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Empirical Studies of Corporate Law

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Abstract

This chapter reviews the empirical literature, especially the event study literature, as it relates to corporate and securities law. Event studies are among the most successful uses of econometrics in policy analysis. By providing an anchor for measuring the impact of events on investor wealth, the methodology offers a fruitful means for evaluating the welfare implications of private and government actions. This chapter begins by briefly reviewing the event study methodology and its strengths and limitations for policy analysis. It then discusses one of the limitations of more conventional empirical work (cross-sectional analysis), the problem presented by the fact that the characteristics of firms that are studied in relation to each other (such as ownership and mechanisms of corporate governance) or to firm performance are not exogenous but self-selected by firms. Thereafter it reviews in detail how event studies have been used to evaluate the wealth effects of corporate litigation. Subsequently, we focus on the methodology's application to corporate law and corporate governance issues, supplemented with discussion of other relevant empirical work as well. Event studies are emphasized because they have played an important role in the making of corporate law and in applied corporate finance and corporate law scholarship. The reason for this input is twofold. First, there is a match between the methodology and subject matter: the goal of corporate law is to increase shareholder wealth and event studies provide a metric for measurement of the impact upon stock prices of policy decisions. Second, because the participants in corporate law debates share the objective of corporate law, to adopt policies that enhance shareholder wealth, their disagreements are over the means to achieve that end. A further reason for emphasizing event study data is that they avoid the endogeneity concerns that can limit the results of other modes of empirical research in this area. Because the empirical literature related to corporate and securities law is vast, the chapter is necessarily selective and omits important topics and individual contributions in the field.

Keywords: event studies, corporate governance, empirical research in corporate law

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Abstract

This chapter reviews the empirical literature, especially the event study literature, as it relates to corporate and securities law. Event studies are among the most successful uses of econometrics in policy analysis. By providing an anchor for measuring the impact of events on investor wealth, the methodology offers a fruitful means for evaluating the welfare implications of private and government actions. This chapter begins by briefly reviewing the event study methodology and its strengths and limitations for policy analysis. It then discusses one of the limitations of more conventional empirical work (cross-sectional analysis), the problem presented by the fact that the characteristics of firms that are studied in relation to each other (such as ownership and mechanisms of corporate governance) or to firm performance are not exogeneous but self-selected by firms. Thereafter it reviews in detail how event studies have been used to evaluate the wealth effects of corporate litigation. Subsequently, we focus on the methodology's application to corporate law and corporate governance issues, supplemented with discussion of other relevant empirical work as well. Event studies are emphasized because they have played an important role in the making of corporate law and in applied corporate finance and corporate law scholarship. The reason for this input is twofold. First, there is a match between the methodology and subject matter: the goal of corporate law is to increase shareholder wealth and event studies provide a metric for measurement of the impact upon stock prices of policy decisions. Second, because the participants in corporate law debates share the objective of corporate law, to adopt policies that enhance shareholder wealth, their disagreements are over the means to achieve that end. A further reason for emphasizing event study data is that they avoid the endogeneity concerns that can limit the results of other modes of empirical research in this area. Because the empirical literature related to corporate and securities law is vast, the chapter is necessarily selective and omits important topics and individual contributions in the field.

1. Introduction

This chapter reviews the empirical literature, especially the event study literature, as it relates to corporate and securities law. Event studies are among the most successful uses of econometrics in policy analysis. The methodology, which studies the movement of stock prices due to specific events (unexpected actions by managers or policy-makers that are expected to affect firm values) was originally developed to test the hypothesis that the stock market was efficient--that publicly available information is impounded immediately into stock prices such that an investor cannot earn abnormal profits by trading on the information after its release. As evidence accumulated that the stock market was efficient, the methodology came to be used instead to value the event under study. It is through this latter usage that event studies have influenced policy analysis, particularly in corporate and securities law. This is no doubt because there is a natural fit between the methodology and those fields of law: the benchmark for evaluating the benefit of corporate and securities laws is whether they improve investor welfare, and this can be ascertained by what event studies measure, whether stock prices have been positively affected.

The event study methodology is well-accepted and extensively used in finance. Event study results have been used in several hundred scholarly articles in leading academic finance journals to analyze corporate finance issues, such as stock repurchases and stock splits and the relation between stock prices and accounting information, by examining the impact of earnings releases. Because the event study technique may be less familiar to non-financial economists than other techniques of empirical analysis, this chapter draws on our earlier work, Bhagat and Romano (2002a, 20002b) to begin by briefly reviewing the event study methodology and its

strengths and limitations for policy analysis. It then highlights a principal limitation of other modes of empirical research involving corporate law, the concerns implicated by an endogeneity problem, that firms' ownership and governance characteristics are not exogeneously given but are chosen by managers and investors. Thereafter we review in detail how event studies have been used to evaluate the wealth effects in corporate litigation, corporate law and corporate governance, integrating into the discussion, where relevant, research findings using other empirical approaches. The empirical literature relevant to issues in corporate and securities law is vast; the fact that the event study methodology is well-suited to evaluating the policy objectives of legal regimes undoubtedly helps explain its scope. As a consequence, the chapter is unavoidably selective in coverage and does not discuss many important topics and individual contributions to the field.

2. A Guide to Event Studies

The price of a stock reflects the time- and risk-discounted present value of all future cash flows that are expected to accrue to the holder of that stock. According to the semi-strong version of the efficient market hypothesis, all publicly-available information is reflected completely and in an unbiased manner in the price of the stock, such that it is not possible to earn economic profits on the basis of this information.[1] Therefore, only an unanticipated event can

[1] The efficient market hypothesis has been subjected to extensive empirical testing; perhaps the most intensive and extensive testing of any hypothesis in all of the social sciences. Most tests find evidence consistent with the efficient market hypothesis. Some studies find that the stock price responds within minutes of a corporate announcement such as a stock offering (see Barclay and Litzenberger, 1988).) Most finance scholars hold the view that the stock market in the U.S. is semi-strong form efficient (Welch 2000). But controversy regarding the efficient market hypothesis lingers. This controversy is based on issues regarding the definition and measurement of risk, and the relationship between risk and return. There is, however, agreement that these issues do not invalidate the event study methodology; see Fama (1990); and Brown and Warner (1985). Some legal scholars consider the stock market to be inefficient (see, e.g., Stout, 2005). But careful scrutiny of the efficient market anomalies have raised concerns

change the price of a stock. This change should equal the expected changes in the future cash flows of the firm or the riskiness of these cash flows. Thus, an event is said to have an impact on the financial performance of a firm if it produces an abnormal movement in the price of the stock. Broad stock market movements are usually subtracted from the stock's price movement in estimating the abnormal return. Event studies apply conventional econometric techniques to measure the effect of specific events, such as actions by firms, legislatures, and government agencies, on the stock price of affected firms. Their advantage for policy analysis is that they provide an anchor for determining value, which eliminates reliance on ad hoc judgments about the impact of specific events or policies on stock prices.

2.1. Mechanics of Event Studies

An event study has four component parts: defining the event and announcement day(s); measuring the stock's return during the announcement period; estimating the expected return of the stock during this announcement period in the absence of the announcement; and computing the abnormal return (actual return minus expected return) and measuring its statistical and economic significance.

In order to conduct an event study, the researcher first defines the event under investigation. Events are usually announcements of various corporate, legal, or regulatory action or proposed action. Examples of events that have been studied are: takeovers, equity offerings,

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about the asset pricing models used to construct the expected returns rather than the efficiency of the market (see Schwert, 2003). It should further be noted that finance theory does not depend on whether the average investor is rational (a criticism directed by users of the behavioral finance literature, e.g., Stout, 2005); it depends, as one finance scholar puts it, on the existence of "sharks," sophisticated investors who seek to profit from arbitraging pricing anomalies (Ross, 2005). There are a few fascinating examples in which arbitrage is ineffective at eliminating pricing differentials for a period of time (e.g., Lamont and Thaler, 2003), but these micro examples of violations of the law of one price are not very important for the question of market efficiency, occurring as they do, in isolated examples of individual stocks (Ross, 2005), and not always offering an exploitable arbitrage opportunity (e.g., Lamont and Thaler, 2003).

change in state of incorporation, adoption of antitakeover provisions, filing of lawsuits against corporations, deaths of corporate executives, and product recalls. After defining the event, the researcher searches for the first public announcement of the event. Identification of the first public announcement of the event is critical since, under the semi-strong form of the efficient market hypothesis, the impact of the event on the value of the firm would occur on the announcement date. Historically, the *Wall Street Journal Index* has been a popular source for announcement dates. More recently, computer accessible databases such as *Lexis-Nexis* and the *Thompson Financial Securities Data* are being increasingly used.

Conceptually, the announcement date is straightforward: It is the "day" the public is first informed of the event.[2] However, identification of this date can sometimes be nontrivial. Consider the announcement of a tender offer. It is possible and probable that news of the tender offer may have leaked to some market participants prior to the first public announcement. If such is the case then some impact of the tender offer on the firm's share price would occur prior to the public announcement. Some researchers have attempted to address this issue by considering the period several weeks (or months) through the announcement day as the announcement period. However, this obvious solution has two problems, one conceptual and the other technical. Conceptually, it is unclear if the leakage occurs over a few days, weeks, or months. Technically, as we increase the length of the announcement period, the noise-to-signal ratio increases, and it becomes increasingly difficult to measure the impact of the tender offer on share price with precision; we will discuss this later in the chapter. Aside from news leakage issues, at the time

[2] Currently, most event studies consider daily returns, hence the announcement period is typically a day. However, historically, some event studies have considered monthly returns - where the announcement need only be identified for a particular month; see the classic study by Fama et al. (1969). More recently, announcements have been identified to the nearest minute, and returns have been computed over minute and trade intervals such that the

the tender offer is announced there is uncertainty over whether it will be successful, and if successful, over the terms of the final offer. Sometimes the final resolution may not be known for months or even years.

Finally, some events may have several distinct event dates. For example, the enactment of a statute involves many different events, each of which may provide new information to investors regarding the likelihood of passage: when a bill is introduced, when a committee holds hearings on the bill, when one legislative chamber votes on the bill, when a conference committee approves a final bill, and when the executive signs the bill (if there is uncertainty over whether or not the bill will be vetoed). In this context, rather than treat the entire interval from bill introduction to executive signature as the event and run into the problems discussed above, the researcher can adapt the methodology to permit each event date to be identified separately; however, in doing so the researcher's bias and priors on what is a significant or relevant event enters the analysis.

After defining the event and announcement period, stock returns are measured for this period. If daily data are being used, this is straightforward: the return is measured using closing prices. Often there is uncertainty if the announcement is made before or after the close of trade on the exchange. To address this, the returns from the next day are often included.

Calculation of the third component is more complicated. While it is straightforward to measure the actual return for the announcement period, determination of the impact of the event itself on the share price is less so. To measure this impact, the *expected return* must be subtracted from the actual announcement period return. This expected return is the return that

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event study is conducted using intra-day data; see Barclay and Litzenberger (1988).

would have accrued to the shareholders in the absence of this or any other unusual event. The finance literature has considered several models of expected returns. These models can broadly be classified as statistical models or economic models:

Statistical models

The constant expected returns model:

$$R_{it} = \mu_i + \varepsilon_{it} \quad (1)$$

where, R_{it} is the return for stock i over time period t, μ_i is the expected return for stock i, and ε_{it} is the usual statistical error term.

The market model:

$$R_{it} = a_i + b_i * R_{mt} + \varepsilon_{it} \quad (2)$$

where, a_i and b_i are firm-specific parameters, and R_{mt} is the market return for the period t.

Economic models:

Capital Asset Pricing Model (CAPM):

$$R_{it} = R_f + \beta_i * (R_{mt} - R_f) + \varepsilon_{it} \quad (3)$$

where, R_f is the riskfree rate and β_i is the beta or systematic risk of stock i.

Arbitrage Pricing Theory:

$$R_{it} = \delta_0 + \delta_{i1}F_{1t} + \delta_{i2}F_{2t} + ... + \delta_{in}F_{nt} + \varepsilon_{it} \quad (4)$$

where, F_1, F_2,..., F_n are the returns on the n factors that generate returns, and δ are the factor loadings.

The statistical models are simple models of price formation that are not grounded in a specific economic theory. The economic models are derived from specific economic theories of

asset price formation. One can think of the economic models as placing certain restrictions on the statistical models (that is, on the slopes and intercepts being estimated).

Since several studies have found evidence inconsistent with the economic models, in particular CAPM, the use of such restrictions is not appropriate. Hence, most researchers have begun to rely on the statistical models to estimate the expected returns during the announcement period. For estimation of the market model, researchers most commonly use for the market portfolio, all of the stocks in the University of Chicago Center for Research in Securities Prices (CRSP) data base, the best source for stock return data; if all of the firms under study are small, however, using the CRSP portfolio or an index such as the S&P 500, whose average firm size is large, for the market adjustment, may produce biased estimates of the sample firms' abnormal return (see, e.g., Karpoff and Malatesta, 1995). The statistical models are usually estimated using between 100 and 200 daily returns in the period preceding the announcement period. The unexpected announcement period return, also known as the *abnormal return*, is computed as the actual return minus the estimated expected return. This abnormal return is the estimated impact of the event on the share value.

The fourth and final step is to compute the statistical significance of this abnormal return. The standard error of the residuals from the estimated statistical model can be used as an estimate of the standard error for the announcement period abnormal return. However, since individual stock returns are quite volatile, this standard error can be quite high relative to the abnormal return. Event studies usually consider a sample of firms that have made or been the subject of the same type of announcement; each firm's announcement typically has been made on a different calendar day. Another benefit of this approach is that it increases the likelihood

that no other information besides the event under study will be valued, since any additional unexpected information disclosed on one firm's announcement date will wash out with that on other firms' announcement days.

The abnormal returns of this sample of firms is averaged to obtain the *average abnormal return.* This average abnormal return is the estimated impact of the event on the share value. Next, the residuals from the estimated statistical model for these firms are averaged in *event time*. Usually the announcement day is defined as *event day 0*. *t* days before (after) the announcement day is defined as *event day -t* (*event day +t*). Finally, the standard error of these averaged residuals is used as an estimate of the standard error of the average abnormal return. Under the null hypothesis that the event under study has no impact on firm value, the expected average abnormal return is zero. Additionally, assuming that the announcement period returns for the sample firms are independently and identically distributed, then by the Central Limit Theorem the average abnormal return is normally distributed with mean zero.

The above estimate of the standard error of the average abnormal return would be appropriate if the announcement period abnormal return had the same variance as the estimation period residuals. However, substantial evidence in the finance literature suggests that stock returns in the announcement period are typically more volatile. Brown and Warner (1985) have suggested the use of cross-sectional test statistics when there is an increase in return variance during the announcement period. The standard error of the announcement period returns for the sample firms is used as an estimate of the standard error of the average abnormal return. Non-parametric tests, such as the Fisher sign test and the Wilcoxon signed rank test, are also conducted on the announcement period returns; the usual null hypothesis is that the median

announcement period return is zero.

2.2. Statistical Power of Event Studies

If an event changes firm value by a specific amount, say, 1 percent, can the event study technique detect it with some statistical precision? Equally important, from a statistical, financial and legal viewpoint: If an event has no impact on firm value, that is, the announcement period abnormal return is zero, can the event study technique provide this inference with some statistical precision? These questions can be addressed by considering the statistical power of event studies.

The power of a test statistic is considered in the context of a null hypothesis and an alternate hypothesis. (Hopefully, the alternate hypothesis would be economically meaningful.) In the context of event studies, the usual null hypothesis is that the event has no impact on firm value. An interesting alternate hypothesis could be that the event increases firm value by 1 percent. Under the assumption that the alternate hypothesis is true, the power of the event study in this context is the probability of observing a statistically significant test statistic. Brown and Warner (1985) and MacKinlay (1997) have studied the power of test statistics typically used in event studies. These authors show that the power of the event study technique improves as the number of firms in the sample increase, as the number of days in the announcement window decrease, and as the alternative of a larger abnormal return is considered against the null hypothesis of zero abnormal return.

The following numerical examples from MacKinlay (1997, Table 2) illustrate the power of the event test methodology, and how the power can be enhanced.

For a one day announcement window, a sample size of 25 firms, and a two-sided test

with a 5 percent significance level, the probabilities of detecting an abnormal return of 0.5 percent, 1.0 percent and 2.0 percent, are 24 percent, 71 percent and 100 percent, respectively.

- If the sample size were increased to 50 firms, the probabilities of detecting an abnormal return of 0.5 percent, 1.0 percent and 2.0 percent, are 42 percent, 94 percent and 100 percent, respectively.
- If the sample size were increased to 100 firms, the probabilities of detecting an abnormal return of 0.5 percent, 1.0 percent, and 2.0 percent, are 71 percent, 100 percent and 100 percent, respectively.
- For a two days announcement window (or equivalently, doubling of the standard deviation of the event day abnormal return), and a sample size of 25 firms, the probabilities of detecting an abnormal return of 0.5 percent, 1.0 percent and 2.0 percent, are 10 percent, 24 percent and 71 percent, respectively.
- For this two days announcement window and a sample size of 50 firms, the probabilities of detecting an abnormal return of 0.5 percent, 1.0 percent and 2.0 percent, are 14 percent, 42 percent and 94 percent, respectively.
- For this two days announcement window and a sample size of 100 firms, the probabilities of detecting an abnormal return of 0.5 percent, 1.0 percent and 2.0 percent, are 24 percent, 71 percent and 100 percent, respectively.

The above findings suggest that the power of the event study diminishes as the sample size decreases. An important question is can an event study be conducted with just one firm, that is, is a sample size of one acceptable? This question is especially relevant in court cases or regulatory injunctions involving only one firm. Conceptually, a sample of one is a rather small sample but this by itself does not invalidate the event study methodology. However, the statistical power with a sample of one is likely to be quite low. First, the variability of (abnormal) returns of a portfolio with just one stock in it is significantly higher than a portfolio with even a few, say five, stocks in it. Any standard finance or investment textbook will have a graph depicting the sharp drop in variance of portfolio returns as the number of stocks in the

portfolio increases from one, to five, to ten; after about fifty stocks in the portfolio the decrease in variance is quite small. Second, it is plausible that the announcement period return of an announcing firm will be affected by other information unrelated to the event under study. If a sample of one is considered, it is quite difficult to determine the separate effects on firm value of the announcement and of the unrelated information item(s). If the sample has several firms, then the effect on firm value of such unrelated information is likely to cancel out. As the sample size increases the effect on firm value of such unrelated information (goes to zero) becomes less and less significant.

The above findings also suggest that the power of the event study methodology diminishes substantially as the event period is increased from one to just two days. During the past decade an increasing number of finance studies have considered abnormal returns for long-horizon windows of several *years*. Such studies have considered abnormal returns over *twelve to sixty months* after the announcements of various corporate events like mergers, share repurchases, initial public and seasoned equity offerings, spin-offs, stock splits and dividends. Examples of such studies include Ikenberry et al. (1995), Loughran and Ritter (1995), Brav and Gompers (1997), McConnell et al. (2001), Desai and Jain (1996).

