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# State Antitakeover Legislation and Firm Financial Policy

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**In the wake of numerous hostile corporate takeover attempts in the 1980s, many states enacted antitakeover legislation, often as a direct response to a particular takeover effort in the specific state. A number of empirical studies assess the impact of such statutes on firm value using traditional event methodology. While the event type research may capture the immediate market assessment of the impact of such legislation, the legislation can affect longer term financial policies of the affected firms. Theorists have speculated that firms less exposed to a takeover threat are more likely to pursue a longer term investment strategy, that leverage may substitute for or complement other existing takeover defenses, and that protected firms may require additional external monitoring. The results of this study indicate that protected firms increase both capital expenditures and R&D relative to assets and sales. Further, there are increases in dividends but only small changes in leverage. Firms with antitakeover amendments in place prior to the legislation show lower increases in capital spending and R&D, and modest evidence of a greater tendency to increase debt levels. While these results indicate that the laws influence subsequent firm strategy, that does not necessarily mean that these changes in policy improve firm value.** © 1997 John Wiley & Sons, Ltd.

## INTRODUCTION

During the 1980s, many states enacted antitakeover legislation to protect local firms from hostile takeover attempts that occurred at that time. In many cases, laws were proposed and adopted in response to a specific takeover attempt of a major firm in the state. While these state laws are not necessarily designed to prohibit hostile takeovers, they do have the potential to delay the takeover process and, as a consequence, make takeovers more costly. These 'second generation' laws are defined as those passed since 1982, when the US Supreme Court declared the 'first generation' Illinois Business Takeover Act to be unconstitutional. Subsequently, the second generation Indiana and Ohio statutes were both upheld by the US Supreme Court, in April 1987.

Arguments can be made that these laws will harm shareholder wealth, while arguments can also be made to the contrary. Based on the large body of agency theory literature, Jensen (1987) and Jensen and Ruback (1983) argue that shareholders benefit from an unfettered market for corporate control. That is, antitakeover laws make the removal of weak or ineffective management more difficult (effectively entrenching incumbent management) and thus harm shareholders. However, Scherer (1988) questions whether takeovers really do encourage economic efficiency. If not, then there is a case for slowing down what Scherer describes as "a costly and noisy process". The continuous threat of a takeover and perhaps job loss may move management toward 'short-sighted' decision making, while reducing the threat could result in firm value being enhanced. The managerial myopia argument (Stein, 1988), while somewhat different, reaches essentially the same conclusion. He contends that a threatened management will attempt to maximize share value by focusing on short-term profitability, often by postponing spending on

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capital improvements, research and development, and avoiding costly marketing strategies. DeAngelo and Rice (1983) suggest that giving management the power to negotiate with hostile bidders may actually result in tender offers at higher premiums to market over current value.

The empirical work to date has focused on traditional event methodology to examine the stock price reaction to the adoption of such laws. These studies have yielded mixed results. Earlier studies have tended to find evidence either that the laws are harmful to shareholders, or that they have no significant effect on shareholders. While these works are important, they only address the market's reaction at the time of legislation, and thus can be regarded as a 'snapshot' of the market's assessment of the potential impact of the new laws. There remains a question as to whether or not firms in adopting states change their longer term financial strategies in accordance with several theories concerning how firms are affected by the threat of takeover.

The objective of this study is to examine changes in a firm's financial decisions made after state antitakeover legislation. That is, takeover protection may result in management adjusting debt leverage, the level of long-term investing in the firm, and dividend policy. Theorists have postulated that a takeover threat may discourage long-term strategies in favor of short-term cash flow. Also, debt has been shown to be an effective barrier to a takeover. In addition, protected firms may require additional outside monitoring. We examine changes in relevant financial ratios, and compare these with changes in industry controls. Given the nature of the principal–agent relationship and the potential for management entrenchment, the passage of state antitakeover laws may well alter the agency relationship and consequently affect firm decision making. One major finding is that protected firms tend to raise both capital expenditures, and R&D expenditures relative to all firms. However, such a finding alone does not allow us to conclude that these investments result in gains in shareholder wealth.

## REVIEW OF THE LITERATURE

Research on the effects of second generation state antitakeover legislation has yielded mixed results. Ryngaert and Netter (1988) find a negative market reaction associated with the state Senate passage of antitakeover legislation in Ohio and conclude that Ohio firm value was reduced. Margotta *et al.* (1990), who find no significant effects resulting from the Ohio statute, use a wider variety of event windows than Ryngaert and Netter. However, Ryngaert and Netter (1990), in a direct response to Margotta *et al.* (1990), argue that their narrower window is more appropriate.

