

CAN A CHANGE IN DIVIDEND POLICY CHANGE BETA? THE CASE OF MICROSOFT

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ABSTRACT

Microsoft Corporation began paying a regular quarterly cash dividend in February 2003. Since that time Microsoft's systematic risk, as measured by its beta, has decreased by a statistically significant amount.

Accepted financial theory posits that a corporation's cost of equity, and therefore its systematic risk, is independent of its dividend decision.

This paper first establishes the change in Microsoft's beta which followed its change in dividend policy. We then examine a sample of actively traded firms which began paying regular dividends in the last five years. Some of these firms exhibited changes in beta similar to Microsoft's; other firms exhibited no accompanying change.

The application of this work is to suggest to corporations dividend policy strategies which would reduce their cost of capital, and to suggest to investors equity-screening strategies which would increase their rate of return.

INTRODUCTION

The story of Microsoft Corporation is familiar to many investors. Founded in 1981 by Bill Gates, Microsoft has grown to dominate the computer operating system and applications software industries, making its founder the richest man in the United States. Shareholders have often been enriched as well, and increases in share price have been followed by a stock split, which has happened seven times since 1991.

As is common in high-growth companies, Microsoft paid no dividends to shareholders. In March of 2003, however, Microsoft made a major shift in policy and began paying regular quarterly dividends. As is shown in Exhibit 1 on page 39, price volatility post dividend initiation changed dramatically. Financial theory concerning dividend irrelevance would argue that the initiation of dividends changes nothing about the underlying value of the firm, or its inherent risk.

Companies decide to pay dividends for various reasons, and have a number of constraints on those payments. Companies are precluded from just retaining earnings forever; if they can't find viable investments and continue to retain earnings, they could face an excess accumulations tax. So even high-growth companies should eventually pay a dividend. The amount of those dividends could be limited, however, perhaps by their banking relationship via a loan covenant that precludes dividends unless debt is serviced or even liquidated.

Internally, there can be a struggle between managers who want to retain earnings to fund their pet projects, and shareholders who want to see the money. Many studies have shown that companies avoid cutting a dividend at all costs, as the market reacts poorly to that bad news (Dyl and Weigand, 1998). So companies typically won't initiate a dividend or increase a dividend unless they are confident about their earnings potential and the stability of those earnings. And finally, certain shareholder groups (clienteles) may prefer higher or lower dividend payouts.

Standard textbook discussions of dividend theory examine these issues using three main models. The agency cost / contracting model recognizes the internal constraints that were mentioned before. This model assumes that managers who are not significant shareholders will prefer that the company retain earnings and fund pet projects and provide perks. By requiring the payout of dividends, directors limit the power of those managers, who aren't necessarily maximizing firm value. The clientele model recognizes that different groups of investors prefer or don't prefer dividends. In the past, this has been primarily because of differences in tax rates on dividends and capital gains. Higher tax bracket shareholders preferred low dividend payout rates, and low-bracket shareholders preferred high payout rates. Now that the tax code has been modified to apply the same rate to both dividends and capital gains, this argument has lost strength. There are some groups of investors who prefer steady current income (i.e. widows and orphans, and retirees), and other

investors who want to control the timing of their income, so there is still perhaps a weak clientele effect. The most robust reasoning for paying dividends is the signaling model. This model recognizes the information content of a dividend. When a firm initiates a dividend, it conveys management's confidence that the firm is profitable enough to **both** fund investment projects and pay out cash dividends. It is a very strong signal to the market about management's assessment of cash flow in the long-run.

Whatever the reason for dividends, however, shareholder returns should be a result of the earnings and free cash flow of the company, not whether or not a dividend is paid out or retained. Dividend payments shouldn't affect the underlying volatility of the company earnings, and therefore the stock price. But do they? Systematic, or market risk, is measured by regressing the excess returns of a particular stock against the "market's" excess return which is usually measured via a proxy such as the S&P 500 Index return minus a Treasury rate. The resulting statistic is the stock's "beta." Because beta is influenced by volatility of returns, there is no structural reason that the beta of a stock should change because of a dividend initiation.

PRIOR RESEARCH

Asquith and Mullins (1983) were the first to examine the effects of dividend initiation on shareholder wealth. They concluded that dividends convey unique, valuable information to investors, who then elect to purchase the stock or sell it based on clientele effects. Overall, they found positive abnormal returns accompanying the dividend announcement. In 1988, Healy and Palepu showed that the dividend-initiating firms experienced higher earnings growth than industry peers within the first year following initiation, and for two years after, translating into abnormal returns for investors. They explained the result as being due to signaling: the dividends told the market that the firm was strong and growing.