There are two reasons for studying the long-horizon window of several years after an announcement. First, the market may be unable to fully understand and incorporate the impact of the announcement on the company's value. Over time the market gets the opportunity to fully understand and incorporate the impact of the announcement on the company's value. Under this explanation, no new information related to the first announcement is released in this post-announcement period; hence this reason presumes a semistrong form *inefficient* market. Second,

new information pertinent to the initial announcement may become known to the market participants in the months or years subsequent to the announcement. For example, the initial announcement could be a takeover offer announcement. Before the offer is finalized and completed several events could occur that might change the likelihood of the success of the initial offer. Examples of such events include the arrival of a second bidder, litigation by target management, and regulatory objections (see Bhagat et al., 2005). In this scenario, one way to estimate the full impact of the initial event would be to consider the period from the initial announcement through final resolution - a period that could extend several years in some cases.

Kothari and Warner (1997), Barber and Lyon (1997), and Lyon et al. (1999) have raised serious concerns about the specification and power of the event study methodology when long-horizon windows of several years are considered. Kothari and Warner find that the event study test statistics used in the above-mentioned studies are generally misspecified in the sense that they reject the null hypothesis of normal performance when there is no abnormal performance too frequently given the significance level. Lyon et al. suggest ways to construct properly specified test statistics. However, these authors caution that while these test-statistics appear to be well-specified for random samples, they are not well-specified for non-random samples. Given that tests of most interesting finance and legal hypotheses are likely to lead to the construction of non-random samples, the concern with the misspecification of the long-run test statistics remains. Finally, Lyon et al. document the power of the long-horizon test-statistic to detect abnormal performance when it is actually present. Using state-of-the-art techniques, for a twelve-month buy-and-hold abnormal return, a sample size of 200 firms, and a one-sided test with a 5 percent significance level, the probabilities of detecting an abnormal return of 5 percent,

10 percent and 20 percent, are 20 percent, 55 percent and 100 percent, respectively. As the horizon increases beyond twelve months, and the sample size decreases, the power of the technique would further diminish. For these reasons, these authors (p. 198) conclude that "the analysis of long-run abnormal returns is treacherous." The problems with the specification of the methodology of long-horizon event studies, identified by these authors, have still not been resolved (see the literature review of Kothari and Warner, 2004, updating the earlier papers).

2.3. Cross-Sectional Determinants of the Stock Market's Reaction

Some researchers have sought to provide insight into the cross-sectional determinants of the stock market's reaction to the announcement of an event by examining the relation between the size of the abnormal return (AR) identified in an event study and characteristics specific to the event observations, that is, cross-sectional differences in the firms in the study. This approach can be used, for instance, where there are multiple hypotheses for the source of a wealth effect. The AR is the dependent variable in an ordinary least squares regression on the firm characteristics of interest:

$$AR_j = \delta_0 + \delta_1 x_{1j} + \ldots + \delta_M x_{Mj} + \eta_j \qquad (5)$$

where AR_j is the j^{th} abnormal return observation, x_{mj} , m = 1, . . . , M, are M characteristics for the j^{th} observation and η_j is the zero mean disturbance term that is uncorrelated with the x's. δ_m, m = 0, . . . , M are the regression coefficients.

This approach has been used in a variety of contexts. We note here an illustration from the methodology's application to assessing the wealth effects of corporate litigation discussed in section 4.1 below. Bhagat et al. (1994) provide an example of its use in determining the source of the significant negative wealth effects experienced by corporate defendants. They find that

the negative abnormal returns from litigation are significantly related to variables proxying for the defendant's proximity to financial distress.

An interpretational concern involving cross-sectional models is whether the abnormal return is related to the firm characteristics not only through the wealth effect identified in the event study but also through investors' anticipation of the event. Namely, investors may expect that firms with the specified characteristics will be subject to the event under study. In this case, the linear specification will not uncover a relation between the variables. Moreover, the greater the connection between the specified characteristics and the occurrence of the event–that is, the more highly the event is anticipated–the less likely a relation with be found in the cross-section because the information effect (the AR) will be that much smaller (Bhagat and Jefferis, 1991 and Prabhala, 1997). MacKinlay (1997) provides an overview and further references. The issue also implicates event studies in general, for if the anticipation is sufficiently great, there will be no announcement effect; given this possibility, some researchers have proposed the use of a conditional approach instead of the conventional approach that we have discussed (for example, Acharya, 1988). However, Prabhala (1997) shows that the significance test for the existence of an information effect in the traditional methodology is, in fact, well-specified. He also shows the circumstances under which the regression coefficients on firm characteristics in traditional cross-sectional models are proportional to the true cross-sectional parameters, and hence the associated t-statistics may be interpreted as a conservative (lower bound) estimate of the parameters' true statistical significance. We therefore conclude that the principal use of cross-sectional models will continue to be for refinement of researchers' theories for undertaking their event studies by explaining the results of the standard model, that is, for relating the size and sign of the abnormal

returns to specified firm and event characteristics.

2.4. Assessing the Usefulness of the Event Study Methodology for Corporate Law Research

The standards for conducting an event study are well established. A researcher can increase the power of an event study by increasing the sample size, or/and narrowing the public announcement to as short a time-frame as possible. Users of event studies for policy analysis in corporate law should therefore keep those factors in mind – sample size and event interval – when evaluating the results.

How large should the sample size be? In general, the larger the better. This said, the recommended sample size would depend on the magnitude of the abnormal return that one is trying to detect. If the abnormal return is about 1 percent (and the announcement window can be narrowed to one day) then a sample of 100 firms would be sufficient. If the abnormal return is only 0.5 percent (and the announcement window can be narrowed to one day) then we would recommend a sample of 200 firms. On the other hand, in general, a sample of just one firm would be quite inadequate in detecting an abnormal return of even 2 percent.

Regarding the length of the announcement window: the shorter the better. If one is using daily return data, an announcement window of one day is quite feasible and the window that we recommend. However, in going from one to two or three days, the loss in statistical power is not serious. But it is very difficult to have much confidence in the results of event studies that consider long-horizon returns of several years.

Many topics of interest to legal researchers involve events that will produce a data set that does not fall into these extreme cases. For instance, if the topic of investigation is the wealth effect of a specific state law, it may be impossible to identify a one-day event interval. Given the

nature of the legislative process, statutory changes typically occur over an interval significantly longer than one day, encompassing at least several months. In this setting, the researcher should try to narrow the event interval as best as he or she can: for instance, by examining the impact on returns only of specific event days (introduction of the bill, committee hearing, chamber vote) over the longer legislative interval. But identification of a single event day is not always possible. In addition, the number of firms affected by one state statute is likely to be substantially below 100 in all but a few states.

Inability to increase sample size or narrow the event interval does not indicate that the methodology cannot or should not be used: rather, it means that interpretation of results, such as a finding of insignificance, should be undertaken with care. For a sample of 50 firms and an event date consisting of a one week interval, for example, the event would have to produce an abnormal return of about 4 percent to be reliably detected, although there may be a further question whether a smaller level of abnormal returns would be considered economically significant.

3. Econometric Issues: Endogeneity in Corporate Governance and Performance Studies

Bhagat and Jefferis (2002) note that a vast theoretical and empirical literature in corporate finance considers the inter-relationships between corporate governance, takeovers, management turnover, corporate performance, corporate capital structure, and corporate ownership structure. In the following sub-sections we review the theoretical literature that provides support for relationships among subsets of these variables and the problem those relationships pose for empirical analysis.

3.1. Corporate Control, Performance, and Governance

The interpretation of takeovers and managerial turnover as mechanisms for discipline may be motivated by incentive-based economic models of managerial behavior. Broadly speaking, these models fall into two categories. In agency models, a divergence in the interests of managers and shareholders causes managers to take actions that are costly to shareholders. Contracts cannot preclude this activity if shareholders are unable to observe managerial behavior directly, but ownership by the manager may be used to induce managers to act in a manner that is consistent with the interest of shareholders.[3] Performance is reflected in managerial payoffs, which may be interpreted as including takeovers and managerial turnover. Grossman and Hart (1983) describe this problem.

Adverse selection models are motivated by the hypothesis of differential ability that cannot be observed by shareholders. In this setting, ownership may be used to induce revelation of the manager's private information about cash flow or his ability to generate cash flow, which cannot be observed directly by shareholders. Performance provides information to the principal about the ability of the manager, and is therefore reflected in managerial payoffs, which may include dismissal for poor performance. A general treatment is provided by Myerson (1979).

In this setting, takeover defenses may be interpreted as a characteristic of the contract that governs relations between shareholders and managers. The presence of takeover defenses is affected by the same unobservable features of managerial behavior or ability that are linked to

[3] This suggests a positive relationship between ownership and performance. However, as pointed out by Stulz (1988), ownership has both an incentive effect through a stake in the firm's cash flows and an entrenchment effect through control of votes. As ownership gets large enough, there is no way to take a corporation over. Recent evidence in Himmelberg et al. (1999) suggests that econometric estimation of the effect of managerial ownership may be quite difficult for the reasons noted in this section.

ownership and performance.

3.2. Corporate Governance and Performance

Corporate governance could affect firm performance, but firm performance could also affect governance. The factors that determine governance structure are not well understood, but governance, for example, board composition, is known to be related to industry (Agrawal and Knoeber, 2001) and to a firm's ownership structure (firms with high inside ownership have less independent boards; see Bhagat and Black, 2002). If board composition is endogenous, ordinary least squares (OLS) coefficient estimates can be biased (because the error terms are correlated with the endogeneous variable). Simultaneous equations methods can address endogeneity, but are often more sensitive than OLS to model misspecification; for an example of the sensitivity of results depending on the model used to examine the relationship among board composition, insider ownership and performance, in which "relatively minor changes in [the full model and first-stage regression] have profound effects on overall results" see Barnhart and Rosenstein (1998, p. 14).

3.3. Corporate Ownership and Performance

Similar endogeneity concerns are implicated by the relation between corporate ownership and performance. For reasons related to performance-based compensation and insider information, firm performance could be a determinant of ownership. For example, superior firm performance leads to an increase in the value of stock options owned by management which, if exercised, would increase their share ownership. In addition, if there are serious divergences between insider and market expectations of future firm performance, then insiders have an incentive to adjust their ownership in relation to the expected future performance; Seyhun (1998)

provides evidence on this. Himmelberg et al. (1999) argue that the ownership structure of the firm may be endogenously determined by the firm's contracting environment which differs across firms in observable and unobservable ways. For instance, if the scope for perquisite consumption is low in a firm then a low level of management ownership may be the optimal incentive contract.

The endogeneity of management ownership has also been noted by Jensen and Warner (1988, p.13): "A caveat to the alignment/entrenchment interpretation of the cross-sectional evidence, however, is that it treats ownership as exogenous, and does not address the issue of what determines ownership concentration for a given firm or why concentration would not be chosen to maximize firm value. Managers and shareholders have incentives to avoid inside ownership stakes in the range where their interests are not aligned, although managerial wealth constraints and benefits from entrenchment could make such holdings efficient for managers."

The primary responsibility of the corporate board of directors is to engage, monitor, and, when necessary, replace company management. The central criticism of many modern public company boards has been their failure to engage in the kind of active management oversight that results in more effective corporate performance. It has been suggested that substantial equity ownership by the outside directors creates a personally-based incentive for active monitoring. An integral part of the monitoring process is the replacement of the CEO when circumstances warrant. An active, non-management obligated board will presumably make the necessary change sooner rather than later, as a poorly performing management team creates more harm to the overall enterprise the longer it is in place. On the other hand, a management dominated board, because of its loyalty to the company executives, will take much longer to replace a poor

performing management team because of strong loyalty ties. Consequently, it may be argued that companies where the CEO is replaced expeditiously in times of poor performance may have more active and effective monitoring boards than those companies where ineffective CEOs remain in office for longer periods of time. Bhagat et al. (1999) find that when directors own a greater dollar amount of stock, they were more likely to replace the CEO of a company performing poorly.

The above discussion focuses on the costs of diffused share-ownership; that is, the impact of ownership structure on performance. Demsetz (1983) argues that since we observe many successful public companies with diffused share-ownership, clearly there must be offsetting benefits, for example, better risk-bearing. Sometimes, as in the case of leveraged buyouts, when the benefits are substantially less than the costs of diffused share-ownership, we do observe companies undergoing rapid and drastic changes in their ownership structure. In other words, ownership structure may be endogenous.

3.4. Corporate Governance and Ownership Structure

The corporate charter is a contract that governs relations between managers and shareholders. Most studies of management-sponsored antitakeover amendments adopted by the shareholders focused mainly on the wealth effects associated with the amendments, as discussed in section 4, and secondarily on the ownership structure of the firms that adopt them. There are patterns associating ownership and takeover defenses. Jarrell and Poulsen (1987), for instance, report above-average insider holdings and below-average institutional holdings in a large sample of firms enacting amendments. It is also plausible that these corporate characteristics are endogenously determined. Shareholder support for amendments involving takeover defenses has

been attributed to free-rider problems (Jarrell et al., 1988). Bhagat and Jefferis (1991) argue that the transaction costs that give rise to the free-rider problem are, at least in part, an endogenous consequence of strategic behavior by managers using the proxy process that might be eliminated through either changes in the charter or proxy reform. The next section provides a model for empirical research that takes into account the endogeneity across corporate governance, and in particular takeover defenses, ownership structure and performance.

3.5. Simultaneous Equations Estimation

Given the above considerations regarding the endogeneity among corporate governance, ownership, takeovers, and performance, we propose the following system of equations as appropriate for modeling the interactive effect.

$$\text{Performance} = f_1(\text{Ownership, Governance, Takeover}, Z_1, \varepsilon_1) \quad (1)$$

$$\text{Governance} = f_2(\text{Ownership, Performance, Takeover}, Z_2, \varepsilon_2) \quad (2)$$

$$\text{Ownership} = f_3(\text{Performance, Governance, Takeover}, Z_3, \varepsilon_3) \quad (3)$$

$$\text{Takeover} = f_4(\text{Performance, Governance, Ownership}, Z_4, \varepsilon_4) \quad (4)$$

In equations (1) through (4) the Z_i are vectors of instruments that affect the dependent variable. The error terms ε_i are associated with exogenous noise and the unobservable features of managerial behavior or ability that explain cross-sectional variation in ownership, performance and governance. Identification requires some combination of exclusion restrictions, assumptions about the joint distribution of the error terms, and restrictions on the functional form of the f_i. Maddala (1983) discusses restrictions that identify the model when the ε_i are normally distributed. Identification in *single equation* semiparametric index models, where the functional form of f_1 is unknown and the explanatory variables in that equation are

continuous, known functions of a basic parameter vector is discussed by Ichimura and Lee (1991). Estimation of a system of the form (1)-(4) in the absence of strong restrictions on *both* the f_i and the joint distribution of error terms is, to the best of our knowledge, an unsolved problem.

We are unaware of a model of takeover defense that implies specific functional forms for the f_i. If these functions are linear, identification may be attained through either strong distributional assumptions or exclusion restrictions. Maddala (1983) and Amemiya (1985) discuss restrictions on the ε_i that identify the model in the absence of exclusion restrictions. But these restrictions are inconsistent with incentive-based explanations of takeover defense, since unobservable characteristics of managerial behavior or type will be reflected in all of the ε_i. Using panel data and firm-fixed effects it would be possible to control for unobservable characteristics of managerial behavior or type; however, a system such as in (1)-(4) would have to be specified and estimated. Aside from the non-trivial data collection effort required to estimate such a system, this system would not be identified when $Z_2 = Z_3 = Z_4$. Exclusion restrictions are therefore the most likely path to identification.

However, exclusion restrictions would be difficult to justify. Intuitively, variables that affect the likelihood of a takeover will be reflected in the structure of takeover defenses. A detailed microeconomic model, based on specific assumptions about preferences and production possibilities, might yield exclusion restrictions. But we are unaware of any candidates and suspect that the same features of the data that yield identification (for example, a Cobb-Douglas production technology) would render the model inconsistent with the data; see Griliches and Mairesse (1999).[4]

[4] In a recent paper, Coles et al. (2003) construct a structural model of the firm and calibrate the exogenous

In the absence of distributional assumptions or functional form restrictions, the econometric model (1)-(4) is not identified when $Z_2 = Z_3 = Z_4$.

The difficulties presented by a complete simultaneous equation model is one reason why event studies are the more preferable form of empirical research in corporate law.[5] Our review of the empirical literature will consequently primarily focus on stock price studies; we will touch on econometric analyses of corporate governance, ownership and performance, but many of those studies are subject to the caveat that they do not control for the endogeneity concerns identified in this section.

4. Empirical Research in Corporate Law

4.1. Shareholder Wealth Implications of Corporate Lawsuits

In the 1980s-1990s, business frequently complained about a litigation explosion and the costs associated with legal disputes, raising concerns that the U.S. legal system affected firms' competitiveness in global markets. Surveying corporate legal department budgets, Economic Analysis Group, Ltd., Craig Consulting Co., and Endispute, Inc. estimated that salaries to in-house lawyers and fees to outside counsel for the 1000 largest public companies hit $20 billion in 1991.[6] Large liability or settlement payments undoubtedly dwarf direct legal costs. Indeed,

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parameters of the model to data. While these authors have made a significant contribution to addressing the endogeneity concerns in this literature, the problems of estimating firm production functions, as noted in Griliches and Mairesse (1999), are still relevant.

[5] Event studies of firm choices, such as corporate governance mechanisms or corporate domicile discussed in section 4, that are voluntarily undertaken by firms, avoid the endogeneity concern because they study the wealth effect of the choices of firms that have (voluntarily) made the choice. No claims are made in an event study that the price effect would be the same for firms that have not taken the particular decision, as it is for the firms under study.

[6] An article in Forbes, citing statistics from a Rand study on tort litigation, estimated the direct costs of all lawsuits, including those involving business, to be as high as $117 billion a year (Spencer, 1992, p. 40). Another estimate (id., p. 41) placed litigation costs as high as 2.5 percent of GNP.

some mass torts, such as the breast-implant cases against Dow Corning and the Dalkon Shield cases against A.H. Robins, have threatened the existence of defendant firms, forcing them into insolvency proceedings.

It is, however, possible that estimates of business' legal costs are overstated, reflecting political agendas or overreaction to media coverage of a few spectacular cases. Many large publicized damage awards, for example, are overturned on appeal or significantly reduced in a settlement (Shanley and Peterson, 1987). In addition, much corporate litigation involves contract disputes between firms.[7] But concerns over litigation continued in the 1990s: tort reform was one of ten points in the Republican party's "Contract with America" 1994 campaign platform under which it gained a majority in the House of Representatives for the first time in 40 years, and successful litigation initiatives against tobacco companies that produced a settlement of over $200 billion have led to other industry targets, such as health care providers and fast food restaurants.

