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WHAT MATTERS IN CORPORATE GOVERNANCE?

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Abstract

We investigate which provisions, among a set of twenty-four governance provisions followed by the Institutional Investors Research Center (IRRC), are correlated with firm value and stockholder returns. Based on this analysis, we put forward an entrenchment index based on six provisions – four “constitutional” provisions that prevent a majority of shareholders from having their way (staggered boards, limits to shareholder bylaw amendments, supermajority requirements for mergers, and supermajority requirements for charter amendments), and two “takeover readiness” provisions that boards put in place to be ready for a hostile takeover (poison pills and golden parachutes). We find that increases in the level of this index are monotonically associated with economically significant reductions in firm valuation, as measured by Tobin’s Q. We also find that firms with higher level of the entrenchment index were associated with large negative abnormal returns during the 1990-2003 period. Furthermore, we find that the provisions in our entrenchment index fully drive the correlation, identified by prior work, that the IRRC provisions in the aggregate have with reduced firm value and lower stock returns during the 1990s. We find no evidence that the other eighteen IRRC provisions are negatively correlated with either firm value or stock returns during the 1990-2003 period.

Key words: Corporate governance, agency costs, boards, directors, takeovers, tender offers, mergers and acquisitions, proxy fights, defensive tactics, entrenchment, anti-takeover provisions, staggered boards, corporate charters, corporate bylaws, golden parachutes, poison pills.

JEL Classification: G30, G34, K22

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I. INTRODUCTION

There is now widespread recognition – as well as growing empirical evidence – that corporate governance arrangements can substantially affect shareholders. But which provisions, among the many provisions firms have and outside observers follow, are the ones that play a key role in the link between corporate governance and shareholder value? This is the question we investigate in this paper.

An analysis that seeks to identify which provisions matter should not look at provisions in isolation without controlling for other corporate governance provisions that might influence shareholder value. Thus, it is desirable to look at a universe of provisions together. We focus in this paper on the universe of provisions that the Institutional Investor Research Center (IRRC) monitors for institutional investors and researchers interested in corporate governance. The IRRC follows 24 governance provisions (the IRRC provisions) that appear beneficial to management -- and which may or may not be harmful to shareholders. Prior research has identified a relationship between the IRRC provisions in the aggregate and shareholder value. In an influential article, Gompers, Ishii, and Metrick (2003) found that a broad index based on these 24 provisions, giving each IRRC provision equal weight, was negatively correlated with firm value, as measured by Tobin's Q, as well as stockholder returns during the decade of the 1990s. Not surprisingly, a substantial amount of subsequent research has utilized this index as a measure of how harmful firms' governance provisions are (e.g., Amit and Villalonga (2004); Cremers, Nair, & Wei (2004); Fahlenbrach (2003); Klock, Mansi and Maxwell (2003), Yermack (2004)).

There is no a priori reason, of course, to expect that all the 24 IRRC provisions are equally responsible for the documented correlation between the IRRC provisions in the aggregate and Tobin's Q as well as stock returns in the 1990s. Some provisions might be innocuous or even beneficial. And among those provisions that are negatively correlated with firm value or stockholder returns, some might be more so than others. Furthermore, some provisions might be at least in part the endogenous product of the allocation of power between

shareholders and managers set by other provisions. Thus, the question naturally arises: Which of the 24 IRRC provisions matter? We look inside the box of the IRRC provisions to answer this question.

Identifying which provisions inside the set of twenty-four IRRC provisions can enhance our understanding of the relationship between corporate governance provisions and firm value. To begin, identifying the provisions that do and do not contribute to the negative correlation with Tobin's Q would provide a useful focus for subsequent corporate governance research and practice. These provisions are the ones that have potential relevance for policy-making. Furthermore, knowing which provisions play a key role would likely be useful in identifying the source of the negative correlation between the IRRC provisions in the aggregate and firm performance. Finally, identifying which provisions do and do not matter enables providing a measure of corporate governance quality that would not be affected by the "noise" created by counting provisions that do not matter.

Our investigation of which provisions do and do not matter is theory-driven. We start by examining the IRRC provisions and identifying six that, on theoretical grounds, can be expected to play a significant role in the documented correlation between IRRC provisions, in the aggregate, and shareholder value. Four of these provisions determine the constitutional limits on shareholder voting power. Shareholders' voting power is ultimately the source of their power, and these four arrangements – staggered boards, limits to shareholder amendments of the bylaws, supermajority requirements for mergers, and supermajority requirements for charter amendments – limit the extent to which a majority of shareholders can impose its will on management. Two other provisions are the most well-known and salient measures taken in preparation for a hostile offer – poison pills and golden parachute arrangements. We construct an index, which we label the "entrenchment index," based on these six provisions. Each company in our database is given a score, from zero to six, based on the number of these provisions that the company has in the given year or month. Our hypothesis is that the six provisions in the entrenchment index substantially drive the correlation between the IRRC provisions, in the aggregate, and shareholder value.

We first explore whether these entrenching provisions are correlated with lower shareholder value as measured by Tobin's Q. We find that, controlling for the rest of the IRRC provisions, the entrenching provisions – both individually and in the aggregate – are negatively

correlated with Tobin's Q. Increases in our entrenchment index are correlated, in a monotonic and economically significant way, with lower Tobin's Q values.

Moreover, the provisions in the entrenchment index appear to be largely driving the correlation that the IRRC provisions in the aggregate have with Tobin's Q. We find no evidence that the 18 provisions not in the entrenchment index are in the aggregate negatively correlated with Tobin's Q. (Indeed, we find that they have a positive correlation with Tobin's Q, though the magnitude of this correlation is very small.) And we find no evidence that any of the other 18 IRRC provisions is individually negatively correlated with Tobin's Q in contrast to the provisions in the entrenchment index.

We then turn to explore the extent to which these six entrenching provisions are responsible for the documented correlation between the IRRC provisions and reduced stockholder returns during the 1990s. We find that the entrenching provisions were correlated with a reduction in firms' stock returns both (i) during the 1990-1999 period that Gompers, Ishii and Metrick (2003) studied, and (ii) during the longer 1990-2003 period that we were able to study using the data we had. A strategy of buying firms with low entrenchment index scores and, simultaneously, selling short firms with high entrenchment index scores would have yielded substantial abnormal returns. To illustrate, during the 1990-1999 period, buying an equally-weighted portfolio of firms with a 0 entrenchment index score and selling short an equally-weighted portfolio of firms with entrenchment index scores of 5 and 6 would have yielded an average annual abnormal returns of approximately 7%. The abnormal returns associated with low entrenchment index levels are robust to controlling for firms' industry classification as well as controlling for the number of other IRRC provisions firms had not included in the entrenchment index. In contrast, we do not find evidence that these eighteen other IRRC provisions, not in our entrenchment index, are correlated with reduced stock returns during the time periods (1990-1999; 1990-2003) we study.

A finding of a correlation between governance and returns during a given period is subject to different possible interpretations (Gompers, Ishii & Metrick (2003); Cremers & Nair (2004); Core, Guay & Rusticus (2003)). Needless to say, our results on returns should not be taken to imply that the identified correlation between the entrenchment index and returns should be expected to continue in the future. But our return results do highlight the significance that the entrenchment index provisions have among the larger universe of IRRC provisions.

Our findings concerning the key role played by a subset of the IRRC provisions cast some doubt on the wisdom of an approach recently followed by shareholder advisory firms. Responding to the demand for measures of the quality of corporate governance, some shareholder advisory firms have developed and marketed indexes based on a massive number of governance attributes. The Institutional Shareholder Services (ISS), the most influential shareholder advisory firm, has developed a governance metric based on 61 elements (see Brown and Caylor (2004)). Governance Metric International has been even more ambitious, including more than 600 provisions in its index. The development and use of these indexes has put pressure on firms to change their governance arrangements in ways that would improve their rankings.

Our results indicate that a “kitchen sink” approach that counts all conceivably relevant provisions might not be best. Among a large set of governance provisions, the provisions of real significance are likely to constitute only a limited and possibly small subset. Pressuring firms to improve their index rankings could be counter-productive when the index gives weight to many innocuous or even beneficial provisions and correspondingly under-weights provisions that are in fact harmful to shareholders. And governance quality could well be measured more accurately by using a smaller index based on the provisions that do matter than by using a broader index that counts many provisions that do not in fact matter and only serve to introduce “noise.” Thus, investment decisions and governance improvements could be better served by an approach that seeks to identify and focus on key harmful provisions rather than attempt to count all the trees in the governance forest.

By way of limitation, while we believe that our work identifies some key governance provisions that matter, and some that do not, our work cannot be relied on to have identified all the governance arrangements that matter. Our investigation is limited to the universe of provisions followed by the IRRC, provisions that are a subset – albeit an important one – of the provisions that could matter.

The rest of our analysis is organized as follows. Section II provides the needed background in terms of theory, institutional detail, and prior work. Section III describes the data. Section IV studies the correlation between the entrenchment index and firm value. Section V studies the correlation between this index and stock returns during the 1990-1999 and 1990-2003 period. Section VI offers some concluding remarks.

II. ENTRENCHMENT: IMPORTANCE, DETERMINANTS, AND PRIOR WORK

A. Importance

We take the view – which is shared by many but certainly not all researchers – that arrangements that protect incumbents from removal or its consequences are harmful to shareholders. We refer to such protection as “entrenchment.” A large body of theoretical literature has analyzed the possible consequences of entrenchment, which can affect shareholder interests through many channels (see Bebchuk (2002) for a survey).

Those concerned about insulation from intervention or removal by shareholders have been most concerned about the adverse effects that entrenchment can have on management behavior and incentives. Such insulation might harm shareholders by weakening the disciplinary threat of removal and thereby increasing shirking, empire-building, and extraction of private benefits by incumbents (Manne (1965)). In addition, such insulation might have adverse effects on the incidence and consequences of control transactions (see, e.g., Easterbrook and Fischel (1981))

Concerns about insulation are by no means universal, however, and some strongly believe that insulating incumbents from intervention and removal by shareholders in fact benefits the latter. Such protection might benefit shareholders by inducing management to invest optimally in long-term projects (Stein (1988), Bebchuk and Stole (1993)) and avoid deadweight losses and inefficient actions that might otherwise be undertaken to reduce the likelihood of a takeover bid (Arlen and Talley (2003)). Such protection might also help shareholders by strengthening incumbents’ bargaining power and enabling them to extract higher acquisition premia in negotiated transactions (Stulz (1988)).

The disagreements about this basic question of governance are difficult to resolve at the level of theory. Empirical work seems necessary for determining whether the overall effect of entrenching provisions is positive or negative. By examining the correlation between entrenching provisions and shareholder value, we seek to contribute to this inquiry by testing the prediction that higher levels of entrenchments are associated with lower shareholder value.

B. Determinants

What are the provisions in the IRRC universe that are most responsible for, or reflective of, managerial entrenchment? Examining the 24 IRRC provisions, we have identified two types of provisions that are likely significant – (1) constitutional limitations on shareholder voting power, and (2) key hostile takeover readiness measures.

1. Constitutional limitations on shareholders' voting power

At bottom, shareholders' most important source of power is their voting power (Clark 1986). But shareholders' voting power is constrained by constitutional arrangements that determine the subjects on which, and the majority by which, shareholders can pass a binding resolution. The extent to which such structural provisions constrain the ability of a majority of the shareholders to have their way is an important factor in the fundamental allocation of power between management and shareholders. We have identified four such constitutional limitations on shareholder voting power.

