior returns. It might be assumed that the return differential is due to the higher risk of value stocks. Common measures of risk do not support this conclusion. Instead, behavioral considerations and the agency costs of delegated investment management lie at the root of the value-growth spread.

Practitioners use various strategies based on the information about dividends paid out by stock market companies. One of the most popular investment analyses is known as “Dogs of the Dow” by Michael B. O'Higgins. His strategy is to invest in the ten Dow Jones Industrial Average stocks with the highest dividend yield. Proponents of the Dogs of the Dow strategy argue that blue chip companies do not alter their dividend to reflect trading conditions and, therefore, the dividend is a measure of the average worth of the company; the stock price, in contrast, fluctuates through the business cycle. This should mean that companies with a high yield are near the bottom of their business cycle and are likely to see their stock price increase faster than low yield companies. A high dividend yield suggests that while the stock is oversold the management believes that the company's prospects will improve, backing up their belief by paying out a relatively high

dividend. Under this model, an investor annually reinvesting in high-yield companies should out-perform the overall market.

This study examines the “Dogs of the Dow” by Michael B. O'Higgins. I analyze the strategy focused on dividend yields from the Dow 30 during 1987 to 2012. My hypothesis is that high dividend yield portfolios outperformance both medium dividend yield and low dividend yield portfolios.

Background:

There are quite a few papers that examine the relationship between dividends and stock returns. Brezeszczynski, Archibald, Gajdka and Brezeszczyn (2008) studied the profitability of an investment strategy focused on high dividend yield stocks from the British stock market in years 1994-2007. They analyzed their results in a broader context by considering transaction costs and taxes, following the studies of McQueen, Shields and Thorey (1997) and Visscher and Filbeck (2003). They also add the currency risk and look at the obtained results from the point of view of international investors. The results demonstrated that the portfolios composed of the high dividend yield stocks are capable of beating the FTSE100.

McManus, Gwilym and Thomas (2002) examined the relationship between returns and dividends in the context of the UK Stock Market. They used data from the LBS London Share Price Database (LSPD) and applied robust estimation (GMM). They worked on the nature of the relation between dividend yields and stock returns with a careful assessment of the role of seasonality, firm size and payout ratio. They concluded that payout ratio is an important adjunct to dividend yield in explaining returns. In

addition, they also concluded that the non-linear relation between yields and returns result in the “special” nature of zero-dividend stocks.

According to research by Michael Clemens (2012), dividend investing has historically outperformed both the broader market and value investing, while at the same time has shown lower risk. The specific reasons for the outperformance of dividend investing are a reduction in the agency costs associated with high free cash flows and a probable systematic mispricing (undervaluation) of high dividend paying stocks. The outperformance of high dividend yield stocks has been robust over the 1928-2011 timeframe.

Hypothesis:

To compare the performance of high dividend yield, medium dividend yield and low dividend yield portfolios, the Sharpe ratio, the Treynor ratio and Jensen’s Alpha will be calculated. I predict that the performance of high dividend yield portfolio will be significantly better than medium dividend yield portfolio and lower dividend yield portfolio. High dividend yield portfolio is expected to have a higher Sharpe ratio and higher Treynor ratio than medium dividend yield portfolio and low dividend yield portfolio. The Jensen’s alpha for the high dividend yield portfolio is predicted to be significant and positive while the Jensen’s alpha for the low dividend yield portfolio is predicted to be significant and negative.

To test the difference between portfolios, a paired t-test will be used. The first null hypothesis is that the high dividend yield portfolio’s return is less or equal to the low dividend yield portfolio’s return. The alternative hypothesis is that the high dividend yield portfolio’s return is greater than the low dividend yield portfolio’s return.

$$H_0 Q1(\text{High Dividend Yield Portfolio return}) - Q3(\text{Low Dividend Yield Portfolio return}) \leq 0$$

$$H_\alpha Q1(\text{High Dividend Yield Portfolio return}) - Q3(\text{Low Dividend Yield Portfolio return}) > 0$$

The second hypothesis that the high dividend yield portfolio's return is less or equal to my medium dividend yield portfolio's return. My alternative hypothesis is that the high dividend yield portfolio's return is greater than my medium dividend yield portfolio's return.

$$H_0 = Q1(\text{High Dividend Yield Portfolio}) - Q2(\text{Medium Dividend Yield Portfolio}) \leq 0$$

$$H_\alpha = Q1(\text{High Dividend Yield Portfolio}) - Q2(\text{Medium Dividend Yield Portfolio}) > 0$$