Venkatesh (1989) was the first to look at the volatility of returns after initiation, and found decreases in the post-initiation volatility, as measured by standard deviation. He felt that the decrease was only in the firm-specific volatility as opposed to systematic volatility, which he showed by examining firm betas. He found the betas to be stable while the standard deviations were unstable. His explanation of risk reduction in post-dividend initiation firms was that prior to dividend initiation, investors could only

observe earnings announcements, but after dividend initiation, investors could observe dividend declarations as well. Once this happens, investors give less weight to information cues other than dividends and earnings, whereas in the pre-dividend initiation period, they may have reacted to other information more strongly.

Contrary to the earlier results, Michaely, Thaler and Womack (1995) **did** find changes in firm beta after dividend initiation. The trio also found a 3-day price reaction as well as long-term price drift, which suggests that the initial price movement was insufficient. Dyl and Weigand (1998) also found a decrease in firm beta following dividend initiation due to their "risk information hypothesis," which says that the initiation of dividends is a signal to markets that a firm's earnings and cash flows have become fundamentally less risky, and therefore beta is lower. Firms are expected to have fewer surprises after dividend initiation. If the earnings volatility decreases, then the volatility of returns will decrease as well. The decreased firm risk was what made the managers declare a dividend in the first place. This study did not find increased earnings, but did find decreased betas over three years following dividend initiation.

Decreased betas would hint at a trading rule, whereby price would increase as the market adjusts to new betas. Boehme and Sorescu (2002) tried to find this trading rule, but could not replicate the results of prior studies. In splitting data into subgroups, they found that large firms in particular did not experience abnormal returns post dividend initiation. The authors felt that any abnormal returns or risk reduction were a function of chance.

EMPIRICAL ANALYSIS

We collected data for five firms that initiated dividends between June 2002 and September 2003. Those firms are Microsoft, FedEx, Qualcomm, Manor Care, and CDW. We then calculated betas before and after the dividend initiation, using monthly returns from June of 1996 to September of 2006. The regression assumed the risk-free rate to equal the yield on the 10-year Treasury bond, and the market return to equal the return on the S&P500.

Since our data comes from the Internet sources *Yahoo! Finance* and *Mergent Online*, we were heartened by recent research, Clayton, Jahera, and Schmidt (2006), showing that such on-line sources are as reliable as data from the traditional

source the Center for Research on Security Prices (CRSP).

As shown in Table 1, with the exception of Qualcomm, betas declined after dividend initiation, sometimes quite significantly.

Table 1
Comparison of Betas

Corporation	Dividend Start Date	Beta Before Dividend	Beta After Dividend
Microsoft Corp.	February 10, 2003	1.56	0.36
FedEx Corporation	June 13, 2002	0.85	0.49
Qualcomm, Inc.	March 12, 2003	1.54	1.92
Manor Care, Inc.	August 5, 2005	0.85	0.73
CDW Corp.	September 10, 2003	1.83	1.25

While further study, using a larger data set, is warranted, it is clear that IF beta decreases after dividend initiation, the required return for an investor is lowered, as is the cost of capital for the firm. If the market prices a firm's shares via the old beta, the stock price will be too low. As the new beta is incorporated into the pricing analysis over time, the price will increase. In the meantime, there could potentially be opportunities for abnormal returns to the savvy investor.

Using the Security Market Line equation:

$$E(R_i) = R_{RF} + (R_M - R_{RF})\beta_i$$

we calculated the required returns on the five companies using both "old" (pre-initiation) and "new" (post-initiation) betas. Comparing the required return with the actual holding period return, it is possible to determine abnormal returns to the shareholder (Table 2). Three of the five companies showed positive abnormal returns. While two companies showed negative abnormal returns, their holding period returns were non-negative.

Table 2
Comparison of Returns

Corporation	One-year Holding Period Return	Required Return with Old Beta	Required Return with New Beta	Abnormal Return to Shareholder
Microsoft Corp.	18.19%	15.08%	6.56%	11.63%
FedEx Corporation	115.46%	14.93%	17.63%	97.83%
Qualcomm, Inc.	25.37%	10.02%	7.43%	17.94%
Manor Care, Inc.	4.00%	10.08%	9.26%	- 5.26%
CDW Corp.	4.40%	16.74%	12.80%	- 8.40%

If an investor had invested \$1000 in each issue when initial dividends were declared, and held each issue for one year, they would realize a 33.48% overall return. While efficient markets tells us that exploitable trading rules should not exist, it appears that consistent abnormal returns are available. More exploration needs to be done with a larger data set to confirm our preliminary results.

CONCLUSIONS

While our initial interest was in Microsoft, we extended our examination of dividend initiations to include four additional firms that began paying dividends during the same time period. We found that, contrary to textbook theory, the firm betas were unstable, apparently shifting about the time of dividend initiation. This provided opportunities for investors to realize abnormal returns. Further study will include additional firms and time periods to examine beta stability as well as question the existence of abnormal returns for various periods after dividend initiation.

