THE VALUE OF CORPORATE GOVERNANCE: EVIDENCE FROM AMERICAN MERGERS

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ABSTRACT

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This thesis extends the growing literature relating shareholder protection and greater valuation. Using a governance index built from 24 firm-level takeover defenses over a sample of 491 mergers from 1990 to 2001, we provide evidence that investors value a change in corporate governance. We find that firms acquired by bidders with relatively greater investor protection experience significantly greater abnormal returns. On average, 2.49 percent in additional abnormal return is recorded when bidders with above median shareholders rights acquire firms with below median investor protection. In contrast, we do not find evidence that bidders benefit from the increased social surplus created in transactions where the target corporate governance is improved. The thesis also examines the relationship between the protection of minority shareholder at the firm-level and the probability of a takeover bid, a stock settlement and the premium paid. Although no statistically significant relation is established between the investor rights and the takeover premium, we are able to confirm a negative correlation with the intensity of M&A activity, providing additional support for the efficiency hypothesis. Evidence is also provided that the method of payment is influenced by the previous degree of shareholders rights in the target and acquiring firm but not by the change in corporate governance following a takeover bid.

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1. INTRODUCTION

With the recent accounting scandals, the importance of companies' corporate governance and the protection of the minority shareholders have been discussed at great length. Both regulatory and legislative systems have reacted with new governance guidelines from the NYSE and NASDAQ and the Sarbanes-Oxley Act in 2002. The repeated headlines from the business press on the governance failure at Enron and Worldcom generated increased interest from investors as well. Meanwhile, there is already extensive empirical evidence confirming that protection of minority shareholders is related to finance. Recent contributions in the corporate governance literature indicates that greater investor protection is associated with, among others, lower concentration of ownership and control (La Porta, Lopez de Silanes, Shleifer and Vishny (1999) and Bebchuck (1999)), lower cost of equity (Bhattacharya and Daouk (2002)), more effective market for corporate control (Rossi and Volpin (2003)) and lower private benefits of control (Dyck and Zingales (2001)). However the question of whether greater governance and greater controlling rights are truly valued by investors when time comes to make an investment decision is still open.

This thesis extends the growing body of empirical studies investigating the effect of shareholders' protection on corporate valuation. Using a governance index built from 24 firm-level takeover defenses as a proxy for investor protection, we investigate whether the alteration in the degree of shareholder protection in the target firm following a merger or an acquisition is correlated with the firm market value. Assuming that target firm adopts the governance practices of the acquiring firms and that there is a zero cost attached to learning the firm minority shareholder protection level, then given the highly

efficient and well-developed markets in equity shares in the United States, we expect the change in corporate governance to be reflected in the stock price. We hypothesize that the firm's value experiences an increase that is statistically and economically significant following an increase in its shareholder protection.

In this thesis, we also document the effect of the corporate governance level on the intensity of mergers and acquisitions (M&A) activity, on the premium paid and the method of payment. We expect investor protection to affect these deal characteristics because it affects the degree of frictions and inefficiencies in the target firm.

Most research on corporate governance using bylaws faces the difficulty of identifying a single date for the change in governance structure. Meanwhile research on takeover defenses faces the danger that the new system is driven by contemporaneous conditions of the firm. Observing firms upon a takeover announcement provide a unique opportunity to observe the impact of the improvement in the level of corporate governance at a specific time. Furthermore the known factors affecting the firm returns at the time of the transaction can be controlled. Using an exclusively U.S mergers sample offers another advantage: it guarantees that most of our sample firms will adopt the same, or similar, governance practices as the acquirer firm. Comparatively, the transfer of governance practices in international transactions can be prohibited by law or influenced by tax issues (Bris and Cabolis (2003) and Alexander (2000)).

There is a continuing debate as whether mergers create or destroy value[1]. We extend Bris and Cabolis (2003), and propose that mergers create value through the transfer of governance practices. Hence, to the extent that investors value greater protection, and thus greater governance, we should find evidence that the acquisition of a

[1] See Andrade, Mitchell and Stafford (2001).

target with poorer shareholder protection by an acquirer with better stockholder rights generate greater abnormal returns upon the announcement date, holding all else constant.

To the best of our knowledge, ours is the first attempt to document the value of a change in corporate governance at firm level with such a thorough governance index and using a large sample of firms over a period of eleven years. However, like Gompers, Ishii and Metrick (2003), no claims of causality are made since the transactions in the sample are not randomly chosen. They consist instead in every merger and acquisitions for which we could build the governance index for both parties from the Investor Responsibility Research Center (IRRC) *Corporate Takeover Defenses* publications.

The major finding of the thesis is that investors actually value shareholder protection, even prior to the current accounting scandals and public attention. We find that firms acquired by bidders with greater investor protection experience significantly greater abnormal returns. This result holds for several measures of shareholders rights and is robust when controlling for other characteristics of the deal such as size, bargaining power and method of payment. These findings provide support for the quantitative importance of the managerial entrenchment hypothesis that states that antitakeover provisions reduce shareholder wealth.

The second major finding is that the bidder's abnormal returns are not affected by the change in governance taking place in the target firm. Indeed, while univariate models provide significant but inconsistent results upon the announcement of the control bid, cross-sectional regressions estimates are insignificant.

Evidence is also provided that the intensity of M&A activity, measured as the number of completed transactions in our sample divided by the number of firms in the

whole IRRC universe for a given governance index, is significantly lower for firms with better shareholder protection. In contrast, using cross-border deals, Rossi and Volpin (2003) find that there is greater M&A activity in countries with better investor protection, confirming the outcome hypothesis at international level. Our result confirms the contrary efficiency hypothesis that predicts a negative relationship between the M&A activity and the level of shareholders rights. This result suggests that in the United States, the market for corporate control operates freely and works efficiently to reallocates control over companies.

Another finding is that the method of payment is influenced by the previous degree of shareholders rights in the target and acquiring firm but not by the change in corporate governance following a takeover bid. We find that the likelihood of stock payment is positively related with the level of corporate governance in the target and acquiring firm at the time of the transaction. However, empirical evidence does not support the assertion that when the bidder stock offers less protection than the former target's shares, the shareholders will deplore the loss of investor rights and prefer to receive cash.

