Seeking safety in bad times: Dividend initiation returns and the economy

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Abstract

In this paper, we study the relationship between dividend initiation announcement returns and the state of the economy. Our test is motivated by the hypothesis that investor preference for dividends may be driven by the propensity to seek income stability from dividends. We hypothesize that in this case market reaction to dividend initiations should be higher in times when other income sources (such as labor income and access to borrowing) are restrained. We report evidence consistent with this hypothesis after controlling for several alternative explanations, such as the life cycle effect, free cash flow, signaling, and clientele effect. The result is robust to choice of control variables, event window, and partial anticipation effects.

Introduction

Does demand for dividends change over time, and if so, why? Answering this question is very important, since it may help us understand the nature of the well documented investor preference for dividends. Miller and Modigliani (1961) show that in a frictionless market, investors are indifferent to the choice of specific dividend policy by a firm. The presence of market imperfections, however, can make dividend policy relevant. Among such frictions are taxes, transaction costs, contracting costs, borrowing constraints, information asymmetries, and bounded rationality. A vast theoretical and empirical literature has analyzed the effects of these imperfections on dividend policy.[1]

In this paper, we hypothesize that the demand for dividends is driven by the desire for stability and safety. In a recent survey of a large sample of financial executives, Brav, Graham, Harvey, and Michaely (2007) evaluate the importance of various factors on dividend policy. Interestingly, they report that taxes are among the less important factors to managers, despite the major tax cut in May 2003 that occurred immediately preceding the time the survey was conducted. Among the most important factors reported is the stability of future cash flows. Hoberg and Prabhala (2007) support this evidence by reporting that cash flow stability of non-paying firms, relative to payers, is a strong predictor of future propensity to pay dividends. Hence, it appears that managers are reluctant to initiate dividend unless they believe that the *stable dividend policy* can be maintained.

We argue that if investors like dividends as a source of safety and stability then dividends should matter more during the times when the performance of the alternative

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[1] See Allen and Michaely (2007) and Kalay and Lemmon (2005) for comprehensive surveys on dividends.

income sources is poor and uncertain (unemployment risk is high, access to borrowing is restricted, capital gains are low or negative) and when the overall outlook of the economy is gloomy. Hence, we study the time variation of dividend preferences with the economic downturns.

This approach is in line with studies that explore determinants of variation in demand for dividend. Baker and Wurgler (2004) find that the difference in the market-to-book ratios of dividend payers and non-payers – the measure they label "the dividend premium" – varies over time and is correlated with investor sentiment, measured by the closed-end fund discount. They argue that this evidence is consistent with the sentiment – based preference for dividends: "when the dividend premium is high, investors are seeking firms that exhibit salient characteristics of safety, including dividend payment."[2] Although Baker and Wurgler (2004) mainly focuses on the supply side of dividends (i.e. the propensity to pay dividends), in this study we examine the time variation in demand for dividend paying firms. Fuller and Goldstein (2004) also examine the demand side of dividends and find that dividend paying firms outperform non-payers by more in declining markets. They also report that the market reaction to dividend increases is more favorable in declining markets. The emphasis in Fuller and Goldstein (2004), however, is mainly on documenting the existence of time variation of demand for dividend rather than on analyzing the underlying reasons for dividend demand. Our paper is most closely related to Fuller and Goldstein (2004). At the same time, we note several important

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[2]In unreported work, we look at the average initiation announcement return computed by Baker and Wurgler (2004) and reported in their Table 3. This data is available annually from 1962 through 2000. We notice a positive correlation of 0.28 between this series and the average annual unemployment rate reported by the Bureau of Labor Statistics. When we regress the announcement return jointly on the dividend premium measure, reported in Table 2 of Baker and Wurgler (2004), and the unemployment rate, we find that the dividend premium is insignificant but the unemployment rate is significant at a 5% level (these results are available from the authors upon request).

differences between that study and ours. Most importantly, we focus explicitly on dividend *initiations*, which we believe to be a measure better suited for studying shifts in investor preferences for stability. This is because investors are more likely to perceive dividend initiation as a major shift from an unstable to a stable investment whereas a dividend increase by an established payer does not represent a transition from less stability to more. In addition, there is a reason to believe that the reaction to initiation may differ from a reaction to a dividend change. For example, Grinstein and Michaely (2005) show that institutional investors prefer payer to non-payers but do not care about higher dividend payment. Hence, focusing on initiations may allow us to explore certain hypotheses in more depth.

As our measure of investor preferences for dividends we use the abnormal returns on dividend initiation announcement days. To describe the state of the economy, we use several variables: the unemployment rate; interest rates; and the index of consumer confidence reported by the University of Michigan. Our hypothesis is that investors that seek dividend stability will greet dividend initiations with greater enthusiasm in times when unemployment is high, interest rates are high, and consumer confidence is low. We investigate, using a panel of dividend initiations between 1970 and 2006, whether investor demand for dividends is higher during economic downturns.

We believe that our choice of macroeconomic variables for this study is well substantiated. For example, the importance of unemployment rate as a major factor for household spending and thus for the overall economy has been addressed in the economics research (see, e.g., Gruber (2000) and Shimer and Werning (2005)). It is also evident, for example, from the dramatic negative market reaction to the rise in the U.S.

unemployment rate in December 2007 (the Wall Street Journal, January 5, 2008). The index of consumer confidence is included in the list of ten major leading economic indicators by the Conference Board and is shown to forecast household spending (e.g., Bram and Ludvigson (1998), and Ludvigson (2004)). Consumer confidence has also received attention as a measure of investor sentiment (e.g., Fisher and Statman (2002), Qiu and Welch (2004), Lemmon and Portniaguina (2006)).

Using dividend initiation announcement return as our measure of investor enthusiasm for dividends is consistent with prior literature as well. Baker and Wurgler (2004) advocate this measure of investor demand for dividends as follows: "if investors are clamoring for dividends, they may make themselves heard through their reaction to initiations." Hoberg and Prabhala (2007) accept this measure also, saying that "the average announcement return […] is arguably the most direct test of pro-dividend sentiment."[3,4]

We find that investor preference for dividends is stronger in poor economic times even after controlling for factors that had been found to be important determinants of market reaction to dividend announcements. The result is also robust to choice of specific control variables, event window, and partial anticipation effects. We also make sure that our results are not driven by any confounding events such as earnings announcements or mergers.