(i) *Staggered Boards*: When the board is staggered, directors are divided into classes, typically three, with only one class of directors coming up for reelection each year. As a result, shareholders cannot replace a majority of the directors in any given year, no matter how widespread the support among shareholders for such a change in control. Staggered boards are a powerful defense against removal in either a proxy fight or proxy contests. There is evidence that staggered boards are a key determinant for whether a target receiving a hostile bid will remain independent (Bebchuk, Coates, and Subramanian (2002, 2003)), and that they are negatively correlated with Tobin's Q (Bebchuk and Cohen (2003)).¹

(ii) *Limits to Amend By-Laws*: In addition to the power to vote to remove directors, shareholders have the power to vote to amend the company bylaws, which contain various governance arrangements. In some companies, shareholders' power to amend the bylaws is constrained by limits included in the corporate charter or the bylaws themselves. Such limits

¹ It is also worth noting that, throughout the period of study, shareholder resolutions to repeal staggered boards obtained substantial shareholder support. In 2003, for example, such resolutions attracted on average 62% of the shares voted, the highest level of support among all types of shareholder resolutions (Georgeson Shareholder, 2003).

usually take the form of supermajority requirements which can make it difficult for shareholders to pass a bylaw amendment opposed by management because not all non-management shareholders are likely to participate in a vote and management commonly commands or influences some votes.²

(iii) & (iv) *Supermajority Requirements for Mergers and Charter Amendments*: In addition to the power to vote out directors and amend bylaws, shareholders have the power to vote to approve charter amendments and mergers. Some companies, however, have limitations on the ability of shareholders to pass charter amendments (typically in the form of supermajority requirements) and supermajority requirements for approving a merger. When such provisions are present, management might be in a position to defeat or impede charter amendments or mergers even if they lose control of the board. Thus, to the extent that such provisions could enable management and shareholders affiliated with them to block changes, this might discourage outsiders from seeking to gain control of the board through a hostile bid or a proxy contest.³

On the basis of the above analysis, we have decided to include the following four provisions in our entrenchment index: staggered boards, limits to amend bylaws, limits to amend charter, and supermajority voting requirements for mergers. We have not included in our index two provisions that can be classified as constitutional limitations on voting power -- limits to voting by written consent, and limitations on the right to call a special meeting -- because of their limited practical significance.

The ability to act by written consent or to call a special meeting enables shareholders to avoid having to wait until the next annual meeting to conduct a vote. When shareholders can neither act by written consent nor call a special meeting they must wait until the annual meeting to conduct any vote. While these provisions impose some delay on shareholder action, their practical significance is not typically substantial. Even when shareholders can act by written consent or call a special meeting, the rules governing proxy solicitations are likely to impose some delay before a vote can be conducted. And waiting until the next annual meeting often does

² In the recent case of *Chesapeake Corp. v Marc P. Shore*, a Delaware court ruled that a supermajority requirement of two-thirds of all outstanding shares for a bylaw amendment made it practically impossible for non-management shareholders to remove certain antitakeover provisions that management earlier placed in the bylaws.

not involve substantial delay; if issues making a vote desirable were to arrive uniformly over time, the next annual meeting would take place an average of 6 month after an issue arose. Thus, because these provisions gain management only a limited delay, their effect on managerial entrenchment is rather limited. Indeed, in a study of hostile takeovers, Bebchuk, Coates, and Subramanian (2003) find that, while staggered boards substantially reduce the likelihood of a hostile bidder's success, limits on special meeting and written consent do not have a statistically significant effect on the outcome of hostile bids.

2. Takeover Readiness

We have also included in our index two provisions that in our view best reflect management's defensive posture and its inclination to protect itself from a hostile bid or its consequences. Poison pills (less colorfully known as shareholder rights plans) are rights that, once issued by the company, preclude a hostile bidder as a practical matter from buying shares as long as the incumbents remain in office and refuse to redeem the pill. Golden parachutes protect incumbents in a different way – by providing management with a soft and sweet landing in the event of ouster and thus by providing it with substantial insulation from the economic costs that it would otherwise bear as a result of losing control.

While both poison pills and golden parachutes are each present in most of the companies in our dataset, it should be noted that companies may adopt these measures not only before but also after the emergence of a hostile bid. Poison pills and golden parachutes are measures that the board has the power to approve at anytime, with no need for a shareholder vote of approval. Thus, even a company that does not have a poison pill in place can be regarded as having “a shadow pill” that would likely be rolled out in the event of a hostile bid (Coates, 2000). Similarly, even when executives do not have a golden parachute in their ex ante compensation contracts, boards can and often do grant executives “golden goodbye” payments when an acquisition offer is already on the table (Bebchuk and Fried (2004, Ch. 7), Hartzell, Ofek and Yermack (2004)).

³ It is worth noting that shareholder resolutions to eliminate supermajority provisions obtain substantial shareholder support. In 2003, such resolutions attracted on average 60% of the shares voted, the second-highest level of support among all types of shareholder resolutions (Georgeson Shareholder, 2003).

Although companies may wait to put in place poison pills and golden parachutes until an acquisition is on the table, the fact is that a large number of companies – but not all – have these measures in place rather than roll them out when needed. Having these measures in place is not costless for boards, because institutional investors have been looking unfavorably on poison pills and golden parachutes. During the time period of our study, shareholders’ resolutions seeking to limit poison pills or golden parachutes constituted more than 20% of all shareholder resolutions during the 1990-2003 period (Georgeson Shareholder, 2000, 2003). Furthermore, these types of shareholder resolutions attracted substantial shareholder support; in 2003, resolutions calling for poison pill rescission obtained support from an average of 59% of the voting shareholders, and resolutions calling for future golden parachutes to receive advance approval from shareholders received on average 53% of the votes. Boards that avoid or eliminate poison pills and golden parachutes can win some favorable reactions from institutional investors, as well as eliminate the risk of facing one of the precatory shareholder resolutions that often target such measures.

Lawyers with whom we discussed these questions indicated that, although the board is free to adopt poison pills and golden parachutes at any stage, a management interested in protecting itself might do well to have them in place prior to a hostile bid being made. Seeking board adoption of such measures after a hostile bid is made would often raise more questions and not look as good; could require more effort to convince independent directors to go along; and might be a costly distraction. For these reasons, seasoned M&A lawyers explain that clients concerned about an attack will do better to have the wagons already circled rather than wait to do so only after the battle cries are already heard. Thus, management’s decision to put these defensive measures in place indicates a higher level of defensive inclination and readiness.

It is worth noting a difference between the ways in which constitutional limitations and takeover readiness positions could be connected to higher levels of entrenchment and, in turn, lower firm value. Our conjecture is that the four provisions imposing constitutional limitations on shareholder power directly insulate management and thereby reduce firm value. In contrast, the two takeover readiness provisions are not by themselves the cause, but rather are reflections of (and thus proxies for) incumbents’ defensive attitudes and inclinations.

3. Other Provisions

We have thus far explained the reasons that have led us to identify six provisions as ones that are likely to matter for measuring the level of entrenchment. These six provisions represent a quarter of the twenty-four IRRC provisions. Their selection for our entrenchment index leaves 18 provisions for the residual “other provisions” index.

Of these 18 provisions, a significant number are ones that in our assessment cannot be expected to have any material effect on the level of entrenchment. For example, fair price provisions and business combination statutes are takeover protections that were deemed important in the late 1980s but have become largely irrelevant by subsequent legal developments that provide incumbents with the power to use more powerful takeover defenses (Bebchuk and Ferrell 2001). As long as incumbents are in office, they can now use a poison pill to prevent a bid, and thus have little need for whatever impediments are provided by fair share and business combination arrangements. And if the bidder were to succeed in replacing incumbents with a team that would redeem the pill, fair price and business combination arrangements would remain irrelevant because they apply only to acquisitions not approved by the board.

Another takeover-related provision that we believe is unlikely to be material is the presence of blank check preferred stock. This provision was included by the IRRC and prior research in the set of studied provisions because blank check preferred is the currency most often used for the creation of poison pills. But lawyers are able to create poison pills without blank check preferred. Indeed, in the IRRC data, of the companies that did not have a blank check preferred stock in 2002, about 45% nevertheless had a poison pill in place.

Three of the IRRC provisions are connected to issues of liability and indemnification. As Black, Cheffins and Klausner (2003) powerfully argue and document, directors are protected from personal liability by a myriad of factors and the risk of liability is negligible even in companies that do not have any of these three provisions. Personal liability might arise in some rare cases of egregious bad faith behavior, but in such cases the three liability and indemnification provisions in the IRRC set would provide no protection.

While we have good reasons for viewing most of the provisions in the other provisions index as unlikely to be significant for measuring entrenchment, there were some for which a good assessment was difficult to reach on theoretical grounds. Our strategy, however, is to

include in the entrenchment index only those provisions for which we had a good basis for viewing as ones likely to matter for measuring entrenchment, relegating all others provisions to the other provisions index. Our prediction is that the provisions in the entrenchment index drive to a substantial degree the correlation earlier research has identified between the IRRC provisions, in the aggregate, and firm value.

C. Prior Empirical Work

Our work builds on the large body of existing work on the relationship between corporate governance provisions (and the IRRC provisions in particular) and shareholder value. To begin, there is a substantial amount of research that seeks to examine the effects of one or more of the IRRC governance provisions without controlling for a large universe of other governance provisions. One set of studies has examined the effects of the passage of antitakeover statutes on shareholder interests (see, e.g., Karpoff and Malatesta (1989), and Swartz (1998), and see Gartman (2000) for a survey of this body of work).⁴ This work did not control for governance provisions other than those provided by antitakeover statutes. Furthermore, for the reason briefly described earlier, state anti-takeover statutes should not be expected to be a key determinant of the level of protection from removal that management enjoys in any given company.

Another set of studies examines how the adoption of a poison pill (see, e.g., Ryngaert (1988)) or a golden parachute (see Lambert and Larcker 1985) affected stock prices. When a firm adopts a poison pill or a golden parachute, however, its stock price might be influenced not only by the expected effect of the poison pill or the golden parachute but also by inferences that investors make as to management's private information about the likelihood of a bid (Coates, 2000). Furthermore, these studies did not control for whatever governance provisions the firms adopting the poison pill or golden parachute had.

Garvey and Hanka (1999), Johnson and Rao (1997), and Borokohovich, Brunarski, and Parrino (1997) study the effects of antitakeover charter provisions. However, they lump together some antitakeover provisions that can be expected to have significant effects with those that

⁴ In addition to the above event studies, there is also work that finds that the passage of state antitakeover statutes increased management's tendency to take actions favorable to it such as making executive compensation schemes less performance-sensitive (e.g., Bertrand and Mullainathan (1999, 2003)).

cannot, and they do not include the full set of provisions that are likely to be significant. The above studies also rely in part on data from the 1980's, i.e., prior to the legal developments that permitted incumbents to maintain poison pills indefinitely and thereby substantially expanded management's power to resist hostile bids.

In addition to the large literature that focused on the effects of an isolated subset of the IRRC provisions, there is also recent work that looks at the effects of the IRRC provisions in the aggregate. As already noted, Gompers, Ishii, and Metrick (2003) study the correlation between the IRRC provisions in the aggregate and firm value as well as stock returns. Their work started a line of research using their governance index (herein, the GIM index) based on the 24 IRRC provisions (e.g., Amit and Villalonga (2004); Core, Guay and Rusticus (2003); Cremers, Nair, and Wei (2004); Cremers and Nair (2003); Fahlenbrach (2003); Klock, Mansi and Maxwell (2003)). Our work complements this line of work in that we focus on what, inside the box of the IRRC provisions, matters.