Schumann (1987, 1988) finds that New York firms experience a significant market decline associated with the introduction of the Governor's antitakeover package. However, Pugh and Jahera (1990) report a positive market reaction for the New York law in the period after the introduction and before passage in the House. Karpoff and Malatesta (1989) examine an aggregate sample of 141 firms (without antitakeover charter amendments in place) from 26 states. They find a significantly negative market reaction associated with news reports of the impending takeover legislation. The positive market reaction during the 10 days following the 2-day event window is reported as not significant, and a control sample of firms in those states with existing antitakeover provisions shows no significant market reaction. In contrast, Pugh and Jahera (1990), in a study of four states—New York, New Jersey, Ohio, and Indiana—conclude from the aggregated and individual state results that the legislative progress of antitakeover legislation had no impact on share value, and that the market reactions for firms with and without existing antitakeover charter amendments were essentially the same. Jahera and Pugh (1991) find similar results in a study of the Delaware antitakeover statute. In a study of the Pennsylvania takeover statute, the results of Szewczyk and Tsetsekos (1992) find that the affected firms suffer a significant price decline. However, that law is widely viewed as one of the most restrictive passed to date and there were an unusually large number of firms exercising an opt-out provision. Pound (1992), in another study relating to the Pennsylvania statute, examines characteristics of those firms that chose to opt-out as compared to those who did not. Looking at a variety of financial as well as non-financial characteristics, he concludes that such takeover defenses serve to entrench managers.

A related area of study deals with the impact of antitakeover charter amendments (ATCAs), as many such amendments have a structure similar

 

to that of antitakeover laws. However, one difference between state laws and charter amendments is that amendments must be approved by shareholders. Since shareholders must approve such amendments, one would expect the market reaction to charter amendments to be less severe than that for legislation, even if the management entrenchment reaction is dominant. DeAngelo and Rice (1983) find no impact upon passage of such amendments, while Linn and McConnell (1983) find evidence that shareholders may benefit from the approval of antitakeover amendments. Jarrell and Poulsen (1987) conclude that antitakeover provisions (other than fair price provisions) decrease the value of affected firms. However, McWilliams (1990) reports a positive impact for firms with low insider ownership (for all but fair price ATCAs). She concludes that the primary effect of an ATCA for low insider ownership firms is to increase management's bargaining power. Agrawal and Mandelker (1990) find a positive reaction for firms with high institutional ownership. The implication of their work is that institutions are more likely to monitor/prevent a bad ATCA. Lauterbach *et al.* (1991) find that only firms that are current takeover targets lose value when passing an ATCA. In cases where the firms are not current targets, but eventually become targets, the market reacts positively to the news of the ATCA. This result suggests that the ATCA signals that the firm is a potential takeover target, and/or that management now has a stronger bargaining position.

## TAKEOVER THREATS AND CORPORATE DECISION MAKING

Some researchers, e.g. Scherer (1988), claim a takeover threat harms economic efficiency as it may move management toward 'short-sighted' decision making. Under Stein's 'myopia' hypothesis (Stein, 1988, 1989), managers are 'trapped' into short-term investment strategies that emphasize projects with quick payoffs, and that also serve to inflate current earnings. In this model, markets are rational and investors expect managers to emphasize short-term projects. Both managers and investors realize this. Therefore, managers who do not follow such a strategy are still assumed to have adopted the short-run view and consequently, their firm share price suffers. In other words, informational asymmetry leads shareholders to undervalue assets with long-term cash flows. Consequently managers, concerned that investors will establish a low firm value, will forego profitable long-term investments in favor of short-term projects. Stein's argument holds that a takeover defense will allow managers the security to take a longer-run strategy by increasing expenditures on fixed capital, and on R&D. Shleifer and Vishny (1990) also develop a model predicting that threatened managers are likely to favor short-term assets.

Myopic decision making has been the focal point of several empirical studies in recent years. However, Stein contends that empirical testing of myopic behavior may be difficult. In his 1989 paper, Stein concedes that many forms of myopic behavior cannot be empirically refuted using conventional accounting data. That is, managers may be less inclined to skimp on reported expenditures such as plant and equipment, and perhaps R&D, as these items are available for public scrutiny. Under funding these areas would be fairly easy to detect in Stein's opinion. Thus, the projects most likely to be sacrificed would be more subtle, such as market penetration strategies where lower short-term margins may eventually result in greater market share.

Nonetheless, researchers have attempted to empirically test managerial myopia. Meulbroek *et al.* (1990) provide an early test of Stein's hypothesis using R&D expenditures to capture long run decision making. Their empirical results suggest that R&D as a percentage of sales actually declines after antitakeover charter amendments are adopted. Pugh *et al.* (1992) provide empirical evidence that R&D and fixed capital expenditures actually increase after the passage of antitakeover charter amendments. Narayanan (1985) examines the incentives for managers to make short-term decisions at the expense of longer-term shareholder interests. He finds that, under certain circumstances, managers' decisions are often short-term-oriented. More recently, Mahoney *et al.* (1997), using a much larger sample that also includes poison pill provisions, find that investment ratios decline significantly by the third year of adoption. They suggest that the most important conclusion of their work is that ATCAs do indeed affect strategic decision making.