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[3] One needs to keep in mind the distinction between investor demand and corporate ability to initiate dividends. It could be that the investor need for dividends is high in times when the ability of firms to pay dividends is low. Thus investor demand for dividends may not have an immediate and direct impact on the propensity to pay. Hoberg and Prabhala (2007) found that initiation announcement returns do not forecast future propensity to pay. Baker and Wurgler (2004) find that initiation announcement returns forecast the fraction of initiating firms in their sample but report no similar findings for propensity to pay.

[4] We do not use the main measure of pro-dividend sentiment designed by Baker and Wurgler (2004) – "the dividend premium," or the difference in market-to-book ratios of payers and non-payers, since market-to-book ratios are potential proxies for many effects, including growth and investment opportunities as well as risk, as emphasized in Hoberg and Prabhala (2007).

These findings are in line with the mental-accounting view of dividend preferences and with the related consumption-based view. In principle, in order to have a safety-based preference for dividends investors must view dividends as a separate income source that will provide them with the desired safety even when the alternative income sources show disappointing performance. Hence, our hypothesis is alongside the theories of Shefrin and Statman (1984) and Shefrin and Thaler (1988) that investors place dividends – as opposed to capital gains – in a separate "mental account."[5] Some recent evidence supports the view that investors may place dividends and capital gains in different mental accounts. Baker, Nagel, and Wurgler (2007) use the Consumer Expenditure Survey and a large household investments accounts data from a brokerage firm in the U.S. They find that investors are more likely to consume from dividends than capital gains and that the net withdrawals from household investments accounts increase with ordinary dividends.[6] We believe, however, that although the finding that investors consume disproportionately out of dividends is supportive of the mental accounting hypothesis, the consumption role of dividends is unlikely to be the sole explanation for the time variation in dividend preferences. Dividend income is a small fraction of total income and would not provide for the household consumption needs when other income sources are restrained. Besides, financially troubled investors (such as those that lost their jobs or filed for bankruptcy) are unlikely to increase their equity holdings by investing, for example, in dividend paying stocks. Hence, our finding that investors greet dividend

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[5] This term was introduced by Thaler (1980).
[6] Not all evidence on the consumption hypothesis has been supportive: Dong, Robinson, and Veld (2004) survey a Dutch investor panel and find that individual investors in their panel do not consume a large part of dividend income and prefer to re-invest it. We note that shocks to regular income are potentially different in the U.S. and in the Netherlands. For example, Shimer and Werning (2005) show that the duration of unemployment benefits is six months in the U.S. and 60 months in the Netherlands. Hence, to the extent that dividends matter as a consumption insurance, consumption from dividends is likely more important to the U.S. households.

initiations with greater enthusiasm in times of high unemployment and high interest rates is unlikely to be driven entirely by the desire to smooth consumption, although consumption smoothing may play some role. Our hypothesis here is more in line with that of Baker and Wurgler (2004) that maintain that dividend preferences may be broadly defined as "seeking safety."

In this study, we also address numerous alternative explanations that also suggest stronger preference for dividends during poor and uncertain economic times. Investors may prefer higher dividend payouts if the firm has free cash flow and lacks positive NPV investment opportunities because dividends reduce the agency costs associated with free cash flow (Jensen, 1986). In addition, during poor economic times firms are more likely to attain maturity phase of their life cycles (low-growth, large cash holdings), which would place them under higher scrutiny from the markets to initiate dividends (DeAngelo et al., 2006; Grullon et.al, 2007; Bulan et. al2005). Signaling theory of dividends also implies that during poor times, a commitment to stable dividends would be a more credible signal (Bhattacharya, 1979; Miller and Rock, 1985; Fuller and Goldstein, 2004).

Paying a dividend may also be a way to attract institutional shareholders. Grinstein and Michaely (2005) find that institutions clearly prefer dividend payers to non-payers, although they do not find that institutions also prefer high dividends to low dividends. In this case, market reaction to dividends may reflect the anticipated benefits of increased institutional shareholding such as better monitoring and more efficient corporate governance (Allen, Bernardo, and Welch (2000)). In poor economic times, the need of stable institutional shareholding may be particularly important; or firms may be more successful in attracting institutional investors due to the higher signal credibility.

Regarding alternative hypotheses, we find evidence that firms that initiate dividends in times of poor economic conditions are more likely to have low sales, high leverage, and low Tobin's Q compared to firms initiating dividends in good times. These are consistent with the life cycle and free cash flow hypotheses: in economic downturns, firms reach the maturation stage with lack of profitable investment opportunities, and are more likely to be under scrutiny of investors to start paying dividends. However, the magnitudes of these effects on CAR do not increase in poor economic conditions. This suggests that economic state variables are not proxies for these alternative hypotheses.[7]

Our findings also do not lend support to the signaling hypothesis. We study the long-term operating performance of the dividend initiating firms and do not find that initiations announced during downturns predict stronger performance. Hence, it is difficult to support the view that firms that initiate dividends during economic downturns are better than those that initiate dividends at other times.

We address the institutional clientele hypothesis in two ways. First, we include the size of the dividend yield in our regressions and find that the size of the dividend matters, and that it matters weakly more in times of economic downturns. It the demand for dividend initiating firms comes from institutional investors, our finding is inconsistent with the evidence reported in Grinstein and Michaely (2005) that institutions prefer smaller dividends. Second, we directly measure changes in institutional ownership following initiations announced during downturns and those announced during good times and fail to find that the time of initiation has an effect on institutional ownership change. Therefore, our evidence does not support the view that the higher initiation

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[7] These results are not reported, but are available upon request.

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announcement returns during bad times are driven by the perceived benefits of increased institutional shareholding.

We also investigate the possibility of more subtle clientele shifts around dividend initiations by measuring abnormal trading volume around the announcements. Our measure of abnormal trading volume follows the methodology of Michaely, Thaler, and Womack (1995). We recognize that both institutional and retail clienteles are heterogeneous due to different tax brackets, prior ownership of the firm's stock, age, income levels, or other factors. For example, Graham and Kumar (2006) report that older and low-income individual investors are more likely to purchase stocks following dividend announcements than are other types of individual investors. Furthermore, abnormal trading activity is mainly driven by pension funds (Dhaliwal and Li, 2006). We find statistically higher abnormal trading volume on the initiation announcement date for the firms initiating dividends in bad times, relative to firms initiating dividends in good times. Hence, we find that there exist clienteles (or sub-groups within clienteles) that have higher preferences for dividends in times of economic downturns. Identifying these groups is an intriguing area for future research.