The work closest to ours is Bebchuk and Cohen (2003), which started investigating which of the IRRC provisions matter controlling for the others. This study shows that, controlling for all other IRRC provisions, staggered boards are negatively correlated with Tobin's Q, and that their contribution to the negative correlation between the IRRC provisions in the aggregate and Tobin's Q is substantially larger than the contribution of an average provision in the IRRC set. But this study did not attempt to identify which provisions other than staggered boards matter, and it did not investigate the correlation between IRRC provisions and stock returns. Thus, this study completed only the first step in the inquiry we seek to pursue more fully in this paper.

III. DATA

A. Sources

Our data set includes all the companies for which there was information in one of the volumes published by the Investor Responsibility Research Center (IRRC). The IRRC volumes include detailed information on the corporate governance arrangements of firms. The IRRC has published six such volumes: September, 1990; July, 1993; July, 1995; February, 1998; November, 1999; and February, 2002.

Each volume includes information on between 1,400 and 1,800 firms, with some variation in the list of included firms from volume to volume. All the firms in the S&P 500 are covered in each of the IRRC volumes. In addition, a number of firms not included in the S&P 500 but considered important by the IRRC are also covered. In any given year of publication, the firms in the IRRC volume accounted for more than 90% of the total U.S. stock market capitalization.

Because IRRC did not publish volumes in each year, we assumed, following Gompers, Ishii and Metrick (2003), that firms' governance provisions as reported in a given IRRC volume were in place during the period immediately following the publication of the volume until the publication of the subsequent IRRC volume. Using a different "filling" method, however, does not change our results.

In addition to the IRRC volumes, we also relied upon Compustat, CRSP, and ExecuComp. Firm financials were taken from Compustat. Stock return data was taken from the CRSP monthly datafiles. Insider Ownership data was taken from ExecuComp. The age of firms, following Gompers, Ishii and Metric (2003), was estimated based on the date on which pricing information about a firm first appeared in CRSP.

In calculating abnormal returns we used the three Fama-French benchmark factors, which were obtained from Kenneth French's website. The Carhart momentum factor was calculated by us using the procedures described in Carhart (1997) using information obtained from CRSP.

We excluded firms with a dual class structure. In these companies the holding of superior voting rights might be sufficient to provide incumbents with a powerful entrenching mechanism that renders other entrenching provisions relatively unimportant. We also excluded real estate investment trusts (REITs), i.e. firms with a SIC code of 6798, as REITs have their own special governance structure and entrenching devices. While we kept both financial and nonfinancial firms in our data, running our regressions on a subset consisting only of nonfinancial firms (as done by Daines (2001)) yields similar results throughout.

B. Summary Statistics

Table I provides summary statistics about the incidence of the 24 IRRC governance provisions, including the six provisions we have chosen to include in our entrenchment index, during the period covered by our study.⁵

Of the six provisions in the entrenchment index, staggered boards, golden parachutes and poison pills are the most common, with each present in a majority of companies. The incidence of golden parachutes has been increasing steadily, starting at 53% as of 1990 and reaching approximately 70% in 2002. The incidence of staggered boards has been stable at around 60%, and the incidence of poison pills has been relatively stable as well - in the 55% - 60% range.

The incidence of supermajority provisions has been declining slightly over time, starting at 39% in 1990 and ending at approximately 32% in 2002. The incidence of limits to bylaws has been increasing, starting at 14.5% in 1990 and reaching approximately 23% by 2002. Of the six provisions, the only one that does not have a substantial presence are provisions that limit charter amendments, which has throughout the 1990-2002 period a very low incidence hovering around 3%.

The entrenchment index assigns each company one point for each of the six provisions in the index that the firm has. Accordingly, each firm in each year will have an entrenchment index score between 0 and 6. Table II provides summary statistics about the incidence of the index levels during the period of our study. On the whole, there has been a moderate upward trend in the levels of the entrenchment index during this period. While 55% of the firms had an index level below 3 in 1990, only 49% of the firms were in this range in 2002. Especially significant has been the decline in the incidence of firms with 0 entrenchment level – from 13% in 1990 to approximately 7% in 2002.

As for the cross-sectional distribution of firms across entrenchment levels, roughly half of the companies have an entrenchment level of 3 or more, while roughly half have an

⁵ We use throughout the definitions of the IRRC provisions used by Gompers-Ishii-Metrick (2003). For example, because the IRRC used in some years the term secret ballot and in some years the term confidential voting to describe essentially the same arrangement, GIM defined a company as having no secret ballot in a given year when it did not have in that year in the IRRC dataset either the secret ballot variable or the confidential voting variable. To give another example, GIM defined a company as having a fair price arrangement in a given year when in that year it (i) had the variable for a fair price charter provision, or (ii) had the variable indicating incorporation in a state with a fair price provision and (iii) did not have the variable indicating a charter provision opting out of the state's statute. We are grateful to Andrew Metrick for providing us with the GIM set of definitions of the 24 IRRC provisions.

entrenchment level below 3. Of the half of the firms with entrenchment levels below 3, a substantial fraction are at 2, with firms at the 0 and 1 levels constituting 23% - 31% of all firms. For the roughly half of the firms with entrenchment levels of 3 or more, a substantial fraction are at 3, with firms in the 4-6 range constituting 19% - 23% of all firms.

A relatively small fraction of firms are at the extremes. Given that one of the provisions is present in only about 3% of firms, it is not surprising that only a few firms reach the maximum level of 6, with its incidence never exceeding 0.7% of the sample. Given the small number of observations with entrenchment index scores of 6, firms in index level 6 are grouped together with firms in index group 5 in the course of conducting the statistical analysis. This group of companies with index scores of 5 and 6 – the very worst companies in terms of their entrenchment scores – constitute approximately 3.5% - 5% of all firms throughout the period. At the other end of the spectrum, the group of companies that are the “best” in terms of entrenchment are those firms with a 0 entrenchment level. These firms constitute roughly 7% - 13% of all firms during the 1990-2002 period.

The correlation between the entrenchment index and the GIM index exceeds 0.7 in each of the years of the IRRC volumes. Table III displays the tight connection that membership in the extreme “democracy” (GIM index score of five or less) and “dictatorship” groups (GIM index score of fourteen or more) has with the entrenchment index. In 2002, of the more than 100 firms in the “democracy” portfolio, none are in the top half in terms of the entrenchment index (i.e., have an entrenchment score of 3 or more). Of the more than 100 firms in the “dictatorship” portfolio, only 1 is in the bottom half of the entrenchment range (i.e., has an entrenchment score below 3). Thus, to the extent that differences in entrenchment are correlated with difference in Tobin’s Q or stock returns, they will likely produce corresponding differences between the “democracy” and “dictatorship” portfolios as a result of this correlation.

Table IV displays the mean and standard deviation of entrenchment levels for companies of different sizes and cohorts. There are no significant differences between firms in and out of the S&P 500, and there are likewise no noteworthy differences between young and old firms. It is worth noting, however, that entrenchment levels are different in firms that are very large in size. In 2002, out of the 15 companies with a market cap exceeding 100 billion dollars, only one had an entrenchment level index exceeding 3. This is not surprising. With no hostile bid or proxy

fight ever directed at a company of this size, the management of these very large firms have no need for entrenching provisions in order to be secure.

To control for other governance provisions, we defined an index based on the other eighteen corporate governance provisions not included in the entrenchment index, which we label the other provisions index (O index). This index, like the entrenchment index and the GIM index, counts all provisions included in it equally, giving one point for each one of these provisions a firm has. The other provisions index and the entrenchment index add up, of course, to the GIM index based on the full set of IRRC provisions.

Table V provides the distribution of the other provisions index for the IRRC publication years. As Table V indicates, the highest level of the O index actually reached by firms is 13; and the lowest level of the O index that firms actually have is 1. Approximately 40% - 45% of firms have an O index score of 6 or less with the remaining firms having an O index score of 7 or more. There are very few firms at the extremes, with only roughly 1% of firms having an O index score of 1 or 2 and another 1% of firms having an O index score of 12 or 13. The correlation between the O index and the entrenchment index ranges from 0.3 to 0.35 throughout the 1990-2002 period.

IV. ENTRENCHMENT AND FIRM VALUE

In studying the association between the entrenchment index and firm value, we use Tobin's Q as the measure of firm value. In doing so we follow earlier work on the association between corporate arrangements and firm value (see, e.g., Demsetz and Lehn (1985), Morck, Shleifer and Vishny (1988), McConnell and Servaes (1990), Lang and Stulz (1994), Yermack (1996), Daines (2001), LaPorta et al. (2002), and Gompers, Ishii, and Metrick (2003)).

We use the definition of Tobin's Q that was used by Kaplan and Zingales (1997) and subsequently also by Gompers, Ishii, and Metrick (2003). According to this specification, Q is equal to the market value of assets divided by the book value of assets, where the market value of assets is computed as the book value of assets plus the market value of common stock less the sum of book value of common stock and balance sheet deferred taxes. This measure (and simpler ones that drop deferred taxes) have been increasingly used in light of the complexities involved

in the more sophisticated measures of Q and the evidence of very high correlation between this proxy and more sophisticated measures (see, e.g., Chung and Pruitt (1994)).

Our dependent variable in most regressions is log of industry-adjusted Tobin's Q, where industry-adjusted Tobin's Q is a firm's Q minus the median Q in the firm's industry in the observation year. We defined a firm's industry by the firm's 2-digit primary SIC code. Using the Fama-French (1997) classification of forty-eight industry groups, rather than SIC two-digit codes, yields similar results. Using industry-adjusted Tobin's Q as the dependent variable also produces similar results.

As independent variables, we use throughout standard financial controls. These controls include the assets of the firm (in logs), the age of the firm (in logs) (Shin and Stulz (2000)), and whether the firm is incorporated in Delaware -- all variables use by Gompers, Ishii, and Metrick (2003). We also use additional controls that the literature has used in Q regressions -- the level of insider ownership, return on assets, capital expenditures on assets, research and development expenditures, and leverage. (Using only the controls used by Gompers, Ishii, and Metrick produces similar results throughout.) Moreover, we use dummies for firms' 2-digit SIC codes. In all of the regressions, in addition to the standard financial and ownership controls, we controlled for firms' other provisions index scores in order to control for the IRRC provisions not included in the entrenchment index. In our Q-regressions, we focus on the period 1992-2002, because our inside ownership data (from ExecuComp) did not cover 1990, 1991, 2003.

A. The Entrenchment Index and the Other Provisions Index

Table VI presents the results of pooled OLS regressions for the 1992-2002. The pooled OLS regressions in Table VI were run using White (1980) robust standard errors to account for potential heteroskedasticity. In the first column of Table VI, we used as an independent variable, in addition to the financial variables and other provisions index discussed above, firms' entrenchment index scores. As column 1 indicates, the coefficient on the entrenchment index is negative (with a value of -.044) and statistically significant at the 1% level. The coefficient of the other provisions index is also significant at the 1% level, but it is positive (with a value of .01).

In the second column, in order to avoid the imposition of linearity on the entrenchment index, we used dummy variables to stand for the different levels that the index can take. As the results indicate, the coefficient for any level of the index above 0 is negative and significant at the 1% level. Moreover, the magnitude of the coefficient is monotonically increasing in the level of the entrenchment index.