My third hypothesis that the medium dividend yield portfolio's return is less than or equal to the low dividend yield portfolio's return. The alternative hypothesis is that the medium dividend yield portfolio's return greater than the low dividend yield portfolio's return.

$$H_0 = Q2(\text{Medium Dividend Yield Portfolio}) - Q3(\text{Low Dividend Yield Portfolio}) \leq 0$$

$$H_\alpha = Q2(\text{Medium Dividend Yield Portfolio}) - Q3(\text{Low Dividend Yield Portfolio}) > 0$$

Methodology:

Stock prices and the regular dividends was obtained from Wharton Research Data Services (WRDS) and Yahoo, Finance. The data is CRSP monthly data of thirty stocks on the Dow from December 1987 to December 2013 for ordinary common shares traded on NYSE. Some exceptions are found in the data collected. There are 4 separate occurrences where there are 29 stocks instead of 30. On April 29, 1987, American Can's name changed to Primerica Corporation, but there is no data on dividends for American

Can during that period. On December 16, 1988, Primerica Corporation merged with Commercial Credit Group incorporated. Though the merged company kept the Primerica Corporation name, data is only available for Commercial Credit Group Inc. The third one is for J.P Morgan Chase. On Jan 2, 2001, J.P Morgan's name changed to J.P Morgan Chase after merging with Chase Bank. Next one is at the end of 2008. Since the stock price for General Motors was not available in 2009, it is impossible to calculate 2008's return. Therefore, all these instances have to be dropped.

Table 1 is a summary table of the stocks on the DOW30 from 1987 to 2012. Over the 26 years between 1987 and 2012, a total of 49 stocks were featured in the Dow. Of those 49, 13 stocks consistently appeared on Dow for 26 years, 25 stocks appeared between 10-25 years, and 11 stocks appeared between 4-9 years.

To determine the dividend yield, I had to get the regular cash dividends for the Dow 30 for each year from 1987 to 2012. During that process, some companies paid a special dividend for specific dates during the year. For instance, in 1989, Texaco Inc paid a special dividend on May 31 for \$4 and on August 31 for \$3. These special dividends have to be removed because usually Texaco Inc. pays an annual dividend of around \$3. If those two dividends are included, it will bias the result. After removing these special dividends, I added up all the dividends paid during that year to get the annual yearly dividend. The formula used to calculate the dividend yield is

$$\text{Dividend Yield} = \frac{\text{Annual Dividend per Share}}{\text{Closing Price per share at year end}}$$

The data is sorted based on dividend yield from highest to lowest. Three portfolios are constructed as follows: Q1 is the top ten stocks with the highest dividend

yield; Q2 is the second ten stocks; Q3 is the last ten stocks. Table 2 and Figure 1 present average dividend yields for these three different portfolios from 1987 to 2012. For high dividend yield portfolio, the average yield was 4.53%, with a minimum yield 2.88% in 1998 and a maximum yield 9.32% in 2008. For medium dividend yield portfolio, the average yield was 2.56%, the minimum yield was 1.45% in 1999 and the maximum yield was 3.85% in 2008. For low dividend yield portfolio, the average yield was 1.26%, the minimum yield was 0.47% in 1999 and the maximum yield was 1.9% in 2008. A possible explanation for why all three portfolios had their highest dividend yield in 2008 was the financial crisis. Even in a bear market, companies will often continue to pay dividends.

The portfolios were constructed by giving equal weight to each stock. For the four years where there is only data for 29 companies, Q3 consisted of only the nine lowest dividend yield stocks. Each portfolio was constructed based on the last trading day of December. The portfolios were rebalanced every year by revising the dividend yield indicators for all companies on the Dow for that year.

Stock returns calculate using the formula:

$$\text{Total Stock Return} = \frac{(P1 - P0) + D}{P0}$$

$P1$ is the price of the stock at the end of the year, $P0$ is the stock price at the beginning of the year and D is the annual dividends paid.

Results:

Table 3 displays the average return in each year and annual compound return or geometric mean. Figure 2 displays the average return frequency based on the simulation for all three portfolios. The average return in each year indicates that the high dividend

yield portfolio beat the low dividend portfolio in 16 out of the 26 single year periods in the entire sample. For high dividend yield portfolios, average return is 10.82% and geometric return is 9.27% with a minimum return -42.07% in 2007 and a maximum return 35.3% in 1994. For medium dividend yield portfolios, average return is 8.34% and geometric mean is 7.03% with a minimum return -28% in 2000 and a maximum return 41.51% in 1994. For low dividend yield portfolios, average return is 3.3% and geometric return is 0.76% with a minimum return -43.15% in 2007 and a maximum return is 2012.