In conclusion, this paper suggests that stock price react favorably to dividend initiations when investor sentiment is low. This finding is in line with the growing literature on the relationship between investor characteristics and corporate policies, and improves our understanding of investor behavior.

The remainder of the paper is organized as follows. The next section discusses the hypotheses that motivate out empirical work as well as several alternative hypotheses for which we control. Section 2 describes the data and the empirical methodology. Section 3

discusses the evidence. Section 4 addresses some robustness tests, and Section 5 summarizes and concludes.

1. Hypotheses

1.1 Dividends as a source of income stability

Our main hypothesis in this paper is that dividends matter to investors because they are viewed as a stable source of income and wealth accumulation, on which investors can rely when all other income sources show disappointing results. Importantly, this hypothesis implies that investors behave in line with the mental accounting model offered by Shefrin and Thaler (1988). In that model, investors place dividend income and capital gains into different "mental accounts," the term offered by Thaler (1980).

Recent evidence by Baker, Nagel, and Wurgler (2007) supports the view that investors place dividends and capital gains in different mental accounts. The study finds that investors have a higher propensity to consume from dividends than capital gains. Although we do not believe that consumption is the sole explanation for dividend preference, it is nevertheless plausible that dividend preferences will vary with the condition of other income sources, such as labor income and borrowing constraints, if dividends are viewed as the "certain," or "safe" component of wealth appreciation. Hence, under our stability-based hypothesis, we expect to find an association between the variables that proxy for economic downturns and the dividend initiation announcement returns: when the economy is poor, we expect that investors will greet dividend initiations with greater enthusiasm.

Next, we consider a number of alternative hypotheses, some of which we believe to be especially important to control for in our empirical tests.

1.2 Taxes

Relative preference for dividends may vary with dividend taxation relative to capital gains. It is plausible that some association may exist between tax regimes and the status of the economy. Thus, increased probability of a recession may motivate the government to consider potential tax cuts, in which case dividend initiations may be more welcome by investors who pay dividend taxes. However, the time variations in dividend tax regimes are not likely be highly correlated with the changes in unemployment rates. For example, a major shift in dividend tax regime occurred in 1986; and recently, another one occurred in 2003. No contemporaneous shocks to the unemployment rates occurred around those periods compared to 1985 and 2002, respectively. At the same time, unemployment rate is a cyclical variable that had several distinct peaks over our sample period, as evident from Figure 1. No major dividend tax regime changes occurred contemporaneously with the peaks in the unemployment rate.

1.3 Transaction costs

Investors may prefer dividends to capital gains if transaction costs of selling shares prevent them from creating the desired dividend income stream. However, changes in equity trading costs are unlikely to be correlated with shocks to employment rates.

1.4 Investment opportunities and Life-Cycle Theory

Investors may prefer higher dividend payouts if the firm has free cash flow and lacks

positive NPV investment opportunities because dividends reduce the agency costs

associated with free cash flow (Jensen (1986)). In addition, dividend initiating firms are

more likely to attain maturity (low-growth, large cash holdings) phase of their life-cycles

(DeAngelo et. al, 2006). Grullon, Michaely, and Swaminathan (2007) find that dividend

initiations are associated with greater firm maturity and lower future profitability. Bulan,

Subramanian, and Tanlu (2005) also report that dividend initiating firms are large, stable,

and mature firms with low growth rates. Unemployment is likely higher in times when

the overall economy is growing slowly, corporate investment opportunities are low, and

cost of capital is high. In such times, more firms may experience a decline in profitable

investment opportunities and future growth prospects and are more likely to be under

pressure to initiate dividends. Thus, positive market reaction to dividend initiations in

high unemployment regimes may indicate life-cycle of the firms. This is an important

issue from our perspective, and we need to control for this alternative hypothesis. Our

control methodology is addressed in the empirical section of the paper.

1.5 Signaling

To the extent that shocks to employment are correlated with shocks to investment

opportunities, the signaling role of dividends may become more important in the sense

that dividend signal is costlier and thus more credible. Evidence on signaling models has

been mixed. Hanlon, Myers, and Shevlin (2007) find evidence that dividends are

informative about future earnings beyond what is incorporated in the stock price. Grullon,

Michaely, Benartzi, and Thaler (2007) control for non-linear patterns in earnings and

show that dividend changes are not informative regarding future earnings. Our controls

for investment opportunities and other firm characteristics (such as the size of the

initiated dividend) are likely to help control for the signaling effects. In addition, we test

the signaling hypothesis explicitly by studying the operating performance three years

following the dividend initiation, for firms that initiate during bad times and for those that

initiate during good times. Finding statistically better operating performance in the

former sample would be supportive of the signaling hypothesis.

1.6 Anticipation

In tough economic times, the ability of firms to maintain stable dividends becomes more

uncertain, and the probability that a given non-paying firm will initiate dividends is low.

Because investors have lower expectations regarding dividend initiations around these

times, they are more surprised by the initiation announcement, and the effect may be

stronger. However, our empirical methodology accounts for the *total* announcement

return, including the potentially anticipated component as well as the unanticipated one.

This issue is addressed in the robustness section of this paper.

1.7 Attention Attraction Hypothesis

Capital market reactions may incorporate attention of investors. Even though vast

amounts of various investment opportunities may exist at any time, investors focus only

on a limited number of opportunities that may attract their attention. Thus, investors are

more likely to focus on firms that have public visibility, which is the case when firms

initiate dividend payments. The initiation of dividend payments will attract the attention

of investors in poor economic conditions when there are few firms with dividend initiations. To control for this effect we build a dummy variable named Advertising dummy to proxy for the advertising efforts taken by the firm prior to dividend initiation.

1.8 Clientele Shifts

Firms may initiate dividends to attract large institutional clientele, which is better equipped to improve firm management and governance (Allen, Bernardo, and Welch (2000)). Evidence on this hypothesis has been mixed. Brav et al (2005) report in their survey that managers believe dividend increases to be more attractive to individual rather than institutional investors. Grinstein and Michaely (2005) find that institutions clearly prefer dividend payers to non-payers; however they do not find that institutions also prefer high dividends to low dividends. To the extent that the clientele hypothesis holds, market reaction to dividends may reflect the anticipated benefits of increased institutional shareholding. In poor economic times, the need of stable institutional shareholding may be particularly important; or firms may be more successful in attracting institutional investors due to higher signal credibility in poor times. In any event, investor reaction to dividend initiations may be stronger in poor times due to clientele effects. Hence, we need to control for changes in institutional shareholding. This issue presents an empirical challenge since investor base shifts are not strictly exogenous to dividend initiation (they are necessarily measured with a considerable delay in order to capture permanent effects). Therefore, simply putting changes in institutional stockholding on the right-hand side of the regression is not appropriate. We address the issue as follows: using the data on institutional ownership of the firms in our sample, we look at changes in institutional

ownership surrounding the dividend initiations (one quarter following the announcement relative to one quarter prior to the announcement).