To avoid imposition of linearity on the other provision index, we also ran unreported regressions using the log of the other provisions index as a control, and obtained similar results to those reported in Table VI. In unreported regressions, we also ran regressions using industry-adjusted Q as the dependent variable instead of its log, and obtained similar results. Finally, we ran median regressions and, again, obtained similar results.

We next ran regressions using firm fixed effects in order to control for unobserved firm heterogeneity that remains constant over the time period we study. The fixed effects regressions, reported in columns 3 and 4 of Table VI, examine the effect on firm value of changes that firms made, during the 1990-2003 period, in the number of entrenching provisions (whether to increase or decrease the number of entrenching provisions). As Table I indicates, there was meaningful variation in the incidence of some entrenching provisions over the 1990-2003 period, such as golden parachutes and limits on shareholders' ability to amend bylaws, that would result in changes in firms' entrenchment scores. Other entrenching provisions, and in particular staggered boards, were rarely changed by firms during the period of study, and are therefore unlikely to constitute a significant source for changes in firms' entrenchment scores.

As columns 3 and 4 indicate, in the firm fixed effects regressions, the coefficient values for the entrenchment index (column 3) and the coefficient values for the dummy variables for the different levels of the entrenchment index above 0 (column 4) remain negative, economically meaningfully, and statistically significant at the 1% level (except for the coefficient value on having an entrenchment level of 1 where the statistical significance is 5%). The magnitudes of the coefficient values also continue to increase monotonically in the level of the entrenchment index. The coefficient value on the other provisions index remains positive, but is no longer statistically significant.

For a final robustness check, we also ran annual regressions. In all regressions, we used the entrenchment index and the other provisions index as the independent governance variables. We first ran a set of annual regressions similar to the baseline regressions in column 1 of Table

VI – that is, OLS regressions with log of industry-adjusted Q as the dependent variable. We then also ran a set of median regressions with log of industry-adjusted Q as the dependent variable, as well as a set of OLS regressions with industry-adjusted Q as the dependent variable. We calculated the Fama-McBeth coefficients for each set of annual regressions.

Table VII displays the results of these three sets of annual regressions, displaying only the coefficients of the entrenchment index and of the other provisions index. The coefficient of the entrenchment index is negative in all of the individual annual regressions. Of the 33 estimated negative annual coefficient values on the entrenchment index (three sets of annual regressions per year times eleven years), 27 were statistically significant. Of the six negative coefficient values without significance, three occurred in one year (1992). The Fama-McBeth coefficient value on the entrenchment index is negative at the 1% level for each one of the three sets of annual regressions.

As for the other provisions index, the coefficient on the other provisions index in the annual regressions is positive in a substantial majority of the annual regressions, and occasionally positive with statistical significance. It is never negative and statistically significant in any of the annual regressions. The Fama-McBeth coefficient value on the entrenchment index is positive at the 1% level in each one of the three sets of annual regressions, albeit with a coefficient with a small magnitude.

B. Individual Provisions: Looking Inside the Two Indexes

The above analysis indicates that the six entrenching provisions we have identified are, in the aggregate, highly correlated with lower firm valuation. There is still the possibility, however, that one or more of the individual entrenching provisions are not contributing to this negative effect on firm valuation. To explore this possibility, we ran several sets of regressions whose results are displayed in Table VIII.

In the first set of six regressions, we ran a regression for each of the six provisions in the entrenchment index in which the independent corporate governance variables were (i) one of the six entrenching provisions, and (ii) the GIM index minus the entrenching provision in (i). That is, each of the regressions has one of the entrenching provisions as an independent variable while

controlling for all the other IRRC provisions. The financial controls used earlier (see Table VI regressions) are also used as independent variables.⁶

The results of these six regressions, one for each of the entrenching provisions, are displayed in Row (1) of Tale VIII. In each of the regressions, the coefficient of the entrenching provision under investigation is negative and statistically significant. Five entrenching provisions have statistically significant negative coefficient values at the 1% level, while the other one has statistical significance at the 5% significance.

It is worth cautioning that not too much should be read into the differences in the levels of statistical significance and coefficient estimates of the various entrenching provisions due to the problem of co-linearity. Each entrenching provision is positively correlated with the GIM index minus that entrenching provision. Accordingly, it might well be that any particular entrenching provision's coefficient is under estimated. The one conclusion that can be comfortably drawn from the results displayed in Row (1) of Tale VIII is that each of the entrenching provisions contributes to the negative correlation between Tobin's Q and the IRRC provisions in the aggregate.

For a robustness check, we then proceeded to run three additional sets of regressions. In particular, we ran for each entrenching provision *i* the following types of regressions:

- (a) A regression in which the independent corporate governance variables in addition to entrenching provision *i* are (1) a variable equal to the entrenchment index minus provision *i*, and (2) the other provisions index.
- (b) A regression in which the independent corporate governance variables in addition to entrenching provision *i* are (1) dummy variables for each of the five other entrenching provisions, and (2) the other provisions index.
- (c) A regression in which the independent corporate governance variables in addition to entrenching provision *i* are dummy variables for each of the other twenty-three IRRC provisions.

Rows 2, 3, and 4 of Table VIII display the results of the regressions of type (a), (b), and (c) respectively. For each one of the six entrenching provisions, the coefficient in each of the three types of regressions was negative and statistically significant at 1% or 5%. Thus, none of our

⁶ We display only the coefficients of the entrenching provision being investigated in each regression. In all the regressions, the coefficient of the GIM index minus the provision under investigation is negative and significant, and the coefficients of the financial controls are similar to those obtained in earlier regressions.

robustness tests provide any evidence that is inconsistent with the view that each of the six entrenching provisions contributes to the negative correlation that the IRRC provisions in the aggregate have with Tobin's Q.

We now turn to the eighteen provisions in the Other Provisions Index. The results reported earlier indicate that, in the aggregate, these eighteen provisions are not negatively correlated with firm valuation. This finding does not imply, however, that none of the eighteen provisions contained in this index is harmful for firm valuation. It might be that one or more provisions have adverse effects, but this effect does not show up in our regressions because it is diluted or counteracted by the effects of the provisions contained in the other provisions index. Indeed, the results of our paper highlight the importance of looking inside the "box" of a broad index to try to identify the effects of particular corporate governance provisions.

Accordingly, we carried out a preliminary investigation to look inside the other provisions index. We ran four sets of eighteen regressions (for seventy-two regressions overall) whose results are displayed in Table IX. In particular, for each provision *i* in the other provisions index, we ran the following four types of regressions:

- (a) A regression in which the independent corporate governance variables were provision *i*, and a variable equal to the GIM index minus provision *i*;
- (b) A regression in which the independent corporate governance variables were provision *i*, a variable equal to the other provision index minus provision *i*, and the entrenchment index;
- (c) A regression in which the independent corporate governance variables were provision *i*, dummies for each of the other seventeen provisions in the other provisions index, and the entrenchment index; and
- (d) A regression in which the independent corporate governance variables were provision *i* and dummies for each of the other twenty-three IRRC provisions.

Rows 1, 2, 3, and 4 of Table IX display the results of the regressions of type A, type B, type C, and type D respectively (only the coefficient of the provision under investigation in any given regression is displayed). The standard financial controls used in earlier regressions were also used in these regressions (see regressions in Table VI). Of the eighteen IRRC provisions in the other provisions index, seventeen of them do not have a coefficient that is negative and statistically significant in any of the types of regressions used. Indeed, a fair number of them are positive with statistical significance.

With respect to one provision in the other provisions index, pension parachutes, its coefficient is not statistically significant in regression type D, negative and significant at the 10% level in regression types B and C, and negative and significant at the 5% level in regression type A. The results with respect to the negative effect of pension parachutes on firm valuation are thus mixed, and weaker than the results for each of the entrenching provisions. It is worth noting that pension parachutes are present in only 1% of firms as of 2002 (and reached a maximum of 5.3% of firms in 1993). Despite the mixed results and low incidence, the exact correlation between pension parachutes on firm valuation is an issue worth further exploration in future research.

It is important to note that, because of the problem of co-linearity, we do not rule out the possibility that some of the eighteen provisions in the other provisions index are negatively correlated with firm value. We merely note that, using the same method that produced strong and unambiguous results regarding the negative correlation between each of the entrenching provisions and Tobin's Q, we do not obtain similar results with respect to any of the elements of the other provisions index.

V. ENTRENCHMENT AND STOCK RETURNS

We turn in this section to examine the relationship between a firm's entrenchment index score and the firm's abnormal stock returns. We should stress that for a provision to be associated with negative abnormal return during a given period time is neither a necessary condition, nor a sufficient condition, for the provision to be harmful to shareholders. A corporate governance provision that is harmful to shareholders might have no abnormal returns associated with it during a given period if the market accurately assessed the provision's adverse consequences in the beginning of the period. Conversely, a provision that is in fact beneficial to shareholders might be associated with a negative return during a given period if the market viewed it at the end of the period somewhat less positively – although still positively – than in the beginning of the period. For the purpose of identifying which provisions have adverse effects on shareholders, our findings in the preceding section on Tobin's Q might well be more informative than stock return results contrived in isolation.

Nevertheless, findings that abnormal returns are associated with certain publicly known governance provisions can be quite interesting. They might indicate that the significance of these provisions, or at least the market's perception of their significance, changed over this period. Much attention has therefore been paid to the findings of Gompers, Ishii and Metrick (2003) that firms with low GIM index scores were associated with higher abnormal returns during the 1990s compared to those of firms with high GIM index scores.

Gompers, Ishii, and Metrick (2003) employed the following methodology in calculating the abnormal return associated with differences in GIM index scores. A "Democracy" portfolio was constructed consisting of firms with strong shareholder rights protections, defined as those firms with GIM index score of 5 or less. Likewise, a "Dictatorship" portfolio was constructed consisting of firms with weak shareholder rights protections, defined as those firms with GIM index score of 14 or more. The firms in the Democracy and Dictatorship portfolios roughly correspond to the best and worst 10% of firms in terms of GIM index scores. Democracy and Dictatorship portfolios were constructed both by weighting stock positions by a firm's market capitalization (value-weighted portfolios) as well as by equally weighting each firm (equal-weighted portfolios).

Gompers, Ishii and Metrick (2003) found that the monthly abnormal return for going long the Democracy portfolio and short the Dictatorship portfolio, value-weighted, was 71 basis points with 1% significance level, and that doing so using equally-weighted portfolios yielded a monthly abnormal return of 45 basis points with 5% significance.⁷ Their findings of statistically significant abnormal returns applied only to a trading strategy using Democracy and Dictatorship portfolios -- i.e., firms at the extremes of the GIM index -- in its long and short positions. Expanding their testing to a broader spectrum of firms, including firms in the middle of the GIM index distribution, they found no statistically significant abnormal returns resulting from going long firms with low GIM index scores while shorting firms with high GIM index scores.

We aim in this section to investigate the extent to which the identified correlation between returns and the GIM index during the 1990s might be attributable to the provisions in the entrenchment index. Our main findings are as follows. Low entrenchment index firms are

⁷ We were able to replicate these basic findings with the Fama-French benchmark factors. We found that the value-weighted trading strategy generated a monthly abnormal return of 73 basis points at the 1%

associated with statistically significant abnormal returns both during the 1990-1999 period investigated by Gompers, Ishii, and Metrick, and the longer 1990-2003 time period which our data enables us to study. Moreover, including in our trading strategies firms that are in the middle of the entrenchment index distribution still generates positive monthly abnormal returns with 1% statistical significance, albeit abnormal returns that are smaller than those generated using firms only with extreme entrenchment index scores. We find that this association between entrenchment index scores and stock returns is not due to the entrenchment index being correlated with IRRC provisions not included in the entrenchment index. Finally, we find that the corporate governance provisions not included in the entrenchment index have no explanatory power, above that already provided by the entrenchment index, for returns during the two time periods (1990-1999; 1990-2003) we study.