Financial leverage may also be an effective weapon in the battle for corporate control. Prior

research has documented the relationship between leverage and probability of a takeover. Dann and DeAngelo (1988) report that the probability of a successful takeover decreases with firm leverage and that when a firm takes on significantly higher debt, it is effectively insulated from a hostile takeover. Stulz (1988) argues that when leverage is increased through the firm buying out other (passive) shareholders, the percentage of non-insider shares that an acquirer would need to purchase increases. The acquirer would thus need to offer a higher price to gain the necessary shares than otherwise. Israel's model assumes that increasing leverage transfers wealth from existing debtholders to equityholders, resulting in a rise in the stock price and raising the cost to an acquirer (Israel, 1991). Jensen (1986) suggests that financial leverage may, by committing future cash flows for payment of debt obligations, reduce agency costs and consequently make the firm a less desirable takeover target. The implication of the above is that state antitakeover laws should reduce management's reliance on leverage as a defense. However, Pugh *et al.* (1995) empirically examine the relationship between adoption of a takeover defense and subsequent capital structure decisions. They find that, overall, firms that adopted antitakeover charter amendments also increased debt, relative to their industry peers. Such a result suggests that leveraging may serve as a complement to other takeover defenses. Pugh *et al.* also find that ATCA firms that did not leverage were more likely to be merged/acquired, which supports the usefulness of a multiple factor defense strategy.

Managers probably have mixed feelings regarding the use of leverage as a takeover defense as the leverage could increase the chance of bankruptcy. More so than a diversified shareholder, managers have at risk a large part of their wealth in the form of job security, pension rights, stock options, professional reputation, etc. Management may also under-leverage to avoid added scrutiny (or monitoring) by banks and investment bankers. This under-leveraging hypothesis is supported by Friend and Lang (1988) who find an inverse relationship between the debt ratio and management's ownership share. In contrast, however, Kim and Sorensen (1986) and Amihud *et al.* (1990), find a positive relationship between the degree of insider ownership and the level of financial leverage, supporting the position that the owner/manager's goal is maximizing firm value, rather than managerial job protection.

Easterbrook (1984) suggests that owners can monitor managerial activity either directly (internal auditors, etc.) or indirectly to ensure that their interests are protected. One indirect means would be where shareholders force management to approve a higher dividend. This means of monitoring management activity has a drawback in the form of higher income taxes to the owner, although institutional owners usually do not pay this cost directly. The lower level of retained earnings forces management into the security markets or to banks for any additional (probably debt) capital. Following this scenario, the involved banker or bond rating agency now serves as the monitor. Another twist to the indirect monitoring, of course, would have management pile on significantly more debt—which also involves greater scrutiny by lenders.[1]

## DATA AND EMPIRICAL METHODOLOGY

We examine the changes in financial decision making for a sample of firms located in 16 states that adopted 20 second-generation antitakeover statutes during the time period from 1984 to 1988. The list of New York (NYSE) and American (AMEX) Stock Exchange firms that were incorporated in each state was compiled from the Disclosure database. We excluded banks, savings and loans, and public utilities as these firms tend to be subject to other regulations and in several cases were specifically exempted from the antitakeover legislation. We obtained the legislative history for each law in our sample from the appropriate state office. Firms with existing antitakeover charter amendments (ATCAs) were identified from Jarrell and Poulsen (1987), DeAngelo and Rice (1983) and from the data provided by the Investors Responsibility Research Center which tracks 1500 companies.

A number of financial ratios are examined to assess the effect of adoption of state antitakeover legislation. To capture changes in longer-run investment, two ratios are used: capital expenditures to assets, and R&D expenditures to assets. Both capital expenditures and R&D expenditures represent a long-term commitment of funds that reflect a longer-run position by management in terms of decision making. This is in contrast to the posi-

 

tion of myopia that many believe occurs. While dividend policy is usually expressed in the measurement of the traditional payout measure, dividends to earnings, we find this ratio to be especially noisy. For example, while one can screen all ratios for negative data, a sharp drop in earnings while maintaining a dividend (a common practice, especially during a recession) results in massive payout ratios. Thus, we relay more on changes in dividends as a percentage of sales and assets. To assess changes in leverage, the total debt to total asset ratio is analyzed.

For the years following and including the year of enactment, each of the ratios are compared with the corresponding value at the end of the year before implementation (referred to as the base year). This base year is noted as year $-1$, the year of enactment is year 0, etc. Therefore, a $[-1, 0]$ time window represents the change in the financial ratio from the end of year $-1$ to the end of year 0: thus, the change in the ratio that is concurrent with the enactment of the legislation. A 2-year $[-1, 1]$ time window shows the change from the end of the base year to the end of the year following the enactment. All event windows represent the firm's fiscal rather than calendar year.