We recognize that clientele shift may be more subtle than simple shifts from the retail to the institutional clientele or vice versa. Both institutional and retail clienteles are heterogeneous. For example, different institutions are in different tax brackets or may have different amount of prior holding of the initiating firm's equity, which may affect their decision to acquire (more of) the firm's shares upon dividend initiation. Dhaliwal and Li (2006) show that heterogeneity in investors affect trading volume prior to dividend payments. Specifically, within the institutional investors, dividends are more attractive for tax-exempt investors such as pension funds. Retail investors are also likely to be heterogeneous. For example, Graham and Kumar (2006) report that older and low-income individual investors are more likely to purchase stocks following dividend announcements than are other types of individual investors.

To test for more subtle clientele shifts, we construct a measure of abnormal trading volume following the methodology of Michaely, Thaler, and Womack (1995). To the degree that to some clienteles, dividends are more important in bad times, we should observe higher abnormal trading volume around dividend initiations that occur in downturns.

2. Data and Sample Selection

2.1 Dividend initiation panel

Our sample consists of dividend initiations covered in the Center for Research in Security Prices (CRSP) tapes from 1970 to 2006. We identify a dividend initiation as the first cash ordinary dividend payment in the CRSP (Michaely et. al, 1995). We obtain the final sample using the following criteria:

1. Firms must have CRSP share codes of 10 or 11.

2. Firms must have been traded on the NYSE, AMEX or NASDAQ for two years prior to dividend initiation.

3. We exclude utilities (SIC codes 4900-4949) and financial firms (SIC codes (6000-6999).

4. We exclude firms with sales below $50 million in 1990.

5. Firms have the following COMPUSTAT data items: total assets (6), book value of equity (60), stock price (199), shares outstanding (25), long- and short-term debt (9 and 34), net sales (12), and earnings before interest and taxes (13).

In addition to these criteria, we eliminate confounding events that may affect stock price reaction to dividend initiations. We search The Wall Street Journal to identify all major announcements of firms that could potentially confound stock price reactions to their dividend initiation announcements in the five-day event window[8]. Dividend initiations that are subject to one or more of the confounding events below are eliminated: Restructuring or divestiture, M&A, Major litigation or labor unrest, earning announcement, joint venture, change in top management team, bond issuance, executive severance package announcement, spin-off, accounting write-offs release of industry

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[8] See McWilliams & Siegel (1997), Bruner (2002) and Campbell et. al (1997) for the effect of confounding events in event study.

report, competitor announcement, share repurchase, major contract and EPA violation.

The final sample consists of 679 dividend initiation events between 1975 and 2006.

2.2 Control variables

We collect the following control characteristics and variables. Dividend Yield is included

to control for the size of dividend payment. The natural logarithm of sales measures the

firm size. We include Book Leverage to control for free cash flow. We control for growth

opportunities and operating performance by including Tobin's Q and EBITDA/TA. We

also incorporate the volatility of stock returns to proxy for idiosyncratic risk, following

Hoberg and Prabhala (2007). In order to control for visibility of the firm in public

spheres, we create Advertising Dummy that takes the value one if firm reports advertising

expenses in the fiscal year prior to dividend announcement.[9] Industry dummies based on

two-digit SICs are included to control for industry effects on market reaction.

In addition, we test the clientele hypothesis using abnormal trading volume as a

measure of clientele shifts. Following Michaely, Thalet, and Womack (1995), we

calculate daily turnover for each stock as the ratio of volume shares traded to total

number of shares outstanding. The abnormal trading turnover is defined as the ratio of

daily turnover to normal turnover minus 1, where normal turnover is the average turnover

in days t-125 and t-6 (where t=0 corresponds to the date of dividend announcement). We

then calculate the average turnover for each trading day surrounding the dividend

initiation date.

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[9] The results are qualitatively similar when we use size of advertising expenses in regressions.

2.3 Measure of the announcement effect

We use the event study methodology (Brown & Warner, 1980, 1985) to measure the effects of dividend initiation announcements on firm value. The event study methodology assumes that stock prices reflect all publicly available information and react immediately to new information such as the announcement of dividend initiation. Hence, it is appropriate for measuring the impact of a dividend initiation announcement on the firm value.

We compute abnormal returns (AR_i) of a firm *i* in a three-day "event window" [-1,+1], surrounding the announcement of an acquisition (day 0) by examining deviations of the firm's actual returns (R_i) from the expected normal returns (R_n) of the firm had it not initiated a dividend payment:

$$AR_i = R_i - R_n \tag{1}$$

We cumulate the abnormal returns over a three day event window [-2,+2]:

$$CAR_i(-2,2) = \sum_{t=-2}^{2} (AR_{it}) \tag{2}$$

Although our choice of the event window is consistent with event windows chosen in earlier studies (Baker and Wurgler, 2004), we also conducted robustness checks across alternative event window specifications such as [-1,+1] and [-5, +5] and found qualitatively similar results.

2.4 Macroeconomic variables

The data on unemployment date comes from the Bureau of Labor Statistics. The unemployment rate over the sample period is plotted in Figure 1. As one can see, the

period captures several peaks in unemployment rate. We also construct the High

Unemployment Rate dummy as an alternative explanatory variable. The high

unemployment rate dummy takes on the value of one when the value of unemployment

rate is in the top 25th percentile.

The yields on a 3-month Treasury bill and a 10-year Treasury bond come from the

Federal Reserve. We obtain index of current economic conditions and index of consumer

expectations from the University of Michigan.

3. Empirical Evidence

3.1 Descriptive statistics

Table 1 reports the descriptive statistics of the sample. Firms in our sample are

large firms. For example, the average market value and total assets are $1.121 billion and

$730 million, respectively.[10] These firms achieve robust operating performance. The

average EBITDA/TA is 0.17. This is in line with the view that firms initiate dividends

when they have large earnings (Brav et. al, 2005). Macroeconomic conditions preceding

dividend initiation vary widely. The unemployment rate ranges between 4.0 and 9.5

percent. The average unemployment rate in the sample period is 6.547 percent.