Event studies can be used to identify and measure the costs of lawsuits against firms, and they have been used to evaluate the costs of interfirm litigation. The results are quite uniform: when the costs and benefits to both parties are computed, litigation is not a positive net present value event for both firms considered together. This result is not surprising: it is an impetus motivating the successful move to greater use of alternative dispute resolution, particularly in the corporate context.

4.1.1. Wealth Effects of Corporate Litigation

The primary focus in the literature has been on "leakages" in the litigation process:

[7] For example, a Rand study of Fortune 1000 companies found that contract disputes between firms constituted the largest single category of federal civil suits (Dungworth and Pace, 1990).

negative wealth effects upon netting the parties' gains and losses. For example, Cutler and Summers (1988) examine the Pennzoil/Texaco lawsuit, which involved a claim of tortious interference of a merger contract, and find significant costs to both parties from the dispute, with the losses for the losing defendant Texaco, being larger than the gains for the winning plaintiff Pennzoil. The combined drop in value for the two firms was $2 billion. They attribute the loss mainly to an increase in the probability of financial distress for Texaco. Engelmann and Cornell (1988) study the wealth implications around filings, settlements, and verdicts for a sample of five interfirm disputes. They too observe combined wealth losses, or leakages, to the litigating parties. Bhagat et al. (1994) examine the market reaction to lawsuit filings and settlements for a much larger sample of 550 interfirm disputes. They observe combined wealth losses arising from lawsuit filings and find that these leakages are a result of increased probability of financial distress for the defendant. In addition, they find that defendant firms gain upon the announcement of a settlement.

Ellert (1975) examines the market responses to announcements of legal challenges to mergers under Section 7 of the Clayton Act by the Federal Trade Commission and Department of Justice over the period 1950-1972. During the month of the announcement of the suit, the market adjusts defendant firm value downward by about two percent. Bizjak and Coles (1995) analyze a more homogeneous but still large sample of interfirm disputes -- private antitrust suits. To our knowledge, this is the only study to find a positive stock market reaction to plaintiffs upon any sort of lawsuit filing. They also find that the joint wealth effects associated with the announcement of a filing tend to be negative and that leakages in antitrust disputes are attributable to court-imposed behavioral restraints, the likelihood of follow-on suits, and an

increased likelihood of financial distress. Moreover, they confirm that factors which affect the costs of litigation also affect behavior in suit, settlement, and trial. In their sample of antitrust lawsuits, the parties are more likely to settle when the suit involves potential restrictions on the defendant's business practices and when there is the potential for financial distress.

Event studies have also been used to address the validity of the government's antitrust actions against various corporations. The argument goes that for a corporation exercising market power, the government's antitrust action against it will lower its share price *and* increase the share price of its competitors. The competitors will experience a positive reaction since the government's antitrust action increases the odds that these competitors will be competing in an industry without a dominant company that might be exercising market power. Bittlingmayer and Hazlett (2000) use this intuition to evaluate the U.S. Department of Justice's recent antitrust action against Microsoft. They find evidence inconsistent with the joint hypothesis that Microsoft's behavior has been anticompetitive and that the antitrust enforcement enhances economic efficiency.

Finally, Bhagat et al. (1998) analyze a large sample of lawsuits in which at least one side, plaintiff or defendant, is a corporation. To estimate the implications of litigation for shareholder wealth, they examine the abnormal stock market reaction to filing and settlement announcements. They find that the average wealth loss for a defendant is 0.97 percent of the market value of the equity, or $15.96 million. They further test whether characteristics of the suit, such as legal issue, type of opponent, and firm characteristics (such as firm size and proximity to bankruptcy) have power to explain cross-sectional variation in these wealth effects.

Bhagat et al. (1998) find that no matter who brings a lawsuit against a firm, be it a

government entity, another firm, or private citizen, defendants experience economically-meaningful and statistically-significant wealth losses upon the filing of the suit. Furthermore, they find some evidence that the identity of the plaintiff has an influence on the wealth effects upon filing. Defendants involved in government suits suffer larger declines in shareholder wealth (-1.73 percent) than defendants involved in lawsuits with other firms (-0.75 percent) or with private parties (-0.81 percent).[8] This result is consistent with the notion that government agencies have more leverage and resources at their disposal to use in a legal battle and/or the type of suit most frequently filed by government agencies, such as an environmental action, is typically more serious. Indeed, they do find that certain types of litigation are more costly for defendants. Environmental suits (-3.08 percent), product liability suits (-1.46 percent), and violations of securities laws (-2.71 percent) result in significantly greater wealth losses for defendant firms, compared to disputes involving antitrust or breach of contract issues. It appears that, at least for some types of suits, the actual or potential lawsuit is associated with a large decline in shareholder wealth and a corresponding nontrivial deterrent effect. The results of these and other studies that consider the impact of litigation on corporate value are summarized in Table 1.

Bhagat et al. (1998) also find that the defendant wealth effect on announcement of a filing is significantly positively related to the size of the firm and, in some specifications, significantly negatively related to the firm's proximity to bankruptcy. One possible explanation for this effect of firm size is that larger firms can have more bargaining power or more resources to devote to the legal dispute (e.g., because of better access to capital markets or "deep

[8] Note that a related finding in event studies of government legal and regulatory actions against firms is that the market appears to impose a higher sanction than actual criminal sanctions and the reputational losses are of equal

pockets"). The results on proximity to bankruptcy are consistent with other work that has identified potential bankruptcy costs as an important indirect cost of a legal dispute (Bhagat et al., 1994; Bizjak and Coles, 1995; and Cutler and Summers, 1988).

For plaintiff firms, they find no significant wealth effects associated with lawsuit filings. They also find that the identity of the defendant -- that is, whether the defendant is another firm, a government agent, or private citizen -- and the legal issue are not related to the stock price change of the plaintiff when a suit is filed. They are, accordingly, unable to detect in the data evidence of strong incentives for plaintiffs to sue.

Bhagat et al.'s (1998) results indicate that when a defendant firm settles a suit with another firm there is a significant wealth increase. It is surprising that, in contrast, they can detect no significant wealth change for defendants upon announcement of a settlement when the opponent is a governmental entity or noncorporate private party.[9] In addition, the wealth effect of a settlement for the defendant is unrelated to the legal issue. For plaintiff firms the wealth implications of settlements appear to be trivial. On average, they find no significant wealth gains or losses to plaintiff firms who settle a lawsuit, and neither legal issue nor the identity of the opposing party has power to explain variation in those returns. These data suggest that lawsuits are not positive net present value undertakings for plaintiffs, since the absence of positive abnormal returns on settlement cannot be explained by investor anticipation upon the lawsuit filing (there was no significant positive gain at the earlier date).

Two caveats are in order regarding the findings concerning the wealth effects of

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magnitude for civil fines as for criminal fines (see Bhagat and Romano, 2001a, pp. 161-162).

[9] In a recent paper, Haslem (2003) documents a significant negative market response to settlements for defendant corporations. He also finds a marginally positive response if the defendant corporation litigates – regardless of the outcome.

corporate litigation discussed in this section. First, the announcement-period abnormal return understates the expected decline in shareholder wealth. The reason is that information about the forthcoming suit may already have reached the market (prior to the announcement in the press) and therefore already be reflected in the market price of the firm's stock. Most of the studies have attempted to reduce the severity of this problem by excluding cases where there was indication in published news reports that information about the suit had previously reached the public. Second, event studies of litigation report the average market response associated with the filing or settlement of a lawsuit. Under what circumstance would a court, corporate manager or corporate legal counsel use such information? Virtually, no litigation situation is an average situation. Each suit represents a unique set of costs and benefits, and managers deciding whether to launch or defend a suit will consider the specific costs and benefits of their situation, rather than the average market response to a collection of suits that may or may not share similar characteristics. However, it is precisely information in a wide spectrum of suits that is most useful for the ex ante formulation of public policy and corporate strategy.

4.1.2. Corporate Litigation brought by Shareholders: Derivative and Securities Lawsuits

Studies have investigated the wealth effects of corporate litigation involving suits brought by shareholders against corporate officers and directors for fiduciary breach (e.g., Fischel and Bradley, 1986; Romano, 1991). These suits are referred to as derivative suits, as the shareholder brings the action in the name of the corporation rather than herself; the right to sue is derived from the loss experienced by the corporation (technically the shareholder sues the board of directors for not pursuing the fiduciary claims against the individuals accused of misconduct, since corporate law places the litigation decision in the board; under specific circumstances

when the board refuses to take action, courts permit the plaintiffs to proceed with the suit in place of the corporation). Shareholders may sue officers and directors for fiduciary breach in their own right when the misconduct affects their rights as shareholders (voting rights, dividend rights, etc.); these suits may be brought individually or in a representative capacity as a class action. Plaintiffs prefer to bring that type of suit when possible, in order to avoid a variety of procedural barriers that apply to derivative suits.

Because the efficacy of shareholder litigation as a device to monitor is hampered by collective action problems –the cost of bringing the lawsuit will typically be greater than the shareholder's pro rata benefit, although less than the aggregate gain across all owners—the law provides financial incentives to attorneys to prosecute cases. Successful plaintiffs are awarded counsel fees, even in the absence of a monetary recovery to the plaintiff, as is often the case in derivative claims, and the calculation of the fee award includes compensation for risk beyond hours worked. This resolution of the collective action problem creates an agency problem in that the attorney's incentives need not coincide with the shareholders' interest (Coffee, 1985). Compounding that agency problem is the interaction between the legal regime on indemnification and directors' and officers' liability insurance: individual expenditures on settlements or judgments in derivative litigation may not be indemnified, while liability insurance policies exclude deliberate dishonesty or fraud. Individual directors and officers have a powerful incentive to settle, even if the case has no merit, as that will avoid the possibility of an adjudication of fraud invalidating the insurance policy, however remote, and thereby guarantee no out-of-pocket expenditures.

As is true of most civil litigation, the majority of shareholder suits settle (Romano, 1991,

p.60). The attorney-client agency problem, when coupled with the incentives of defendants to settle, appears to produce two problematic trends: frivolous claims tend to be overcompensated and meritorious claims undercompensated, and the plaintiffs' bar is the principal beneficiary of the system (see Romano, 1991). The event study data regarding the wealth effects of the litigation are, however, mixed. Romano (1991) finds no significant price effect for derivative lawsuit filings.[10] One explanation of the difference between this finding and that of other corporate litigation summarized in table 1 is that the market anticipates the outcomes of derivative suits: the suits typically result in no or very low monetary rewards. In Romano's sample, for instance, most derivative suits did not produce a monetary recovery, and for those that did, the value was less than 0.5 percent of firm assets, or $0.15 per share net of attorneys' fees (pp. 61-62). Romano also finds no significant price effect for lawsuit dispositions: dismissed derivative suits have insignificant negative returns, but so do settled suits. Fischel and Bradley (1986) find a significant negative reaction to suit terminations and an insignificant positive reaction to judicial decisions not to dismiss. Although this result might suggest that the market views derivative suits positively, they conclude that the suits have no significant wealth effects because when returns are cumulated around the filing date they are insignificant.

The event study methodology is not directed at measuring any potential deterrent effect of shareholder lawsuits. Such a third-party effect would not be incorporated in a sued firm's stock price. Because in order for lawsuits to deter misconduct generally, managers who are sued need to suffer a penalty or sanction (there must be specific deterrence), Romano (1991) investigated whether top management of sued firms experienced a decline in compensation, an

[10] Romano does find a significantly negative price effect for the filing of a class action, which is in keeping with the findings in the literature reported in the previous section.

increased frequency of termination, or a decrease in directorships held on other companies' boards, compared to management of firms, matched by industry and size, that were not sued. Romano failed to find any significant differences across management on all of the dimensions she measured, compensation, employment, and directorships, and therefore concluded that derivative suits do not provide specific deterrence. This finding raises the possibility that the litigation does not serve as a mechanism of general deterrence. Romano's study suggests that shareholder litigation does not provide much in the way of benefit (compensatory or deterrent) to investors, as opposed to their attorneys, and therefore lent credence to the view that many of the claims of misconduct underlying such suits are insubstantial and that the procedures that have been devised to restrict the litigation should be expanded rather than reduced.

To the extent that litigation patterns have shifted since Romano's study, the implication regarding a need for reform may no longer be accurate. Romano found that litigation over acquisitions and defensive tactics, which constituted approximately 40 percent of the disputes in her sample, increased fivefold over the period of her study, the late 1960s through the beginning of 1987. Thompson and Thomas (2003) more recently examined shareholder litigation and report that over 80 percent of the shareholder suits filed in 1999-2000 in the Delaware Chancery court, which is the leading corporate law jurisdiction, involved acquisitions. As a consequence, most of the claims in Thompson and Thomas' sample were brought as class actions, rather than derivative suits. Thompson and Thomas find that the greatest benefits (increased premiums) occur in the class action cases of acquisitions by controlling shareholders. In comparing the derivative and class action claims, characteristics they consider to be indicia of nonmeritorious claims – multiple lawsuits, with identical language in the complaints, filed by a small set of law

firms very shortly after the announcement of the event on which the litigation is based, and few substantive motions filed after the initial complaint -- are more frequently observed in the class action acquisitions cases than the derivative suits. They therefore conclude, in contrast to the implications of Romano's earlier study, that relaxing the procedures for derivative actions and tightening those for class actions would be beneficial. Weiss and White (2004) provide further support for such a conclusion: they analyze 104 merger-related class actions brought in Delaware from 1999-2001, and describe an out-of-control process of "opportunistic filings" and collusive settlements in which attorneys are awarded fees in amounts in relation to recoveries that the authors consider suggest "little value" added by the attorneys to the recoveries.

Another class of suits brought by shareholders against corporations are securities class actions (lawsuits brought by investors with losses on purchases or sales of stock for violations of the federal securities laws). As in the derivative suit context, the litigation environment implicates concerns over collusive settlements, in which defendants pay damages on frivolous claims to avoid the higher cost of litigation and an organized plaintiff's bar takes a large share of the recovery (which is typically paid by insurers). And, as in the state law claim context, as claims paid increase, liability insurance becomes more expensive, and exposed firms lobby legislators for relief.[11] One question motivating empirical research on securities litigation is related to those concerns, whether suits are frivolous or, as some researchers have put it, whether settlements reflect the merits of claims (Alexander, 1991). For example, Alexander (1991)

[11] In the state law context, statutes permitting firms to limit the monetary liability of directors for negligence were enacted in the mid-1980s as a response to a perceived crisis in the market for directors' and officers' liability insurance which was, arguably, partly due to judicial expansion of fiduciary liability (Romano 1990). In the federal context, Congress passed securities litigation reform in the mid-1990s, largely in response to concern over frivolous litigation brought against firms in the high technology sector, whose stock is volatile; many of these firms went public in the beginning of the decade and were sued under the securities law when their prices dropped subsequent

compares settlement value and potential damages for litigation following initial public offerings of a small number of high technology firms. She concludes that the settlement amounts do not depend on the merits of the cases. Other studies suggesting instead that settlements are related to the merits are Francis et al. (1994), who find a positive correlation between settlements and potential damages, and Skinner (1995), who finds more untimely disclosures of adverse earnings produce less favorable litigation outcomes.

Another question is whether the market responds efficiently to information about these lawsuits. Griffin et al. (2004) seek to illuminate this question by examining the relation between abnormal returns at the date of a corrective disclosure that could serve as the basis for litigation (such as an announcement of a financial restatement, which is referred to as the date of the end of the class action period), the date of the filing of a class action complaint, and the date at which the alleged violation occurred (such as the date of the original fraudulent financial statement, which is referred to as the date of the beginning of the class action period), for a sample of several thousand federal class actions filed from 1990-2003. They find significant predictable responses on the three event dates (negative on the class action period ending and complaint filing dates and positive on the class action period beginning date, with the response on the filing date conditional on the response on the class period ending date), but not after the dates at which the allegedly false information is revealed to the market. They also find that the responses are related to litigation characteristics (such as the content of the complaint --whether accounting violations are alleged -- and the outcome of the litigation), and in particular, that the response on the class action period ending date reflects the subsequent filing and settlement amount. Griffin

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to the offering.

et al. therefore conclude that the market is "reasonably efficient" in this context.

At about the same time as researchers were focusing attention on securities litigation, the issue moved onto the national policy agenda as frivolous securities litigation became a central concern of Congress, culminating in the 1995 enactment of the Private Securities Litigation Reform Act (see e.g., H.R. Conference Report, 1995). Johnson et al. (2002) study lawsuits filed before and after the 1995 legislation, and conclude that it appears to have been somewhat successful in weeding out nonmeritorious claims: complaints filed after 1995 appear to be more likely to raise serious accounting and insider trading issues than pre-1995 claims (allegation of an accounting issue is correlated with variables proxying for accounting wrongdoing, such as earnings restatements and abnormal discretionary accruals that signal earnings management, only for complaints filed after the 1995 statute, and insider trading allegations are correlated with net sales by insiders only for post-enactment complaints).[12] The conclusion regarding the statute's success is less robust when examining litigation outcomes (strength of claims) rather than incidence because the variables that proxy for the merits of the claim have only mixed power in differentially explaining settlement amounts above nuisance value before and after the legislation: earnings restatements are positively correlated with what the authors consider non-frivolous settlements (above $2 million) post-enactment, but the level of insider trading correlates with the likelihood of non-frivolous settlement only prior to enactment. See also

[12] The sample consists of 119 firms in the computer hardware and software industry, an industry sector that is a frequent target of securities lawsuits, that were sued from 1991-2000, and a matched control sample of firms experiencing similar price drops but that were not sued. The authors find that variables measuring the extent of damages that other studies have shown predict lawsuit filing, such as market capitalization and share turnover, did not change in significance pre- and post- legislation. As Johnson et al. (2002) note, because damage variables determine the attorneys' recovery – greater potential damages have a higher fee award potential – those variables will always be correlated with lawsuit incidence even though they are not likely to be correlated with the merits of a claim (the likelihood of fraud). The empirical research on what firm and market characteristics explain the incidence of securities litigation is considerable; for a study whose model specification explains 41 percent of the litigation

Perino (2003), for additional data suggesting that the statute's success at reducing nonmeritorious suits has been mixed.

4.2. Empirical Research and the Debate over State Competition for Corporate Charters

In the United States, corporate law is largely a matter for the states. State corporation codes consist primarily of enabling provisions that supply standard contract terms for corporate governance. Firms choose their state of incorporation, a statutory domicile that is independent of physical presence. Midstream domicile changes require the approval of a majority of the shareholders. Firms consequently can particularize their governance arrangements both by the choices made in their charters under state law and by their choice of domicile.