Finally, we find that shareholder rights are not correlated with the takeover premium. Grossman and Hart (1980) also investigate the relationship between premium and governance mechanisms. They find that higher premium is usually paid in presence of diffuse ownership, to overcome the free-rider problem. However, our insignificant results provide support for the importance of the use of broader firm level corporate governance index in the study of deal characteristics.

The remainder of the thesis is organized as follows. Section 2 reviews previous research on the topic and introduces our hypotheses. Section 3 describes the sample of takeovers and provides summary statistics on the governance index. Section 4 reports the cumulative abnormal returns experienced by the firms surrounding the announcement date. Section 5 tests the association between the target's governance level and the M&A activity, the method of payment and the premium. Section 6 evaluates the value of corporate governance for the target and the bidder firms. Section 7 concludes.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The essence of the agency problem first discussed by Coase (1937) and Jensen and Meckling (1976) is the separation of ownership and control. It engenders a conflict of interest between those who make the decision and those who bear the consequences. While the managers have an incentive to introduce provisions to keep control over the firm and secure their job, the shareholders try to protect themselves against wealth expropriation by putting in place governance mechanisms ensuring control over the managerial decisions. These mechanisms define the firm's corporate governance. They can be internal (board structure and ownership concentration) or external (market for corporate control and the legal and regulatory system) but are undertaken to increase the protection of minority shareholder rights.

La Porta et al. (2000) discuss and justify the association between investor protection and corporate governance. They argue that outsiders, the minority shareholders, need to have their rights protected by supra-corporation rules and laws

since they have fewer resources and information and thus they are more vulnerable to expropriation than insiders, the executives and controlling shareholders.

A broad body of empirical literature confirms the relationship between investor protection and finance. Using the quality of the legal and regulatory environment within a country as a proxy for the protection of minority shareholders, previous literature finds that greater investor protection is related to a lower concentration of ownership and control (La Porta et al. (1999) and Bebchuck (1999)), a lower cost of equity (Bhattacharya and Daouk (2002)), greater dividend payouts (La Porta et al. (2000a)), a higher correlation between investment opportunities and actual investments (Wurgler (2000)), more effective market for corporate control (Rossi and Volpin (2003)), lower private benefits of control (Dyck and Zingales (2002) and Nenova (2002)), lower earnings management (Leuz, Nanda and Wysocki (2002)), and a greater capacity for the capital market to respond to adversity (Johnson, Boone, Breach and Friedman (2000)). Denis and McConnell (2002) provide a review of this literature.

Recent research has also investigated the impact of governance on the firm performance and shareholder wealth. However, empirical evidence on the relationship between internal governance mechanisms and corporate valuation is weak. Core, Holthausen and Larcker (1999) find evidence of a relation between the structure of the board of directors and the ownership characteristics with CEO compensation. They argue that weak board and weak ownership structure, and thus weak governance, imply greater CEO compensation and, most interestingly, subsequent poorer firm operating and stock performance. On the other hand, Bhagat and Black (1999) find no meaningful relation between various characteristics of board composition and firm performance.

In contrast, there is increasing empirical evidence that external governance mechanisms, such as legal regulation, and the protection of the minority shareholders rights in general, are associated with corporate performance. The literature can be grouped into studies using country- or state-level regulatory systems as proxies for corporate governance and those investigating the relationship between firm-level antitakeover charter provisions and firm performance.

From the former group, using a sample of 371 firms across 27 countries, La Porta et al. (2002) find that the country legal origin, hence the level of investor protection, is positively associated with corporate valuation. Ceteris paribus, the firm Tobin's Q in a common law country is significantly higher than the Tobin's Q of firms in civil law countries. Consistent with this view, using a sample of 7,330 industries across 49 countries from 1990 to 2001, Bris and Cabolis (2003) find that the value of industries is improved when firms are acquired by foreign firms with stronger investor protection and accounting standards. They also present evidence that, thanks to private contracting, industries in countries with poorer investor protection and accounting standards that acquire firms with better shareholder protection are valued more. Finally Daines (2001) provides cross-sectional results that the assets of Delaware firms are more highly valued than similar firms incorporated elsewhere. Using 4,481 publicly traded corporations between 1981 and 1996, he finds that Delaware firms have a significantly greater Tobin's Q than firms incorporated elsewhere. Although there is some debate regarding whether Delaware policies increase or decrease investor protection, Daines (2001) confirms the relationship between state regulations and firm performance.

Meanwhile, most of the literature examining the investor protection at a firm level scrutinizes the market reaction to the antitakeover provisions. However, the empirical evidence on the effects of antitakeover charter amendments (ATCAs) on shareholder wealth is ambiguous. Examining NYSE firms adopting ATCAs from 1971 to 1979, De Angelo and Rice (1983) find significant negative abnormal stock returns upon the announcement date. On the other hand, Linn and McConnell (1983), examining NYSE firms from 1960 to 1980, find positively significant abnormal stock returns upon the ATCAs announcement. They argue that the adoption of ATCAs enables the management of a firm faced with a hostile takeover bid to negotiate a "better deal" for their shareholders. Eckbo (1990) and Schleifer and Vishny (1986) also find mixed evidence on the market reaction to the adoption of antigreenmail provisions, another takeover defense.

Malatesta and Walking (1988) argue that the small wealth effects of ATCAs, and therefore the explanation for these inconclusive studies, may be due to the fact that shareholders, after all, approve them. Jarrell and Poulsen (1988) suggest yet another explanation for these opposite conclusions. They argue that ATCAs will benefit the shareholders to the extent that the cost of greater bargaining power for the manager in a takeover attempt exceeds the cost of maintaining inefficient management and of repelling takeover bids that would benefit the shareholders. In support of the "managerial entrenchment hypothesis", that states that the latter cost will always be greater than the former, Borokhovich, Brunarski and Parrino (1997) find that the adoption of ATCAs is positively related to CEOs salaries and option grants. They show that CEO compensation is higher before and after the amendments compared to other firms without such

provisions, confirming that ATCAs increase the shareholder wealth expropriation. Jarrell and Poulsen (1988) also find that public announcements of certain anti-takeover amendments to corporate charters reduce shareholder wealth. Akhigbe and Madura (1996) observe negative long term stock price performance after anti-takeover amendments.