This analysis confirms that in the long run the high dividend portfolios performed better than the moderate and low dividend yield portfolios. The overall average return of Top Ten portfolios was over three times higher than overall average return of the low dividend yield portfolios and over 2% higher than the average return of the medium dividend yield portfolios. What's more, the annual compound return of high dividend yield portfolio is more than nine times higher than the annual compound return of low dividend yield portfolio.

The next step is to calculate the most important risk-adjusted measures: Sharpe Ratios, Treynor Ratio and Jensen's alphas.

The Sharpe ratio, obtained by subtracting the risk-free rate from the rate of return for a portfolio and dividing the result by standard deviation of the portfolio returns, is a measure of the excess return (or risk premium) per unit of risk. The risk-free rate was based on the annual return on 3 month Treasury Bills. This data was from Department of Treasury.

$$\text{Sharpe Ratio} = \frac{r_p - r_f}{\sigma_p}$$

The values of the excess return, standard deviation, Sharpe ratios, Treynor Ratio and Jensen's alphas are reported on Table 4. The excess returns indicate that the high dividend yield portfolio beat the low dividend yield portfolio in 17 out of the 26 single year periods in the entire sample. From the table we can see that the high dividend yield portfolio's excess return is much higher than the low dividend yield portfolio's excess return. The Sharpe ratio confirms that the high dividend yield portfolio performed considerably better than low dividend yield portfolio.

The Treynor ratio is a risk-adjusted measure of return based on systematic risk. It is similar to the Sharpe ratio, with the difference being that the Treynor ratio uses beta as the measurement of volatility.

$$\text{Treynor Ratio} = \frac{r_p - r_f}{\beta_p}$$

Based on the data given in Table 3 and Table 4, the portfolio betas can be calculated using original least squares (OLS) regression, regressing the portfolios yearly return against the yearly returns on the stock market. For this analysis, the Standard & Poor's 500 (S&P500) was used. The beta for Q1 is 0.698, for Q2 is 0.733 and Q3 is 1.019. In other words, the results mean low dividend yield portfolio is riskier than high dividend yield portfolio and medium dividend yield portfolio. The Treynor ratio is 0.1019 for Q1, 0.0632 for Q2 and -0.039 for Q3. They confirm that the Top Ten portfolios' performance have been very successful in these three portfolios.

Jensen's Alpha is a risk-adjusted performance measure that represents the average return on a portfolio over and above that predicted by the capital asset pricing model

(CAPM), given the portfolio's beta and the average market return. It is calculated using the formula:

$$\alpha = \bar{r}_p - [\bar{r}_f + \beta_p(\bar{r}_m - \bar{r}_f)]$$

\bar{r}_p is the expected total portfolio return, \bar{r}_f is the risk-free rate, β_p is the Beta of the portfolio and \bar{r}_m is the expected market return. The Jensen's Alpha is the difference between a portfolio's actual return and the one that could have been achieved on a benchmark portfolio with the same risk as measured by the beta. A larger Jensen's Alpha indicates better performance. Another way to calculate Jensen's Alpha is with an OLS regression. I ran the regression using high dividend yield excess return as the independent variable and the excess return on the S&P500 to get Jensen's Alpha for Q1. The same method was used to get Jensen's Alpha for the medium and low dividend yield portfolios. Jensen's alpha is 2.83% for Q1, 0.087% for Q2 and -6.54% for Q3. Only Q3 had a Jensen's Alpha that was significant at the .05 level. The evidence shows that the high dividend yield portfolio was the best performer among these three portfolios.

To see how each of these portfolios compare, assume there are three investors that each has 1 million dollars to invest. The first investor puts his money in the high dividend yield portfolio (Q1), the second in the medium dividend yield portfolio (Q2) and the third in the low dividend yield portfolio (Q3) starting 1987. The portfolios are rebalanced every year by revising the dividend yield. Figure 3 illustrates how each investor's portfolio performed from 1987 to 2012. The first investor receives \$10,016,100.98 back from his \$1 million investment. The second investor receives \$5,844,275.97 back. The third investor only receives \$1,218,890.63 for his \$1 million investment. It is pretty obvious to see that investing in high dividend yield portfolio is better.

The final step of the analysis is to use a paired t-test to determine if there are significant differences in the average returns between pairs of portfolios.

The first hypothesis is that the average yearly difference between the returns for the high dividend yield portfolio and the low dividend yield portfolio is greater than zero. The average difference between the portfolios was .075 with $t(25) = 2.57$ ($p = .008$). With a .05 significance level, we can conclude that the difference between the two is greater than zero. In other words, the average return of high dividend yield portfolios is greater than the average return of low dividend yield portfolios.