One small state, Delaware, has come to dominate the incorporation process, serving as the domicile for the majority of publicly traded corporations. Its profits from providing corporate charters are considerable: for example, franchise fees averaged 17 % of total tax revenues over the past 30 years (Romano, 2002, table 4.1). Delaware's success has fueled an ongoing debate among corporate law commentators, mirroring the more general U.S. political debate over the benefits of federalism: are the aims of corporation codes–protecting the interest of the shareholders–best achieved by firms' ability to choose among domiciles compared to a centralized national regime.

A little over 25 years ago the unquestioned consensus among corporate law scholars followed the position best articulated by William Cary, that the states were competing in a race "for the bottom," in which Delaware led the pack to produce corporate laws that decidedly favored managers' over shareholders' interests (Cary, 1974).[13] But today Cary's position is no

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incidence in three industries in sectors with a high rate of litigation see Johnson, Kasznik and Nelson (2000).

[13] For example, 80 law professors signed a letter endorsing a national corporation law in 1976 (Romano,

longer accepted as a self-evident proposition. Indeed, even adherents of Cary's position in the contemporary discourse advocate federal law as an option in addition to state law, rather than preemption of state law (Bebchuk and Ferrell, 2001). What accounts for such a seismic shift?

Judge Ralph Winter first articulated the flaw in Cary's position from the omission of markets from the analysis of firm behavior. As Winter (1977) explained, were managers to choose to incorporate in states whose codes disadvantaged shareholders, they would encounter a higher cost of capital and ultimately a lower job retention rate, compared to competitors operating under codes more favorable to shareholders. While Cary's position can be amended to join Winter's argument by asserting that markets are imperfect at disciplining managers when it comes to domicile choice, Winter's insight motivated empirically-oriented researchers to study the effect of incorporation choices on firm value, for the purpose of arbitrating the debate.

The event study methodology meshed neatly with Winter's analysis of the issue. This is because a good proxy for ascertaining whether the legal regime decisions made by firms under competition benefit investors is the effect upon shareholder wealth of a change in domicile. If a change in domicile increases firm value, it would be exceedingly difficult to maintain that charter competition, and particularly, Delaware's legal regime, is harmful to shareholders, as the overwhelming majority of firms reincorporate in Delaware (Romano, 1985; Daines, 2001).

There have been eight event studies investigating the effect on stock prices of a change in incorporation state. The event day 0 is identified as the date of the proxy mailing announcing the proposed reincorporation. All of the studies find positive abnormal returns, with four (Bradley and Schipani, 1989; Romano, 1985; Wang, 1995; Hyman, 1979) finding a significant positive

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1993a, p. 14 n.2).

stock return at the time of the announcement of the domicile change (although one of these, the earliest study by Hyman, employs a variant of the event study methodology and uses a difference-in-means test between price changes of reincorporating firms and the S&P index), one (Heron and Lewellen, 1998) finding a significant positive return for only a reduced subset of reincorporations on the announcement date, with different results - significant positive and negative returns for different subsets of reincorporations - on the subsequent shareholder meeting date, another (Dodd and Leftwich, 1980) finding a significant positive return over two years prior to the reincorporation, and two (Netter and Poulsen, 1989; Peterson, 1988) finding positive returns significant at 10 percent (albeit in one of these, the study by Peterson, the finding holds only for a subset of reincorporations) (see Table 2). As indicated in the table, the sample size in many of the studies finding significant positive abnormal returns is large (over 100 firms), whereas some of the studies that report a significant abnormal return at only a 10 percent significance level have small samples (less than 40 firms). Hence the difference could be attributed to the more limited power of the test for small samples, as discussed in section 2. The event study literature thus suggests that Winter's core insight is accurate: competition for corporate charters benefits investors. One certainly cannot read the event study literature and conclude that firms reincorporating are reducing their shareholders' wealth, as Cary's position implies.

Bebchuk et al. (2002, p.1791), who are critics of state competition for corporate charters, criticize the conclusion that the event study data indicate that shareholders benefit from competition by contending that the significantly positive abnormal returns are "rather small" or "modest" (on average 1.28 percent). However, an investment project that generates positive

abnormal returns of even 1 percent is considerable for competitive capital markets: for example, the magnitude of the price effect of announcements of capital expenditures, joint ventures, product introductions and acquisitions is less than 1 percent (Andrade et al. 2001, p.119). That positive abnormal return is also three times greater than the negative abnormal return found in the most comprehensive event study of takeover statutes (Karpoff and Malatesta, 1989).

Because reincorporations are typically accompanied by changes in business plans (Romano, 1985, p.250), there is, however, a question whether the positive stock price effects are evidence of the market's assessment of the change in business plan rather than the change in domicile. The issue is whether there is a confounding effect, that muddies the interpretation of stock price effects, requiring a more probing examination of the findings. To investigate whether the positive price effect was a function of investors' responses to other changes in business plan accompanying the reincorporation, Romano (1985) compared the returns of the firms in her sample grouped by the type of activity accompanying or motivating the reincorporation--engaging in a mergers and acquisitions (m&a) program, undertaking takeover defenses, and a miscellaneous set of other activities including reducing taxes. Although one might have expected the impact to vary across firms, with the antitakeover reincorporations experiencing negative returns, as prominent commentators have viewed takeover defenses as adverse to shareholders' interest (e.g., Easterbrook and Fischel, 1981), and the m&a reincorporations positive returns, as research finds firms experience significantly positive abnormal returns on announcing an m&a program (Schipper and Thompson, 1983), not only was the sign on both groups' abnormal return positive but there was also no significant difference across the groups (p. 272). This finding suggests that the significant positive returns upon

reincorporation are due to investors' positive assessment of the change in legal regime, and not a confounding of the impact of reincorporating firms' other future projects.

In contrast to Romano's study, Heron and Llewellen (1998, pp. 557-59) find a different price reaction depending on whether the reincorporation is undertaken to limit directors' liability (positive) or to erect takeover defenses (negative). However, the event date they use that produces the result is problematic. The takeover defense firms' abnormal returns are significantly negative only on the shareholder meeting day (except for a further subdivision of the subset of firms adopting takeover defenses, 32 creating a new poison pill, compared to other takeover defense groupings of 45, 168, and 83 firms), and James Brickley's (1986, pp. 346-47) investigation of the event study methodology found that, in contrast to random samples of proxy mailing dates, random samples of annual meeting dates–that is, a sample on which there is no *a priori* reason to find a significant price effect--produce significant abnormal returns.[14]

Firms sometimes propose reincorporation at special meetings, which might limit the relevance of Brickley's finding for at least a subset of Heron and Llewellen's sample. Still the theoretical basis for expecting a price effect on the meeting date is weak: the number of contested management proposals is exceedingly small so that minimal uncertainty exists over the voting outcome to be resolved on the meeting date that could affect the returns of a portfolio of firms on that date. But even if we assume that most of the Heron and Llewellen sample firms held special meetings for the reincorporation and that they can identify the new information available on the meeting date and construct a model of the market's expectation concerning

[14] Brickley's (1986, pp. 347-48) explanation of the finding of abnormal returns on randomly selected meeting dates in contrast to mailing dates is that annual meeting dates are known in advance and often contain important management announcements (such as earnings forecasts), which can produce abnormal returns because "risk and expected returns can increase around predictable events likely to contain information."

passage of the proposal and how that expectation changed after the proxy mailing date, the negative return on the mailing date for firms adopting takeover defenses upon reincorporation is not probative for judging state competition adversely. The defenses they examine could have been adopted by the reincorporating firms in their original home states and were not solely available to them in Delaware. In this regard, a negative price reaction could be interpreted by investors as disappointment that the reincorporating firms would not obtain the maximum benefit –facilitation of a takeover bid—from the domicile change (see Daines 2001). But such a reaction should still have been incorporated into the stock price at the proxy mailing rather than meeting date.

In short, it may well be that the reincorporations accompanied by takeover defenses are exercises in managerialism, as Heron and Llewellen imply, but managers do not need to reincorporate in Delaware to adopt defenses. The only significant concern that could affect an assessment of state competition is the possibility that by bundling defenses into one vote on the reincorporation rather than as multiple votes on separate charter amendments, management is able to garner support for a proposal that it would not otherwise be able to obtain. The argument is that issue bundling coerces shareholders to accept value-decreasing takeover defenses in order to obtain the value-increasing effect of the new legal regime. While we think that it is improbable that shareholders would vote for the reincorporation if they would not have voted for the defenses separately, identification of such a concern, were it correct, would indicate that state competition, through which firms can move to Delaware, is in fact perceived favorably by investors, as it would mean that they consider the benefit of a Delaware domicile to be greater than the loss from a takeover defense. In accord with that inference, the abnormal returns of

firms reincorporating in Delaware from California in the Netter and Poulsen (1989) study, which firms tended to be in the bundling category –adopting takeover defenses at the same time as reincorporating—are positive (only marginally significant at 10 percent) and no different than those of the firms in their sample that migrated from other states.[15] Consistent with that finding, and mitigating the bundling concern, the wealth effects of many of the charter-level defenses adopted by the firms in Heron and Llewellen's study (such as fair-price provisions) are inconsequential (see e.g., DeAngelo and Rice, 1983; Linn and McConnell, 1983; Jarrell and Poulsen, 1987) .

Bebchuk (1992, pp. 1449-50) contends, analogously to the issue bundling concern posed by Heron and Llewellen's data but more generally, that event studies are not probative on whether state competition benefits shareholders because state competition may produce some code provisions that are harmful to shareholders even if the overall package of statutory provisions is not, and hence we would not detect any statistically significant price effect upon reincorporation. However, the power of the premise that shareholders are being forced to choose between bundles of offsetting good and bad statutes depends on finding insignificant returns on reincorporation, which would imply that the codes are in equipoise between wealth-increasing and wealth-decreasing provisions. Yet, as noted above, event studies report significant positive stock price effects. Moreover, from the perspective of shareholders, and hence from the perspective of assessing the efficacy of the output of state competition, it is the net wealth effect of a code on investors that is important.

A related contention of Bebchuk et al. (2002) is that the positive price effects of a

[15] In the time frame of the Netter and Poulsen study, and for roughly 2/3 of the sample period of the Heron and Llewellen study, California did not permit staggered boards; the law was changed in 1989.

reincorporation in Delaware are due to network effects unrelated to the content of the legal regime, that is, that investors value the presence of a stock of legal precedents, even though the code (and precedents thereunder) are adverse to their interest (that is, they favor managers over shareholders). Bebchuk et al's insight, which adopts the view of corporate law advanced by Klausner (1995), is a valuable contribution to this debate. However, this thesis would suggest that the value of the stock of precedents should be inversely correlated with the value of the substantive law that creates those precedents for investors, that is the substantive law must favor managers' over shareholders' interest. Otherwise a network effect is of no import for an evaluation of the price effects of state competition, because its positive price effect would be reinforcing, not offsetting, the wealth effect of the regime.

It is not likely that over time the positive value of certainty offered by a stock of precedents would continue to outweigh the negative value of the legal rules that make up that stock. Rather, if the substantive law harmed investor interests, we should observe over time, negative returns for domicile changes and some investor reaction to the situation.16 For example, we should observe an increasing number of proxy proposals by institutional investors – who are informed about legal rules and seek the removal of defensive tactics to takeovers through the proxy process-- to reincorporate out of Delaware, but we do not. From 1987-94, of 2,042 proposals only 10 were directed at reincorporation (and of those most were proposing moving out of a state other than Delaware) compared to over 1000 directed at eliminating

[16] To the extent that firms can contract around, or out of, legal rules, and that is the value of a stock of precedents, self-help avoidance of wealth-decreasing laws would appear to be an alternative explanation consistent with Bebchuk et al.'s hypothesis that positive network effects offset negative effects from the substantive law. But such a practice would also undermine that hypothesis because it would mean that the wealth-decreasing rules were of no import (that is, because the legal rules can be contracted around, they have no force and therefore do not adversely affect investors' wealth).

defensive tactics (Romano, 2002, p. 72). Or we should observe fewer incorporations in Delaware. But the proportion of newly public corporations (whose insiders bear the cost of a domicile choice in the price received for the newly issued shares to the public) domiciled in Delaware has increased over time (Daines, 2002; Bebchuk and Cohen, 2003).

Another class of event studies that provide data for the state competition debate are event studies of changes in Delaware law. Such studies are less reliable tests than studies of domicile switches of the wealth effects of state competition, however, for several reasons. First, reincorporations are more difficult for investors to anticipate and therefore easier to date for statistical testing than legislative changes. Second, reincorporations are firm-specific events, and hence the endogeneity of the event's occurrence is automatically controlled for by the composition of the test portfolio–it includes only firms experiencing the event. This is not true for the enactment of statutes, which are applicable to all domestic corporations but may actually have divergent effects on different corporations. When their impact is examined for a portfolio of domestic firms that does not control for the potential heterogeneity across firms of the effect of the legal rule change, the test may simply aggregate offsetting effects and therefore not be able to identify any wealth effect.

State takeover statutes have been examined intensively, a legislative context in which Delaware is a laggard rather than the leader of competitive activity (Romano, 1993a, p. 59). In addition, one Delaware statutory change has been closely studied, enactment of a statute permitting firms to limit outside directors' liability for negligence. Other states soon followed suit with similar limited liability statutes, but the wealth effects of those enactments have not been studied.

The wealth effects of takeover statutes are less uniform than the reincorporation studies– there are findings of negative, positive and insignificant price effects (see Romano, 1993a, pp. 60-68). But the most comprehensive study, by Karpoff and Malatesta (1989), which has the largest sample size because it includes 40 statutes enacted in 26 states, finds that the statutes have a significant, albeit small, negative price effect on domestic corporations (-0.4 percent), when the event date is the earliest newspaper report of the legislation. They find no significant price effect when days on which specific legislative events occurred, such as bill introduction, final passage and signing into law, are used as the event dates. Much of the differences in the event study findings can be explained by the type of statute: statutes more likely to raise the cost of a bid tend to produce negative price reactions compared to statutes less likely to affect a bid (compare the results for disgorgement, business combination and control share acquisition statutes in the studies by Szewczyk and Tsetsekos, 1992, and Karpoff and Malatesta, 1989, with those for fair price and other constituency statutes in the Karpoff and Malatesta, 1989, and Romano, 1993b, studies).17 Differences also depend upon the event interval chosen (compare Ryngaert and Netter, 1988 with Margotta et al., 1990), which cautions against drawing strong conclusions from any one study without adequate justification of the researchers' interval choice. Finally, differences may reflect methodological choices (see Karpoff and Malatesta, 1995, who show how the small size of Pennsylvania portfolio firms biases results that use standard market portfolios consisting of large firms, given the statute's enactment during a time period in which

[17] The price impact of a statute may be related to the absence of firm-level defenses. When Karpoff and Malatesta's (1989) sample is divided according to whether the firm has antitakeover charter amendments or a poison pill, only the portfolio without defenses experiences a significantly negative effect on the event date (p. 308). However, not all studies find the same abnormal return pattern controlling for firm-level defenses (e.g., Romano, 1993b; Jahera and Pugh, 1991). We thus are hesitant to conclude that characteristic differences across firms in sample portfolios explain the variance in the studies' results.

in terms of overall market performance, there was a negative small firm effect).

Most important for the state competition debate, Karpoff and Malatesta (1989) find that Delaware's takeover statute had an insignificant stock price effect. A study by Jahera and Pugh (1991) finds a significantly positive effect of the Delaware statute on legislative event dates for some but not all of the excess returns models that they investigate; they also find no significant price reaction on the newspaper announcement dates (Karpoff and Malatesta do not provide information on the price effect of the Delaware statute on legislative event dates).[18] The inference from these studies is that the Delaware takeover statute, in contrast to other states' enactments, did not adversely affect the wealth of investors. Table 3 summarizes the results of the above-mentioned studies, and additional event studies evaluating the same statutes as those discussed in the text; for a more complete tabulation of takeover statute event study results see table 4-1 in Romano (1993a).

The nonnegative impact of the Delaware takeover statute is a fact of itself favorable to an assessment of state competition because Delaware is the leading incorporation state, and this result indicates that its legislature is more likely to consider the interest of investors than legislatures in other states. Indeed, the findings on takeover statutes are the strongest (and sole) empirical evidence against the efficacy of state competition for charters: they suggest that states other than Delaware enact laws that do not benefit shareholders. Ironically, then, for adherents of Cary's position on state competition, the data cast Delaware in a positive light for investors. A fair conclusion from the takeover statute event studies is that for at least some firms in some

[18] Contrary to Karpoff and Malatesta's finding on firm defenses that it is the firms without defenses that experience significant negative returns, Jahera and Pugh find that for Delaware firms, those with antitakeover charter defenses experienced a negative price effect, and those without them a positive price effect, on several event dates: the cumulated effect is insignificant for the former group and significant for the latter group only at 10 percent.

states, legislative initiatives making takeovers more difficult were bad news (wealth-decreasing events) for investors.

Delaware's limited liability statute, in contrast to other states' takeover statutes, but like its own takeover statute, did not have a significant stock price effect (Bradley and Schipani, 1989; Janjigian and Bolster, 1990; Romano 1990). Delaware firms did experience significant negative returns on the effective date of the statute, which was two weeks after its enactment and two months after the first legislative event date, the day when the corporate law section council of the Delaware Bar Association approved the provision (for corporation code revisions, the Delaware legislature acts upon recommendations of the corporate bar).[19] But the statute's effective date is not a meaningful event date because there was no new information released on it – the statute's enactment was well-publicized and there was no uncertainty regarding whether the statute would become effective on the stated date.

Because the coverage of the limited liability statute was optional, one explanation of the finding of insignificance, besides the issue raised by any event study of legislation, imprecision as to the dating of events, is that the effect of the statute would not be incorporated into stock prices until investors determined whether or not their firm would elect to be covered. The abnormal returns experienced by firms opting into the statute vary, however, depending on the event window examined or the portfolio of firms. One study (Romano, 1990) finds significant

[19] Romano(1990) finds a significantly negative return on the day after a press report of the enactment of the bill and the day after the Senate passed the bill, whereas Janjigian and Bolster find a significantly negative return on the day of the press report and the day the Senate passed the bill, and a significantly positive return the day after the press report of the bar committee's approval (in Romano's study the return on that date is insignificantly positive). These suggest an adverse wealth effect from the statute. However, because the cumulated abnormal return over all of the event dates is insignificant, in both studies, we conclude, along with the study authors, that the statute did not decrease shareholder wealth. Note that Bradley and Schipani do not find significant abnormal returns on any legislative event dates; they find a significantly negative cumulated return for an interval measured a week around the effective date of the statute, which is after the statute was enacted.

positive returns over two, three and five day intervals, and insignificant returns over a seven day interval; another study (Bradley and Schipani, 1989) finds significant negative returns over a seven day interval; two studies (Janjigian and Bolster, 1990; Netter and Poulsen, 1989) find insignificant returns over a variety of time intervals; and a final study (Brook and Rao, 1994), which uses a four day interval, finds insignificant positive returns for its full sample of 120 firms and positive abnormal returns for poorly performing firms. Brook and Rao's explanation of their finding is that shareholders of poorly performing firms value limited liability provisions more highly than shareholders of other firms because it is more important for such firms to "attract and retain" the services of high quality outside directors.[20]

These findings suggest that the limited liability statute did not adversely affect shareholders. Providing further support for this interpretation of the data is the fact that shareholders vote overwhelmingly to opt into the limited liability statute. It is, of course, possible that shareholders vote for management-sponsored proposals that adversely affect firm value; see Bhagat and Jefferis (1991). But the Bhagat and Jefferis study investigated management-sponsored proposals related to takeover defenses, proposals that institutional investors have vigorously opposed in the same time period in which they have supported the limited liability provisions. Consistent with this distinction, institutional investors have also sponsored proposals to overturn takeover defenses implemented by management but not to overturn limited liability charter provisions. In the reverse legislative situation, a takeover statute that shareholders did not wish to have applied to their firm (the Pennsylvania disgorgement statute), institutional investors successfully pressured managers to opt out of the statute's

[20] Although these firms also had a smaller percentage of outside directors, there was no relation between the number of outside directors and the value of a limited liability provision (Brook and Rao, 1994, p. 495).

coverage (Romano, 1993a, pp. 68-69). The event studies of that Pennsylvania statute report a negative wealth effect, in contrast to those of the limited liability statute.