To control for industry effects and indirectly, any market effects through its impact on the industry, we adjust any ratio changes by the equivalent change for the population of all those firms, by industry, on the Compustat Active and Research database. We use, but do not report any results on, an alternative control sample that excludes those firms in the sample states. These results do not vary appreciably from full control results. Industry controls are formed based on both two- and three-digit SIC codes with only the two-digit results presented. Each industry control group has at least five firms. In addition, firms must have non-zero financial ratios in both the base year and the comparison year in order to be included in the control sample. An industry-adjusted indicator is found by subtracting the control indicator from the state takeover firm indicator Equation (1), i.e.,

$$\text{Industry} - \text{adjusted change} = ((\mathrm{RT}_t - \mathrm{RC}_{-1}) - (\mathrm{RC}_t - \mathrm{RC}_{-1})). \quad (1)$$

RT refers to the appropriate ratio for the state law firm, while RC refers to the corresponding ratio for the industry control. This expression captures the change in the state law firm's financial ratio from the period prior to the enactment of the laws up to as many as 4 years after, and from this we subtract the equivalent change in the overall industry ratio. If the law had no effect, then one would expect the change in the state law firm ratio to be no different, on average, than the change in the overall industry ratio. Thus the null hypothesis is that the industry-adjusted ratio is not significantly different from zero. A positive change would indicate a rise in the state law firm's ratio over time, compared with any change in the average of the corresponding ratio for the control sample firms.

We conduct tests of significance using the mean and standard deviation of the state law firms for each ratio and for each event-window. We also conduct a binary test to see whether the proportion of adjusted ratios differs significantly from 50% (the null hypothesis). This last test serves to ascertain whether or not any results were primarily driven by a few outliers.

The change from the base year ($t = -1$) to the implementation year ($t = 0$), and each year following up to the 4 years after implementation ($+1$, $+2$, $+3$, and $+4$), is reported. The control for the base year is unique for each comparison year: to be included in that year's comparison, a control firm must not have missing data in either the base year or the comparison year.

The empirical analysis is conducted on the full sample of firms and then on two subsamples according to the presence of existing ATCAs. Many firms have adopted such antitakeover charter amendments to provide some insulation from a hostile takeover. For those firms, the passage of a state statute may add no further protection and consequently have little, if any, effect on decision making. That is, if one agrees with the management entrenchment hypothesis, then the adoption of the antitakeover amendment may have already served to entrench weak or ineffective management. Any change in financial decision making may depend upon whether or not one views the state statutes as complements to or substitutes for firm charter amendments. We also test the two subsamples for any differences in ratio change. For this, we use a standard differences in means test, and we also test whether the proportions are significantly different.[2]

**Table 1. Changes in Long-Term Capital Investment (Industry Adjusted)**

| Financial ratio | Year | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| *Changes for Full Sample of Firms* | | | | | |
| Capital expenditures to assets | 0.012 | 0.021 | 0.034 | 0.034 | 0.023 |
| *t*-Statistic | (4.27)* | (5.97)* | (8.48)* | (7.41)* | (4.68)* |
| Proportion showing increase | 62.21% | 64.78% | 66.34% | 64.19% | 60.46% |
| Binary *t*-statistics | (6.61)* | (8.05)* | (8.67)* | (7.37)* | (5.33)* |
| Sample size | 733 | 741 | 704 | 650 | 650 |
| Capital expenditures to sales | −0.203 | 0.056 | 0.185 | 0.270 | 0.100 |
| *t*-Statistic | (−2.38)** | (1.23) | (4.25)* | (5.55)* | (1.42) |
| Proportion showing increase | 61.11% | 64.64% | 67.76% | 67.91% | 64.56% |
| Binary *t*-statistic | (6.02)* | (7.97)* | (9.42)* | (9.29)* | (7.42)* |
| Sample size | 733 | 741 | 704 | 673 | 649 |
| *Changes for firms with* antitakeover *charter provisions* | | | | | |
| Capital expenditures to assets | 0.010 | 0.014[b] | 0.022[a] | 0.0198[a] | 0.005[a] |
| *t*-Statistic | (3.24)* | (3.29)* | (4.79)* | (3.67)* | (0.85) |
| Proportion showing increase | 63.91% | 63.91% | 64.30%[c] | 61.50%[a] | 53.33%[a] |
| Binary *t*-statistic | (5.80)* | (5.80)* | (5.88)* | (4.60)* | (1.32) |
| Sample size | 435 | 435 | 423 | 400 | 390 |
| Capital expenditures to sales | −0.051 | 0.037 | 0.089[c] | 0.124[b] | 0.022[c] |
| *t*-Statistic | (−1.08) | (1.07) | (2.54)** | (3.78)* | (0.47) |
| Proportion showing increase | 59.77% | 62.30% | 66.90% | 64.50% | 58.97%[a] |
| Binary *t*-statistic | (4.08)* | (5.13)* | (6.95)* | (5.80)* | (3.54)* |
| Sample size | 435 | 435 | 423 | 400 | 390 |
| *Changes for firms with no* antitakeover *charter provisions* | | | | | |
| Capital expenditures to assets | 0.017 | 0.031[b] | 0.050[a] | 0.053[a] | 0.056[a] |
| *t*-Statistic | (3.62)* | (5.46)* | (7.34)* | (6.69)* | (6.90)* |
| Proportion showing increase | 65.71% | 65.20% | 70.10%[c] | 71.53%[a] | 68.52%[a] |
| Binary *t*-statistic | (5.58)* | (5.43)* | (6.86)* | (7.23)* | (6.09)* |
| Sample size | 315 | 319 | 291 | 281 | 270 |
| Capital expenditures to sales | −0.304 | 0.023 | 0.210[c] | 0.294[b] | 0.201[c] |
| *t*-Statistic | (−2.73)* | (0.40) | (4.04)* | (4.72)* | (2.21)** |
| Proportion showing increase | 61.91% | 64.58% | 72.17% | 68.33% | 68.77%[a] |
| Binary *t*-statistic | (4.23)* | (5.21)* | (7.56)* | (6.14)* | (6.16)* |
| Sample size | 315 | 319 | 291 | 281 | 269 |