A. The Entrenchment Index and Returns for the 1990s

1. Summary Statistics

We begin by presenting some basic summary statistics on the entrenchment index and stock returns during the 1990s. Table X presents the average monthly returns of portfolios of firms, both equally-weighted and valued-weighted, with the same entrenchment scores (0, 1, 2, 3, 4, 5-6) for the September, 1990 – December, 1999 period. Interestingly, the average monthly return drops monotonically as one moves from having an entrenchment score of zero to an index score of five and six. The difference between firms with an entrenchment score of zero and firms with an entrenchment score of five or six is quite substantial: 1.74% versus 1.26% for equally-weighted portfolios and 2.45% versus 1.51% for value-weighted portfolios. Because the returns of value-weighted portfolios can be substantially affected by the returns of a small number of the largest companies, it could be plausibly argued that more attention should be paid to results based on equally-weighted portfolios. But we follow the literature by reporting throughout results based on both equally-weighted and value-weighted portfolios.

level, while the equal-weighted trading strategy generated a monthly abnormal return of 49 basis points at the 5% level.

This decline in monthly returns as a firm's entrenchment score increases occurs not only when one moves from firms with very low entrenchment scores to firms with very high entrenchment scores but also as entrenchment index scores increase in the middle of the entrenchment index distribution. Moreover, the decline in monthly returns as a firm's entrenchment score increases holds equally true for both equally-weighted and value-weighted portfolios. In both cases, average returns decrease monotonically as one moves to portfolios with higher entrenchment scores.

Obviously, these summary statistics are only suggestive of a possible relationship between the entrenchment index and stock returns in the 1990s. To explore this possibility systematically, it is necessary to control for other factors, such as systematic risk, that might be affecting stock returns for firms with different entrenchment index scores.

2. The Baseline Model: Controlling for the Carhart Four Factors

To identify the correlation between different levels of the entrenchment index and stock returns, we investigated the following question: What was the abnormal return associated with taking a long position in the firms with a given entrenchment index score and, at the same time, shorting the firms with a higher entrenchment index score? To answer this question, we follow the methodology of Gompers, Ishii, and Metrick (2003) of regressing the return of this long-short trading strategy for month t (call this variable $Diff_t$), on the four-factor model of Carhart (1997). In other words, we ran the following regression:

$$Diff_t = \alpha + b1 * MKTRF_t + b2 * HML_t + b3 * SMB_t + b4 * Momentum_t + e_t \quad (1)$$

where $MKTRF_t$ is the month t value-weighted market return minus the risk-free rate, SMB_t and HML_t are the Fama-French zero-investment benchmark factor mimicking portfolios reflecting, respectively, size and book-to-market stock return effects for time t (see Fama and French 1993) and $Momentum_t$ reflects stock return momentum effects for time t (see Carhart 1997). The Fama-French factors were obtained from Kenneth French's datalibrary and the Carhart momentum factor was constructed by us using the procedures described in Carhart (1997). Accordingly, α is construed as the monthly abnormal return associated with going long firms with low

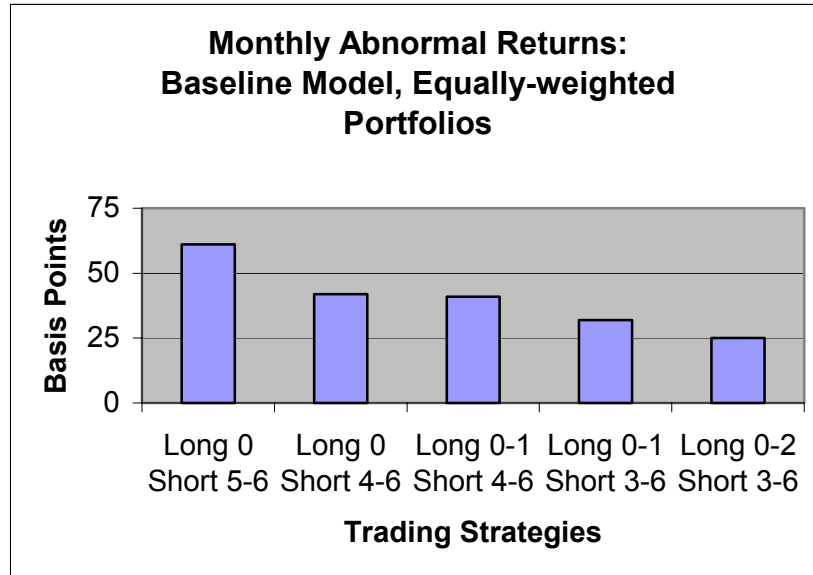
entrenchment index scores and, simultaneously, shorting firms with high entrenchment index scores.

Monthly abnormal returns were calculated using both value-weighted portfolios and equally-weighted portfolios. These hedging portfolios were updated as new information became publicly available concerning the corporate governance provisions firms had. September 1990 is the starting date of the sample period as this was the month that the first IRRC volume was published and became publicly available. Firm membership in portfolios was adjusted on July 1993, July 1995, February 1998, November 1999 and February 2002 as these are the dates when updated IRRC volumes became publicly available.

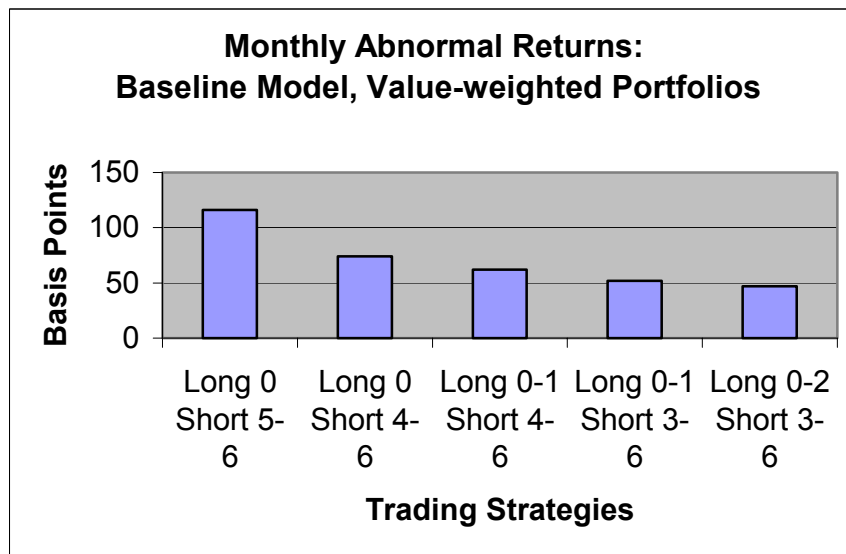
Table XI displays the abnormal return results for the 1990s controlling for the Carhart four factors (the baseline model). These results, regardless of whether one looks at equally-weighted or value-weighted entrenchment index portfolios, are striking. During the 1990s, going long those firms with the lowest possible entrenchment score (index score of 0) and shorting the high entrenchment index portfolio (index scores of 5 and 6), would have generated a monthly abnormal return of 61 basis points with 1% significance when equal-weighted portfolios are used; and it would have yielded monthly abnormal returns of 116 basis points with 1% significance when value-weighted portfolios are used. On an annual compounded basis, these strategies would have produced an abnormal return of 7.4% when equally-weighted portfolios are used and 14.8% when value-weighted portfolios are used.⁸

There is another interesting pattern that emerges from the baseline model results in Table XI. The abnormal returns are all positive with statistical significance at the 1% level but progressively decline, whether equally-weighted or value-weighted portfolios are used in the trading strategy, as one includes more and more firms in the middle of the entrenchment index distribution. This monotonic decline in abnormal returns as the trading strategies include more firms in the middle of the distribution (with the first trading strategy on the far left being long index level 0-short index levels 5-6, then long 0- short 4-6, long 0-1-short 4-6, long 0-1- short 3-6, and finally long 0-2, short 3-6) is illustrated below for equally-weighted portfolios.

⁸ These figures are based on compounding the monthly return over the year. Without compounding, the annual abnormal returns would be approximately 7.2% for a strategy based on equally-weighted portfolios and 13.9% for a strategy based on value-weighted portfolios.



The same pattern of declining abnormal returns as firms in the middle of the entrenchment index are added to the long and short positions emerges (with the first trading strategy on the far left again being long 0-short 5-6, then long 0-short 4-6, long 0-1-short 4-6, long 0-1-short 3-6, and finally long 0-2-short 3-6) when value-weighted portfolios are used. This progression is illustrated below.



This monotonic decline in abnormal returns is to be expected if stock returns are negatively correlated with the degree to which managers are entrenched as captured by the entrenchment index.

3. Industry-adjusted Returns

There is, of course, always the possibility that a firm's corporate governance provisions merely reflect the industry in which the firm happens to operate. That is, it might be that low entrenchment levels were more common in industries that happened to perform well in terms of returns during the 1990s, and that the above findings of abnormal returns were driven by industry association. We therefore control for industry effects on stock returns in the way used by Gompers-Ishii-Metrick (2003)..

In particular, we classified all the firms in our dataset into one of the forty-eight Fama-French (1997) industry classifications, and we then calculated industry-adjusted monthly returns by first subtracting from each firm's monthly stock return the median monthly industry return for the Fama-French industry in which the firm operates. Monthly abnormal industry-adjusted returns on a trading strategy were then calculated by regressing the industry-adjusted returns associated with this strategy (going long firms with a particular entrenchment index score and, simultaneously, shorting other firms with a higher entrenchment index score) on the three Fama-French factors (Fama and French 1993) and a momentum factor (Carhart 1997). The industry-adjusted monthly abnormal returns were calculated for the same trading strategies analyzed in the baseline model. The results are also reported in Table XI.

As the table indicates, all the long-short portfolios continue to generate positive abnormal returns that are all statistically significant at the 1% level. Also, once again, as one adds firms with index scores in the middle of the distribution to the long and short portfolios, the industry-adjusted monthly abnormal returns monotonically decrease. Finally, the industry-adjusted return estimates are approximately the same as those estimated without adjusting for industry. In short, the abnormal return results generated using the baseline model do not appear to be driven by industry effects.

4. Controlling for other governance provisions

One potential issue with the preceding analysis is the fact that the entrenchment index is correlated with other corporate governance provisions covered by the IRRC. Recall that the correlation between the entrenchment index and the other provisions index is about 0.3-0.35

during the period of our study. This makes it desirable to examine whether the results associating higher abnormal returns with lower entrenchment index scores are due to a correlation between returns and the other provisions index.

To address this issue, we calculate the results of a new set of trading strategies that seek to control for the provisions in the other provisions index. We wish to test whether, within pools of firms that have similar levels of the other provisions index, going long on low entrenchment companies and short on high entrenchment companies continues to produce positive abnormal returns.

Specifically, we start by dividing all firms into four buckets based on their other provisions index (O index) score. The four buckets were created so as to contain, to the extent possible, equal numbers of observations. The four buckets of firms consist of firms with low O index scores (index score of 5 or less); firms with medium-low O index scores (index score of 6); firms with medium-high O index scores (index scores of 7 and 8); and firms with high O index scores (index scores of 9 or more). In addition, we used several different divisions of the O index into buckets and found that using them does not affect the results.