In support of the "stockholder interest hypothesis", the opposing view, Burkart, Gromb and Panunzi (1998) argue that the combination of one share-one vote and simple majority assertion are not always optimal and can reduce the shareholder protection. Consistent with this view, Casares (1999) finds that IPO firms with antitakover provisions are of higher quality than those without such provisions. These firms also exhibit greater operating income before the offering and are usually represented by better underwriters. Overall, Sundaramurthy (1996) who reviews previous event studies finds there is a preponderance of evidence supporting the managerial entrenchment hypothesis.

The literature is also inconclusive regarding specific antitakeover provisions, such as poison pills and golden parachutes. Unlike the ATCAs, poison pills are usually adopted without the shareholders' approval. Jarrell and Ryngaert (1986), Malatesta and Walkling (1988) and Ryngaert (1988) find that poison pills significantly reduce stockholder wealth. These results confirm the managerial entrenchment hypothesis but the evidence is economically weak. Meanwhile Lambert and Larcker (1985) show that golden parachutes are positively associate with the stock market reaction. They argue that managers react more favorably to takeover bids and potential changes in control when assured of certain remuneration, confirming the shareholders interest hypothesis. Finally

Agrawal and Mandelker (1990) find no significant effect of staggered board and fair price amendments on the firm stock price.

Given the above ambiguous literature review, there is some debate on whether the legal and regulatory environment or the private contracting through charter provisions better protect the investor and has a greater impact on the firm value. Although Daines (2001) presents evidence that state laws are foremost in Delaware, Black (1990) insists that the state of incorporation is trivial. Gompers et al. (2003) reconcile both views providing a further detailed portrait of the actual firm corporate governance level by combining antitakeover provisions and state bylaws into a thorough governance index. They find that firms with greater investor protection have significantly higher value statistically and economically.

Finally, most of the previous literature provides evidence of positive abnormal return for target firms upon the announcement of a takeover bid (Ravenscraft and Scherer (1989), for instance). In contrast, although Healy, Palepu and Ruback (1992) document significant improvement in the post-acquisition performance of the acquiring firm, there is still disagreement on whether bidders earn excess return at the time of the acquisition bid. Jensen and Ruback (1983) provide a review of previous empirical research on the topic.

This literature leads to the formulation of the first hypothesis tested herein:

Hypothesis 1: The improvement in the firm's corporate governance, measured as the level of protection of minority shareholder rights, will result in a positive stock market reaction. Therefore a target firm acquired by a bidder with higher minority shareholder protection is expected to experience greater abnormal returns upon the bid

announcement. Conversely, a target firm acquired by a bidder with weaker investor protection is expected to experience lower abnormal returns.

According to Manne (1965) and Jensen and Ruback (1983) an efficient market for corporate control is another means to reduce agency costs and replace inefficient management. Hence we expect to find an association between the governance mechanisms in place in the firm with the propensity to receive a takeover bid. However, the existing literature does not agree on the relationship between shareholder protection and the probability of being a target. Ambrose and Megginson (1992) find mixed results when observing individual antitakeover provisions. They find that the voting rights requirement is positively related to the probability of receiving a takeover bid, while another takeover defense, blank-check preferred stock, is associated with a lower probability of being a target. Finally, they find no significant impact of the presence of poison pills on the probability of a takeover bid. Pound (1987), using 100 NYSE firms with both supermajority and classified board finds that these takeover defenses reduced the probability of a control bid. Meanwhile, Gompers et al. (2001) find a positive but insignificant relation between the governance index and the probability of being a target using transactions from 1991 to 1999.

These inconclusive results are explained in the literature by the "outcome hypothesis" and the "efficiency hypothesis". According to the outcome hypothesis, there is a positive relationship between M&A activity and the level of investor protection. In contrast, the efficiency hypothesis states that there is a negative relationship between M&A activity and the level of investor protection. In favor of the outcome hypothesis, Daines (2001) finds that Delaware firms have a greater probability of being acquired than

firms incorporated in states where barriers to hostile bids are higher. Rossi and Volpin (2003) find that the intensity of M&A activity is positively related to the degree of shareholder protection as proxied by the measures proposed in La Porta et al. (1998). Bebchuck (1999) argues that where there is lower investor protection, there is a greater concentration of ownership, hence the market for corporate control is constrained and limited and the probability of receiving a takeover bid declines. Hannes (2002) provides evidence that, in a competitive bid, unshielded firms are more likely to be acquired than firms who adopted antitakeover charter provisions.

In favor of the efficiency hypothesis, La Porta et al. (2002) and Bhattacharya and Daouk (2002) respectively find that countries with lower stockholder protection have firms with poorer valuation and higher costs of capital are, thus, inefficient. The market for corporate control will therefore be more active when there is lower investor protection as shareholders insist on new management. Comment and Schwert (1995) also find that antitakeover provisions such as poison pills do not prevent many transactions.

Finally, Bris and Cabolis (2003) find that most M&A activity is between firms with the same level of investor protection, but, in relative terms, there are slightly more cases of cross-border transactions where the acquirer has poorer shareholder protection than the target. Similarly, at the firm level, Gompers et al. (2003) present evidence that firms with greater shareholder rights make fewer acquisitions. In contrast, at country level, Rossi and Volpin (2003) find that acquirers usually have greater investor protection than their target.

The above reviewed literature and the predominance of empirical evidence suggest the second hypothesis tested herein:

Hypothesis 2: A target firm with poorer investor protection is more likely to receive a takeover bid.