*, **, and *** denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
Firms with antitakeover charter amendments tend to increase capital expenditures at a rate significantly lower than firms without antitakeover charter amendments.
[a, b, c] Denote significance at the 1%, 5% and 10% levels, respectively, for the difference in means between the ratio change for the firms with and without antitakeover amendments, and for the difference in proportion test.

## EMPIRICAL RESULTS

Table 1 presents the industry-adjusted change in the ratios of capital expenditures to sales and capital expenditures to assets. We present results for all of the state law firms, and then for the firms with and without antitakeover charter amendments. The results presented for each period consist of the industry-adjusted change, the *t*-statistic, the proportion of industry-adjusted changes that are positive, the binomial test statistic for this proportion, and the sample size, respectively. In all cases, the industry-adjusted ratio is calculated relative to the year before the passage of the state law ($t = -1$). For example, the change denoted for year 0 in the tables refers to the change from $t = -1$ to $t = 0$. We note a statistical difference between ATCA and non-ATCA firms with footnotes next to the change in the ratio for the *t*-test, or by the proportion positive for the binomial test.

We find that state law firms, as a group, significantly increase capital spending as a percentage of assets and as a percentage of sales, relative to their industry peers, in the years following the enactment of state antitakeover legislation. All

 

**Table 2. Changes in Research & Development Expenditures (Industry Adjusted)**

| Financial ratio | Year | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| *Changes for Full Sample* | | | | | |
| R&D expenditures to assets | 0.005 | 0.010 | 0.010 | 0.015 | 0.020 |
| *t*-Statistic | (3.58)* | (5.82)* | (4.19)* | (5.57)* | (5.80)* |
| Proportion showing increase | 58.87% | 57.77% | 61.63% | 61.25% | 64.47% |
| Binary *t*-statistic | (2.79)* | (2.46)** | (3.64)* | (3.49)* | (4.37)* |
| Sample size | 248 | 251 | 245 | 240 | 228 |
| R&D expenditures to sales | −0.001 | 0.003 | 0.001 | 0.001 | 0.006 |
| *t*-Statistic | (−0.72) | (1.70)*** | (0.63) | (0.55) | (2.91)* |
| Proportion showing increase | 51.00% | 59.36% | 51.84% | 50.83% | 57.90% |
| Binary *t*-statistic | (0.32) | (2.97)* | (0.57) | (0.26) | (2.38)** |
| Sample size | 249 | 251 | 245 | 240 | 228 |
| *Changes for firms with* antitakeover *charter provisions* | | | | | |
| R&D expenditures to assets | 0.008[b] | 0.014[b] | 0.016[b] | 0.023 | 0.030 |
| *t*-Statistic | (4.92)* | (5.73)* | (4.61)* | (5.90)* | (6.88)* |
| Proportion showing increase | 59.04%[b] | 59.87%[a] | 59.62%[a] | 63.09%[a] | 67.35%[a] |
| Binary *t*-statistic | (2.48)** | (2.47)** | (2.40)** | (3.20)* | (4.21)* |
| Sample size | 188 | 157 | 156 | 149 | 147 |
| R&D expenditures to sales | 0.005 | 0.003[b] | 0.003[b] | 0.002[a] | 0.008[c] |
| *t*-Statistic | (4.30)* | (1.75)*** | (1.49) | (0.58) | (2.73)* |
| Proportion showing increase | 62.77% | 59.24%[a] | 55.77%[a] | 61.07%[b] | 62.59%[b] |
| Binary *t*-statistic | (3.50)* | (2.31)** | (1.44) | (2.70)* | (3.05)* |
| Sample size | 188 | 157 | 156 | 149 | 147 |
| *Changes for firms with no* antitakeover *charter provisions* | | | | | |
| R&D expenditures to assets | 0.013[b] | 0.022[b] | 0.029[b] | 0.030 | 0.033 |
| *t*-Statistic | (6.44)* | (9.51)* | (7.26)* | (8.39)* | (6.22)* |
| Proportion showing increase | 70.29%[b] | 77.86%[a] | 76.15%[a] | 84.13%[a] | 86.07%[a] |
| Binary *t*-statistic | (4.77)* | (6.59)* | (5.96)* | (7.66)* | (7.97)* |
| Sample size | 138 | 140 | 130 | 126 | 122 |
| R&D expenditures to sales | 0.004 | 0.009[b] | 0.010[b] | 0.011[a] | 0.015[c] |
| *t*-Statistic | (2.00)** | (5.02)* | (4.68)* | (4.71)* | (5.25)* |
| Proportion showing increase | 66.91% | 75.00%[a] | 74.62%[a] | 74.61%[b] | 74.59%[b] |
| Binary *t*-statistic | (3.99)* | (5.92)* | (5.61)* | (5.52)* | (5.43)* |
| Sample size | 139 | 140 | 130 | 126 | 125 |