With these O buckets in place, we were able to take into account the O distribution, as captured by the four buckets, when calculating abnormal returns associated with going long firms with low entrenchment index scores and short high entrenchment index firms.⁹ When considering a trading strategy of going long firms with a given low entrenchment index score level and short firms with a given high entrenchment index score level, we would for each O index bucket create positions (either equally-weighted or value-weighted) consisting of going long all the firms with the given low entrenchment level and short all the firms with the given high entrenchment level in that O index bucket. After doing this, we then created an overall long-short portfolio consisting of an equally-weighted position in each of the four long and short positions created for the four O index buckets. As before, we then regressed the return associated with this long-short portfolio on the Carhart four-factor model, with the intercept term being interpreted as the monthly abnormal return associated with this particular trading strategy.

The basic idea behind constructing portfolios in this way is to ensure that, in constructing our long-short portfolios, the firms purchased and shorted are different in their entrenchment

⁹ It is impossible to do an exact O index distribution given a lack of sufficient firm observations across the entrenchment index to replicate the O index distribution.

index scores while still being roughly similar in their O index scores. The method is analytically similar to the way in which the Fama-French book-to-market and firm size factors are calculated (see Fama and French 1993) as well as the Carhart momentum factor construction (see Carhart 1997).

The same trading strategies analyzed earlier were used once again. The results, which are reported in Table XI, indicate that relatively little changes after we control for correlation with the O index. The abnormal returns remain positive and statistically significant at the 1% level, with one exception that is positive and significant at the 5% level. Moreover, the abnormal return estimates are of roughly similar magnitudes. For instance, the monthly abnormal return of going long firms in the bottom half of the distribution and short the top half is 23 basis points for equal-weighted portfolios and 50 basis points for value-weighted portfolios, both with 1% significance. Also, the same pattern of decreasing abnormal returns again emerges when looking at the effect of adding firms in the middle of the entrenchment index distribution to the long and short portfolios.

B. The Entrenchment Index and Returns for 1990-2003

Following the initial finding by Gompers, Ishii and Metrick (2003) of correlation between the GIM index and lower stock returns during the period 1990-1999, subsequent work did not find such correlation in a period extended forward to include the beginning of this decade (Core, Guay & Rusticus (2003), Cremers and Nair (2003)). The question therefore naturally arises whether the trading strategies analyzed above, going long firms with low entrenchment index scores and shorting firms with higher entrenchment index scores, would have yielded abnormal returns in the 1990-2003 period.

Turning to this question, we calculated for the period 1990-2003 the abnormal returns for different trading strategies using the Carhart four factors (the baseline model), the industry-adjusted model, and the O-Bucket adjusted model. The results are summarized in Table XII.

As Table XII indicates, all the trading strategies, going long on low entrenchment firms and short on high entrenchment firms, continue to produce positive abnormal returns that are large and statistically significant at the 1% level. Furthermore, for both the equal-weighted and value-weighted portfolios, abnormal returns on trading strategies largely continue to decline

monotonically as firms in the middle of the entrenchment index are added to the long and short portfolios. This overall pattern emerges in the baseline model, the industry-adjusted model and the O-bucket adjusted model.

In terms of the magnitude of the abnormal returns, the results for the period 1990-2003 are roughly similar to the results for the period 1990-1999 when the trading strategies use equally-weighted portfolios. For example, going long entrenchment index 0 and short index 5-6, would have yielded 61 basis points during 1990-1999 and 60 basis points during 1990-2003 using the baseline four-factor model; would have yielded 60 basis points during 1990-1999 and 66 basis points during 1990-2003 using the industry-adjusted model; and would have yielded 73 basis points during 1990-1999 and 68 basis points during 1990-2003 using the O-bucket-adjusted model. Similarly, when going long firms with entrenchment index scores of 2 or less and shoring the firms with index 3 or more, moving from 1990-1999 to 1990-2003 would have increased the monthly abnormal return by 2 basis points (to 27 basis points) under the baseline model; by 8 basis points (to 34 basis points) under the industry-adjusted model; and 1 basis point (to 24 basis points) under the O-bucket-adjusted model.

For trading strategies using value-weighted portfolios, the abnormal returns for the 1990-2003 period are significantly smaller than the corresponding trading profits for the 1990-2003 period. The trading profits using value-weighted portfolios in the 1990-2003, however, continue to be quite large in magnitude and, in particular, higher than the abnormal return on the corresponding strategies using equally-weighted portfolios during either the 1990-1999 or 1990-2003 period. For example, during 1990-2003, using value-weightings, going long entrenchment index 0 firms and shorting index 5-6 firms would have yielded a monthly positive abnormal return of 84 basis points under the baseline model; 94 basis points under the industry-adjusted model; and 81 basis points under the O-bucket-adjusted model. In contrast, using equal-weightings, going long index 0 firms and shorting index 5-6 firms during 1990-1999 would have yielded only a monthly positive abnormal return of 61 basis points under the baseline model (or 60 basis points if the period were extended to 2003); 60 basis points under the industry-adjusted model (or 66 if the period were extended to 2003); and 73 basis points under the O-bucket-adjusted model (or 68 if the period were extended to 2003).

C. Stock Returns and the Other Provisions Index

We have found that, even controlling for the other provisions index, the entrenchment index was correlated with stock returns during the period we study. There is still the possibility, however, that the other provisions index was also correlated, controlling for the entrenchment index level, with stock returns. In other words, it is possible to flip the inquiry and ask whether the O index, the IRRC corporate governance provisions not reflected in the entrenchment index, has explanatory power for stock returns.

Accordingly, we calculated the abnormal returns associated with firms' O index scores, controlling for the entrenchment index distribution as captured by different entrenchment index buckets. To this end, we created six entrenchment index buckets, each consisting of all the firms in a given level of the index from 0 to 5, with the small number of firms with entrenchment index 6 scores added to the bucket with entrenchment index 5 firms. Following the methodology described earlier, we would for each entrenchment index bucket create positions (either equally-weighted or value-weighted) consisting of going long all the firms with a given low O index score and short all the firms with a given high O index score in that entrenchment level bucket. After doing this, we then created an overall long-short portfolio consisting of an equally-weighted position in each of the six long and short positions created for the six entrenchment index buckets. As always, we regressed the return associated with this long-short portfolio on the Carhart four-factor model, with the intercept term being interpreted as the monthly abnormal return associated with this particular trading strategy.

We did the calculations both for the 1990-1999 period and for the 1990-2003 period. The long-short portfolios in O index positions were based on the division of firms into four O index buckets: firms with O index scores between 0 and 5; firms with O index scores of 6; firms with O index scores of 7 or 8; and firms with O index scores of 9 and more. Table XIII contains the results of this analysis.

Out of the sixteen trading strategies analyzed, consisting of going long firms with low O index levels and short firms with high O index levels, none generated a statistically significant abnormal returns, even at the 10% level. Indeed, many of the t statistics indicate p values in the range of 80%. In addition to the lack of statistical significance, the coefficients are sometimes negative rather than positive and always small in magnitude, never exceeding .17. These results

are consistent with the view that the O index has little residual explanatory power for returns once the entrenchment index is taken into account.

VI. CONCLUDING REMARKS

A substantial literature has attempted to identify over the past two decades which corporate arrangements and structures are correlated with higher shareholder value. We have sought in this paper to contribute to this literature by identifying which provisions, among the set of 24 IRRC provisions, are negatively correlated with firm performance. We have identified six entrenching provisions that are negatively correlated with firm value, as measured by Tobin's Q, as well as with stock returns during the 1990-2003 period. We have also found that these provisions fully drive the findings documented by prior research that the IRRC provision in the aggregate are correlated with Tobin' Q as well as returns during the 1990s.

Our results contribute to our understanding of the relationship between governance and firm value, and provide a basis for future work, in several ways. The six provisions in the entrenchment index are the ones to which researchers, investors, governance advisers, and policymakers interested in improving corporate governance should pay more attention. Knowing which provisions matter also provides a useful starting point for an inquiry into the source of the correlation between the IRRC provisions in the aggregate and firm value.

One important question that remains for future work concerns causation. To what extent, if any, does the correlation between any given entrenching provision and firm value result from entrenchment producing lower value? And to what extent, if any, does this correlation simply reflect the tendency of managers of low-value firms to entrench themselves? Once the key provisions responsible for the correlation with firm value are known, it is possible to examine whether the answers to these questions vary among the provisions in the entrenchment index. Our conjecture is that the constitutional limitations on shareholder power do bring about, and not merely reflect, lower firm value.¹⁰ In contrast, our conjecture is that the correlation that poison

¹⁰ Bebchuk and Cohen (2003) provide some suggestive evidence that the correlation between staggered boards and reduced firm value at least in part reflects staggered boards bringing about lower value rather than merely reflecting it.

pills and golden parachutes have with lower firm value at least partly reflects the greater tendency of managers of firms with lower firm value to adopt takeover readiness provisions.

Our work provides a measure of good corporate governance that future research work can use. Because eighteen of the twenty-four IRRC provisions appear not to matter for firm performance, an index that is based on all the IRRC provisions provides a “noisy” measure of the governance elements that are correlated with firm performance. By focusing only on the key provisions that matter, and excluding the noise that comes from counting provisions that do not, our entrenchment index provides an improved measure of good governance that can be used in future research.

Looking beyond the set of IRRC provisions, our analysis cautions against the “kitchen-sink” approach of building ever-larger indexes of governance measures. As we noted in the introduction, shareholder advisory firms, including industry leader ISS, have put forward indexes of good corporate governance based on a massive number of provisions, and the development and use of these indexes has put pressure on firms to adjust their arrangements in ways that would improve their index scores. As this paper highlights, in any large set of governance provisions, many are likely not to matter or to be an endogenous product of others. Compared with a governance ratings scheme based on the key provisions that matter, a governance rating system based on a much larger set can push firms in directions that are counter-productive or at least wasteful, and provides a noisier measure of governance quality. In short, adding more provisions to an index is not harmless; in this area, less can be preferable to more. Shareholders and their advisers might do well to focus on those corporate governance provisions that really matter for firm value.