There is wide variance around the mean CAR indicating that a subgroup of

dividend initiations receives favorable market reaction while another subgroup incurs

major losses. The dividend initiations are also prone to large trading activities around

dividend announcements. The average abnormal trading volume increases by 1.486

following dividend initiations.

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[10] See Data Appendix for variable definitions.

Table 2 reports pair-wise correlation coefficients for the variables of interest. CAR around the dividend announcement is positively associated with unemployment rate and bond yields. Furthermore, CAR is negatively related with Current Economic Conditions and Consumer Expectations Indices. These findings provide preliminary evidence for the hypothesis that capital markets react favorably to dividend initiation announcements when opportunities for major means of cash inflows are likely to be slim. Firm visibility measured by Advertising Dummy does not have significant relationship with the variables of interest. Firms that initiate dividends in times of high unemployment are more likely to have low sales, high EBITDA/TA, high leverage, and low Tobin's Q. These findings are consistent with the life cycle and free cash flow hypotheses: in economic downturns, firms are more likely to reach the maturation stage with lack of profitable investment opportunities and free cash flow, and are more likely to be under scrutiny of investors to start paying dividends.

3.1 Markets Reactions to Dividend Initiations

Table 3 presents the results of the multivariate regressions that incorporate control variables. The positive and significant coefficient estimates of economic downturn proxies substantiate the view that investors react more favorably to dividend initiations in reduction in economic activity. The magnitude of reaction is also economically significant; a one standard deviation increase in unemployment rate (1.295) increases the CAR by 89 basis points. This corresponds to 23.9% increase relative to average CAR (0.037). Similarly, CAR increases by 96 basis points per a standard deviation (11.659) decrease in Index of Current Economic Conditions.

We also find that capital market reaction to dividend announcements is related to the size of the dividend payments. Dividend yield coefficients are positive and significant in all models.

Table 3 shows that capital markets react unfavorably to dividend initiation announcements by firms with higher growth opportunities measured by the Tobin's Q. The effect is also economically significant; a one standard deviation increase in Tobin's Q reduces the CAR by 1.05 percent.

The coefficient estimate for Leverage is negative, but lack statistical significance. Lastly, the Advertising Dummy variable, proxing for firm visibility and investor attention, is not significant from zero.

3.2 Do firms that initiate dividends have better operating performance?

Capital markets may react favorably to dividend initiations in economic downturns if dividend initiation in these times reflect better operating performance in the long-run. In order to test this hypothesis we compare the industry adjusted EBITD three years following the dividend initiation with that of a year prior to dividend initiation. Table 4 indicates that unemployment has positive coefficient estimate, but is not statistically significant. This finding does not support the superior operating performance hypothesis.

3.3 Do firms that initiate dividends attract institutional ownership?

It is possible that dividend initiation in economic downturns are more likely to attract institutional investors which provide stable shareholder for the company. Furthermore, institutional ownership improve effective monitoring of top management team and

decreases the likelihood of value-destroying decisions of managers. In order to capture change in ownership, we first examine the abnormal change in trading volume. Figure 2 shows abnormal trading volume surrounding dividend initiation announcements. Specifically, there is large volume of abnormal trading activity when unemployment is high. This provides preliminary evidence for institutional ownership hypothesis, but does not control for factors contributing to institutional holdings. We calculate the percentage change in institutional holdings following dividend initiation relative to that prior to dividend initiation. In the multivariate regression (Table 5), the effect of unemployment is marginally significant and expected inflation and consumer confidence index do not have significant effects on the growth in the percentage of shares held by institutional investors. Thus, change in institutional ownership is less likely to drive the positive relationship between poor economic conditions and CAR.

3.3 Initial interpretation

The positive coefficient for the unemployment rate, after controlling for firm characteristics, supports the view that investors have two separate mental accounts for their investments and resort to dividend paying stocks when other sources of consumption are likely to be restrained.

The finding that dividend size matters for dividend announcement return suggests relatively higher importance of dividend initiations to individual rather than institutional investors. The survey results of Brav et al (2005) suggest that dividend size matters more to individual investors. Grinstein and Michaely (2005) report that institutions, if anything, prefer low to high dividends. If, on average, the positive announcement return comes

from individual investors, then we have additional indirect support of the consumption-based view, as dividends from direct equity holdings are more likely to be consumed than dividends from mutual and pension funds (Baker et al, 2007).

At the same time, dividend size has an alternative explanation as the signal that firms use to differentiate themselves from others. Thus, the positive association between dividend yield and CAR may support the signaling hypothesis.

We find evidence consistent with the life cycle theory. Firms with good investment opportunities that initiate dividends are faced with less favorable market reaction. Thus, dividend initiation by a firm with good growth prospects may suggest re-evaluation and degrading growth opportunities of the firm.

We fail to find evidence supporting free cash flow hypothesis. Dividend initiations by under-leveraged firms are negative, but lack statistical significance. There is also no supporting evidence for attention attraction hypothesis.

Collectively, while we find support for several alternative hypotheses, the empirical evidence in this section is consistent with the view that investors greet dividend initiations with greater enthusiasm in times when other sources of consumption are restrained.

4. Robustness

Firms are less likely to initiate dividends in poor macroeconomic conditions, on average, since more firms may find themselves financially distressed or unable to maintain the desired stable dividend payout. Thus, it is possible that dividend initiations are more of a surprise in high unemployment regimes and positive market reaction in these regimes

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may indicate surprise, rather than consumption smoothing. If this is the case, then market reaction to dividend initiation should be gradually incorporated in stock prices prior to announcement date when the unemployment rate is low. Consequently, CAR covering the pre-event window in high unemployment rate regimes should be *lower* than that of low unemployment regimes. We compare CAR for covering [-10,-3], [-15,-3] and [-20,-3] windows and fail to find statistical difference between high and low unemployment rate regimes.[11]

Another potential explanation for our findings is that we fail to fully control for the life cycle effect (DeAngelo et. al, 2006). In poor economic conditions, firms have less growth opportunities and are more likely to be under pressure to initiate dividends. Thus, positive market reaction to dividend initiations in high unemployment regimes may indicate life-cycle of the firms. To refine the way in which we address this alternative hypothesis, we include RE/TE, ratio of retained earning to total equity (DeAngelo et. al, 2006). This measure captures whether the firm is in self-financing or capital infusion stages. Even after controlling for RE/TE, we continue find statistically and economically significant coefficient estimates to unemployment rate measures.[12] Collectively, these indicate that our findings are robust to alternative explanations suggested in previous studies on dividend initiations.