Finally, in addition to the event studies of legislation, there have been event studies of judicial decisions (Bradley and Schipani, 1989; Kamma et al. 1988; Ryngaert, 1988; Weiss and White, 1987). Because courts play an important role in Delaware's market position (e.g., Romano, 1993a, pp. 39-41), determining whether investors benefit from judicial decisions could proxy for determining whether they benefit from state competition. However, judicial decisions are not clearly "events," except for the litigants for whom a decision effects a wealth transfer. Decisions in corporate law cases may not effect firms other than the litigants because other firms and investors will be able to contract around a rule and recalibrate costs and benefits. Judicial decisions are therefore only of limited value as subjects for the event study methodology – we can use the methodology to learn how a specific decision affects the parties, but it may not be useful for analyzing the decision's impact on nonlitigants.

Further complicating event studies of judicial decisions is the interaction between the court and state legislature in Delaware, which is a byproduct of the competition for charters. A judicial decision with a significant adverse impact on firms stands a good chance of being overturned by the Delaware legislature: the limited liability statute, for instance, was a reaction to a judicial opinion holding outside directors liable for accepting too hastily a takeover premium (Romano, 1990). Since investors can anticipate the legislature's response to a judicial decision that is adverse to their interest, one would not expect to find a negative stock price effect for a portfolio of Delaware firms after a wealth-decreasing decision.

Not surprisingly, event studies of judicial decisions find insignificant price effects for

portfolios of Delaware firms (Bradley and Schipani, 1989; Weiss and White, 1987). Judicial decisions produce significant abnormal returns to the litigants, however, and, when the decisions uphold (or invalidate) a specific takeover defense, to concurrent takeover targets as well (Kamma et al., 1988; Ryngaert, 1988). The use of the methodology in these latter studies is equivalent to that of the litigation studies discussed in section 4.1.

An alternative methodological approach to event studies for investigating the impact of state competition is to compare the performance of firms incorporated in Delaware to those in other states. Three studies have examined whether firms' performance improves after a change in domicile (Baysinger and Butler, 1985; Romano, 1996; Wang, 1995). These studies compare accounting measures of performance (return on equity and earnings before interest and taxes) for reincorporating firms before and after the domicile change or compared to non-reincorporating firms. They find no significant difference for any comparison, with the exception that Wang (1995) finds the change in earnings over the year after the domicile change was higher for firms reincorporating in Delaware than for firms reincorporating in other states. One interpretation of the absence of significant performance differences is that firms select the domicile that optimizes their future performance; the studies do not control for the fact that the domicile choice is endogenous, and therefore could affect performance, making cross-sectional comparisons difficult (the issue raised in section 3). Wang's finding of higher performance of firms moving to Delaware is consistent with the event study data (the positive price effects indicate that investors anticipated increased earnings) and with the view that the law matters, but that interpretation can not be distinguished from a self-selection effect (higher quality firms chose to move to Delaware).

A fourth study by Daines (2001) compares the performance of firms incorporated in Delaware to those incorporated elsewhere, over the period 1981-96. Daines uses as the performance measure, Tobin's *Q*, which is the ratio of a firm's market value to the replacement cost of its assets and conventionally interpreted to proxy for a firm's investment or growth opportunities. His insight is that opportunities added by corporate law rules can be considered a component of the value measured by Tobin's *Q*. Daines finds that Delaware firms have significantly higher Tobin's *Q* values, controlling for investment opportunities and other variables known to affect Tobin's *Q*, such as a firm's business diversification, as well as ownership, in the pooled sample and in 12 of 16 years when the model is estimated separately by year. In addition to the controls, a variety of robustness checks are performed (such as investigating, and finding unchanged, the results for subsamples of mature firms, IPO firms of different quality, and excluding reincorporating firms), to ensure, as best as possible, that the identified effect is due to the legal regime, rather than selection (higher quality firms incorporate in Delaware).

Subramanian (2004) drops the first ten years from Daines' study (years 1981-90) and adds four later years (1997-2000) and reports that the advantage of being incorporated in Delaware has decreased (a market value higher by 2.8 percent in his sample compared to the estimate of 5 percent in Daines' sample's last year) and the difference in Tobin's *Q* is not significant in the later years of Subramanian's sample.[21]

[21] One important difference in sample construction should be noted that could account for the lower Tobin's *Q* values in the Subramanian study. Daines only includes firms that have 5 years of data over his 16 year sample period, whereas Subramanian includes all firms, without providing any distributional information on how many observations lack 5 years of data, such as, how many firms were in the sample for one or two years and then went bankrupt. Such firms are likely to have low Tobin's *Q* values, and given their short life span, comparisons containing such firms would not be informative on the effects of a Delaware domicile.

The absence of a difference in Tobin's *Q* in those years suggests that either other states had "caught up" to Delaware, by amending their codes to eliminate major differences, which would reduce the differential value of a Delaware incorporation (similar to how performance levels of low productivity nations converged to that of high productivity ones after World War II through their ability to learn from the leader through technology transfer, as detailed in Baumol et al., 1989) or that the decline in the takeover market in the late 1990s with the economic downturn of that period was reflected in firms' Tobin's *Q* values.

It should be noted that there is a well-established practice of using Tobin's *Q* to measure performance (see e.g., Morck et al. 1988), but there are some distinct methodological issues regarding its use. Namely, there are problems regarding this performance measure especially when studying its relation to ownership. First, the denominator does not include the investments a firm may have made in intangible assets. If a firm has a higher fraction of its assets as intangibles, and if monitoring intangible assets is more difficult for the shareholders, then the shareholders are likely to require a higher level of managerial ownership to align the incentives. Since the firm has a higher fraction of its assets as intangibles it will have a higher *Q* since the numerator will impound the present value of the cashflows generated by the intangible assets, but the denominator, under current accounting conventions, will not include the replacement value of these intangible assets. These intangible assets will generate a positive correlation between ownership and performance, but this relation is spurious not causal. Second, a higher *Q* might be reflective of greater market power. Shareholders, cognizant of the fact that this market power shields the management to a greater degree from the discipline of the product market, will require managers of such a company to own more stock. Greater managerial ownership will tend

to align managers' incentives better and offset the effect of the reduced discipline of the product market. In the above scenario we would again observe a spurious relation between performance as measured by *Q* and managerial ownership. Finally, as suggested by Fershtman and Judd (1987), shareholders may induce the managers (via greater share ownership) to engage in collusive behavior and generate market power. In this scenario we would also observe a spurious relation between performance as measured by *Q* and managerial ownership. Bhagat and Black (2002) have accordingly suggested using a variety of performance measures, especially accounting performance measures, in evaluating the relation among corporate governance, ownership and performance.

Finally, four recent studies have compared the domicile and physical location of firms to draw insights into state competition that may not be apparent when examining reincorporations (Bebchuk and Cohen, 2003; Daines, 2002; Kahan, 2005; Subramanian, 2002).[22] These studies have contributed new insight into the reincorporation debate, and we therefore discuss the analysis in greater detail than other studies reviewed in the chapter. Because the approach and results in the Bebchuk and Cohen and the Subramanian studies are virtually identical, comparing the state corporation codes of firms' current domiciles to that of their current physical location on one state-law dimension, whether the state code has a set of specific takeover statutes, we focus our discussion on only one of the two, the Bebchuk and Cohen study, which contains more controls in the regression model than the Subramanian study. Those two studies seek to test the hypothesis that takeover statutes dictate firms' choice of domicile; evidence consistent with the

[22] We do not discuss a fifth paper, Ferris et al. (2004), because it investigates domicile choices using a poorly specified index of state corporate law regimes that combines takeover statutes with laws permitting flexibility in acquisitive transactions. It is not only theoretically incorrect to classify all of these laws as equivalently "pro-manager" or anti-shareholder in perspective, but also, the results in Kahan (2005) indicate that it is dubious

hypothesis would support the view that state competition for charters is a race to the bottom.

Bebchuk and Cohen consider a logit model of whether a firm is incorporated and physically located in the same state, which they term a state's "retention rate,"[23] as a function of the following: firm-level (such as sales and number of employees) and state- level variables (such as population, per capita income and number of firms located in-state), along with two state corporate law variables, a dummy variable for whether a state has a version of the Model Business Corporation Act (a model statute, drafted and periodically revised by the business law section of the American Bar Association, for the purpose of providing a template for states' corporation codes),[24] and a takeover statute index, constructed by adding up how many statutes a state has from among five specific types of takeover statutes. Two state-level independent variables are significant: the takeover statute index and an interaction term between a firm's sales and the population of the state in which it is physically located, as are dummy variables for geographical region. The authors conclude from these results that takeover statutes dictate the choice of domicile.

However, the choice of domicile is not likely to be unidimensional with respect to the content of a corporation code. In fact, other characteristics of state corporate law, besides takeover statutes, are known to be considered important by firms that have switched domicile, such as, the responsiveness with which a state updates its code (that is, the speed with which

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methodologically to group the statutes in such a fashion without distinction.

[23] There is a methodological problem with the model specification: the estimation did not adjust for the correlation across observations arising from the fact that the error terms of firms located in the same states are correlated. The specification in Kahan (2005) controls for that problem, as do some models estimated in Daines (2002), and those studies report different statistical findings.

[24] Other means of modeling the significance of the model act for domicile choice, which are not employed by Bebchuk and Cohen, would be to adjust for the differences across states in the form of model act adoption, which varies considerably, such as, by which revision of the act has been adopted, whether important sections of a model act revision are adopted (since the act in some instances contains alternative provisions and is often not adopted in

corporate law innovations are adopted compared to adoption by other states), the quality of its judiciary in corporate law cases and correspondingly, the degree of certainty provided by the legal regime (see Romano, 1985). It is highly probable that the presence (or absence) of those characteristics would similarly affect a state's retention rate (its attractiveness to local firms that might otherwise change domicile). California, for instance, has no takeover statutes, but it also has several other undesirable features from corporations' perspective, such as more unpredictable state courts with little expertise on corporate law (Romano, 1985), and an active plaintiff's bar that has used the state referendum process in an effort to increase the liability of directors and officers.

In addition, firm characteristics not included in the Bebchuk and Cohen model have been found by other researchers to affect domicile choice. For example, studies have identified firm characteristics associated with Delaware domiciles (e.g., Romano, 1985, finds that Delaware firms are more likely to undertake acquisitions or be the subject of shareholder litigation, and Baysinger and Butler, 1985, find that block ownership is inversely correlated with a Delaware domicile). These firm-level characteristics – ownership and propensity to be acquired or to make an acquisition -- are likely to affect the relevance of takeover protection to the choice of domicile, as well as the domicile choice itself.

Second, the choice of a firm's physical location is as likely an endogenous choice for a publicly traded firm as is its statutory domicile. There are trends in firms' movement of physical location in relation to local economic and business conditions (the movement, for instance, from high tax and labor cost states in the North to the South); these could generate

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full), and, most importantly, the speed with which a model act or update has been enacted by the state.

inferential problems from common factors affecting differences in domicile and headquarters from differences in economic conditions that could be spuriously correlated with differences in the number of takeover statutes across states. This issue would be further complicated by firms' changing location more than once.[25] Domicile choices may well be sticky over multiple physical moves because legal counsel's investment in human capital would be depreciated with frequent change (see Romano, 1985), a factor having nothing to do with the presence of a takeover statute.

Both Daines (2002) and Kahan (2005) examine the domicile choice, compared to the location, of firms that went public over 1978-97, and 1990-2002, respectively. Daines controls for additional features of state corporate law (proxies for the quality of a state's law, including the presence of network effects, certain substantive provisions, and responsiveness) and firm-level characteristics (such as controlling shareholder ownership), expected to impact on the choice of domicile. He finds, contrary to Bebchuk and Cohen, that takeover statutes have no significant explanatory effect on the domicile choice. The vast majority of IPO firms choose Delaware or the state in which they are located, but they are not more likely to incorporate in the state of location rather than in Delaware when the home state has more takeover statutes. He further finds that some of the variables for the quality of the legal regime, such as being a Model Business Corporation Act state,[26] explain the other states' retention of firms.

[25] For an example of the inference problem regarding the importance of takeover statutes raised by a firm's multiple changes in headquarters while retaining its original headquarters' state as domicile, see Romano (2002, p. 100). Because Bebchuk and Cohen's data are stock data from one year, they cannot distinguish physical moves from reincorporations in the sample.

[26] Daines (2002, p. 1596) notes two explanations of the significance of the model act, which are not distinguishable in his model: IPO firms might value a state's adopting the act for its substantive content (the model act rules), or for a network effect (the model act provides a stock of precedents and commentary of value for firms' business planning). He notes that another variable measuring the quality of a legal regime, an index of a state's responsiveness to legal innovations (as measured by Romano, 1985) was significant in some model specifications.

Kahan also controls for key state corporate law features of interest to firms, the quality of the judiciary and the flexibility of code provisions unrelated to takeover defenses, in addition to the takeover statutes included in Bebchuk and Cohen's index and his own classification of takeover statutes. In contrast to the other studies, Kahan uses states' aggregate retention rates (the ratio of the number of firms both physically located and incorporated in a state to all of the firms physically located in the state) as the dependent variable, rather than the underlying firm observations. Kahan finds, in contrast to Bebchuk and Cohen, and paralleling Daines, that takeover statutes (whether using individual statutes, his own or Bebchuk and Cohen's index) are not related to states' retention rates, but rather, the states with more flexible statutes (unrelated to takeover defenses) and higher quality judicial systems have higher retention rates.

It is possible that the difference between the findings of the Daines and Kahan studies and Bebchuk and Cohen's findings is that the decision process of IPO firms differs from established firms. . However, Kahan reports that the key result – statutory flexibility is significantly related to domicile retention while takeover statutes are not - holds up when the model is estimated using retention rates derived from the stock domicile data in the Bebchuk and Cohen study. This is not surprising because, as Daines (2002, pp. 1569-70) notes, most firms do not change domicile after their IPO and there is considerable overlap in the data sets of the studies. This suggests that the difference in the results across the studies is , most likely, due to the difference in model specification -- including state corporation code features of importance to firms in addition to takeover statutes – and not due to the difference in datasets. Daines further finds that a highly significant firm-level factor in the domicile decision of IPO firms is whether the firm is advised by a local or national (offices in numerous states) law firm: firms are more

likely to incorporate in Delaware when advised by a national law firm. The explanatory significance of lawyers in the incorporation choice of the IPO firms in Daines' study is in keeping with the important role that lawyers play in the development of corporate law (Macey and Miller, 1987). It is also consistent with survey data in Romano (1985, p.275) that indicated that outside counsel were more influential in firms' decisions to reincorporate in Delaware than in other states.

Daines interprets the finding that domicile choices differ according to whether the law firm is a local or national firm as suggesting that lawyers are advancing their own interest at the expense of their clients in the choice of domicile. Daines' hypothesis has two prongs: local lawyers are unable to advise a client on Delaware law (or better able to advise the client on local law) and, in light of his earlier finding that Delaware firms have higher Tobin's *Q* values, a Delaware domicile would be more wealth-enhancing than retaining the local domicile upon going public. Thus, he contends (p.1595) that if a local lawyer does not advise such a move, it suggests the lawyer is benefiting himself - avoiding competition - at the client's expense (unless the lawyer does not understand the benefits of a Delaware domicile). That may well be true. An alternative possibility is that firms with local counsel are not likely to be firms that would benefit from a Delaware domicile, which, requiring higher franchise fees, is worth the expense only for firms anticipating future transactions that benefit from Delaware's code (see Romano, 1985), or that they are firms whose short-term profitability and long-term viability is at high risk, which would also make it desirable to avoid the greater expense of a Delaware domicile (which would include the use of non-local counsel).

Daines controls for the endogeneity of choice of counsel (a firm chooses a national law

firm for some other reason that would also make it appropriate to reincorporate in Delaware) by estimating a two-stage regression for domicile choice in which the choice of law firm is modeled in the first stage. That specification includes a variable for subsequent acquisitions, which relates to the first possibility, the undertaking of future transactions that make a Delaware domicile attractive as well as a more experienced (hence national) law firm, but the specification does not control for characteristics of firms (such as future growth) related to the second possibility, lower expectations of profitability, that could affect the choice of a local domicile as well as the choice of local counsel (because the firm would not be willing or able to take on the additional expense of national counsel, as well as the additional fees for a Delaware domicile). Moreover, as local lawyers will have influence on the content of their states' corporation code, they can recommend provisions to mitigate disadvantages of an in-state domicile, including the adoption of rules to compensate for a less-experienced judiciary (see Romano, 2002, p.87). The implication for an evaluation of the product of state competition from local lawyers' influence on the choice of domicile is thus ambiguous. The competitiveness of the legal profession, and the relation between inhouse and outside counsel with respect to domicile choice, undoubtedly bear on the question. This is an area where further empirical work would be fruitful.

4.3. Empirical Research on Takeovers

4.3.1. The Role of Event Studies in Public Policy toward Takeovers

There was an intellectual revolution in corporate law scholarship in the 1980s with the introduction of financial economics and the economics of organization (e.g., Winter, 1993). Equally important, corporate law scholarship tends to follow deals, and there was a burst in new acquisitive activity at that time and consequently, corporate law became one of the more active

and sophisticated fields of interdisciplinary legal scholarship.