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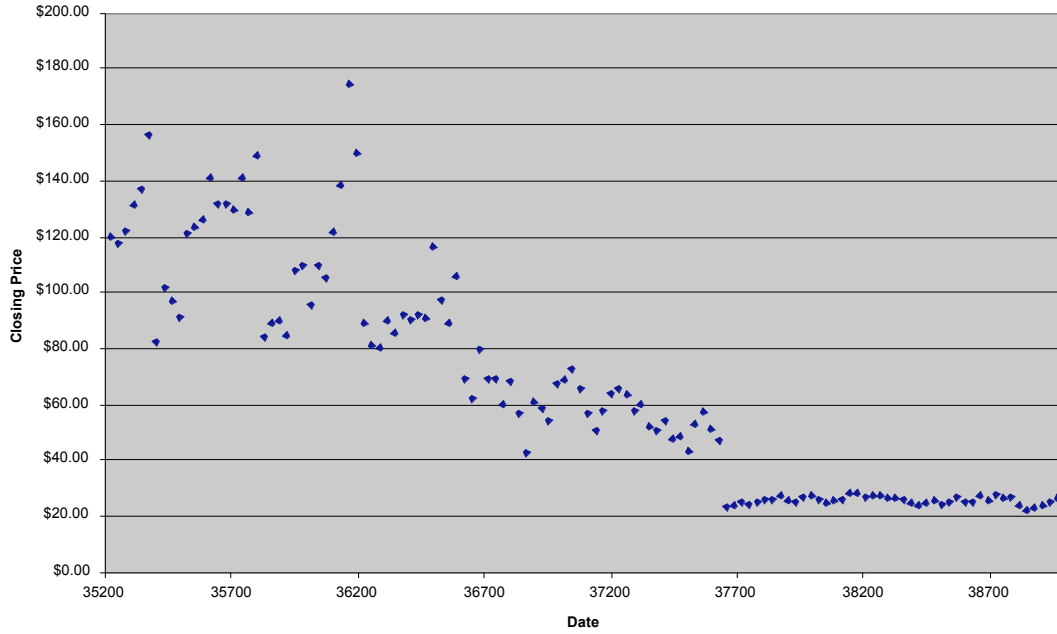
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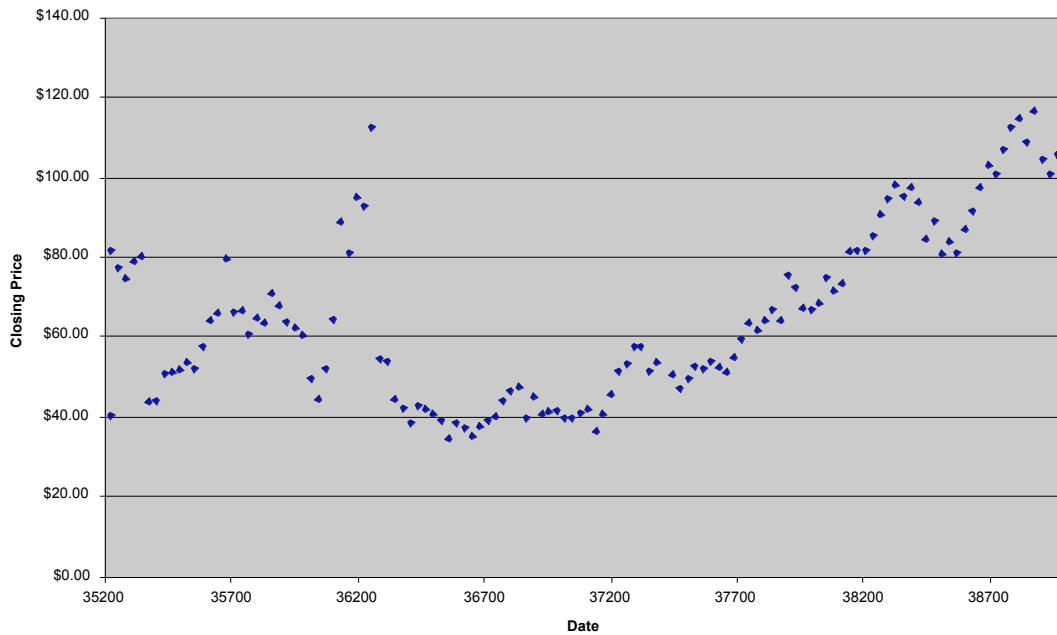
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Exhibit 1