The second Hypothesis is that the average yearly difference between the returns for the high dividend yield portfolio and the medium dividend yield portfolio is greater than zero. The average difference between the portfolios was .025 with $t(25) = .92$ ($p = .183$). With a .05 significance level, we can conclude that the difference between the two is not greater than zero. In other words, the average return of high dividend yield portfolios was not significantly different from the average return of the medium dividend yield portfolio.

The last hypothesis is that the average yearly difference between the returns for the medium dividend yield portfolio and the low dividend yield portfolio is greater than zero. The average difference between the portfolios was .050 with $t(25) = 1.59$ ($p = 0.063$). At the .05 significance level, we can conclude that the difference between the two portfolios is not greater than zero. In other words, there is no difference between the average return of medium dividend yield portfolios and low dividend yield portfolios.

Conclusion:

The Sharpe Ratio, Geometric Return, Treynor Ratio and Jensen's Alpha, show that the portfolios composed of the top 10 highest dividend yield stocks of the Dow 30 have been able to outperform the medium dividend yield portfolio and low dividend yield portfolio. The results are significant at the .05 level. That suggests that investing in high dividend yield portfolio may provide better returns than low dividend yield portfolios. The results can extend to U.S. Stock market which is S&P500 that high dividend yield portfolios perform better than low dividend yield portfolios with more research to prove.

The results presented in this study have an important implication for investors regarding their investment horizon choices. The high dividend yield portfolios proved to be a profitable investment in longer run while their returns can vary considerably in shorter periods.

Table1. Companies from Dow 30 in years 1987-2012

Ticker	Company Name	Date Range on DOW30	# of Years
AA	ALUMNUM COMPANY OF AMERICA(ALCOA INCORPORATED)	1987-2012	26
AXP	AMERICAN EXPRESS CO	1987-2012	26
BA	BOEING CO	1987-2012	26
DD	DU PONT	1987-2012	26
GE	GENERAL ELECTRIC COMPANY	1987-2012	26
IBM	INTERNATIONAL BUSINESS MACHS COR	1987-2012	26
KO	COCA COLA CO	1987-2012	26
MCD	MCDONALDS CORP	1987-2012	26
MMM	Minnesota Mining & Manufacturing(3M company)	1987-2012	26
MO	Philip Morris Companies Inc(Altria Group)	1987-2007	26
MRK	MERCK & CO INC	1987-2012	26
PG	PROCTER & GAMBLE CO	1987-2012	26
UTX	UNITED TECHNOLOGIES CORP	1987-2012	26
T	AMERICAN TEL.&TEL.(AT&T CORPORATION INCORPORATED)	1987-2003 2005-2012	25
CAT	CATERPILLAR INC	1991-2012	22
DIS	THE WALT DISNEY COMPANY	1991-2012	22
GM	GENERAL MOTORS CORPORATION	1987-2008	22
JPM	J.P. MORGAN CHASE & COMPANY(J.P. Morgan)	1991-2012	22
EKDKQ	EASTMAN KODAK COMPANY	1987-2003	17
IP	INTERNATIONAL PAPER CO	1987-2003	17
JNJ	JOHNSON & JOHNSON	1997-2012	16
WMT	WAL-MART STORES INCORPORATED	1997-2012	16
HD	HOME DEPOT INC	1999-2012	14
INTC	INTEL CORP	1999-2012	14
MSFT	MICROSOFT CORP	1999-2012	14
CHV	CHEVRON CORP	1987-1999	13
XOM	EXXON MOBIL COMPANY	2000-2012	13
XON	EXXON CORP	1987-1999	13
ALD	ALLIED -SIGNAL INC	1987-1998	12
GT	GOODYEAR TIRE & RUBBER CO	1987-1998	12
S	SEARS ROEBUCK & COMPANY	1987-1998	12
UK	UNION CARBIDE	1987-1998	12
HPQ	HEWLETT PACKARD CO	2002-2012	11
BS	BETHLEHEM STEEL	1987-1996	10
C	CITIGROUP INC	1999-2008	10
TX	TEXACO INCORPORATED	1987-1996	10
WX	WESTINGHOUSE ELECTIRC	1987-1996	10
Z	WOOL WORTH	1987-1996	10
PFE	PFIZER INC	2004-2012	9
VZ	VERIZON COMMUNICATIONS INC	2004-2012	9
BAC	BANK OF AMERICA CORP	2008-2012	5
CVX	CHEVRON CORP	2008-2012	5
HWP	HEWLETT PACKARD CO	1997-2001	5
TRV	TRAVELERS GROUP(TRAVELERS COMPANIES INC)	1997 2009-2012	5
AIG	AMERICAN INTERNATIONAL GROUP INC	2004-2007	4
CSCO	CISCO SYSTEMS INC	2009-2012	4
HON	HONEYWELL INC	2002-2005	4
NAV	NAVISTAR INTERNATIONAL CORP	1987-1990	4
X	USX CORPORATION	1987-1990	4