Event studies became an important source of information with which to ground policy recommendations in the new context of hostile leveraged bids. The explosion in acquisitions, which occurred shortly after the development of modern finance theory, of which the event study technique is a spinoff, created a cottage industry of event studies. There was a plethora of studies of the price effects of acquisitions and review articles were repeatedly updated in order to keep up with the literature (e.g., Jensen and Ruback, 1980; Jarrell et al., 1988, Andrade et al., 2001). These studies highlighted that there were uniformly large and significant positive price effects for shareholders of targets. There is also consensus in the literature that, on average, bidding shareholders do not experience any significant wealth effect upon announcement of such transactions. Depending on the sample period and sample considered, studies document average bidder returns that cover the range from positive, economically small and statistically insignificant, to negative, economically small and statistically insignificant. Studies that have aggregated the wealth effects of both the target and bidder firms find, however, that despite the lower returns to the generally larger-sized bidders, the combined target and bidder return is positive (e.g., Andrade et al., 2001; Bhagat et al., 2005; Bradley et al., 1988; Kaplan and Weisbach, 1992).

Concern has also been raised on the impact of takeovers on other stakeholders, notably, employees, customers and suppliers (see Bhagat et al., 1990; Kim and Singal, 1993; and Akhavein et al., 1997). A policy-relevant question is whether the large positive returns to target shareholders are offset by negative (or non-positive) returns to employees, customers and suppliers. Several studies have attempted to measure the losses to these non-shareholder

interests and the average effect is generally small and often statistically insignificant, in striking contrast to the significantly larger average target shareholder gain (see, e.g., Asquith and Wizman, 1990; Dennis and McConnell, 1986; Marais et al., 1989; Pontiff et al., 1990; Rosett, 1990). We are not aware, however, of any study that has attempted to address the question with a consistent sample. A study that considers the impact of a sample of takeovers on target and bidder shareholders and bondholders, employees, customers and suppliers would be a valuable contribution to this literature.

Analogous to the shifting sentiment on state competition, the conclusion from the event study research regarding the benefits of takeovers for target shareholders led commentators and policymakers alike to conclude that takeovers should be encouraged rather than obstructed (e.g., Easterbrook and Fischel, 1991, pp. 175-205; Council of Economic Advisors, 1985, p. 215). The Delaware courts took note, tightening the fiduciary standard applicable to takeover defenses (*Unocal Corp. v. Mesa Petroleum Co.*, 1985).

The Delaware courts did not, however, go as far as the position advocated by some prominent commentators that all defenses should be banned (e.g., Easterbrook and Fischel, 1981). Indeed, they eventually adopted an approach that provided managers with substantial discretion to react to a takeover as long as the bid is not precluded (*Unitrin v. American General Corp.,* 1995). This restrained, fact-intensive judicial approach is, in fact, consistent with the inconclusive empirical evidence on the efficacy of defenses, despite legal commentators' support for more active judicial intervention. The event study literature does not uniformly find that the adoption of defenses produces negative price effects. Stock price reactions vary not only with the type of defense, but also with the type of firm. For example, adoption of golden parachutes

produces positive price effects (Lambert and Larckner, 1985), elimination of cumulative voting produces negative ones (Bhagat and Brickley, 1984), and the effects of poison pills vary, being negative in the early to mid 1980s (e.g., Ryngaert, 1988) and insignificant in later years (e.g., Comment and Schwert, 1995).[27] (The difference in the findings on poison pills may be due to investors' having anticipated that firms would adopt poison pills by the later years of the Comment and Schwert study.) In addition, Brickley, et al. (1994) found positive price effects for poison pill adoptions by firms with independent boards, and Datta and Iskandar-Datta (1996) find pill adoptions produce insignificant effects except for firms subject to a takeover bid, for which the price effect is negative. Bhagat and Jefferis (1991) argue that the earlier studies find conflicting or insignificant results since they do not control for the anticipation of the antitakeover proposal. After controlling for this anticipation effect they find a statistically negative 1 percent return for antitakeover charter amendments.

The Delaware courts moved to an increasingly restrained approach to managerial resistance over the time frame in which the results of empirical research were becoming increasingly ambiguous (that is, as the range in the findings of event studies of defensive tactics increased). This may not have been a conscious reaction to the empirical literature (the judicial shift began before many of the discrepant findings were in, although the later studies presumably

[27] Golden parachutes are extremely lucrative severance pay contacts for top management that are triggered by a change of control; cumulative voting permits the aggregation of the votes to be cast in the election of directors on individual candidates, facilitating the representation of minority blockholders on the board; and poison pills are shareholder rights plans that provide the holder with the right to purchase stock in the issuing company at a discount on either the announcement of a takeover bid, or the acquisition of a specified percentage of stock, if those transactions have not been approved by the board of directors. Poison pill plans typically include the right to flip over into shares of the acquirer should the issuer of the rights plan not survive a merger and they permit the board to redeem the rights for a trivial price before the rights have been triggered by an actual stock purchase. Golden parachutes and poison pills therefore make an acquisition more expensive for an unwanted bidder; cumulative voting may be useful to a bidder with a toehold, making it easier to obtain representation on the board and thereby gain acceptance of its bid.

were demonstrating systematically the anecdotal and intuitional sense practitioners already had of defenses' effects).[28] Further evidence that the courts' shift was not simply a Cary-predicted tendency of the Delaware judiciary to favor managers over shareholders is data suggesting that the adoption of defenses (firm- or state-level) did not decrease the number of takeovers (e.g., Comment and Schwert, 1995; but for contrary data see Hackl and Testani, 1988; Pound, 1987), though the data cannot, of course, ever fully satisfactorily answer the counterfactual, what would the rate have been in the absence of defenses?

A more troubling issue for corporate law was presented by the event study results regarding the stock price of acquirers. Event studies indicated a change in acquiring firms' abnormal returns from positive or insignificant to negative from the 1970s into the 1990s, paralleling the increasing use of defensive tactics to encourage auctions (e.g., Jarrell et al., 1988). As corporate law is directed to the shareholders of targets rather than bidders, the owners least likely to benefit from an acquisition as the decade progressed–the shareholders of the acquirers--did not have the opportunity for legal recourse. Courts did not change their traditional response deferring to management on acquisitions compared to the defensive tactic setting where the conflict of interest is more clear-cut. But because even commentators concerned about this issue were divided on whether there ought to be a legal response (compare, e.g., Dent, 1986 with Coffee, 1984, and Black, 1989, pp. 651-652), legislatures' and courts' maintenance of the status quo is unexceptionable.

The uniformity in the empirical findings on takeovers for target shareholders also

[28] Gordon (1991) contends that in making the doctrinal shift providing managers greater leeway to block a takeover, the Delaware Court ignored the empirical literature that takeovers benefited shareholders through higher premiums, and he ascribes the move to the Court's mirroring a shifted public opinion against hostile acquisitions and a "money culture," reflected in increasing negative press, including Hollywood films, expressing antagonism toward

affected interpretation of the mandate of the securities laws. The Securities and Exchange Commission (SEC) issued rules to overturn defensive tactics (e.g., Securities Exchange Act rules 13e-4(f)(8), prohibiting selective self-tenders, and 19c-4, requiring one share one vote), although the federal courts did not always find it had authority to do so (*Business Roundtable v. SEC*, 1990, overturning rule 19c-4). Over 20 years earlier, the agency had successfully lobbied to advantage incumbent managers over bidders in the enactment of the Williams Act. It would be fair to say that the transformation in perspective on hostile bids was not simply a function of a change in agency personnel, but was caused by a more diffuse shift in attitude toward bids that was, no doubt, in part influenced by the event study literature demonstrating the benefits to target shareholders of takeovers.

The event study findings of the positive impact of takeovers on targets also formed the backdrop for the Supreme Court's decision in *Basic v. Levinson* (1988), which held that merger negotiations were sufficiently material to investors that disclosure could be required prior to the firms' reaching an agreement in principle, a bright-line standard that several appeals courts had adopted.[29] The Court's drive to disclose such information as early as possible is an acknowledgment of the significance of the information, which was underscored by the salience of the value of bids as measured by event studies. In reaching this conclusion, the Court rejected

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such transactions, at the time.

[29] The Supreme Court decision in *Basic v. Levinson* had an even more profound impact on the conduct of securities litigation than it had on acquisition negotiations. It articulated a doctrine, known as the "fraud on the market" theory, that permits plaintiffs to establish reliance, a necessary component of securities fraud, by reference to the integrity of the market price rather than by evidence that they saw or heard misleading information from the defendant. This doctrine is an acceptance of the semi-strong form market efficiency hypothesis, and represents, undoubtedly, one of the high points in the impact of finance theory on public policy. Finance theory, and more particularly event studies, have numerous other uses in securities litigation, uses which expanded after the *Basic* decision. As discussed in Mitchell and Netter (1994), the SEC uses the event study methodology in its enforcement of insider trading to determine the materiality of information and to calculate the profits that an insider has to disgorge. Cornell and Morgan (1990) provide a comprehensive overview of the strengths and weaknesses of the use

the view of the importance of maintaining secrecy until a firm agreement was reached that had been adopted by some appeals courts, stating that the view that secrecy "maximize[d] shareholder wealth" was "at least disputed as a matter of theory and empirical research" (p. 235). Although the Court did not specifically cite the economic literature on takeovers, it is plausible that the event studies detailing the benefits to shareholders of takeovers had an impact on its decision-making as the opinion evidences an awareness of the finance literature.

4.3.2. The Relation between Takeovers, Governance and Performance

Several studies have investigated the relation between takeovers, firms' corporate governance mechanisms and performance. We report selected results from this literature, but caution the reader at the outset that because many of the papers discussed in the section do not estimate the effects of these variables simultaneously, the estimates may well be biased and the results may not hold up were the models reestimated to take the endogeneity of the variables into account.

Martin and McConnell (1991) study performance prior, to and managerial turnover subsequent to, successful tender offer-takeovers. They find that takeover targets are from industries that are performing well relative to the market, and targets of disciplinary takeovers are performing poorly within their industry. During the year subsequent to the takeover they document a rate of management turnover of 42 percent compared to an annual rate of about 10 percent in the five-year period prior to the tender offer. Furtado and Karan (1990) review the literature on management turnover and conclude that turnover increases after control contests and after poor performance.

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of event studies for private securities litigation.

DeAngelo and DeAngelo (1989) study management turnover subsequent to proxy contests. The cumulative survival rate for incumbent management in 60 firms one year after the proxy contest outcome (regardless of the outcome) is 28 percent; and three years after the outcome is 18 percent. Ikenberry and Lakonishok (1993) study the performance of firms subject to proxy contests before and subsequent to the contest. Both stock market and accounting based performance measures indicate poor performance five years prior to the proxy contest. Also, accounting based performance measures indicate poor performance five years subsequent to the proxy contest, especially if dissidents win. Taken together, these studies' findings paint a picture similar to that of the Martin and McConnell study and the review by Furtado and Karan , in relating changes in control to changes in top management and poor performance. However, Agrawal and Jaffe (2003) examine the prebid performance (using accounting and market measures) of a very large sample of takeover targets and subsamples of targets of hostile bids, and conclude that targets are not poor performers (or that poor performance occurs so many years prior to the bid that it is incorrect to consider takeovers as disciplinary devices for inefficient managers); they do not examine the turnover of management within their sample of target firms.

Denis et al. (1997) study the impact of ownership structure on management turnover. They find that management turnover is more likely as the equity ownership of officers and directors decreases, and whether or not there is an outside blockholder. But they also document evidence suggesting that the impact of managerial ownership on turnover may be due, in part, to the impact of managerial ownership on corporate control activity; they observe a significantly higher occurrence of corporate control activity in the year prior to the management turnover,

regardless of the level of management ownership.

Bhagat and Jefferis (1994) study the frequency of executive turnover in firms that paid greenmail. Greenmail or targeted repurchase refers to the purchase of a block of shares by the company at a premium from a single shareholder or group of shareholders; this offer is not made to all shareholders. The motivation for paying greenmail is alleged to be deterrence of a takeover on terms that would be unfavorable to incumbent management. They find management turnover is less frequent at repurchasing firms than control firms of similar size and industry. This is true unconditionally, and for a subsample of firms that do not experience a takeover. However, they argue that takeovers and managerial turnover are endogenous. Less frequent management turnover at repurchasing firms may suggest that managers of those firms are insulated from market discipline. Alternatively, it may be the case that managerial performance at repurchasing firms does not warrant discipline. They find that accounting based performance measures for firms that paid greenmail and the control sample are similar both prior to and subsequent to the repurchase.

Denis and Serrano (1996) study management turnover following unsuccessful control contests. Thirty-four percent of the firms experience management turnover from the initiation of the control contest through two years following resolution of the contest. This rate of management turnover is twice that of a random sample of firms during the same period. Further, they find that turnover is concentrated in poorly performing firms in which investors unaffiliated with management purchase large blocks of shares during and subsequent to the control contest. In contrast, managers of firms with no unaffiliated block purchases appear to be able to extend their tenure despite an equally poor performance prior to the control contest.

Mikkelson and Partch (1997) study the impact of performance on management turnover during an active takeover market (1984-1988) compared to a less active takeover market (1989-1993) for a sample of unacquired firms. They find the frequency of managerial turnover is significantly higher during the active takeover market compared to the less active takeover market. Additionally, this decline in the frequency of managerial turnover is most conspicuous among poorly performing firms. This is an interesting finding in light of Agrawal and Jaffe's (2003) counterintuitive finding that takeover targets are not poor performers. Agrawal and Jaffe note, in attempting to reconcile that finding with the dominant view in the literature that takeovers discipline managers, that because their data relate only to actual takeovers, the threat of takeovers might discipline managers even though takeovers are only carried out when there are more compelling reasons than poor performance (i.e., managerial discipline); that is, "external control mechanisms (such as the threat of a takeover) may facilitate internal mechanisms (such as boards) in disciplining bad managers (p. 744). This hypothesis would appear to be confirmed by Mikkelson and Partch's finding that turnover rates decrease as takeover activity (and hence the threat of a bid) decreases.

4.4. Research on Corporate Governance

Virtually all of the important mechanisms of corporate governance have been subjected to event study analysis. These include boards of directors, shareholder proposals, derivative lawsuits, and executive compensation. Although all of these devices have been posited to perform a critical function of reducing the agency costs of the separation of ownership and control in the U.S. public corporation, empirical studies do not provide strong support for this viewpoint. Neither shareholder proposals nor lawsuits have a significant positive price effect. A

positive stock price effect is associated with appointment of an independent director to the board, but board composition has not been found to impact positively on performance. By contrast, the incentive-aligning device of stock-based executive compensation has been found to affect stock prices positively. These findings suggest that widely-shared beliefs concerning what are essential components for effective corporate governance may be mistaken, and that affirmative policies to foster such devices ought to be reconsidered.

4.4.1. Boards of Directors

Directors are seen as performing a pivotal role in the corporation: ensuring that management acts in furtherance of the shareholders' interest. As the repository of the shareholders' agents to monitor the agents directly running the firm, the board structure interposes an additional strata of agency problems on the more basic agency relation between managers and owners of the firm. Accordingly, commentators have emphasized the desirability of a board composed of independent or outside directors–directors without a financial or personal connection to management-- to ensure that the board structure is not simply creating a further layer of agency problems that is one-step removed from operations (e.g., Eisenberg, 1976). This position has been incorporated into the legal system: stock exchanges require listed firms to have independent directors on their boards and on specified committees, such as the audit, nominating and compensation committees, and courts take the board's independence into account when assessing claims in shareholder lawsuits.

Consistent with the monitoring view of outside directors, the market views such directors favorably. An event study of the appointment of an outside director reports a significant positive price effect, even when a majority of the board was already independent (Rosenstein and Wyatt,

1990). This increase, while statistically significant, is economically small and could reflect signalling effects. Appointing an additional independent director could signal that a company plans to address its business problems, even if board composition doesn't affect the company's ability to address the problems.

Bhagat and Black (1999) surveyed the literature on how board composition affects firm performance or vice versa. Prior studies of the effect of board composition on firm performance generally adopt one of two approaches. The first approach involves studying how board composition affects the board's behavior on discrete tasks, such as replacing the CEO, awarding golden parachutes, or making or defending against a takeover bid. This approach can involve tractable data, which makes it easier for researchers to find statistically significant results. But it doesn't tell us how board composition affects overall firm performance. For example, there is evidence that firms with majority-independent boards perform better on particular tasks, such as replacing the CEO (Weisbach, 1988) and making takeover bids (Byrd and Hickman, 1992). But these firms could perform worse on other tasks that cannot readily be studied using this approach (such as appointing a new CEO or choosing a new strategic direction for the firm), leading to no net advantage in overall performance. Also, events such as CEO turnover and takeovers are rare occurrences for firms. The greater and more positive contribution of boards may be in the ongoing advice they give to senior management in private meetings; it would be difficult to study this via the traditional event-study method.

The second approach consists of examining directly the correlation between board composition and firm performance. This approach allows us to examine the "bottom line" of firm performance (unlike the first approach), but involves much less tractable data. Firm

performance must be measured over a long period, which means that performance measures are noisy and perhaps misspecified as discussed in section 2. As Bhagat and Black (1999) review, the bulk of the studies do not find a positive association between board independence and performance (see also Romano 1996).

The inability to find a connection between performance and board composition in most empirical studies may be due to the endogenous relation between those variables, as discussed in section 3. Several researchers have examined whether board composition is endogenously related to firm performance, with inconsistent results. Hermalin and Weisbach (1988) and Weisbach (1988, p. 454) report that the proportion of independent directors on large firm boards increases slightly when a company has performed poorly: firms in the bottom performance decile increase their proportion of independent directors by around 1 percent in the subsequent year, relative to other firms. Bhagat and Black (2002) address the possible endogeneity of board independence and firm performance by adopting a three-stage least squares approach (3SLS); this permits firm performance, board independence, and CEO stock ownership to be endogenously determined. Bhagat and Black find a reasonably strong correlation between poor performance and subsequent increase in board independence. The change in board independence seems to be driven by poor performance rather than by firm and industry growth opportunities. However, there is no evidence that greater board independence leads to improved firm performance. If anything, there are hints in the other direction.[30] The conventional wisdom that

[30] Agrawal and Knoeber (1996) estimate a system of simultaneous equations for firm performance, measured by Tobin's *Q*, and several mechanisms of corporate governance that can control the agency problem: insider ownership, board composition, debt policy, reliance on external labor markets for managers, and corporate control market activity. They find that the proportion of outsiders on the board has a negative effect on performance; the other governance devices are not significant. They conclude that, apart from board composition, control mechanisms are chosen optimally by firms (that is, use of the various devices are traded off so as to maximize firm

supports a very high degree of board independence, although it may explain why poorly performing firms increase the independence of their boards, appears to rest on a shaky empirical foundation.

It is possible that the failure to find that independent boards improve performance is due to the fact that not all outside directors are truly independent from management, and empirical researchers cannot distinguish between "effective" and 'ineffective" independent boards. But a more compelling reason why increasing board independence does not result in improved performance is that having inside directors could add value in strategic planning[31] or evaluation of potential successors for the CEO (e.g., Vancil, 1987). In addition, independent boards at best improve corporate decision-making in certain extraordinary situations, such as management-buyouts or poor performance (e.g., Weisbach, 1988; Lee et al., 1992), which are very low probability events for most firms.