The impact of the method of payment on the target stock returns around the announcement date has been largely documented. Previous research, such as Huang and Walkling (1987), usually associate mergers settled in cash with greater abnormal returns. Meanwhile, Rossi and Volpin (2003) find that the probability of an all-cash bid decreases with the degree of investor protection in the target country. Logically then the probability of an all stock bid should increase with the level of the bidder firm protection of investor's rights. The target shareholders are indeed more likely to prefer cash settlement when the offered share payment does not provide sufficient protection against expropriation. More precisely, target shareholders who are offered stock with greater protection than what they had with the target firm are more likely to prefer stock. Conversely, when the bidder stock offers less protection than the former target's shares, the shareholders will deplore the loss of investor rights and prefer to receive cash.

This leads to the third hypothesis, namely:

Hypothesis 3: Firms experiencing an increase in their degree of investor protection following the takeover bid are more likely to accept a stock swap, while those facing a decrease in their shareholder rights will be more likely to agree to a cash settlement or a combination of both.

Another interesting issue is the relation between the takeover premium and the target's level of corporate governance. Rossi and Volpin (2003), at an international level, and Grossman and Hart (1980), at an American level, find that the premium is positively related to the level of investor protection and ownership diffusion. Moreover, Pound

(1987) finds that the combination of supermajority and classified board amendments reduces the expected value of shareholders gains in takeover attempts. Rossi and Volpin (2003) also argue that hostile bids are positively associated with the target country's investor protection. Since contested hostile bids are usually associated with a greater premium, it implies that the premium is positively correlated with shareholder's rights. On the other hand, Comment and Schwert (1995) find that the presence of poison pills is positively related to the takeover premium. Varaiya (1988) also observes higher premiums in presence of anti-takeover provisions in the target firm.

Notwithstanding, in the context of an aggregate measure of shareholders rights, the above literature suggests the last hypothesis tested herein:

Hypothesis 4: Greater target's investor protection will be associated with a greater premium.

3. DATA & DESCRIPTIVE STATISTICS

3.1. Data

Our data derives from *Corporate Takeover Defenses*, a Investor Responsibility Research Center (IRRC) publication that provides 24 distinct firm-level and bylaw provisions[2] for approximately 1,500 firms since 1990. The governance index construction is the same as in Gompers et al. (2003)[3] and, likewise, the provisions are divided into five thematic groups, *Delays* (tactics for delaying hostile bidder), *Voting* (voting rights),

[2] See Appendix A for detailed definitions of each provision and state laws included in the Governance Index

[3] Each antitakeover provision takes a value of one. The governance index is the sum of 22 charter antitakeover provisions in the firms plus 2 distinctive state-level laws. Two provisions (cumulative voting and secret ballot) increase the shareholder rights and thus, a point is added to the governance index in absence of these provisions.

Protection (director and officers protection) and *Others* (other takeover defenses)[4]. Unlike Gompers et al. (2003), the *State* group is not presented distinctively[5]. However four of the six state-level takeover laws are analogous to firm-level provisions included in the other groups, hence little information is lost with this omission.

We attribute to the target and the bidder their latest available governance index prior to the transaction as a measure of their degree of shareholder protection. We assume that the target adopts the governance practice of the acquiring firm. Hence the change in corporate governance is proxied by the difference in the latest available governance index of the target and the bidder[6]. We are able to obtain the aggregate governance index for all firms for 1990, 1993, 1995, 1998, 2000 and 2002 but the takeover defense details are only acquired for the period from 1993 to 2000. Therefore regressions run over the subindices only take into account transactions occurring after January 1993.

The sample includes all the completed acquisitions of public companies in the *Corporate Takeover Defenses* universe for which we possess both the target's and bidder's governance index and with available data in Securities Data Corporation (SDC). Only successful transactions[7] where the acquirer buys more than 50% of the target[8] are considered and we exclude from the initial sample LBO deals, as well as spinoffs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases,

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[4] Detailed definition of the sub-indices can be found in Gompers et Al. (2003), p. 111

[5] State-level data used by Gompers et Al (2003) are provided by Pinnell (2000), another IRRC publication that was not purchased for the purpose of this thesis.

[6] We do not use the next available bidder governance index, as we can reasonably assume that this information was not available at the time of the transaction.

[7] In presence of competing bidders, only the deal implicating the ultimate buyer of the firm is considered.

[8] We consider that where the bidder possesses more than 50% of shares, they will have enough incentive to pressure the target board to modify the charter provisions to provide similar protection to the shareholders as their own firm. Transactions where less then 100% shares were acquired represent 5.1 percent of the sample.

acquisitions of remaining interest, and privatizations. Overall 491 transactions are retrieved and included in the sample from January 1, 1990 through December 31, 2001, inclusive. Table 1 detailed the data selection. Some 334 deals are excluded from the sample because no governance information is available for the bidder while more than 11,378 acquisitions are excluded due to the lack of investor protection information for the target firm[9]. Nonetheless the distribution of the governance index for the eliminated targets does not suggest any major bias for our sample.

The announcement dates for the sample are gathered from SDC and verified using publicly available media reports from *The Wall Street Journal* and other business publications. We track for any rumors the year prior to the announcement date. We use the earlier of the first rumor date and the official announcement date. Market and accounting data for both the target and the acquirer are drawn from Compustat. We use the last accounting information available before the announcement date. Since data are not always available in Compustat, the sample size varies among the regressions. The initial offer price is obtained from Mergerstat and is available for all but 62 transactions. Finally the industry classification we use is a regrouping of the basic SIC categorization and is presented in Table 2. About 75 percent of the transactions in our sample are horizontal based on our classification system.

Gompers et al. (2003) note that some antitakeover provisions amendments can be missed since IRRC does not update all firms' information in each new edition. Though the listings are thus noisy, no systematic bias is expected. Moreover, although no strength distinction is made between the diverse provisions, we consider that the absolute value of

[9] Gompers et al. (2003) state that sample firms made 12,694 acquisitions as either the acquirer or the seller from January 1991 through December 1999.

the governance index is representative of the firm corporate governance. Nonetheless, like Bris and Cabolis (2003), the results are also presented in relative terms to address any potential errors in the governance index. Firms with a governance index above the median (with poorer investor protection) take a value of 1, zero otherwise.