Table 2. Average Dividend Yields for Q1, Q2 and Q3 in years 1987-2012

Date	Q1 Dividend Yield	Q2 Dividend Yield	Q3 Dividend Yield
1987	6.21%	3.70%	1.82%
1988	5.26%	3.82%	2.10%
1989	6.47%	3.58%	1.76%
1990	7.07%	4.15%	2.04%
1991	5.50%	3.26%	1.66%
1992	5.69%	3.28%	1.45%
1993	4.38%	2.82%	1.23%
1994	5.06%	2.74%	1.36%
1995	3.56%	2.06%	1.05%
1996	3.14%	2.03%	0.81%
1997	3.33%	1.86%	0.96%
1998	2.88%	1.70%	0.81%
1999	3.04%	1.45%	0.47%
2000	3.23%	1.46%	0.55%
2001	3.64%	1.74%	0.62%
2002	4.22%	2.10%	0.92%
2003	3.82%	1.96%	0.91%
2004	3.78%	1.91%	0.84%
2005	4.63%	2.17%	1.14%
2006	3.453%	2.082%	1.215%
2007	4.09%	2.24%	1.35%
2008	9.32%	3.85%	1.90%
2009	4.30%	2.70%	1.40%
2010	3.88%	2.51%	1.06%
2011	3.82%	2.60%	1.62%
2012	4.01%	2.83%	1.69%
Average	4.53%	2.56%	1.26%