These data suggest that it would be prudent for companies to consider experimenting with modest departures from the norm of a "supermajority independent" board with only one or two inside directors. The independent directors will still numerically dominate the board, and can take appropriate action in a crisis. In addition, effort should be focused on devising mechanisms to enhance director independence or otherwise improve their incentives to monitor by encouraging greater equity ownership.[32] A final implication of these data is that the response of the stock exchanges to require a majority of independent directors in the aftermath of the

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value). This paper provides an excellent example of the endogeneity problem discussed in section 3: significant associations that are found between variables when the relations are estimated in separate OLS regressions disappear in the simultaneous equations estimation.

[31] This is consistent with Klein's (1998) evidence that inside director representation on investment committees of the board correlates with improved performance.

[32] Hall and Liebman (1998) provide evidence of the sensitivity of management's financial wealth to firm

corporate scandals involving such firms as Enron and WorldCom and ensuing federal legislation was misguided.[33]

4.4.2. Shareholder Proposals and Charter Amendments

A mechanism of corporate governance used increasingly by certain institutional and individual investors is shareholder proposals, which are included in a firm's proxy materials under SEC Rule 14a-8 and voted on at the annual shareholders' meeting. The most active institutional users of this tool, public pension and union funds, sponsor a variety of proposals that they assert will improve performance, including proposals to enhance the independence of the board, reform executive compensation, remove takeover defensive tactics, and adopt confidential voting (see, e.g., Del Guercio and Hawkins, 1999). The institutions must notify management of their intent to submit a proposal in advance of the meeting under the SEC rule, a requirement that has the beneficial effect for the sponsor that management will frequently negotiate a compromise in order to avoid the proposal's submission (see id).

Numerous event studies have been undertaken to determine whether the introduction of a shareholder proposal affects firm value. The uniform finding is that they do not (see Romano, 2001).[34] The absence of a significant effect is not likely to be due to imprecision in the event

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performance. The hypothesis that director incentives affect firm performance is consistent with the evidence in Bhagat et al. (1999).

[33] The federal legislation, the Sarbanes Oxley Act of 2002, required publicly traded firms to have audit committees composed of all independent directors, see section 301 of Public Law No. 107-204, codified as §10A(m) of the Securities Exchange Act of 1934, 15 U.S.C. §78j-1(m) (2003), a provision that is as misguided as the new stock exchange rules on the composition of the board. This is because there is a sizeable literature on audit committee composition that indicates that 100 percent independence does not improve performance or the quality of firms' accounting statements. See Romano (2005).

[34] Negotiations with management, by contrast, have been found to produce both significant positive and negative price effects. As discussed in Romano (2001), the difference may be explained either as evidencing that management selects the highest valued proposals for negotiation (or lowest for the negative effect studies) or that negotiation, by indicating management's responsiveness to certain investor concerns, provides a signal of management's quality (the price effect reflects market updating regarding management quality rather than the value to the firm of the omitted proposal).

study methodology because in these studies the sample sizes are large and the event dates are precise (see section 2). A plausible explanation of the absence of a price effect is that the objects of many shareholder proposals–independent boards, limits on executive compensation and in particular on incentive pay, and confidential voting–do not, when investigated by event studies, significantly affect firm value (see Romano, 2001). It is improbable that a proposal to undertake a governance strategy that does not itself significantly affect prices will produce a price effect.

It is troubling that institutional investors, who are, after all, in most cases, fiduciaries, would spend significant effort sponsoring proposals that are not likely to improve firm performance. A lack of information regarding the appropriate governance policy to adopt does not seem to be a plausible explanation for the behavior of at least the most prominent sponsors of proposals, who are sophisticated institutions. Public pension fund managers might well be informed about which proposals are useful and still champion fruitless proposals, however, if the managers obtain private benefits from submitting such a proposal, given the absence of strong incentives of boards of public funds to monitor their staff (or the presence of similar private benefits for board members).

The fact that, in contrast to public pension funds, private pension and mutual funds do not engage in comparable highly visible activism has been explained by the competitive nature of the industry, or as cost-conscious private funds' free-riding on the expenditures of activist public funds (e.g., Black, 1998, p. 460). This may be so. But there is a further, complementary explanation, that private institutions' managers are less likely to obtain private benefits from engaging in shareholder activism than public and union fund managers.[35] Both explanations are

[35] For examples of possible private benefits relevant to public pension or union fund officials in contrast to private fund managers, related to furthering political reputations or collective action goals see, e.g., Romano (1993c,

provided with support from survey data indicating that private fund managers perceive the costs and benefits of shareholder activism differently from public pension fund managers (Downes et al., 1999, pp. 32-34).

In short, financial economists have not been able to identify a positive performance effect of shareholder activism because much of that activism would appear to be misdirected. To the extent that this mismatch is due to problematic behavior on the part of fund managers sponsoring proposals involving private benefits, potential solutions are the adoption of better internal control mechanisms for fund boards, such as program audits, or a reduction in the current subsidy of the presentation of proposals by requiring sponsors of losing proposals to reimburse the corporation, in whole or in part, for the cost of the proposal (see Romano, 2001).

Most shareholder proposals receive low levels of support, although some subsets of institutional investors' proposals on corporate governance, such as those concerning the elimination of takeover defenses and the adoption of confidential voting, obtain high levels of support, and even majorities (see Gillan and Starks, 2000). Management proposals, in contrast, receive uniformly high levels of support and are virtually always adopted. This is not surprising, as managements consult with proxy solicitation firms and shy away from putting up proposals that the proxy firms suggest are not likely to be approved. The consequence has been that since institutional investors became active in opposing takeover defenses in the late 1980s, managements have discontinued, for the most part, proposing charter-level takeover defenses (indeed, most large public companies with defenses adopted them by the early 1980s, before the takeover market slowed and institutional shareholders began actively to oppose defenses).

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p.822); Thomas and Martin (1998, pp.61-62).

Gompers et al. (2003) construct a governance index using the Investor Responsibility Research Center (IRRC) database. This governance index is constructed by considering various charter amendments that would increase the difficulty of a hostile takeover, state takeover legislation to which the firms are subject, charter provisions to indemnify officers and directors, management compensation arrangements following change in control, and shareholder voting rights. Gompers et al. find a positive correlation between stronger shareholder rights (basically, fewer takeover defenses) and firm value (as measured by Tobin's *Q*) and stock market performance. They provide evidence in support of a causal explanation, that weak governance caused the poor performance (weak governance firms appear to have higher agency costs in the form of inefficient investments), although they note that the "analysis of causality" cannot be "conclusive," as unobserved characteristics could be correlated both with their index and performance (p. 142). The competing evidence is that industry classification explains between one-sixth and one-third of the abnormal returns across the firms, a finding consistent with research by Gillan et al. (2003) that indicates that corporate governance characteristics of firms vary significantly across industries.

Core et al. (2004) seek to determine whether better governance causes higher returns or other unidentified, correlated factors are driving the Gompers et al. results. The causal explanation offered by Gompers et al. requires investors to have not anticipated the cost (the increased managerial agency costs) of weak governance devices; thus, when the agency costs result in lower profits, investors lower their earnings expectations and the stock price declines. The test Core et al. employ is, accordingly, twofold: first they examine whether there is a relation between governance and operating performance, and then, whether the market

anticipated the performance. Core et al. measure operating performance by return on assets, adjusted for industry, and find a significant negative relation: firms with weak governance (as defined by the Gompers et al. measure) had poor operating returns. But they further find that the weak governance firms' underperformance was anticipated by the market. Analyst forecasts of the firms' earnings in relation to their governance characteristics were unbiased. Core et al. thus conclude that weak governance does not cause lower returns (the association found in the Gompers et al. study is not causal).

Core et al. thereupon investigate alternative explanations to the causal one. They look at whether the difference could be due to differences in risk (firms with weak governance happen to be firms with low risk). Although they find supporting evidence of this explanation, in that weak governance firms have the lowest cost of capital and lowest realized returns, the effect is too small to explain the differential in abnormal returns found by Gompers et al. They then examine governance portfolio returns out-of-sample (2000-02), to evaluate whether time-specific factors correlated with governance characteristics could explain the Gompers et al. results. They find that the abnormal returns trend reverses: the weak governance firms outperformed the strong governance firms in this period (although the reversal is not statistically significant when controlling for the Fama-French three-factor pricing model and momentum, the returns model used in the Gompers et al. study). The weak governance firms did have lower operating performance in the out-of-sample period and analysts continued to forecast the difference. These data suggest that time-period specific factors may account for the finding of positive abnormal returns to strong governance firms in the Gompers et al. study.

It should also be noted that the accumulated evidence on the impact on shareholder

wealth of the charter provisions in the Gompers et al. governance index is weak, with point estimates that range from slightly negative to slightly positive; see DeAngelo and Rice (1983) and Linn and McConnell (1983). Ownership data in firms that propose such amendments and voting patterns on these amendments suggest that the amendments are supported by corporate insiders and opposed by the typical institutional investor. Brickley et al. (1988) document voting patterns consistent with the hypothesis that institutional investors are more likely than nonblockholders to oppose antitakeover amendments, while corporate insiders support the adoption of amendments.[36] A plausible interpretation of these data is that antitakeover amendments protect managers from the discipline of the takeover market while potentially harming shareholders.

There are, however, reasonable arguments to support the view that management-sponsored antitakeover amendments do not actually injure shareholders. For instance, they may solve collective action problems on the part of dispersed shareholders that prevent them from negotiating with bidders to raise takeover premiums. The notion that antitakeover amendments increase managers' bargaining power is inconsistent with Pound's (1987) finding that antitakeover amendments do not increase bid premiums. Subramanian (2003) considers the

[36] Brickley et al. (1988) find higher levels of support for management proposals of takeover defenses when the voting pool contains institutions that they consider susceptible to management pressure because the institutions may have additional business relations with the firms (banks and insurance companies). However, Van Nuys (1993) finds, in a case study that tracks actual votes on a contested management proposal of defenses, that the institutions that had business relations with the firm were not more likely to vote in favor of management than other institutions. See also Davis and Kim (2005), who find that mutual funds' actual votes on shareholder proposals do not differ significantly across portfolio firms with whom they have pension business and those with whom they do not, but that funds' overall voting policies that appear to be more favorable to management are positively related to funds' overall volume of pension business. Institutions' conflicts in voting from business relations provided a basis for shareholder activists' advocacy of confidential proxy voting from the 1980s-1990s (the assumption being that institutions would be able to vote against management if it did not know how the institution voted), but in 2002 that policy position was ignored by SEC, which required mandated disclosure of the proxy votes by a subset of institutions (mutual funds). While that reform may have been misguided from a cost-benefit perspective, there is no evidence that confidential voting affects voting outcomes (see Romano, 2003).

impact of takeover defenses on the target management's bargaining power and its potential impact on takeover premiums. He finds no difference in takeover premiums for negotiated acquisitions (hostile and unsolicited takeovers are excluded from his sample) in states that have a differential encouragement of a specific takeover defense, poison pills (these defenses are not subject to shareholder approval, which limits extrapolating from his data to the above-mentioned charter-level defenses which shareholders must approve). Poison pills are considered to be the most powerful defense against hostile bids and thus the defense most likely to affect adversely shareholders' interest, although a recent study by Danielson and Karpoff (2002) finds, surprisingly, that firms' operating performance improves after a pill's adoption. Subramanian also interviews the heads of mergers and acquisitions of the major investment banks to learn about their perception of the impact of takeover defenses on takeover premiums. The perceptions of the investment bankers are consistent with his data on premiums; most think that defenses are irrelevant in negotiated transactions.

A variant on the bargaining thesis but related to the collective action problem is that takeover defenses facilitate an auction, by delaying the consummation of the initial bid in time for another bidder to appear, rather than by facilitating negotiation for a higher price with the first bidder. The argument is that dispersed shareholders would be unable to hold out for an auction, in contrast to a sole owner. Subramanian's (2003) analysis does not challenge this alternative view of defensive tactics, which motivates the opposition to defenses by critics such as Easterbrook and Fischel (1981), who objected to what they considered defenses' primary effect, that they result in auctions. The data on takeovers indicate that auctions do increase premiums (e.g., Bradley et al., 1988), although other defenses do not appear to do so (e.g.,

Pound, 1987; Hackl and Testani, 1988). Firm-level defenses such as antitakeover charter amendments are not, however, unambiguously necessary to encourage an auction, as that is the likely effect of the Williams Act (the federal takeover regulation).

A second argument, that managers of firms adopting amendments are simply enjoying contractual protection against takeovers afforded them by shareholders, is consistent with the fact that shareholders vote to approve the overwhelming majority of proposals put forth by management. Jarrell et al. (1988) attribute shareholder support for wealth-decreasing amendments to the free-rider problem. Bhagat and Jefferis (1991) argue that the transaction costs that give rise to the free-rider problem are, at least in part, an endogenous consequence of strategic behavior that might be eliminated through either changes in the charter or proxy reform. Despite the lack of such reform, in recent years managers have ceased to present such defenses to shareholders, presumably out of concern that the proposals would be defeated, as institutional investors have become better organized and more active in the proxy process.

4.5. Event Studies and Securities Regulation

In addition to the application of event study methodology to litigate securities fraud cases, the methodology has been used to assist in policy analysis of securities regulation, as it has been used in the state competition and takeover debates, most recently in the evaluation of procedural reforms wrought by the Private Securities Litigation Reform Act of 1995. This congressional initiative was intended to render it more difficult to bring a civil action under the federal securities laws (H.R. Conference Report, 1995). Because the legislation was unexpectedly vetoed by President Clinton and the veto was overridden shortly thereafter (see Johnson, Kasznik and Nelson, 2000, pp. 8-9), in contrast to legislation that comes to fruition

over a long period of time, fairly clean event dates for the Act can be identified.

Event studies have found that the Act had a significantly positive stock price effect (Spiess and Tkac, 1997; Johnson, Kasznik and Nelson, 2000). This result is interpreted as validating the congressional impetus for the legislation, concern over the incidence of nonmeritorious lawsuits, because the market valued the legislation's benefits from curtailing frivolous suits as greater than its costs in restricting meritorious suits. Further supporting this conclusion, a court decision adopting the most stringent interpretation of the Act's pleading requirement, which furthered Congress' goal of making filing of a nonmeritorious suit more difficult, had a statistically significant positive effect on stock prices for a sample of high technology firms, which operate in an industry sector with a high probability of securities litigation (Johnson, Nelson and Pritchard, 2000).[37]

There is, in fact, a long history of empirical research evaluating securities regulation, and in particular the mandatory disclosure regime, going back to the classic studies by Stigler (1964) and Benston (1975) of the original federal statutes enacted during the New Deal, the Securities Act of 1933 and the Securities Exchange Act of 1934. Those studies challenged the conventional legal wisdom that the federal legislation was of value to investors, as both Stigler and Benston found that the statutes did not improve the returns of affected firms. Not surprisingly, their work was quickly criticized (e.g., Friend and Herman, 1964; Friend and Westerfield, 1975). Recent work by Paul Mahoney (2001a, 1999) has raised a different set of concerns regarding the legislation but that lead to the same conclusion on its efficacy for

[37] In contrast to state corporate law, the federal securities laws consist of mandatory rules. Firms cannot therefore contract around a court decision in this context as they can in the corporate law context, and decisions can therefore impose wealth effects on nonlitigants.

investors, as his work shows how key provisions of the 1933 Act were enacted to benefit an established set of financial institutions over new entrants, and how crucial premises of the 1934 Act concerning market manipulation by stock pools were incorrect. We cannot begin to review the literature on securities regulation in this chapter. Instead, we refer the reader to Romano (2002), which reviews the literature and concludes that there is a paucity of evidence that the federal disclosure regime administered by the SEC has benefited investors.

4.6. Comparative Corporate Governance

In a series of influential papers, La Porta et al. (1997, 1998, 1999, 2000, 2002) analyze the role a country's legal system has in protecting investor rights. They argue (2000, p.4): "Such diverse elements of countries' financial systems as the breadth and depth of their capital markets, the pace of new security issues, corporate ownership structures, dividend policies, and the efficiency of investment allocation appear to be explained both conceptually and empirically by how well the laws in these countries protect outside investors." La Porta et al. (1998) draw on the work of David and Brierley (1985) and Zweigert and Kotz (1987) to postulate that the commercial legal codes of most countries are based on four legal traditions: the English common law, the French civil law, the German civil law, and the Scandinavian law. They find that common law countries provide the most protection to investors (La Porta et al. 1998), and that they have the deepest stock markets and most dispersed corporate ownership structures (La Porta et al., 1997, 1999) . They also document that countries develop substitute mechanisms for poor investor protection, such as mandatory dividends and greater ownership concentration. In a follow-up paper, La Porta et al. (2002) find that investor protection is positively correlated with valuation across countries.

In their most recent work, La Porta et al. (2003) construct two indices measuring the quality of securities regulation representing the strength of public and private enforcement mechanisms (the former consists of powers of the national securities regulator, the latter, private litigation regime features such as the burden of proof), to examine the effect of securities regulation on stock markets. As in the case of their investor protection measure, which they refer to as a shareholder rights or antidirector rights index, the public and private enforcement measures have higher values in nations with common law traditions. La Porta et al. find that the private enforcement measure is more significant than either the public enforcement measure or the shareholder rights index for the development of a stock market.

The overarching theme of the influential and extensive La Porta et al. corpus is that "law matters." The cluster of countries associated with the common-law legal tradition, which is identified with stronger investor protection and securities regulation, have deeper stock markets, less concentrated ownership of public firms, and in their view, given those nations' higher level of financial development, offer better opportunities for economic growth and prosperity. Their work has generated considerable discussion. Some scholars have disagreed with the construction of the investor protection measure (e.g., Vagts, 2002; Berglof and von Thadden, 1999). Others have sought to offer alternative explanations of why common law systems are associated with higher financial development.

For example, Mahoney (2001b, p. 523) contends that "legal origin affects growth through channels other than finance," that is, the source of the association between the common law and financial growth is that legal tradition's view of the role of the state, which emphasizes limited government and an independent judiciary, leading to secure property and contract rights, rather

than its effect on financial markets through shareholder protection measures. Estimating generalized methods of moments (GMM) coefficients for endogeneous variables proxying for judicial independence, limited government (scope of civil liberties) and property and contract rights, using the legal tradition (common or civil law) as an instrument, Mahoney finds that the endogenous variables significantly explain growth in real per capita GDP (the null that legal origin affects growth solely through its affect on the endogeneous variables –that the instrument is uncorrelated with the error term -- cannot be rejected). Roe (2000), by contrast, offers a politically-based explanation for La Porta et al.'s finding, emphasizing the political importance of stakeholders in civil law origin nations.