Wright (2004) discusses several issues related to the use of governance reports and ratings. Besides the concern surrounding the quality control and omitted updates of the database mentioned above, there is the issue related to the simplicity of the information provided. In our case, there is still the worry that, even combining bylaws and charter provisions, the governance index might fail to capture the actual corporate governance in the firm because it does not take into account other governance characteristics of the company such as corporate behavior or board accountability. We consider that these limitations will, at worst, result in a generalized underestimation of our results: if the corporate index used herein is not an adequate proxy for the true state of corporate governance in a firm, it is at least a good proxy for the degree of investor protection and, as such, should be valued by investors.

3.2. Descriptive Statistics

The assumption that the target firm adopts the governance practices of the acquiring firm is of first importance to ensure that our experiment is properly designed. Table 3, as well as Figures 1 to 3, shows the relationship between the target and bidder governance level before and after the transaction. Panel A confirms that almost 50 percent of the resulting firms preserve the governance level of the acquirer while 98 percent maintain a level that is similar (-3 to +3 in absolute terms[10]) to the bidder's before the merger. In contrast, it appears from Panel B that the target firm governance level

[10] We estimate that a change of more or less 3 provisions over a possibility of 24 provisions is minor.

before the transaction and that of the resulting firm are not highly correlated. While the correlation coefficient in Panel A is 0.89, the correlation in Panel B is of barely 0.10. Hence we can confirm that the study will primarily measure the value of an increase or decrease in investor protection from the target firm level to the acquirer firm level.

Consistent with the international evidence from Bris and Cabolis (2003), Panel C shows that about 60 percent of transactions occur between firms of a similar level of investor protection (-3 to +3 in absolute terms). However, in our exclusively American sample, there are slightly more cases of transactions where the acquirer has greater shareholder protection than the target.

Table 4 provides summary statistics for the governance index over time. We note that the governance index goes from 2 to 17 out of a possible range of 1 to 24. The reason why no firm presents all 24 distinctive provisions is that the firms view some of the takeover defenses as substitutes. For example, in our sample only 6 targets and 2 bidders presents both executive severance and golden parachute (executive severance conditional to a transfer of control) while more than 70 percent of them presents either one of the antitakeover amendments.

Table 4 also presents the distribution of the target and bidder firms for given level of governance index. Our sample distribution of GI is similar to the whole IRRC universe distribution provided by Gompers et al. (2003)[11]. However the number of transactions per year fluctuates in greater proportion than the number of firms per year in the initial IRRC sample. The sharp increase in mergers and acquisitions transactions in 1995 can be explained by both the new wave of mergers and acquisitions in the late 1990's contemporaneous with the stock market bubble and the fact that we used 1995's

[11] See Appendix B

governance index for all transactions from January 1995 to December 1997, a greater period than the usual two year window. The increased number of deals in 1998 can also be explained by the increase in the IRRC universe by more than 25 percent[12].

The distribution of the antitakeover charter provisions is provided in Table 5. We find approximately the same proportion of governance provisions across our sample as in the IRRC universe as shown in Gompers et al. (2003)[13]. However, we observe a greater presence of golden parachutes provision in the target firm than in the acquiring firm. These results are consistent with Lambert and Larcker's (1985) conclusions. They argue that managers react better to takeover bid and potential change in control when assured of certain remuneration. They suggest that golden parachutes are thus positively related with the probability of completed deals.

Finally, as in Gompers et al. (2003), we find predominantly positive and significant pairwise correlations between pairs of subindices, as shown in Table 6. When the sample is divided between target and bidder subindices, *Voting* has a negative correlation with *Protection*. This suggests that firms consider *Voting* provisions as substitute for *Protection* provisions.

4. UNIVARIATE TEST, METHODOLOGY AND RESULTS

In order to establish whether investors value an increase in corporate governance, we compare the cumulative abnormal returns (CARs) from mergers where bidders with higher investor protection acquire targets with lower investor protection to mergers where bidder with lower investor protection acquires targets with higher investor protection. We

[12] In 1998, IRRC expanded the sample with smaller firms and firms with greater institutional-ownership level. According to Gompers et al. (2003), these firms tend to have lower values of GI.
[13] See Appendix C

expect that CARs of the former type of merger to be higher than that of the latter type of merger.

We follow Brown and Warner (1985) and use an event study methodology to compute the CARs around the time of the acquisition announcement[14]. The mean cumulative abnormal returns are computed from a market model using the CRSP Value Weighted Index as a benchmark[15]. The results are presented over the run-up period (-10, -2), the mark-up period (+2, +10) and the announcement period (-1, +1). The results are also presented over a wider event window (-5, +5), as another measure of the announcement effect. The use of run-up event window serves to pick up any leakage of information that may have occurred pre-announcement. Given that many of our target firms are widely traded firms, we suspect that this is a potential issue.

Event studies may present methodological issues that can affect the significance and reliability of the results. Notwithstanding the limitations of the methodology, they have been largely used in governance studies. Bhagat and Romano (2001) demonstrate that, in the United States, even regulatory authorities use it to establish the impact of their policies. Still, in order to confirm the robustness of our results, the median and corresponding non-parametric Wilcoxon level of significance are also reported as they indicate to what extent the aggregate abnormal returns are produced by outliers or asymmetries in returns. Nevertheless, the individual firm's returns are not expected to present substantial skewness on the short-term. Following Efron (1979), other non-parametric estimates from bootstrapping procedures are also provided. The results from

[14] See Appendix D for detailed methodology of OLS market model based event studies.
[15] According to Gompers et Al. (2003) the IRRC universe tracks most of the value-weighted market, covering almost all of NYSE, AMEX and NASDAQ markets. Hence, the value-weighted model is the most appropriate.

the bootstrapping method and those from the parametric tests are identical, confirming that the parametric results are correct and robust.