Figure 1. Average Dividend Yields for Q1, Q2 and Q3 in years 1987-2012

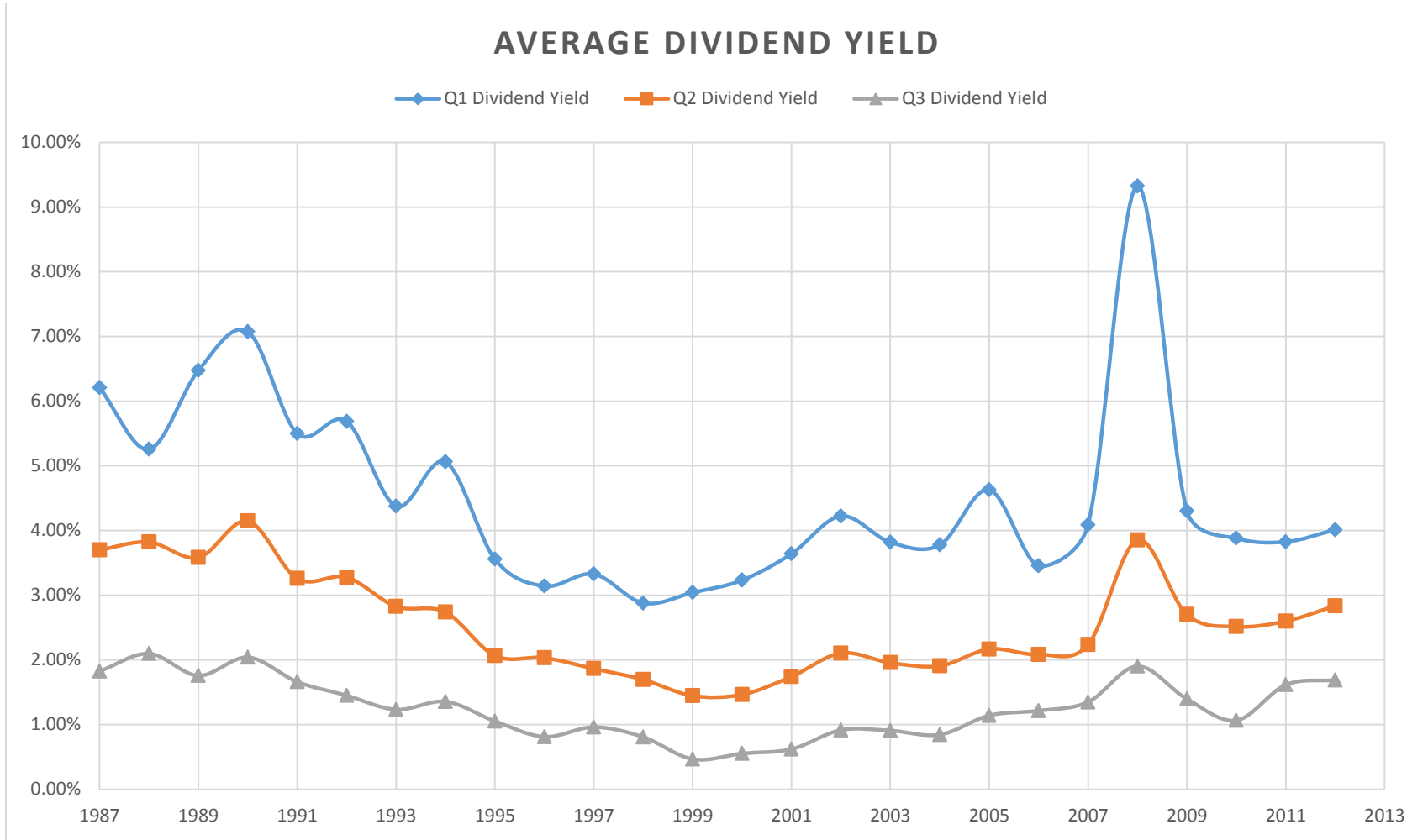


Table 3. Three Portfolios average return in years 1987-2012

Date	Q1 Return	Q2 Return	Q3 Return
1987*	20.44%	17.29%	9.87%
1988*	13.17%	24.23%	0.84%
1989	6.87%	-26.93%	-23.90%
1990	29.09%	12.70%	37.21%
1991	0.79%	15.91%	-13.03%
1992	28.18%	6.23%	14.62%
1993	-3.89%	-5.80%	-11.35%
1994	35.30%	41.51%	24.63%
1995	25.50%	12.21%	24.16%
1996	-7.53%	6.77%	-2.05%
1997	9.66%	13.71%	22.71%
1998	1.35%	-0.07%	4.85%
1999	10.91%	-1.32%	-42.45%
2000*	-5.23%	-28.00%	-0.65%
2001	-7.40%	-12.46%	-28.74%
2002	31.93%	18.03%	28.43%
2003	4.31%	7.27%	2.51%
2004	-4.06%	1.10%	-4.91%
2005	30.78%	15.81%	15.90%
2006	-0.84%	21.51%	3.67%
2007	-42.07%	-22.32%	-43.15%
2008*	19.91%	33.88%	23.00%
2009	21.99%	14.61%	1.05%
2010	16.11%	8.59%	-13.76%
2011	11.29%	11.10%	15.19%
2012	34.72%	25.64%	38.90%
Average Return	10.82%	8.34%	3.30%
Standard Deviation	17.26%	16.25%	21.55%
Geometric Mean	9.27%	7.03%	0.76%
Beta	0.70	0.73	1.02