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TABLE I: INCIDENCE OF CORPORATE GOVERNANCE PROVISIONS

	YEAR					
	1990	1993	1995	1998	2000	2002
Entrenchment Index Provisions:						
Staggered Board	59.2%	60.5%	61.8%	59.5%	60.5%	61.9%
Limits to Amend Bylaws	14.5%	16.2%	16.1%	18.2%	20.0%	23.2%
Limits to Amend Charter	3.3%	3.4%	3.1%	3.0%	3.3%	2.5%
Supermajority	39.0%	39.5%	38.4%	34.1%	34.1%	32.3%
Golden Parachutes	53.3%	55.7%	55.2%	56.9%	67.4%	70.2%
Poison Pill	54.4%	57.6%	56.6%	55.4%	59.9%	59.0%
All Other Provisions:						
Limits to Special Meeting	24.8%	30.0%	32.0%	34.8%	38.3%	50.2%
Limits to Written Consent	24.8%	29.3%	32.1%	33.3%	36.2%	46.4%
No Cumulative Vote	81.6%	83.6%	85.0%	87.8%	89.0%	90.4%
No Secret Ballot	97.1%	90.5%	87.8%	90.4%	89.1%	88.8%
Director Indemnification	40.8%	39.5%	38.5%	24.5%	23.6%	19.1%
Director Indemnification Contracts	16.6%	15.2%	12.6%	11.2%	9.1%	8.1%
Director Liability	72.7%	69.2%	65.5%	47.2%	43.1%	33.9%
Compensation Plans	45.3%	66.1%	72.8%	63.2%	72.6%	74.0%
Severance Agreements	13.1%	5.5%	10.2%	11.2%	9.2%	6.1%
Unequal Vote	2.4%	2.0%	1.9%	1.7%	1.5%	1.6%
Blank Check	76.7%	80.1%	85.9%	88.0%	89.4%	90.8%
Fair Price	58.0%	59.1%	57.6%	49.4%	48.5%	44.0%
Cash Out Law	4.1%	3.7%	3.6%	3.1%	2.7%	2.5%
Director Duties	10.4%	11.1%	10.9%	9.9%	10.2%	10.8%
Business Combination Law	84.1%	87.5%	87.4%	88.4%	89.0%	89.1%
Anti-green Mail	19.7%	20.8%	20.1%	17.1%	15.8%	15.0%
Pension Parachutes	4.0%	5.3%	4.0%	2.2%	1.5%	1.0%
Silver Parachutes	4.1%	4.9%	3.5%	2.4%	2.0%	1.7%

TABLE II: INCIDENCE OF THE ENTRENCHMENT INDEX

Entrenchment index	1990	1993	1995	1998	2000	2002
0	13.0%	11.0%	11.0%	10.7%	7.9%	7.3%
1	18.2%	17.3%	17.6%	19.0%	18.0%	15.4%
2	24.3%	25.0%	25.4%	25.9%	24.0%	26.8%
3	25.4%	25.7%	25.3%	25.1%	27.6%	27.2%
4	14.7%	16.3%	16.7%	15.9%	18.2%	18.3%
5	3.7%	4.3%	3.8%	2.8%	3.8%	4.6%
6	0.7%	0.4%	0.2%	0.6%	0.5%	0.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE III: ENTRENCHMENT INDEX LEVELS OF FIRMS IN DEMOCRACY AND DICTATORSHIP PORTFOLIOS

	Democracy portfolio	Dictatorship portfolio
Average Entrenchment Index	0.58	4.10
Percentage with E=0	53.0%	0.0%
Percentage with E=1	36.1%	1.1%
Percentage with E=2	10.9%	0.0%
Percentage with E=3	0.0%	15.0%
Percentage with E=4	0.0%	58.1%
Percentage with E=5-6	0.0%	25.8%
	100.0%	100.0%

TABLE IV: ENTRENCHMENT INDEX LEVELS OF DIFFERENT TYPES OF FIRMS

Firms in Year 2002	Mean E-Level	Standard Deviation
S&P 500	2.58	1.29
Not in S&P 500	2.46	1.30
Went Public in 1990s	2.30	1.28
Went Public in 1980s	2.35	1.29
Went Public Before 1980	2.82	1.27

TABLE V: INCIDENCE OF OTHER PROVISIONS INDEX

Index of Other Provisions	1990	1993	1995	1998	2000	2002	Average E-Index: Year 1990	Average E-Index: Year 2002
1	0.15%	0.00%	0.00%	0.00%	0.06%	0.00%	1.50	1.11
2	1.41%	0.68%	0.66%	0.71%	0.52%	0.55%	0.89	1.41
3	3.72%	3.68%	2.41%	3.12%	2.14%	1.64%	1.42	1.61
4	7.58%	6.38%	5.41%	10.88%	8.31%	7.71%	1.67	2.10
5	14.94%	12.91%	13.38%	17.82%	17.85%	15.79%	1.75	2.24
6	19.03%	17.87%	17.98%	17.24%	18.23%	21.86%	2.09	2.72
7	16.36%	16.97%	16.81%	16.53%	19.92%	22.16%	2.36	2.90
8	15.24%	17.49%	19.52%	14.88%	14.99%	13.60%	2.52	2.86
9	10.26%	12.01%	11.77%	9.59%	9.28%	8.50%	2.78	3.33
10	7.21%	6.76%	6.94%	5.71%	5.78%	5.04%	3.01	3.44
11	3.35%	4.28%	4.24%	2.71%	2.14%	2.37%	3.04	3.38
12	0.45%	0.75%	0.66%	0.65%	0.65%	0.49%	2.17	3.40
13	0.30%	0.23%	0.22%	0.18%	0.13%	0.30%	2.25	1.11
Average							2.24	2.49
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		

TABLE VI: THE ENTRENCHMENT INDEX AND FIRM VALUE

This table reports pooled OLS regressions of log (industry-adjusted Tobin's q) on various controls and two specifications of the entrenchment index. Tobin's q is the ratio of the market value of assets to the book value of assets, where the market value of assets is computed as book value of assets plus the market value of common stock less the sum of book value of common stock and balance sheet deferred taxes. Industry-adjusted Tobin's q is equal to Tobin's q minus the median Tobin's q in the industry, where industry is defined by two-digit SIC code. Entrenchment index i ($i=1, 2, 3, 4,$ and $5-6$) is equal to 1 if the firm has an entrenchment level i and 0 otherwise. The other provisions index is equal to the GIM index (Gompers-Ishii-Metrick (2003)) minus the entrenchment index. Insider Ownership is equal to the fraction of shares held by officers and director. ROA is the ratio of net income to assets. CAPEX/assets is the ratio of capital expenditures to assets. R&D per Sales is the ratio of research and development expenditures to total sales. Leverage is the ratio of long-term debt plus debt due in one year to assets. Year dummies and a dummy for missing R&D data are included in all regressions, but their coefficients (as well as the constant) are omitted. Columns 1 and 2 provide OLS estimates, which are White (1980) robust, and columns 3 and 4 provide the results of regressions with fixed firm effects. Robust standards errors appear below the coefficient estimate. Significance levels are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Variable	(1)	(2)	(3)	(4)
Entrenchment Index E	-0.044 ^{***} 0.004		-0.020 ^{***} 0.007	
Entrenchment Index 1		-0.092 ^{***} 0.023		-0.056 ^{**} 0.022
Entrenchment Index 2		-0.146 ^{***} 0.022		-0.065 ^{***} 0.025
Entrenchment Index 3		-0.155 ^{***} 0.022		-0.077 ^{***} 0.029
Entrenchment Index 4		-0.206 ^{**} 0.023		-0.104 ^{***} 0.031
Entrenchment Index 5-6		-0.282 ^{***} 0.027		-0.107 ^{***} 0.040
Other Provisions Index	0.010 ^{***} 0.003	0.010 ^{***} 0.003	0.002 0.006	0.002 0.006
Log(Assets)	0.015 ^{***} 0.004	0.015 ^{***} 0.004	-0.119 ^{***} 0.014	-0.118 ^{***} 0.014
Log(Company Age)	-0.048 ^{***} 0.008	-0.047 ^{***} 0.008	-0.026 0.031	-0.026 0.031
Delaware Incorporation	-0.03 ^{***} 0.01	-0.028 ^{***} 0.01	0.004 0.04	0.008 0.04
Insider Ownership	0.001 0.001	0.001 0.001	0.005 ^{***} 0.002	0.005 ^{**} 0.002
Insider Ownership Square	-0.00003 0	-0.0003 0	-0.0001 [†] 0	-0.0001 [†] 0
ROA	0.008 0.009	0.008 0.009	0.019 0.015	0.019 0.015
CAPEX / Assets	0.994 ^{***} 0.089	1.00 ^{***} 0.09	0.868 ^{***} 0.120	0.869 ^{***} 0.120
Leverage	-0.544 ^{***} 0.046	-0.553 ^{***} 0.046	-0.426 ^{***} 0.047	-0.427 ^{***} 0.047
R&D per Sales	0.002 ^{**} 0.001	0.001 [*] 0.001	-0.001 ^{**} 0.001	-0.001 ^{**} 0.001

TABLE VII
THE ENTRENCHMENT INDEX AND FIRM VALUE: ANNUAL REGRESSIONS

This table reports mean and median annual OLS regressions of log of industry-adjusted Q and industry-adjusted Q on the entrenchment index and various controls. Industry-adjusted Tobin's q is defined in the same way as in table VI. The independent variables are the same as in the regressions reported in table VI, but the table reports only the coefficients of the entrenchment index E and the other provisions index. Fama-Macbeth coefficients are calculated and reported in the last row. Columns (1) and Column (3) provide OLS estimates that are White (1980) robust, and Column (2) provides the results of median regressions. Robust standards errors appear immediately below the coefficient estimate. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Year	(1) Log (Industry-adjusted Q) Mean regressions		(2) Log (Industry-adjusted Q) Median Regressions		(3) Industry-adjusted Q Mean Regressions	
	Entrenchment Index	Other Provisions Index	Entrenchment Index	Other Provisions Index	Entrenchment Index	Other Provisions Index
1992	-0.011	0.003	-0.009	-0.001	-0.028	-0.002
	0.009	0.006	0.016	0.011	0.021	0.014
1993	-0.018*	-0.003	-0.022**	-0.007	-0.058**	-0.011
	0.011	0.007	0.010	0.006	0.027	0.016
1994	-0.018**	0.004	-0.037***	0.001	-0.052**	0.010
	0.009	0.006	0.010	0.007	0.020	0.014
1995	-0.016	0.0013	-0.023	-0.005	-0.067**	0.008
	0.011	0.008	0.015	0.011	0.032	0.026
1996	-0.024**	0.011	-0.025*	-0.002	-0.074**	0.029
	0.01	0.007	0.015	0.011	0.029	0.025
1997	-0.014*	0.005	-0.029*	0.017	-0.058**	0.017
	0.008	0.007	0.016	0.011	0.027	0.022
1998	-0.064***	0.022**	-0.058***	0.000	-0.209***	0.066**
	0.014	0.009	0.021	0.014	0.053	0.033
1999	-0.068***	0.005	-0.065***	0.003	-0.327***	0.015
	0.015	0.01	0.016	0.011	0.077	0.054
2000	-0.03**	0.003	-0.066***	-0.003	-0.089**	-0.010
	0.013	0.009	0.020	0.014	0.041	0.028
2001	-0.017*	0.006	-0.024*	0.006	-0.044	0.016
	0.01	0.007	0.014	0.010	0.027	0.019
2002	-0.05***	0.013*	-0.057***	0.000	-0.119***	0.020
	0.013	0.007	0.014	0.009	0.028	0.015
Fama-Macbeth	-0.03***	0.006***	-0.038***	0.001***	-0.102***	0.014***
	0.000	0.000	0.000	0.000	0.001	0.000

TABLE VIII
THE ENTRENCHMENT INDEX PROVISIONS AND FIRM VALUE

This table reports the results of 24 pooled OLS regressions of log (industry-adjusted Tobin's q) on provisions in the entrenchment index and various controls. Each column displays the results of four different regressions investigating a given provision, and it displays only the coefficient of the provision of interest in these four regressions. The independent variables other than governance provisions are the same as in the regressions of table VI. OLS estimates are White (1980) robust. Robust standards errors appear immediately below the coefficient estimate. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