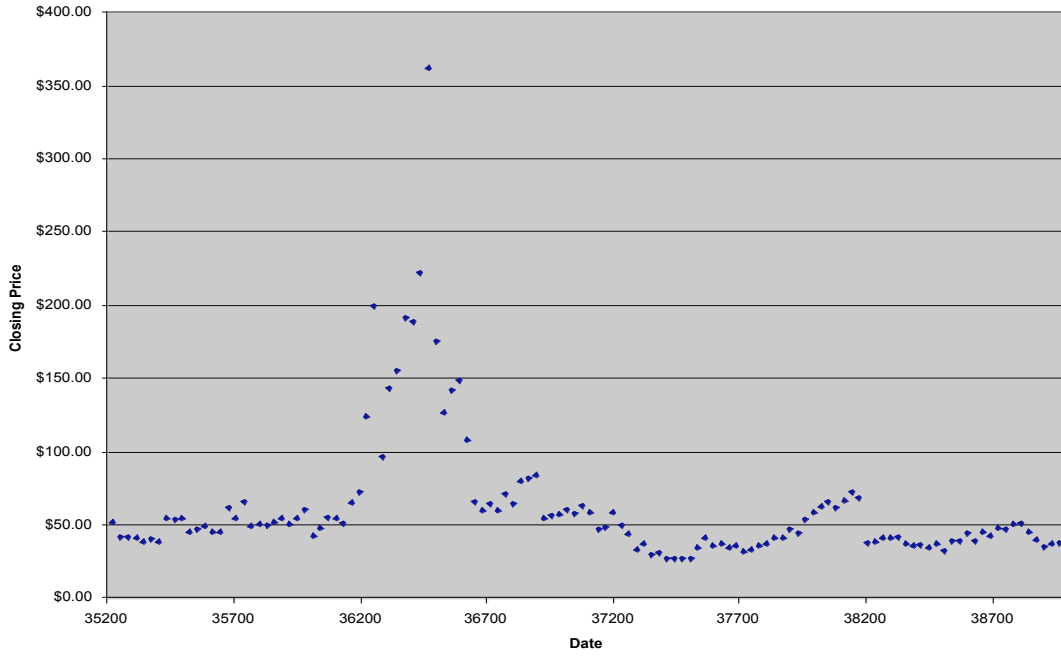
**Microsoft Corp.
June 3, 1996 to September 1, 2006**



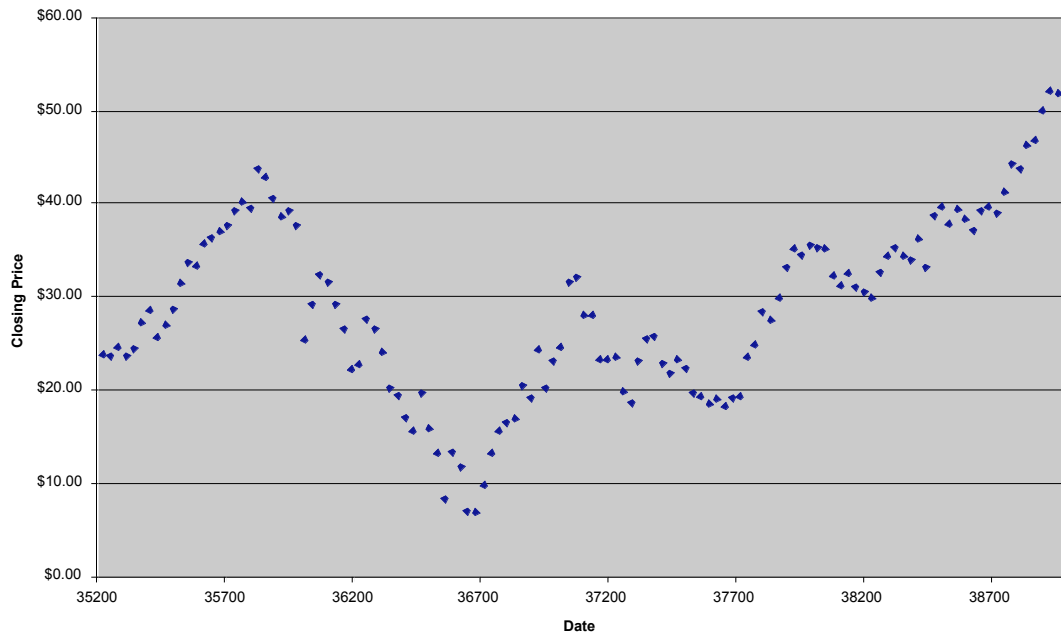
**FedEx Corporation
June 3, 1996 to September 1, 2006**



Qualcomm Inc.
June 3, 1996 to September 1, 2006



Manor Care Inc.
June 3, 1996 to September 1, 2006



CDW Corp.
June 3, 1996 to September 1, 2006