*Note: 1987, 1988, 2000, 2008 have 29 stocks

Figure 2. Average Return Frequency for Q1 Q2 Q3 in years 1987-2012

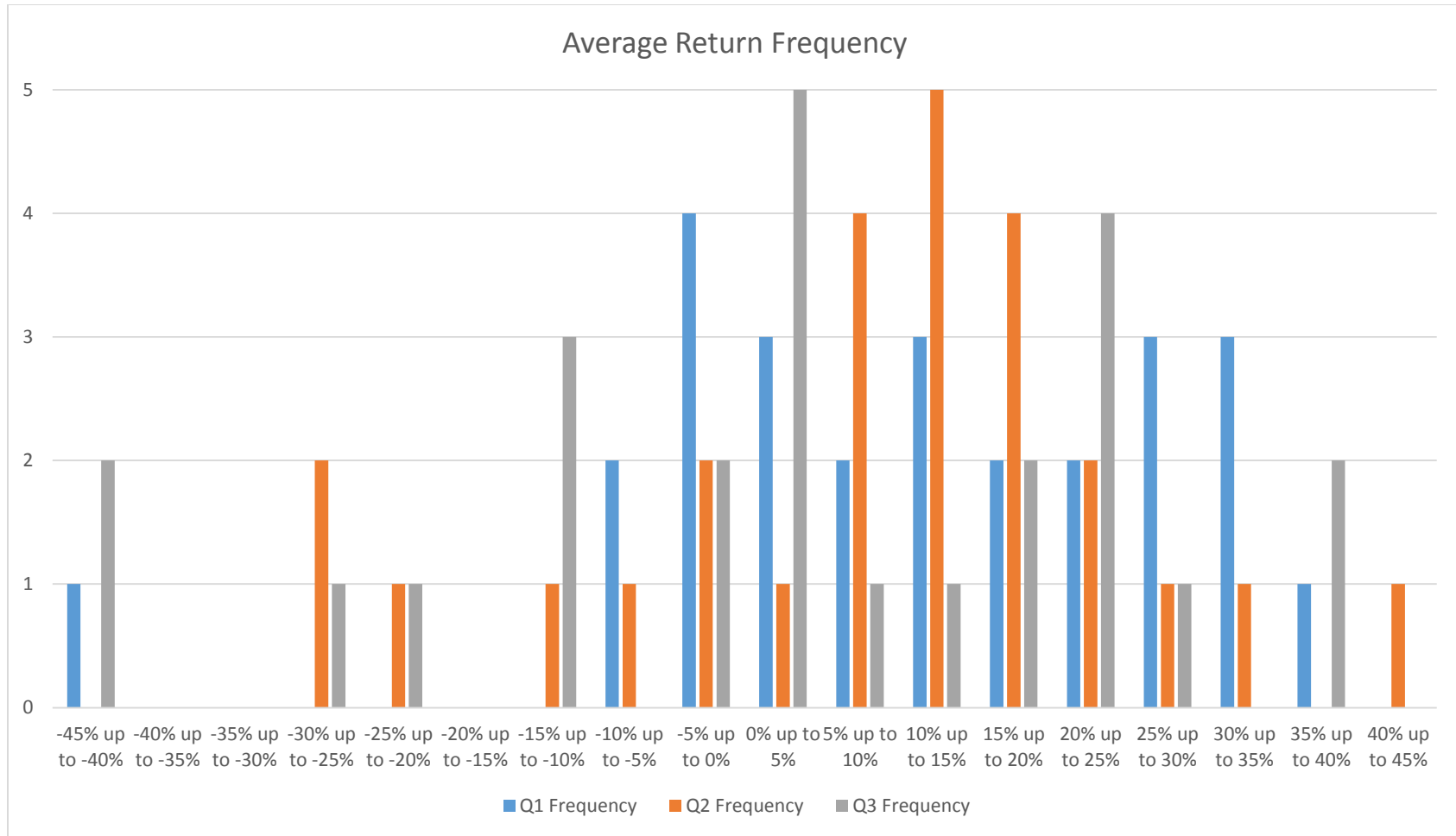


Table 4. Average of excess return for Q1 Q2 Q3 in years 1987-2012

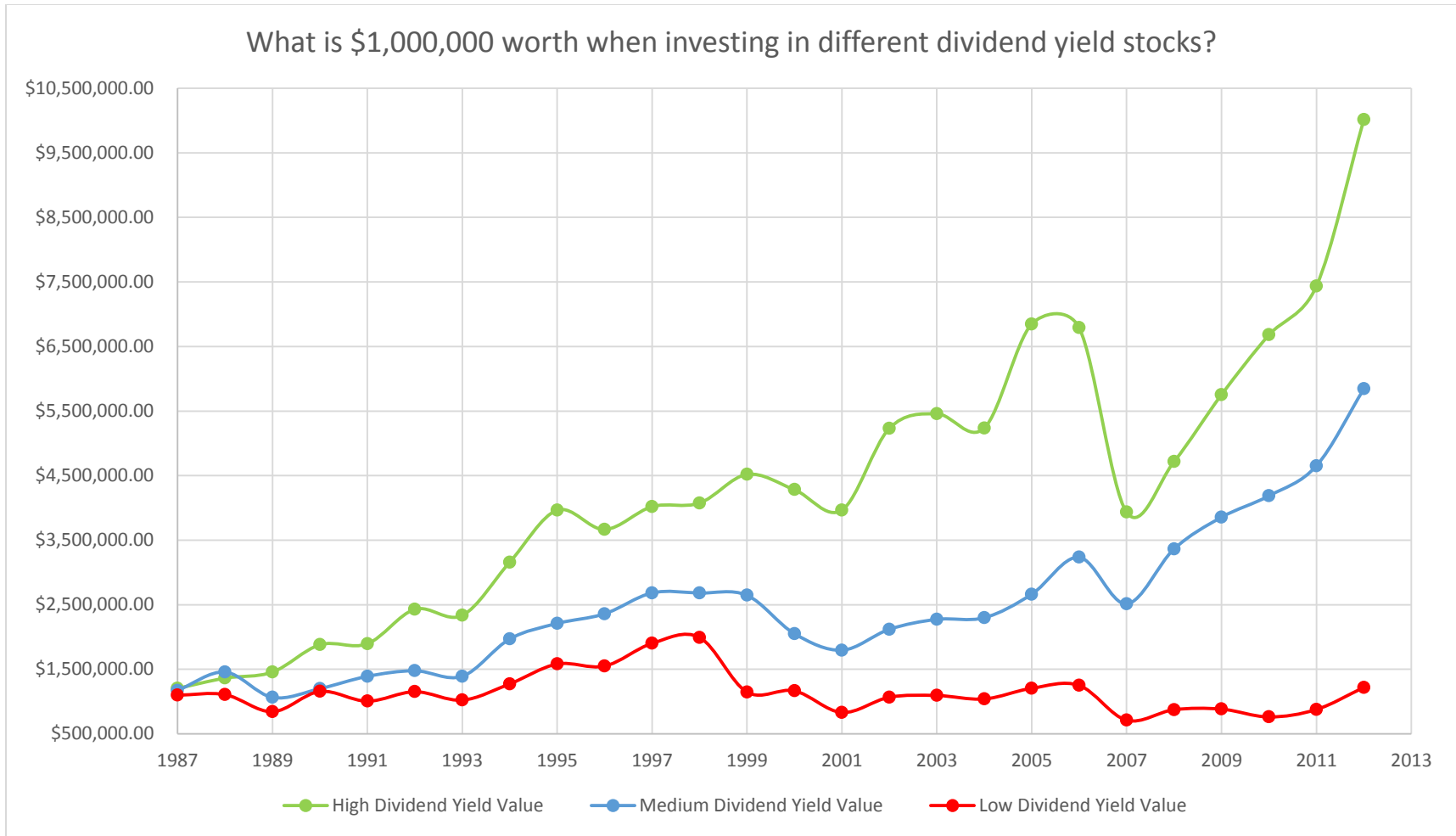
Date	Q1 Excess Return	Q2 Excess Return	Q3 Excess Return
1987*	14.66%	11.51%	4.09%
1988*	6.50%	17.56%	-5.83%
1989	-1.24%	-35.04%	-32.01%
1990	21.60%	5.21%	29.72%
1991	-4.59%	10.53%	-18.41%
1992	24.75%	2.80%	11.19%
1993	-6.89%	-8.80%	-14.35%
1994	31.05%	37.26%	20.38%
1995	20.01%	6.72%	18.67%
1996	-12.54%	1.76%	-7.06%
1997	4.60%	8.65%	17.65%
1998	-3.43%	-4.85%	0.07%
1999	6.27%	-5.96%	-47.09%
2000*	-11.05%	-28.29%	-4.15%
2001	-10.79%	-15.85%	-32.13%
2002	30.33%	16.43%	26.83%
2003	3.30%	6.26%	1.50%
2004	-5.43%	-0.27%	-6.28%
2005	27.63%	12.66%	12.75%
2006	-5.57%	16.78%	-1.06%
2007	-46.42%	-26.67%	-47.50%
2008*	18.54%	32.51%	21.63%
2009	21.84%	14.46%	0.90%
2010	15.97%	8.45%	-13.90%
2011	11.24%	11.05%	15.14%
2012	34.63%	25.55%	38.81%