5. Summary

Using a large panel of dividend initiations between 1970 and 2006, we measure dividend announcement returns in good and bad economic times. We notice from the results

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[11] These results are not reported, but are available upon request.
[12] These results are not reported, but available upon request.

reported in Brav et al (2007) and Hoberg and Prabhala (2007) that managers are reluctant to initiate dividends unless they believe they can maintain a stable dividend policy. We hypothesize that if investors like dividends for reasons of stability, they will greet dividend initiations with greater enthusiasm during economic downturns when their wealth and income are poor and uncertain. We find evidence consistent with this view: in times of high unemployment rate, high interest rates, and low consumer confidence, market reaction to dividend initiations is higher. This effect persists after controlling (and lending some support to) several alternative explanations, such as the life-cycle hypothesis. Consistently with the life cycle hypothesis, we find that firms that initiate dividends during bad times are more likely to exhibit characteristics of mature firms with free cash flow and low growth opportunities. We report mixed evidence for the signaling hypothesis for dividend preference. While we find that the size of dividend matters weakly more when the initiation occurs during economic downturns, we find no differences in long-run operating performance of firms that initiate dividends in bad times and firms that initiate in good times. Our evidence is also mixed for clientele effects. While we find no statistically significant change in institutional ownership following dividend initiations, we find higher abnormal trading volume around initiations announced during economic downturns. We interpret this finding as evidence of heterogeneity in investor clienteles.

Our evidence is consistent with the work of Shefrin and Statman (1984), Thaler and Shefrin (1981), and Shefrin and Thaler (1988), which suggests that investors place dividends in a separate mental account from capital gains or from other sources of income. In that case, investors may perceive dividends as the relatively "certain" and

stable separate component of income, which they can rely on even when the other income source such as labor income, access to capital markets, and capital gains are poor and uncertain.

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Figure 1 Unemployment rate. Source: Bureau of Labor Statistics
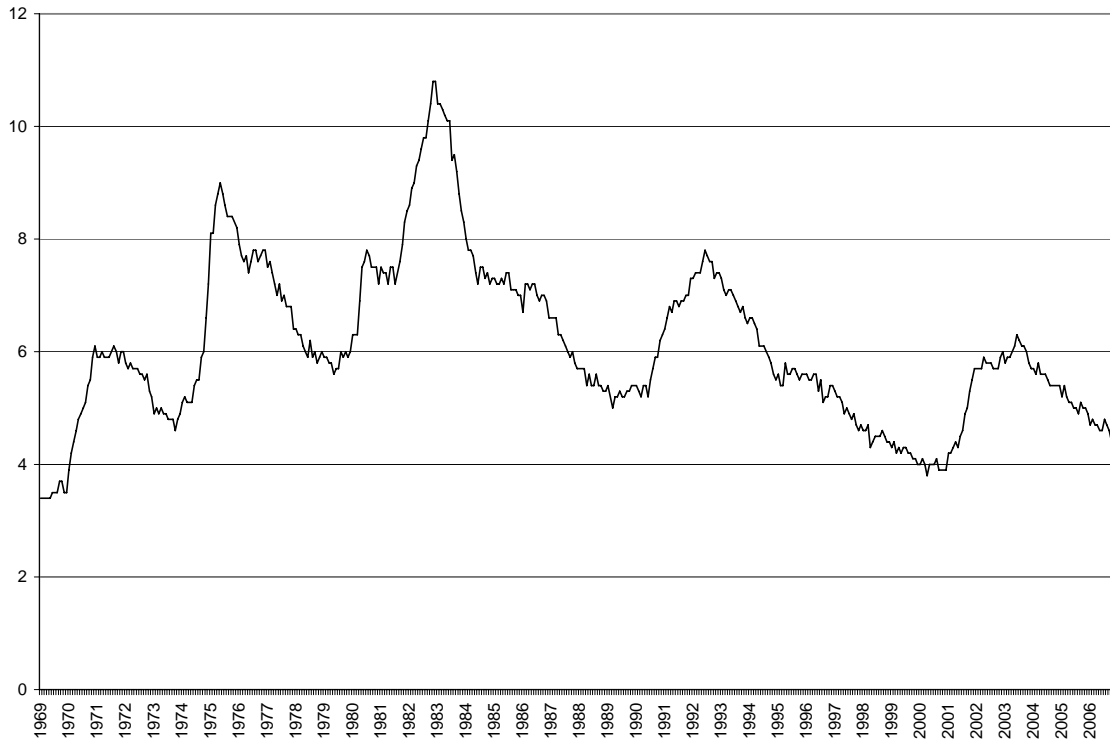
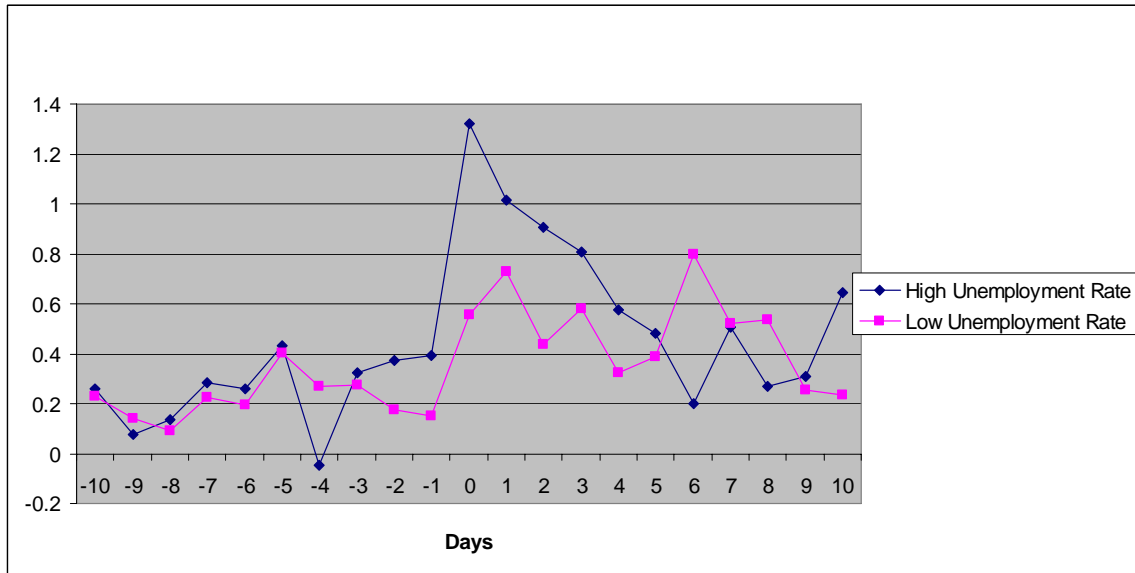Figure 2. Abnormal Trading Turnover around Dividend Initiations

Table 1. Descriptive Statistics

The table reports descriptive statistics for the sample consisting of dividend initiations between 1975 and 2006. Variable definitions are in the data appendix.