*, **, and *** denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
Firms with antitakeover charter amendments tend to increase research and development expenditures at a rate significantly lower than firms without antitakeover charter amendments.
[a, b, c] Denote significance at the 1%, 5% and 10% levels, respectively, for the difference in means between the ratio change for the firms with and without antitakeover amendments, and for the difference in proportion test.

time period changes are positive and significant for capital expenditures to assets. For capital expenditures to sales, only two of the five periods exhibit positive significant changes. The first window is negative. However, the proportion of firms with increases is significantly greater than 50% for this and all other time windows.[3]

When examining firms divided into those with antitakeover amendments and those without, statistically stronger capital spending gains are observed for those without existing ATCAs—at least for the longer term windows. The fact that those firms with firm-specific takeover protection already in place show significant increases suggests that the takeover laws serve as a complement to provide even greater protection.

Table 2 presents the results for changes in R&D expenditures. These are similar to the results observed for capital expenditures. The full sample results generally show increases in R&D to assets, but weak results with respect to sales. For the subsample of firms with antitakeover amendments in place, the results are similar with significant positive increases in R&D to assets, but only

 

**Table 3. Change in Leverage (Industry Adjusted)**

| Financial ratio | Year | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| *Change for full sample* | | | | | |
| Total Debt to Assets | 0.004 | 0.006 | 0.010 | 0.008 | 0.012 |
| *t*-statistic | (1.07) | (1.13) | (1.50) | (1.23) | (1.81)*** |
| Proportion showing increase | 47.05% | 46.65% | 48.09% | 49.37% | 54.55% |
| Binary *t*-statistic | (−1.70)*** | (−1.94)*** | (−1.09) | (−0.35) | (2.52)** |
| Sample size | 831 | 836 | 811 | 792 | 770 |
| *Change for firms with* antitakeover *charter provisions* | | | | | |
| Total debt to assets | 0.008 | 0.009 | 0.012 | 0.014[c] | 0.018[c] |
| *t*-Statistic | (1.62) | (1.37) | (1.38) | (1.72)*** | (2.28)** |
| Proportion showing increase | 49.57% | 47.62% | 47.59% | 51.21% | 54.93% |
| Binary *t*-statistic | (−0.19) | (−1.02) | (−1.03) | (0.52) | (2.08)** |
| Sample size | 460 | 462 | 456 | 453 | 446 |
| *Change for firms with no* antitakeover *provisions* | | | | | |
| Total debt to assets | −0.001 | −0.003 | −0.004 | −0.010[c] | −0.009[c] |
| *t*-Statistic | (−0.18) | (−0.37) | (−0.45) | (−0.90) | (−0.76) |
| Proportion showing increase | 46.29% | 44.64% | 48.12% | 46.63% | 49.42% |
| Binary *t*-statistic | (−1.47) | (−2.12)** | (−0.73) | (−1.27) | (−0.22) |
| Sample size | 391 | 392 | 372 | 356 | 342 |

*, **, and *** denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
Firms with antitakeover charter amendments tend to increase leverage at a rate significantly lower than firms without antitakeover charter amendments.
[a, b, c] Denote significance at the 1%, 5% and 10% levels, respectively, for the difference in means between the ratio change for the firms with and without antitakeover amendments, and for the difference in proportion test.

mixed significance for R&D to sales. The strongest results are for the sample of firms without any firm specific takeover protection. For both assets and sales measures and for all time periods, the changes are positive and significant. Taken together, the results in Tables 1 and 2 imply that, prior to enactment of state antitakeover statutes, managers were avoiding, in some degree, long term investment. But with some existing protection, the firms were less likely to change investment policy in response to legislation.