Average Return	7.11%	4.63%	-0.40%
Standard Deviation	17.80%	17.02%	22.01%
Sharpe Ratio	0.39	0.27	-0.02
Treynor Ratio	0.1019	0.0632	-0.0039

*Note: 1987, 1988, 2000, 2008 have 29 stocks

Table 5. Annual Return of S&P500

Date	S&P500 Price	S&P500 Return
12/1/1987	247.08	12.40%
12/1/1988	277.72	27.25%
12/1/1989	353.4	-6.56%
12/3/1990	330.22	26.31%
12/2/1991	417.09	4.46%
12/1/1992	435.71	7.06%
12/1/1993	466.45	-1.54%
12/1/1994	459.27	34.11%
12/1/1995	615.93	20.26%
12/2/1996	740.74	31.01%
12/1/1997	970.43	26.67%
12/1/1998	1229.23	19.53%
12/1/1999	1469.25	-10.14%
12/1/2000	1320.28	-13.04%
12/3/2001	1148.08	-23.37%
12/2/2002	879.82	26.38%
12/1/2003	1111.92	8.99%
12/1/2004	1211.92	3.00%
12/1/2005	1248.29	13.62%
12/1/2006	1418.3	3.53%
12/3/2007	1468.36	-38.49%
12/1/2008	903.25	23.45%
12/1/2009	1115.1	12.78%
12/1/2010	1257.64	0.00%
12/1/2011	1257.6	13.41%
12/3/2012	1426.19	29.60%
12/2/2013	1848.36	
Average Return		9.64%

Figure 3.



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