	Staggered Board	Golden Parachutes	Limits to Amend Bylaws	Limits to Amend Charter	Supermajority	Poison Pill
Coefficient in a regression with (i) the provision, and (ii) the GIM index minus the provision.	-0.035*** 0.011	-0.024** 0.012	-0.079*** 0.022	-0.048*** 0.01	-0.079*** 0.0101	-0.061*** 0.011
Coefficient in a regression with (i) the provision, (ii) the Entrenchment index minus the provision, and (iii) the Index of All Other Provisions.	-0.051*** 0.005	-0.037*** 0.005	-0.047*** 0.004	-0.044*** 0.004	-0.045*** 0.005	-0.042*** 0.005
Coefficient in a regression with (i) the provision, (ii) dummies for each of the other five provisions in the Entrenchment Index, and (iii) the Index of All Other Provisions.	-0.026** 0.011	-0.025** 0.012	-0.067*** 0.021	-0.044*** 0.01	-0.07*** 0.011	-0.046*** 0.011
Coefficient in a regression with (i) the provision, (ii) dummies for each of the other twenty-three IRRC provisions.	-0.030*** 0.011	-0.026** 0.012	-0.068*** 0.022	-0.043*** 0.01	-0.071*** 0.011	-0.048*** 0.011

TABLE IX
INSIDE THE OTHER PROVISIONS INDEX

This table reports the results of seventy-two pooled OLS regressions of log of industry-adjusted Tobin's q on a given provision in the other provisions index and various controls. Industry-adjusted Tobin's Q is defined in the same way as in table VI. For each provision i, four types of regressions are run: (a) A regression in which the independent corporate governance variable are the provision i, and a variable equal to the GIM governance provisions index minus the provision i; (b) A regression in which the independent corporate governance variables are the provision i, a variable equal to the other provision index minus the provision i, and the entrenchment index; (c) A regression in which the independent corporate governance variables are the provision i, dummies for each of the other seventeen provisions in the other provisions index, and the entrenchment index; and (d) A regression in which the independent corporate governance variables are the provision i and dummies for each of the other twenty-three IRRC provisions. The independent non-governance variables are the same as in the regressions reported in table VI. We display only the coefficient on the provision i. OLS estimates are White (1980) robust. Robust standards errors appear immediately below the coefficient estimate. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

	Blank Check	Limit to Meetings	Limits to Consent	Compensation Plans	Director Indemnification K	Director Indemnification
Regression Type (a)	0.02 0.014	0.025** 0.011	0.001** 0.012	-0.005 0.011	0.031** 0.013	0.003 0.01
Regression Type (b)	0.025* 0.014	0.031*** 0.011	0.002 0.012	0.006 0.011	0.031** 0.013	-0.011 0.01
Regression Type (c)	0.021 0.014	0.037*** 0.012	-0.001 0.014	0.008 0.011	0.036*** 0.013	-0.011 0.01
Regression Type (d)	0.021 0.014	0.034*** 0.012	-0.014 0.013	0.013 0.012	0.035*** 0.013	-0.013 0.01

	No Secret Ballot	Unequal Vote	Anti- Greenmail	Director Duties	Fair Price	Pension Parachutes
Regression Type (a)	0.028* 0.014	-0.048 0.032	-0.008 0.013	-0.004 0.015	0.038*** 0.012	-0.049** 0.021
Regression Type (b)	0.034** 0.014	-0.04 0.032	-0.001 0.012	0.005 0.015	0.032*** 0.012	-0.037* 0.021
Regression Type (c)	0.032** 0.015	-0.03 0.033	-0.012 0.013	0.01 0.015	0.03** 0.012	-0.035* 0.021
Regression Type (d)	0.035** 0.015	-0.035 0.033	-0.009 0.013	0.004 0.015	0.027*** 0.013	-0.031 0.021

	No Cumulative Vote	Director Liability	Business Combination	Silver Parachutes	Cash-Out	Severance Agreements
Regression Type (a)	-.017 0.013	.003 0.011	0.021** 0.016	0.017 0.021	0.026 0.029	.038** 0.0201
Regression Type (b)	-.005 0.012	-0.013 0.011	.024 0.016	0.015 0.022	-0.000 0.028	.022 0.02
Regression Type (c)	-.007 0.013	-0.006 0.011	0.025 0.017	0.021 0.022	-.003 0.03	.021 0.02
Regression Type (d)	-.005 0.012	-0.004 0.011	.026 0.017	0.019 0.022	0.001 0.013	.01 .021

TABLE X
SUMMARY STATISTICS ON ENTRENCHMENT INDEX STOCK RETURNS

This table documents the average monthly return of stocks of portfolios of stocks consisting of the same entrenchment index scores (0, 1, 2, 3, 4 or 5-6) for the period of September 1990 – December 1999. Portfolios are constructed using equal weights of stocks and weighting positions in stocks by firms' common stock market capitalization. Stocks entrenchment scores were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; and February 1998.

Entrenchment Index Level	Equal-Weight	Value-Weight
Index 5-6	1.26%	1.51%
Index 4	1.40%	1.85%
Index 3	1.46%	1.93%
Index 2	1.59%	2.26%
Index 1	1.72%	2.33%
Index 0	1.74%	2.45%

TABLE XI
MONTHLY ABNORMAL RETURNS ASSOCIATED WITH DIFFERENT TRADING STRATEGIES:
THE 1990S

This table documents the monthly abnormal returns, and their associated robust standard errors in parenthesis, associated with different trading strategies for the period of September 1990 - December 1999. The monthly abnormal returns were calculated using three different methods. In the baseline model, abnormal returns were calculated by regressing the return associated with a particular trading strategy on the three Fama-French (Fama & French 1993) – the HML factor which captures book-to-market effects, the SMB factor which captures firm size effects and the value-weighted market return in excess of the risk-free rate for further explanation) – and a momentum factor which was calculated using the procedures described in Carhart (1997). The trading strategies analyzed consist of going long a portfolio of stocks with a certain entrenchment index score and, simultaneously, shorting another portfolio of stocks with a higher entrenchment score. These long and short portfolios were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; and February 1998. The long and short portfolios of stocks were constructed using equal weightings of each stock (equal-weight) and by weighting the holding of a stock in the portfolio by its common stock market capitalization (value-weight). With industry-adjusted returns, the monthly abnormal returns were calculated by first subtracting from each firm's monthly stock return the median industry return for the industry in which the firm operates. The Fama-French 48 industry classification (Fama & French 1997) was used in classifying firms across industries. Monthly abnormal returns were then calculated by regressing the industry-adjusted returns associated with a trading strategy on the four Carhart factors used in the baseline model. Finally, with the O-Bucket-Adjusted returns, the long and short portfolios were constructed by first dividing all stocks in the same entrenchment index category (0, 0-1, 0-1-2, 3-4-5-6, 4-5-6 & 5-6) into four other provisions (O) index buckets. The four buckets consist of firms with O scores of 0-5, 6, 7-8, and 9-13. A portfolio in a certain Entrenchment Index category is then constructed by calculating the return of stocks with the desired Entrenchment Index score equally-weighted across the four O buckets. The O Bucket-adjusted returns associated with a particular trading strategy was regressed, as always, on the four Carhart factors. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Long – Short Portfolios	Baseline Model		Industry-adjusted		O-Bucket-Adjusted	
	Equal-Weight	Value-Weight	Equal-Weight	Value-Weight	Equal-Weight	Value-Weight
Index 0 – Index 5-6	.61*** (.200)	1.16*** (.284)	.60*** (.182)	1.01*** (.301)	.73*** (.269)	1.16*** (.298)
Index 0 – Index 4-5-6	.42*** (.134)	.74*** (.191)	.47*** (.116)	.82*** (.198)	.61*** (.195)	.89*** (.210)
Index 0-1 – Index 4-5-6	.41*** (.138)	.62*** (.153)	.44*** (.109)	.62*** (.154)	.34** (.141)	.77*** (.180)
Index 0-1 – Index 3-4-5-6	.32*** (.106)	.52*** (.141)	.34*** (.088)	.57*** (.130)	.28*** (.107)	.58*** (.161)
Index 0-1-2–Index 3-4-5-6	.25*** (.079)	.47*** (.116)	.26*** (.067)	.51*** (.108)	.23*** (.071)	.50*** (.123)

TABLE XII
MONTHLY ABNORMAL RETURNS ASSOCIATED WITH DIFFERENT TRADING STRATEGIES:
1990-2003

This table documents the monthly abnormal returns, and their associated robust standard errors in parenthesis, associated with different trading strategies for the period of September 1990 - December 2003. The abnormal returns were calculated in the same manner as in Table XI: the baseline model, industry-adjusted returns, and O Bucket-adjusted returns. The long and short portfolios were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; February 1998; November, 1999; and February 2002. The long and short portfolios of stocks were constructed using equal weightings of each stock (equal-weight) and by weighting the holding of a stock in the portfolio by its common stock market capitalization (value-weight). Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

Long – Short Portfolios	Baseline Model		Industry-adjusted		O-Bucket-Adjusted	
	Equal-Weight	Value-Weight	Equal-Weight	Value-Weight	Equal-Weight	Value-Weight
Index 0 – Index 5-6	.60*** (.185)	.84*** (.224)	.66*** (.156)	.94*** (.230)	.68*** (.220)	.81*** (.246)
Index 0 – Index 4-5-6	.39*** (.145)	.57*** (.186)	.48*** (.125)	.67*** (.185)	.50*** (.169)	.60*** (.206)
Index 0-1 – Index 4-5-6	.42*** (.133)	.52*** (.157)	.52*** (.114)	.53*** (.151)	.35*** (.130)	.58*** (.179)
Index 0-1 – Index 3-4-5-6	.37*** (.107)	.41*** (.132)	.43*** (.090)	.46*** (.125)	.34*** (.100)	.43*** (.144)
Index 0-1-2–Index 3-4-5-6	.27*** (.085)	.37*** (.117)	.34*** (.070)	.39*** (.110)	.24*** (.074)	.38*** (.121)

TABLE XIII
MONTHLY ABNORMAL RETURNS ASSOCIATED WITH DIFFERENT TRADING STRATEGIES CONTROLLING
FOR ENTRENCHMENT INDEX DISTRIBUTION

This table documents the monthly abnormal returns, and their associated t-statistics in parenthesis, associated with trading strategies controlling, as in Table XI & XII, for the three Fama-French factors (Fama & French 1993) and the Carhart (1997) momentum factor. Portfolios are constructed by first dividing all stocks in the same other provisions (O) category -- 0-5, 6, 7-8, or 9-13 -- into six entrenchment index categories. The six entrenchment index buckets are entrenchment index scores of 0, 1, 2, 3, 4 and 5-6. A portfolio in a certain O index category is then constructed by calculating the equally-weighted return of stocks with the desired O index category across the six Entrenchment buckets. Within each Entrenchment bucket, the equally-weighted and value-weighted return of stocks in the same O category were calculated. The monthly abnormal returns associated with going long and short various portfolios was calculated for both the period of September 1990 – December 1999 period and the longer period of September 1990 – December 2003. The long and short portfolios were adjusted when updated information on firms' corporate governance provisions became available: July, 1993; July, 1995; February 1998; November, 1999; and February 2002. Levels of significance are indicated by *, **, and *** for 10%, 5%, and 1% respectively.

	1990-1999		1990-2003	
	Equal-Weight	Value-Weight	Equal-Weight	Value-Weight
Long – Short Portfolios				
Index 0-5 - Index 9-13	.10 (.162)	.13 (.180)	.07 (.133)	.05 (.146)
Index 0-5 – Index 7-8	-.024 (.143)	.08 (.124)	.03 (.124)	.17 (.106)
Index 0-5 – Index 6	-.10 (.148)	-.01 (.155)	-.04 (.136)	-.05 (.141)
Index 0-6 – Index 7-13	.10 (.107)	.02 (.056)	.07 (.096)	.05 (.051)