We report the results measuring the change in leverage in Table 3. Overall, the changes show only minimal significance and the signs are not consistent. However, when we examine only the antitakeover amendment firm sample, the changes are all positive but with only one period's change being significant. Interestingly, the changes for those firms without antitakeover protection are all negative, but not significant. There is significance for the binary tests however. When we compare the two subsamples, we find some evidence (in the longest windows) that the charter amendment firms significantly raise debt relative to non-charter firms with the significance at the 10% level. These results, although not particularly strong, are consistent with the position that threatened firms, i.e., those that adopt ATCAs, are likely to use leverage as an additional defense but other firms now protected by state law are less likely to leverage.

In Table 4, we observe significantly higher industry-adjusted dividends as a percentage of assets, while the results for dividends to sales are weaker. For the full sample, the dividends to assets are significantly higher by the second year and remain so throughout the remainder of the analysis period. The binomial results confirm the *t*-tests. Full sample results for dividends as a percentage of sales are somewhat weaker and may reflect the less stable denominator used in this measure. The proportion positive is significant throughout, however. These results would be consistent with the argument that the protected firm needs greater external monitoring.

Analyzing the charter amendment and noncharter amendment firms separately reveals conflicting results. Overall, the binomial tests results indicate that a significant proportion of firms increase dividends with respect to sales, but not with respect to assets. In contrast, the dividend to asset

 

**Table 4. Changes In Dividend Distributions (Industry Adjusted)**

| Financial ratio | Year | | | | |
|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 |
| *Changes for full sample* | | | | | |
| Dividends to assets | 0.002 | 0.007 | 0.014 | 0.010 | 0.008 |
| *t*-Statistic | (0.78) | (2.09)** | (2.93)* | (3.53)* | (3.19)* |
| Proportion showing increase | 50.52% | 56.92% | 63.67% | 70.06% | 68.46% |
| Binary *t*-statistic | (0.25) | (3.33)* | (6.38)* | (9.16)* | (8.27)* |
| Sample size | 576 | 578 | 545 | 521 | 501 |
| Dividends to sales | −0.001 | 0.003 | 0.011 | 0.009 | 0.008 |
| *t*-Statistic | (−0.26) | (0.50) | (1.68)*** | (1.54) | (1.26) |
| Proportion showing increase | 53.82% | 56.06% | 69.54% | 72.55% | 72.06% |
| Binary *t*-statistic | (1.83)*** | (2.91)* | (9.12)** | (10.30)* | (9.87)* |
| Sample size | 576 | 578 | 545 | 521 | 501 |
| *Changes for firms with* antitakeover *charter provisions* | | | | | |
| Dividends to Assets | 0.003 | 0.007 | 0.014 | 0.012 | 0.010 |
| *t*-Statistic | (1.16) | (2.07)** | (2.64)* | (3.52)* | (4.07)* |
| Proportion showing increase | 54.90% | 59.28% | 67.02% | 73.82% | 70.61% |
| Binary *t*-statistic | (1.93)*** | (3.66)* | (6.58)* | (9.03)* | (7.67)* |
| Sample size | 388 | 388 | 373 | 359 | 347 |
| Dividends to sales | −0.002 | −0.000[c] | 0.004 | 0.008 | 0.004 |
| *t*-Statistic | (−0.24) | (−0.01) | (0.45) | (0.90) | (0.43) |
| Proportion showing increase | 51.29% | 60.57%[c] | 69.97% | 77.16%[b] | 72.62%[c] |
| Binary *t*-statistic | (0.51) | (4.16)* | (7.71)* | (10.29)* | (8.43)* |
| Sample size | 388 | 388 | 373 | 359 | 347 |
| *Changes for firms with no* antitakeover *provisions* | | | | | |
| Dividends to Assets | −0.000 | 0.010 | 0.016 | 0.009 | 0.004 |
| *t*-Statistic | (−0.05) | (1.30) | (1.66)*** | (1.82)*** | (0.75) |
| Proportion showing increase | 51.49% | 57.92% | 70.72% | 69.41% | 70.37% |
| Binary *t*-statistic | (0.42) | (2.25)** | (5.57)* | (5.06)* | (5.19)* |
| Sample size | 202 | 202 | 181 | 170 | 162 |
| Dividends to Sales | 0.003 | 0.008[c] | 0.023 | 0.010 | 0.011 |
| *t*-Statistic | (1.12) | (1.65)*** | (1.94)*** | (3.13)* | (3.22)* |
| Proportion showing increase | 51.98% | 52.97%[c] | 64.09% | 67.65%[b] | 65.43%[c] |
| Binary *t*-statistic | (0.56) | (0.84) | (3.79)* | (4.60)* | (3.93)* |
| Sample size | 202 | 202 | 181 | 170 | 162 |

*, **, and *** denote significance at the 0.01, 0.05, and 0.10 levels, respectively.
[a, b, c] Denote significance at the 1%, 5% and 10% levels, respectively, for the difference in means between the ratio change for the firms with and without antitakeover amendments, and for the difference in proportion test.

measure shows the ATCA firms with significant increases in more of the cells and/or at higher significance levels than the non-ATCA firms. However, none of the differences are statistically significant.