Notwithstanding disagreements over the significance of La Porta et al.'s findings, it cannot be denied that their work has had a major impact –international institutions such as the International Monetary Fund and World Bank focus on corporate governance as a key plank in their policy toward emerging market nations[38]-- and that their corporate law index captures an important element driving cross-national differences in financial development, despite nuances of legal regime differences among nations that are grouped together in their legal categorization (see, e.g., Cheffins, 2001, distinguishing between the corporate law and institutions of the United States and United Kingdom, which are grouped together in La Porta et al.'s analysis). Another sign of the influence of La Porta et al.'s research agenda is the large body of literature that has developed using the La Porta et al. variables to investigate a variety of other cross-national differences. These studies also provide evidence that legal rules matter in important ways for national economies. We note three such examples; for a more extensive review see Denis and

[38] For critiques of international financial institutions' application of an "Anglo-American" corporate governance paradigm to emerging nations, a policy supported by La Porta et al.'s research, see, e.g., Berglof and von

McConnell (2003).

Rossi and Volpin (2004) use the differential investor protection characterization across countries developed by La Porta et al. to study the volume and characteristics of cross-border acquisitions. They find that targets are typically in countries with poorer investor protection than acquirers. They conclude that cross-border acquisitions may be partially motivated by enhancement of investor protection in target firms. Wurgler (2000) studies the allocation of capital in financial markets across countries; he finds, among other results, that capital is more efficiently allocated (increased investments in growing industries and decreasing investments in declining sectors) in nations with higher investor protection as measured by La Porta et al. Hail and Leuz (2003) examine the differences in firms' cost of capital across countries. They find that higher levels of securities disclosure, greater public and private securities law enforcement (the measures in La Porta et al., 2003), and, to a lesser extent, a commitment to the rule of law (a variable from La Porta et al., 1997 that is correlated with their shareholder rights index) reduce firms' cost of capital, controlling for other country factors and risk that predictably affect the cost of capital. The effect of securities regulation on the cost of capital is, however, smaller for globally integrated (more developed) markets.

Given the growth of transition and developing markets, with the expansion of the European Union and international trade agreements over the past decade, the research initiated by La Porta et al. will no doubt continue to influence the agenda for comparative research. This is because a better understanding of the connection between legal rules, particularly those related to the organization of economic activity in corporations, and nations' financial growth and

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Thadden (1999); and Singh et al. (2002).

development, which La Porta et al.'s painstaking empirical analysis has identified, is undoubtedly a key to improving social wealth and accordingly, individual welfare.

5. Conclusion

In this chapter we have attempted to provide the reader with a sense of the richness of the extensive body of empirical research in corporate law, and its usefulness for public policy analysis. With respect to the literature on corporate litigation, defendants experience economically-meaningful and statistically-significant wealth losses upon the filing of the suit (except for shareholder derivative suits), and significant wealth increases on the announcement of a settlement when the plaintiff is another firm. Plaintiff firms, however, experience no significant wealth effects upon filing a lawsuit, and the wealth implications of settlements appear to be trivial. These findings suggest that, at a minimum, lawsuits are not a value-enhancing way for corporations to settle their disagreements with other corporations.

Event studies in particular have been influential in the making of corporate law and in corporate law scholarship. They have informed the major policy debates over the production of corporate laws and takeovers, and the jurisprudence on securities law. The impact of empirical research on these issues can be overstated: the strength with which particular corporate law commentators hold priors concerning the appropriate policy will cause them to update those priors differentially. But over time empirical research does have an effect, and its effect has reached beyond the academy to corporate law decision-makers. This is precisely what has occurred in the state competition and takeover debates over the past two decades: academic consensus shifted to a more favorable assessment of state competition and of takeovers as

empirical research accumulated that was probative on these issues, and the approach of the SEC and the Delaware courts to takeovers changed as well.

Empirical research on other mechanisms of corporate governance, such as boards of directors and shareholder proposals, is just beginning to enter the policy debates, as interest in these mechanisms is a relatively recent phenomenon, following the decrease in hostile takeovers in the 1990s. That research generally finds the wealth effects of these governance mechanisms are insignificant. As such findings are reinforced and cumulate, a process of reassessment of the conventional position on the efficacy of these corporate governance mechanisms as managerial monitoring devices may well occur, similar to what transpired in the state competition and takeover debates.

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Table 1, Panel A

Announcement period abnormal returns for **defendant** corporations by opponent type.

Plaintiff	**Study**	**Sample period**	**Sample size**	**Announcement window: (Event days)**	**Announcement return (%)**	**Z-statistic**
Another firm	BBC (1998)	1981-1983	239	Filing (-1,0)	-0.75 **	-3.31
Government	BBC (1998)	1981-1983	110	Filing (-1,0)	-1.73 **	-4.99
Private non-firm	BBC (1998)	1981-1983	221	Filing (-1,0)	-0.81 **	-2.67
Another firm	BC (1995)	1973-1983	343	Filing (-1,0)	-0.60**	-3.17
Stakeholders	KL (1993)	1978-1987	19	Allegation (-1,0)	-1.34	-1.21
Stakeholders	KL (1993)	1978-1987	25	Filing (-1,0)	-1.67 *	-2.35
Government	KL (1993)	1978-1987	13	Allegation (-1,0)	-5.05 **	-4.77
Government	KL (1993)	1978-1987	17	Filing (-1,0)	-0.93	-1.14
Stakeholders	KL (1999)	1979-1995	80	Filing (-1,0)	-1.02 **	-2.86
Consumers	PR (2002)	1985-1995	15	Filing (-1,1)	-1.93 **	-3.31
Another firm	BBC (1998)	1981-1983	12	Settlement (-1,0)	3.66 **	3.29
Government	BBC (1998)	1981-1983	4	Settlement (-1,0)	-0.68	-0.22
Private non-firm	BBC (1998)	1981-1983	12	Settlement (-1,0)	-1.06	-1.72
Stakeholders	KL (1993)	1978-1987	13	Settle/Verdict (-1,0)	-0.17	-0.49
Government	KL (1993)	1978-1987	10	Settle/Verdict (-1,0)	1.48	1.20
Stakeholders	KL (1999)	1979-1995	15	Verdict-Defense (-1,0)	-0.36	-0.51
Stakeholders	KL (1999)	1979-1995	193	Verdict-Plaintiff (-1,0)	-0.62 *	-2.74
Stakeholders	KL (1999)	1979-1995	4	Settlement (-1,0)	-2.43	-1.35
Consumers	PR (2002)	1985-1995	25	Verdict-Plaintiff (-1,1)	0.33	0.73
Government	H(2003)	1994-1998	13	Settlement (-1,3)	-.25	Nr
Another firm	H(2003)	1994-1998	285	Settlement (-1,3)	-.65	Nr
Private non-firm	H(2003)	1994-1998	439	Settlement (-1,3)	.05	nr

Table 1, Panel B

Announcement period abnormal returns for **plaintiff** corporations by opponent type.

Defendant	**Study**	**Sample period**	**Sample size**	**Announcement window: (Event days)**	**Announcement return (%)**	**Z-statistic**
Another firm	BBC (1998)	1981-1983	172	Filing (-1,0)	-0.25	-0.60
Government	BBC (1998)	1981-1983	26	Filing (-1,0)	-0.44	-0.80
Private non-firm	BBC (1998)	1981-1983	51	Filing (-1,0)	0.71	0.34
Another firm	BC (1995)	1973-1983	86	Filing (-1,0)	1.24 **	4.26
Another firm	BBC (1998)	1981-1983	8	Settlement (-1,0)	-0.77	-1.26

Table 1, Panel C

Announcement period abnormal returns for **defendant** corporations by type of legal issue.

Legal issue	**Study**	**Sample period**	**Sample size**	**Announcement window: (Event days)**	**Announcement return (%)**	**Z-statistic**
Antitrust	BBC (1998)	1981-1983	62	Filing (-1,0)	-0.81	-1.52
Breach of contract	BBC (1998)	1981-1983	48	Filing (-1,0)	-0.16	-0.59
Corp. governance	BBC (1998)	1981-1983	154	Filing (-1,0)	0.08	0.64
Environment	BBC (1998)	1981-1983	27	Filing (-1,0)	-3.08 **	-5.32
Exclusive dealing	BBC (1998)	1981-1983	27	Filing (-1,0)	-0.14	0.28
Patent infringement	BBC (1998)	1981-1983	33	Filing (-1,0)	-1.50 *	-2.42
Product liability	BBC (1998)	1981-1983	38	Filing (-1,0)	-1.46 **	-3.12

Disclosure laws	BBC (1998)	1981-1983	46	Filing (-1,0)	-2.71 **	-4.49
Antitrust-horizontal	BC (1995)	1973-1983	117	Filing (-1,0)	-1.45 **	-4.88
Antitrust-vertical	BC (1995)	1973-1983	105	Filing (-1,0)	0.27	1.29
Fraud of stakeholders	KL (1993)	1978-1987	19	Allegation (-1,0)	-1.34	-1.21
Fraud of stakeholders	KL (1993)	1978-1987	25	Filing (-1,0)	-1.67 *	-2.35
Fraud of government	KL (1993)	1978-1987	13	Allegation (-1,0)	-5.05 **	-4.77
Fraud of government	KL (1993)	1978-1987	17	Filing (-1,0)	-0.93	-1.14
Fin. reporting fraud	KL (1993)	1978-1987	4	Allegation (-1,0)	-4.60 *	-2.00
Fin. reporting fraud	KL (1993)	1978-1987	7	Filing (-1,0)	-4.56 *	-1.99
Punitive damages	KL (1999)	1979-1995	80	Filing (-1,0)	-1.02 *	-2.86
Product liability	PR (2002)	1985-1995	15	Filing (-1,1)	-1.93 **	-3.31

** (*) Significant at .01 (.05) level. Event day 0 is the publication date of the filing, allegation, or settlement.

BBC (1998): Bhagat, Bizjak and Coles (1998).

BC (1995): Bizjak and Coles (1995). Horizontal antitrust issues include horizontal price-fixing, merger/joint-venture, asset accumulation, predatory pricing, and monopolization. Vertical antitrust issues include resale price maintenance, exclusive dealing, tying, territorial restrictions, dealer termination, and refusal to deal.

KL (1993): Karpoff and Lott (1993). Fraud of stakeholders occurs when the firm is accused of cheating on implicit or explicit contracts with suppliers, customers, or employees. Fraud of government occurs when the firm is accused of cheating on implicit or explicit contracts with government agencies. Financial reporting fraud occurs when the firm is accused of misrepresenting the firm's financial condition. KL (1999): Karpoff and Lott (1999). Punitive damages are sought in cases involving product liability, fraud, business negligence, breach of contract, insurance claims, employment claims, asbestos claims, and vehicular accident claims.

PR (2002): Prince and Rubin (2002). Product liability claims involving auto manufacturers.

H (2003): Haslem (2003). nr: not reported.

Table 2

Announcement period abnormal returns for firms changing their state of incorporation.

Study	**Sample period**	**Sample Size**	**Announcement window: (Event days)**	**Announcement return (%)**	**Z-statistic**
BS (1989)	1986-88	32	0	1.04*	2.21
Romano (1985)	1961-83	150	(-1,+1)	4.18**	11.92
Romano (1985)	1961-83	63 (m&a)	(-1,+1)	6.94**	11.44
Romano (1985)	1961-83	43 (to)	(-1,+1)	.05	0.77
Wang (1995)	1986-94	145	(-1,+1)	0.97*	1.99
Wang (1995)	1986-94	94 (Del)	(-1,+1)	1.12	1.65
Wang (1995)	1986-94	51 (non-Del)	(-1,+1)	0.69	0.87
HL (1998)	1980-92	294	(0,+3)	-0.15	-0.51
HL (1998)	1980-92	45 (to)	(0,+3)	-0.51	-1.08
HL (1998)	1980-92	59 (ll)	(0,+3)	1.20	1.66
HL (1998)	1980-92	49 (oth)	(0,+3)	-1.23	-0.72
DL (1980)	1927-77	140	0 (month)	1.58	n.r.
Hyman (1979)	1968-76	26	Announcement week	2.73*	2.01
NP (1989)	1986-87	36	(-1,+1)	0.93	1.61
NP (1989)	1986-87	19 (Cal)	(-1,+1)	0.96	1.57
NP (1989)	1986-87	17 (non-Cal)	(-1,+1)	0.89	0.68
Peterson (1988)	1969-84	30	-1	0.27	1.35
Peterson (1988)	1969-84	14 (to)	-1	-0.16	-0.20
Peterson (1988)	1969-84	16 (no to)	-1	0.65	2.04

(*) Significant at .01 (.05) level. Event day 0 = proxy mailing date announcing meeting with reincorporation vote. **n.r.: test statistic not reported

BS (1989): Bradley and Schipani (1989). Romano (1985) subsamples: **m&a**: reincorporations accompanied by acquisition programs; **to**: reincorporations accompanied by takeover defenses.

Wang (1995) subsamples: **Del**: reincorporations into Delaware; **non-Del**: reincorporations to states other than Delaware.

HL (1998): Heron and Lewellen (1998), subsamples: **to**: reincorporations accompanied by takeover defenses; **ll**: reincorporations accompanied by director liability limits; **oth**: reincorporations not accompanied by takeover defenses or director liability limits.

DL (1980): Dodd and Leftwich (1980).

Hyman (1979): calculates AR as difference in mean changes in stock price compared to S&P index.

NP (1989): Netter and Poulsen (1989), subsamples: **Cal**: reincorporations from California; **non-Cal**: reincorporations from states other than California. Peterson (1988) subsamples: **to**: reincorporations accompanied by takeover defenses; **no to**: reincorporations not accompanied by takeover defenses.

Table 3
Event studies of takeover statute enactments.

Study	Statute(s) studied	Sample size	Announcement window: (Event days)	Announce-ment return (%)	Z-statistic
KM (1989)	40 statutes, 26 states, 1982-87	1505	(-1,0)	-0.29	-2.43**
KM (1989)	38 statutes, 26 states (no to)	1107	(-1,0)	-0.39	-2.54**
KM (1989)	33 statutes, 23 states (to)	368	(-1,0)	-0.13	-0.87
Mahla (1991)	49 statutes, 30 states, 1983-89	678	(0)	-0.12	-1.85
PJ (1990)	5 statutes, 1 vetoed bill, 4 states	245	(0,+1)	-0.46	-1.62
KM (1989)	11 BC statutes	1030	(-1,0)	-0.47	-2.70**
Mahla (1991)	BC statutes	248	(0)	-0.24	-2.35*
KM (1989)	Del BC statute, 1987	n.r.	(-1,0)	-0.44	-1.10
JP (1991)	Del BC statute, 1987	920	(0, +1)	-0.09	-0.19
PJ (1990)	Ind BC statute, 1986	15	(0,+1)	-0.94	-1.12
Broner (1987)	NJ BC statute, 1986	51	(-1,+1)	-0.55	-1.13
PJ (1990)	NJ BC statute, 1986	26	(0,+1)	0.48	0.71
Schumann (1988)	NY BC statute, 1985	94	(-1,+1)	-0.96	-2.37*
KM (1989)	NY BC statute, 1985	n.r.	(-1,0)	-0.22	-0.60
PJ (1990)	NY BC statute, 1985	72	(0,+1)	-0.72	-1.71
KM (1989)	12 CSA statutes	271	(-1,0)	-0.01	-0.89
Mahla (1991)	CSA statutes	236	(0)	-0.017	0.18
KM (1989)	Ind CSA statute, 1986	n.r.	(-1,0)	-2.14	-3.46**
PJ (1990)	Ind CSA statute, 1986	15	(0,+1)	-1.8	-2.15*
SW (1990)	Ind CSA statute, 1986	19	(0)	-5.91	1.97
Romano (1987)	Mo CSA statute, 1984	14	(-1,+1)	-0.01	-0.72

Study	Statute(s) studied	Sample size	Announcement window: (Event days)	Announce-ment return (%)	Z-statistic
PJ (1990)	OH CSA statute, 1986	45	(0,+1)	-0.35	-0.67
KM (1995)	Penn DG, 1990	57	(0,+1)	-1.43	-2.89+
KM (1995)	Penn DG 1990	28 (no to)	(0, +1)	-2.33	-2.78+
KM (1995)	Penn DG 1990	29 (to)	(0,+1)	-0.56	-1.21
Margotta (1991)	Penn DG, 1990	55	(0)	-0.6	-2.47*
ST (1992)	Penn DG, 1990	56	(-1,+1)	-3.33	-4.80**
ST (1992)	Penn DG, 1990	44 (no to)	(-1,+1)	-3.94	-5.06**
ST (1992)	Penn DG, 1990	12 (to)	(-1,+1)	-1.11	-0.65
KM (1989)	11 FP statutes	329	(-1,0)	-0.27	-1.30
Mahla (1991)	FP statutes	74	(0)	0.06	-0.05
Romano (1993 b)	25 OC statutes (pre-1991)	361	(0)	0.02	0.30
ASM (1997)	IN, NY, and OH OC statutes (pre-1993)	318	(0,1)	-0.33	v.n.r
RN (1988)	Oh OC/PP statute, 1986	37	(-1,+1)	-2.08	-2.18*
MMM (1990)	Oh OC/PP Statute, 1986	53	(-1,+5)	1.43	1.69

**(*) Significant at .01 (.05) level; + significance level not specified. Event is first press report, unless otherwise indicated below.

v.n.r.: value not reported for z-statistic; significance level is reported

BC: Business Combination statute; **CSA**: Control Share Acquisition statute; **FP**: Fair Price statute; **OC**: Other Constitutency statute; **PP**: Poison Pill statute; **Penn DG**: Pennsylvania takeover statute including disgorgement, other constituency, control share acquisition and labor protection provisions

KM (1989): Karpoff and Malatesta (1989); they report insignificant abnormal returns on legislative event dates; subsamples: **to**= firms with takeover defenses when statute adopted; **no to** = firms without takeover defenses when statute adopted.

Mahla (1991): event is introduction of bill.

PJ (1990): Pugh and Jahera (1990), event is introduction of bill.

JP (1991): Jahera and Pugh (1991); event is 8 legislative events; significant positive return reported using excess returns model.

Broner (1987): event is committee release of bill.

SW (1990): Sidak and Woodward (1990), 14 legislative events.

Romano (1987): event is introduction of bill.

KM (1995): Karpoff and Malatesta (1995); insignificant when cumulated over legislative events; **to**= firms with takeover defenses when statute adopted; **no to** = firms without takeover defenses when statute adopted.

ST (1992): Szewczyk and Tsetsekos (1992), event is measured over 4 legislative events; subsamples: **to** = firms with takeover charter defenses when statute adopted; **no to** = firms with no takeover charter defenses when statute adopted

Romano (1993b): 3 legislative events
ASM (1997): Alexander, Spivey and Marr (1997); subsample: **to** = firms with takeover defenses when statute adopted
RN (1988): Ryngaert and Netter (1988), event is legislative action.
MMM (1990): Margotta, McWilliams and McWilliams (1990), event is legislative action.

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