The choice of event study methodology is based on the assumption that, in an efficient stock market context, stock prices are unbiased estimates of firm value and will reflect the shareholders expectations of the wealth effects induced by the control bid. It is generally accepted that significant CARs upon a takeover announcement are more likely due to the information conveyed by the event than random chance. We also assume that the investor were able to formulate adequate expectations on the outcome of the adoption of the provisions included in the governance index and integrate those in the firm stock price. Such provisions and bylaws started to be commonly used from the mid-80s. Accordingly, over our sample period, the majority of investors were familiar with their effect on the firm value. The aim of this paper is not to establish that there is a consensus on the interpretation of the adoption of any specific provisions included in the governance index. The previous literature review already suggests that it would be a labor-intensive process. Instead we seek to present support for the assumption that investors value greater governance when proxied by the *aggregate* governance index and several subgroups of these provisions.

Table 7 provides empirical evidence of the market sensitivity to a change in corporate governance and examines if investors value an increase in minority shareholder's protection and whether they respond differently to changes in the governance index depending on the respective bidder's and target's protection level prior to the transaction. Consistent with previous literature on the market for corporate control, a highly positive and significant announcement effect is observed for targets over the

whole sample and every subsample tested. Stock prices increase, on average, by more than 20 percent for the sample studied herein. The target run-up event window is characterized by slightly positive and significant returns suggesting that some information leakage occurred, or that the market anticipated the transactions. Even so, these abnormal returns are much smaller than the run-ups observed by Schwert (1996). Using a sample of 1,174 successful bids from 1975 to 1991, he finds average runups of 14.3 percent over a wider event window of (-42,-1). Like Jennings (1994), we find instead evidence that most of the abnormal returns occur on the actual announcement day. Meanwhile, the majority of returns recorded over the mark-up period are insignificant.

From Table 7 we observe a clear difference between excess returns experienced by targets acquired by bidders with greater investor protection (firms with a lower governance index by at least four points) and those of targets acquired by bidder with poorer shareholder protection. Confirming our first hypothesis, the cumulative abnormal returns for the former group for the event window (-1, +1) is 19.12 percent compared to 15.80 percent for the latter group of target firms. The differences in returns over both event windows measuring the announcement effect of the mergers are strongly statistically significant[16]. The same relation can be established from the median CARs though the difference between both returns is not as great.

Consistent with our expectation, we observe that the abnormal returns of target firms engaged in transactions decreasing the degree of investor protection, is lower than when a similar degree of governance is maintained. However, we find that the average abnormal returns recorded for transactions improving the shareholders protection is lower

[16] We use z-test to assess the significance of the difference between both mean returns.

than the returns experience by firms engaged in transaction preserving a similar governance index.

We also find that target firms with poorer investor protection have significantly greater abnormal returns than firms with better shareholder protection, independent of the corporate governance level of the bidder firm. The reason is that, contrary to our expectation, when both merging firms have high governance index (and thus poor investor protection) the target experiences a greater excess return than a firm acquired by a company with an above median governance index. Nonetheless, we find, consistent with our expectations, that changes from an above median to a below median governance index, as well as when the investor protection stays above the median, result in significantly greater abnormal returns than changes from above median to below median shareholder protection.

Table 8 explores the assertion whether the change in corporate governance of the target firm affects the acquirer returns. Consistent with evidence from Morck, Schleifer and Vishny (1990) and unlike Jensen and Ruback (1983), we observe significant negative abnormal returns upon the transaction announcement. On average, bidders in the sample experience an abnormal decrease in their stock price of 2.07 percent. Regarding the relationship between the change in corporate governance and the bidder's returns, we find conflicting evidence. The results over the wider event window measuring the announcement effect suggest that firms engaging in transactions improving the target shareholder protection experience significantly better abnormal returns than acquiring firms involved in transactions decreasing the target corporate governance. The shorter event window results suggest just the opposite. Both the differences in returns over the

event windows measuring the announcement effect of the mergers are statistically significant. However, the difference of 1.2 percent over the (-1,+1) window is greater than the difference of -0.35 percent over the (-5,+5) window. Comparing these abnormal returns with those experienced in transactions where the degree of investor protection is maintained provide similar conflicting results. Therefore, we are unable to make any conclusion on the relationship between the bidders' returns and an alteration in the level of corporate governance of the target firm.

These results appear to confirm the assertion that investors value an increase in corporate governance at the target firm level but that such change has no consistent implication for the bidder firm's value. Notwithstanding, these findings could be due only to endogenous characteristics of the transactions. They could also be driven by reactions to other signals effect included in the merger announcement. These issues are addressed below. Section 6 corroborates our results controlling for the potential factors affecting the firm at the time of the transaction and attempt to identify exactly which group of provisions affects the returns the most.

5. THE DETERMINANTS OF THE M&A ACTIVITY, THE METHOD OF PAYMENT AND THE PREMIUM

This section investigate the relationship between the investors rights and the target corporate governance with merger characteristics, such the intensity of merger activity, the method of payment and the premium paid[17].

[17] The presence of barely 13 hostile deals in the sample (2.65 percent) forbids research on the possible relation between hostile bid and investor protection. Over a similar sample period, from January 1990 to December 1999, Volpin and Rossi (2003) find that 6.44 percent of all American bids were hostile. This suggests a bias in the sample regarding hostile takeovers.

5.1 M&A activity

In order to confirm or refute the efficiency hypothesis that states that there is a negative relationship between the level of M&A activity and the level of investor protection, we investigate the relationship between the level of M&A activity and the level of shareholder protection using the following specification:

$$\text{M\&A activity} = \alpha + \gamma\, \text{TGI} + \beta_1\, \text{TSIZE} + \beta_2\, \text{TBM} + \varepsilon \qquad (1)$$

where M&A activity is the percentage of successful transactions included in our sample over the total number of firms for a given governance index in the IRRC universe. The key independent variable TGI represents the Target Governance Index, while TSIZE and TBM are control variables that represent respectively the natural logarithm of the market capitalization of the target and the target book-to-market ratio four weeks prior to the announcement date. For a given level of governance index, we calculate each variable based on an initial-bid-price weighted portfolio among the targets. We obtain fifteen valid observations for fifteen degrees of investor protection. Table 9 presents summary statistics for some of the control variables used herein.