	Obs	Mean	Std. Dev.	Min	Max
Log(Sales)	679	5.500	1.200	3.930	9.310
Market Value ($ million)	679	1121.735	5026.736	14.302	111631.900
Total Assets ($ million)	679	730.273	2749.936	14.196	49112.460
CAR(-2, +2)	679	0.037	0.094	-0.251	1.018
Post-Dividend Operating Performance (3 years)	538	-0.012	0.093	-0.662	0.349
Unemployment Rate (%)	679	6.547	1.295	4.000	9.500
High Unemployment Rate Dummy	679	0.389	0.488	0.000	1.000
Book Leverage	679	0.275	0.199	0.000	0.870
Tobin's Q	679	1.412	0.862	0.570	5.200
EBITD/TA	679	0.167	0.084	-0.235	0.420
Advertising Dummy	679	0.448	0.498	0.000	1.000
Log (Volatility)	679	-6.271	0.373	-7.290	-5.470
Dividend Yield	679	0.020	0.056	0.000	0.380
Institutional Ownership Growth	363	0.054	0.292	-0.550	1.520
Unemployment Rate (%)	679	6.547	1.295	4.000	9.500
High Unemployment Rate Dummy	679	0.389	0.488	0.000	1.000
Index Current Economic Conditions	674	95.745	11.659	61.700	121.100
Index of Consumer Expectations	674	78.471	12.177	45.300	107.800
Yield (10 year bond)	679	7.288	2.141	3.330	15.320
Yield (3 month bill)	679	5.388	2.691	0.880	16.300

Table 2. Correlation Table

The table reports the pair-wise correlation coefficient for the variables of interest. Variable definitions are in the Data Appendix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 CAR(-2, +2)	1.00															
2 Post-Dividend Operating Performance (3 years)	0.04	1.00														
	0.36															
3 Institutional Ownership Growth	-0.02	0.03	1.00													
	0.68	0.65														
4 Unemployment Rate (%)	0.14	0.03	0.09	1.00												
	0.00	0.49	0.08													
5 High Unemployment Rate Dummy	0.15	0.04	0.15	0.84	1.00											
	0.00	0.40	0.00	0.00												
6 Index Current Economic Conditions	-0.16	-0.01	-0.10	-0.81	-0.70	1.00										
	0.00	0.88	0.05	0.00	0.00											
7 Index of Consumer Expectations	-0.11	0.00	-0.02	-0.48	-0.30	0.77	1.00									
	0.00	0.96	0.71	0.00	0.00	0.00										
8 Yield (10 year bond)	0.09	0.03	0.13	0.46	0.43	-0.42	-0.34	1.00								
	0.01	0.53	0.01	0.00	0.00	0.00	0.00									
9 Yield (3 month bill)	0.08	0.01	0.14	0.16	0.21	-0.26	-0.29	0.90	1.00							
	0.03	0.81	0.01	0.00	0.00	0.00	0.00	0.00								
10 Log(Sales)	-0.19	0.02	-0.08	-0.31	-0.27	0.25	0.15	-0.25	-0.18	1.00						
	0.00	0.69	0.14	0.00	0.00	0.00	0.00	0.00	0.00							
11 Book Leverage	0.00	0.07	0.02	0.00	0.02	-0.02	-0.06	0.11	0.16	0.08	1.00					
	0.95	0.09	0.68	1.00	0.59	0.67	0.11	0.00	0.00	0.04						
12 Tobin's Q	-0.08	-0.13	0.02	-0.32	-0.28	0.31	0.21	-0.25	-0.22	0.10	-0.28	1.00				
	0.03	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00					
13 EBITD/TA	-0.01	-0.43	0.06	0.12	0.07	-0.08	-0.05	0.04	-0.01	-0.09	-0.23	0.43	1.00			
	0.87	0.00	0.22	0.00	0.09	0.04	0.21	0.33	0.71	0.02	0.00	0.00				
14 Advertising Dummy	0.02	-0.07	-0.02	0.10	0.08	-0.11	-0.10	0.03	0.00	0.00	-0.01	-0.02	0.10	1.00		
	0.54	0.13	0.71	0.01	0.04	0.00	0.01	0.45	0.96	0.93	0.74	0.67	0.01			
15 Log (Volatility)	0.19	-0.09	0.10	0.29	0.31	-0.24	-0.05	0.08	-0.02	-0.32	0.01	-0.19	0.00	0.01	1.00	
	0.00	0.04	0.07	0.00	0.00	0.00	0.23	0.03	0.57	0.00	0.72	0.00	0.93	0.72		
16 Dividend Yield	0.16	0.02	0.00	-0.15	-0.11	0.11	0.07	-0.06	-0.02	-0.04	0.01	-0.03	-0.15	-0.05	0.04	1.00
	0.00	0.57	1.00	0.00	0.01	0.01	0.05	0.11	0.62	0.27	0.86	0.48	0.00	0.20	0.35	