## SUMMARY AND CONCLUSIONS

Several theorists, using various assumptions, predict that managers concerned about a takeover threat will focus on projects with short-term and reasonably sure returns, as these managers believe that investors overly discount distant cash flows. However, with that threat reduced by defensive measures, whether state specific (i.e., laws) or firm specific (i.e., ATCAs), managers may be more inclined to adopt longer-term projects. This study finds that firms increase capital spending over the 2 years following state law enactment with the increases becoming stable thereafter. R&D expenditures show a similar pattern of change.

Firms seeking to avoid a hostile bid can usually increase leverage, which has been shown to be an effective takeover deterrent. While our results reveal no major increase in debt for either the full sample or the subsamples, there is some evidence that the charter amendment subsample increases

are greater than the non-charter subsample increases. This difference in debt implies that the charter firms are using debt as a complement to the other defensive measures in place, while the non-ATCA firms, presumably less concerned about a takeover threat, decrease leverage relative to the ATCA firms. This is consistent with the position that the law is a substitute for a debt-based defense.

If a barrier to a takeover is put into place, shareholders can opt to replace the outside monitoring, formerly provided by the market for corporate control, with alternative and more implicit measures. For example, by requiring that managers raise the level of dividends, the owners can help insure that the firm has to face the review process provided by outside monitors such as lenders, as the firm must rely more on outside capital for expansion. Overall, the industry-adjusted changes in dividend as a percentage of either assets or sales is higher, indicating increased external monitoring.

Taken together, the empirical results in this research indicate that firms change their financial decision making when afforded a degree of takeover protection. Both subsample results are consistent with earlier theories on the effects of takeover protection on corporate behavior. Equally interesting are the differences in behavior observed between those firms with antitakeover amendments and those without. The ATCA group shows behavior closer to that predicted by the 'entrenchment' school of corporate control. Those firms that had existing antitakeover charter amendments in place increased R&D, but had little change in capital expenditures relative to assets and sales. They did exhibit increased debt, which may be interpreted as providing even greater takeover protection. However, the dividends to assets also increased, suggesting greater monitoring. The firms with no antitakeover amendments showed no evidence of higher debt, weak or mixed evidence of higher dividends, and an increase in both capital expenditures and R&D. Of course, one interpretation of the differences in ATCA and non-ATCA firms is that ATCA firms simply have a 'head start' on non-ATCA firms. Nevertheless, it appears that takeover protection influences policy.

Clearly, we are unable to say whether these changes move firms closer to some 'optimal' level of investment. Since over-spending was one way of reducing cash reserves (reserves often attract raiders), the temptation to spend cash on less than attractive projects may be lessened by the takeover protection. However, the changes do appear related to the enactment of state antitakeover legislation. While this research takes the examination of the impact of state antitakeover laws beyond the usual event study, further research will be necessary to definitively document behavioral changes and to ascertain whether any such change result in higher firm value.

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## APPENDIX A: SAMPLE STATES WITH TYPE OF LAW AND SIGNING DATE[a]

| Sample states | Date signed into law |
|---|---|
| Connecticut | 6/07/88 |
| Delaware | 2/02/88 |
| Florida | 7/02/87 |
| Georgia | 3/03/88 |
| Indiana | 1/24/86 |
| Louisiana | 6/11/87 |
| Maine | 4/06/88 |
| Maryland | 4/11/89 |
| Nevada | 6/06/87 |
| New Jersey | 8/05/86 |
| New York | 12/16/85 |
| North Carolina | 4/23/87 |
| Ohio | 11/22/86 |
| Pennsylvania | 3/23/88 |
| Virginia | 3/31/88 |
| Wisconsin | 4/18/84 |

[a] Complete information on various state laws is available from the Investors Responsibility Research Center. The above listing represents only the 'second generation' laws upheld by the US Supreme Court. This study covers laws passed through 1989.

## NOTES

1. For empirical work supporting the role of dividends in the agency monitoring process, see Rozeff (1982), Lloyd *et al.* (1985), Dempsey and Laber (1992) and Dempsey *et al.* (1993).
2. Some firms had previously adopted poison pills, usually a dilutive measure that would be triggered by a hostile takeover attempt. These do not require shareholder approval and are not included in the ATCA subsample. As there was a question regarding the constitutionality of the laws, many statutes included poison pills endorsements designed to strengthen the position of in-state companies. Thus, in some cases, the state law made an existing measure even stronger. The Investor Responsibility Research Center has complete information on the various state statutes.
3. Since so many firms are from states that passed these laws, there is the question of an effective control group. Several large states never passed a law (Texas and California), while two of the largest in terms of firms were New York and Delaware, where enactments were over 2 years apart. We find that by examining just the early states alone, or just Delaware, the results are quite similar to the reported results. In all runs, capital expenditure changes peaked by the second year implying that Delaware firms could serve as a control for New York firms and vice versa.

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