Also using the IRRC universe, Gompers et al. (2001) seek to establish a similar relationship between the governance index and the probability of being a target. They use all 466 completed transactions from 1991 to 1999 and present their results from logit regressions. We propose an alternative methodology using a Tobit regression to describe the relationship within our own sample of target firms. Since there are no targets for some levels of the governance index, the dependent variable is effectively left-censored and the use of Tobit regression is appropriately specified.

Gompers et al. (2001) note that antitakeover provisions are more likely to be implemented by firms already facing a greater takeover risk. Consequently, the above regression presents endogeneity problems that cannot be solved with our available data. Hence, our results are more descriptive and we do not make strong claims about causality. Table 10 presents the model results.

Unlike Ambrose and Megginson (1992) a relation can be established between takeover bid and an aggregate measure of corporate governance. Consistent with Gompers et al. (2001), we find that the probability of receiving a takeover bid is significantly positively related to the governance index which presents an estimated coefficient of 0.0012. Therefore, an increase in the governance index by 1 point increases the frequency of mergers by 0.12 percent. The M&A activity is thus characterized as being associated with poor investor protection. This result supports the efficiency hypothesis that inefficient firms, with poorer corporate governance, are more likely to be acquired and confirms the disciplinary role of the takeover bid. The findings also suggest that in the United States the market for corporate control operates freely and efficiently reallocates control over companies.

5.2 Method of Payment

Mergers and acquisitions can be settled in cash, in stock or in a combination of both. To corroborate the assertion that the method of payment is associated with the corporate governance of the target firm, we run the following logit model:

$$\text{PROB(STOCK)} = \alpha + \gamma\ \text{GI} + \beta_1\ \text{SIZE} + \beta_2\ \text{BM} + \varepsilon \qquad (2)$$

where the dependent variable is equal to one if there is a stock payment and zero otherwise. Once again the control variables are SIZE, the natural logarithm of the market

capitalization of the firm and BM, the book-to-market ratio four weeks prior to the announcement date. The independent variable GI represents alternatively the degree of investor protection in the target or the acquirer, and some measures of the change in corporate governance following the transaction. The definition of the variable GI is given with the each analysis of the models.

We first investigate whether there is a relationship between the level of investor protection in the target firm, TGI, and the mode of payment, independently from the bidder's degree of shareholder protection. We run the regression considering only the target firm characteristics of size and book-to-market ratio. We expect shareholders that previously enjoyed the experience of strong corporate governance to be more likely to accept stock settlement. Therefore the frequency of stock payments should be positively correlated with investor protection, hence negatively related with TGI. The results are summarized in Table 11. The coefficient of TGI in model I is significant and has the predicted sign. We find that the probability of a stock swap offer decreases by 8.64 percent with each additional degree of governance index. In other words, the stock payment is positively related to the level of corporate governance in the target firm prior to the transaction.

We use the same specifications to investigate the relationship between the probability of a stock settlement and the degree of corporate governance in place in the acquiring firm, AGI, at the time of the transaction. The control variables remain the same but with the bidder's data. Once again, we expect a negative relationship between AGI and the frequency of stock swap settlement. Indeed, greater AGI is related to poorer investor protection and, hence, poorer corporate governance. Therefore, the target firm

shareholders are less likely to accept payment in shares when those new shares do not provide adequate protection of their rights. The results are presented in Table 12. We find that the probability of a stock payment decrease by 8.04 percent with each additional degree of governance index. In other words, the probability of a stock payment is positively related with the level of corporate governance in the bidder firm at the time of the transaction.

Our third hypothesis is that firms experiencing an increase in their degree of investor protection are more likely to accept a stock swap settlement, while those undergoing a decrease in their shareholder rights will be more likely to agree to a cash settlement or a combination of both. We establish four different measures of the change in quality in the investor protection. First, DGI, the difference between the target governance index TGI and the bidder governance index AGI. If a target with poor shareholder defense (TGI of 14, for example) is acquired by a bidder with a high level of investor protection (AGI of 4), the DGI will be positive (DGI is 10). Therefore, the greater the improvement in investor protection, the greater is DGI. The second proxy, DGI relative, represents the relative difference in the target and acquirer governance index based on whether the firm governance index is above or below the median. Firms with governance index above the median (with poorer investor protection) take a value of 1, zero otherwise. Hence, once again, there is a positive relationship between DGI relative and investor protection. Finally, High TGI-low AGI and Low TGI-high AGI represent respectively the change in governance for firm improving their investor protection from above to below the median, and firms experiencing a decrease in their shareholder's rights from below to above the median. Since all but the latest measure of

the alteration in governance are positively related to investor protection, we expect to establish that they are also positively correlated with the probability of a stock settlement.

As the method of payment is more likely to depend on the characteristics of the buying firm, the regressions are run over the acquirer control variables. The results are summarized in Table 13. Although every coefficient has the expected sign, none of the estimates for the different proxies for the change in the quality of governance are statistically significant. Both our control variables are also insignificant. Subsequently, to validate the robustness of our model specification, we also run the regressions over the target control variables and a combination of both, without further success.

5.3 Premium

In this section, we document the impact of the protection of minority shareholders on the takeover premium with the following regression model:

$$PREMIUM_j = \alpha_0 + \gamma\, TGI_j + \beta_1\, TSIZE_j + \beta_2\, TBM_j + \beta_3\, ABM_j + \beta_4\, HOSTILE_j + \beta_7 TENDER_j + \varepsilon_j \quad (3)$$

where the dependent variable $PREMIUM_j$ is the logarithm of the initial bid price over the market price of the target firm j. The key explanatory variable, GI_j, represents the same measures of investor protection than used in (2). As for the control variables, $TSIZE_j$ is the Target Size representing the logarithm of the target market capitalization four weeks prior to the announcement date, TBM_j is the Target Book-to-market ratio four weeks prior to the announcement date, ABM_j is the Acquirer Book-to-market ratio four weeks before the announcement date, HOSTILE is a dummy variable that equals one in presence of a Hostile Bid and zero otherwise, TENDER is a dummy variable with a value

of one if the deals involve a Tender Offer and zero otherwise. We also include industry dummies but we do not report their coefficients.