Table 3. CAR Regressions

The dependent variable is the [-2,2] days cumulative abnormal return around announcement. The variable definitions are in the Data Appendix. Industry dummies were included but have not been displayed here for brevity. P-values of coefficients are in italics below and are based on heteroscedastic-corrected errors. *,**,*** refer to significance at the 10%, 5% and 1%.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Intercept	0.321 ***	0.241 ***	0.271 ***	0.369 ***	0.369 ***	0.296 ***	0.315 ***
	0.000	*0.001*	*0.000*	*0.000*	*0.000*	*0.000*	*0.000*
Unemployment Rate (%)		0.007 **					
		0.040					
High Unemployment Rate Dummy			0.018 **				
			0.044				
Index of Current Economic Conditions				-0.001 **			
				0.050			
Index of Consumer Expectations					-0.001		
					0.106		
Yield (10 year bond)						0.003 *	
						0.063	
Yield (3 month bill)							0.002 **
							0.040
Log(Sales)	-0.010 ***	-0.008 ***	-0.009 ***	-0.009 ***	-0.009 ***	-0.009 ***	-0.009 ***
	0.001	*0.006*	*0.004*	*0.004*	*0.001*	*0.004*	*0.003*
Book Leverage	-0.006	-0.005	-0.006	-0.005	-0.007	-0.010	-0.011
	0.744	*0.766*	*0.752*	*0.797*	*0.691*	*0.581*	*0.540*
Tobin's Q	-0.007 *	-0.004	-0.004	-0.004	-0.006	-0.006	-0.006
	0.077	*0.385*	*0.306*	*0.406*	*0.185*	*0.185*	*0.166*
EBITD/TA	0.027	0.003	0.009	0.008	0.018	0.016	0.019
	0.605	*0.960*	*0.857*	*0.884*	*0.731*	*0.751*	*0.704*
Log (Volatility)	0.036 ***	0.032 ***	0.031 ***	0.033 ***	0.037 ***	0.036 ***	0.038 ***
	0.000	*0.001*	*0.001*	*0.001*	*0.000*	*0.000*	*0.000*
Advertising Dummy	0.001	0.000	0.000	0.000	0.000	0.000	0.000
	0.900	*0.987*	*0.995*	*0.971*	*0.977*	*0.979*	*0.963*
Dividend Yield	0.270 *	0.291 **	0.288 **	0.301 **	0.292 **	0.275 *	0.270 *
	0.056	*0.041*	*0.043*	*0.040*	*0.048*	*0.051*	*0.055*
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	679	679	679	674	674	679	679
F	4.85	4.58	4.41	4.860	4.440	4.800	4.810
R^2	0.157	0.163	0.163	0.167	0.165	0.160	0.161

Table 4. Post-Dividend Operating Performance

The dependent variable is the difference in industry adjusted operating performance in 1 year before and 3 year after the dividend initiation. The variable definitions are in the Data Appendix. Industry dummies were included but have not been displayed here for brevity. P-values of coefficients are in italics below and are based on heteroscedastic-corrected errors. *,**,*** refer to significance at the 10%, 5% and 1%.

	(1)	(2)	(3)
Intercept	-0.189 **	-0.219 **	-0.217 **
	0.026	*0.025*	*0.012*
Unemployment Rate (%)		0.003	
		0.529	
High Unemployment Rate Dummy			0.010
			0.296
Log(Sales)	0.000	0.000	0.001
	0.952	*0.922*	*0.885*
Book Leverage	0.017	0.018	0.017
	0.488	*0.473*	*0.478*
Tobin's Q	-0.018 **	-0.016 **	-0.016 **
	0.013	*0.024*	*0.022*
EBITD/TA			
Log (Volatility)	-0.032 **	-0.033 **	-0.035 ***
	0.015	*0.012*	*0.008*
Advertising Dummy	-0.009	-0.010	-0.010
	0.343	*0.303*	*0.306*
Dividend Yield	0.063	0.074	0.078
	0.523	*0.453*	*0.432*
Industry Dummies	Yes	Yes	Yes
N	538	538	538
F	1.95	1.74	1.82
R^2	0.118	0.118	0.12
ΔR^2		0.000	0.002

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Table 5. Change in Institutional Ownership

The dependent variable is the change in institutional ownership following dividend initiation. The variable definitions are in the Data Appendix. Industry dummies were included but have not been displayed here for brevity. P-values of coefficients are in italics below and are based on heteroscedastic-corrected errors.

	(1)	(2)	(3)	(4)	(5)	(6)
Unemployment Rate (%)	0.022					
	0.314					
High Unemployment Rate Dummy		0.123 *				
		0.055				
Index of Current Economic Conditions			-0.002			
			0.267			
Index of Consumer Expectations				0.000		
				0.789		
Yield (10 year bond)					0.017 *	
					0.062	
Yield (3 month bill)						0.015 *
						0.059
Dividend Yield	0.128	0.161	0.136	0.102	0.135	0.115
	0.464	*0.353*	*0.443*	*0.579*	*0.453*	*0.512*
Log(Sales)	-0.004	-0.004	-0.005	-0.006	-0.001	-0.002
	0.776	*0.763*	*0.714*	*0.651*	*0.964*	*0.882*
EBITD/TA	0.257	0.247	0.280	0.296	0.244	0.264
	0.243	*0.255*	*0.206*	*0.177*	*0.248*	*0.208*
1/ Stock Price	-0.024	-0.098	-0.029	0.004	-0.062	-0.074
	0.930	*0.727*	*0.918*	*0.987*	*0.816*	*0.784*
Stock Return	0.362	0.237	0.377	0.385	0.342	0.303
	0.395	*0.564*	*0.379*	*0.373*	*0.413*	*0.464*
Log (Volatility)	0.033	0.032	0.031	0.034	0.040	0.048
	0.534	*0.540*	*0.559*	*0.543*	*0.444*	*0.375*
Advertising Dummy	-0.010	-0.013	-0.004	0.001	-0.010	-0.007
	0.795	*0.714*	*0.908*	*0.981*	*0.792*	*0.841*
NASDAQ Dummy	0.007	0.010	0.011	0.011	0.011	0.017
	0.855	*0.772*	*0.771*	*0.784*	*0.752*	*0.630*
AMEX Dummy	-0.017	-0.035	-0.011	-0.002	-0.033	-0.032
	0.855	*0.702*	*0.909*	*0.985*	*0.722*	*0.721*
Intercept	0.106	0.220	0.458	0.267	0.155	0.249
	0.778	*0.547*	*0.356*	*0.543*	*0.666*	*0.497*
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
N	363	363	358	358	363	363
Adj. R^2	0.028	0.042	0.026	0.020	0.042	0.045

Data Appendix

(COMPUSTAT data items in parentheses)

Sales : (12) /adjustment factor for inflation

Total Assets (TA) : (6)

Market Value of Equity (ME): stock price (199) * shares outstanding (25)

Market Value (MV): TA – Book Value of Equity (60) + ME

Tobin's Q: MV/TA

Book Leverage: (Long term Debt (9) + Current Liabilities (34))/TA

EBITDA/TA : Operating income before interest ,taxes and depreciation (13)/ TA

RE/TE : Income before extraordinary items (18)/ ME

Change in Institutional ownership is the change in the percentage of shares held by institutional investors a quarter following the dividend initiation relative to a quarter prior to dividend initiation.

Abnormal trading volume is defined as in Michaely et. al (1995).

Post dividend operating performance is the difference in industry adjusted EBITDA/TA three years after the dividend initiation to that a year prior to dividend initiation.