Tables 14 and 15 report the coefficients of six models derived from specification (3), for the takeover premium a day prior the announcement date and the premium a week prior the announcement date[18]. Even though we detail the analysis over different measures of investor protection, no relation between the premium and the governance index is established. Consistent with our fourth hypothesis, the estimated coefficients of GI are mostly the predicted negative signs but are statistically insignificant.

As expected, the premia are negatively related to the target's size because of reduced competition among potential buyers. The premia are also significantly positively related to the target book- to-market ratio on the announcement date. The significant estimated coefficient for this control variable is respectively 0.32 in the first model for the takeover premium one day prior the announcement date and 0.28 in the first model for the takeover premium a week prior the announcement date. The bidder book-to-market coefficient is neither statistically significant nor of the expected positive sign. We anticipated that greater premia were paid by acquiring firm with a higher ratio because they usually have lower cost of capital and thus are able to pay more. Meanwhile a significant estimated coefficient is observed for the dummy variable TENDER when run against the one week premium. The coefficient is a negative -0.1483 and is consistent with Grossman and Hart (1980) free-rider hypothesis. Finally, positive but insignificant estimated coefficients are observed for the HOSTILE dummy which is consistent with the assertion from Comment and Schwert (1995) that contested deals generate greater

[18] The regressions are also run over the premium four weeks prior the announcement date but no significant relation is uncovered either. Hence we do not present these results.

premia. The insignificance of the variable might be due to the small number of hostile deals in the sample.

6. THE VALUE OF CORPORATE GOVERNANCE

The univariate results of section 4 already provided insight at the relationship between the degree of shareholder protection and the excess returns of the target firms upon a change in control. In this section, the impact of the governance index on the takeover abnormal returns is further assessed by controlling for the transactions characteristics that might adversely affect our previous results. We use the following cross-sectional model:

$$AR_j = \alpha_0 + \gamma\, GI_j + \beta_1\, VRj + \beta_2\, VALUEj + \beta_3\, CASH_j + \beta_4\, HOT_j + \varepsilon_j \qquad (4)$$

where the dependent variable AR_j is the abnormal returns of the firms upon the announcement period (-1, +1) resulting from the event study. The key explanatory variable, GI, is alternatively the aggregate governance index and measures of changes in investor protection, most of them having already been discussed above. Since the governance index is composed of antitakeover provisions generally reducing shareholders rights, a negative estimated coefficient means that the abnormal returns are characterized as being driven by greater investor protection. Meanwhile, the measures of change in quality of shareholder protection are usually built to be positively related to the degree of investor rights. We follow Eckbo, Maksimovic and Williams (1990) and include VR_j, the natural log of the bidder market value of equity divided by the target market value of equity. It represents the relative bargaining power of the two firms. As a further control variable, the independent variable VALUE, the log of the deal value

measured with the closing price, is included. Although most of 1990 transactions are lost when adding this variable in the model (the data is not available), it is maintained because it increases the model goodness of fit[19]. The dummy variable CASH takes a value of one if the offer is in cash and zero otherwise. The dummy variable HOT takes the value of one if the transaction occurs from 1998 onward, and zero otherwise. It controls for both the increased intensity in M&A activity in the late 1990s and the increase in the IRRC universe with firms with generally greater governance level. Finally, we control for industries fixed-effects, but we do not report their coefficients[20].

Notwithstanding the model limitations, Ordinary Least Square (OLS) regressions are run according to the specifications of model (4). Among the methodological issues related to the use of OLS for corporate governance studies and reported by Borsh-Supan and Koke (2000) are the reverse causality and endogeneity problems. Previous literature suggests that takeover defenses, corporate performance, takeovers, management turnover, capital structure, and corporate ownership structure are all interrelated. For example, Palepu (1996), Morck et al. (1989), Martin and McConnell (1991), Denis and Serrano (1996) and Bhagat and Jefferis (2002) all document that takeover activity is influenced by both the presence of takeover defenses and poor corporate performance. Hence, Bhagat and Jefferis (2002) argue that, ideally, in order to study the relation between takeover defenses and corporate performance, a system of simultaneous equations specifying the relationships between these six corporate variables should be used.

[19] Several regressions without the VALUE variable were run. Each time the adjusted R-squared was non-negligibly lower compared to the adjusted R-squared of regression including it.

[20] We also run the regression including the run-ups returns as control variable following Schwert (1996). Although the variable run-ups presents a significant estimated coefficient, its inclusion does not change significantly the goodness of fit, or the value of the other variables estimated coefficients. Thus the results of these regressions are not presented herein.

However, such model presents unachievable specification requirements[21]. We accept the reduced precision in estimate provided by OLS for the benefit of simplicity it offers.

6.1. Target firms

Table 16 shows the impact of investor protection over the target excess returns. From Model I, the estimated coefficient of the variable TGI, the target governance index, is a significant 0.0094 over the announcement period. This suggests that the target abnormal returns are negatively related to the level of shareholder protection in place in the target firm before the merger. This result is consistent with the univariate analysis done previously that showed that firms with poorer corporate governance experience greater excess return than firms with better investor protection. As expected, we also find positive and significant estimated coefficients for CASH dummy of 0.1022 and of 0.0408 for the VR variable over the announcement window. These results are consistent with Huang and Walkling (1987) and Eckbo et al. (1990) respectively. The estimated coefficient of -0.0061 for the dummy variable HOT is insignificant, suggesting that the increased intensity of merger activity after 1998, as well as the inclusion of smaller firms, did not induce any definite change in the dynamics of abnormal returns. The variable VALUE is also insignificant but takes the expected positive sign. This result is consistent with the previous literature that finds that the size of the transaction is associated with greater excess returns for the target firm.

The previous regression confirms the relationship established in Gompers et al. (2003) between corporate governance and firm performance. However the aim of this paper is to determine the quantitative importance of a change in shareholders rights. We

[21] Borsh-Supan and Koke (2000) propose the use of panel data. However our data had been collected for other purposes and are incomplete over time for a given firm.

estimate the incremental effect of corporate governance changes by regressing the transactions excess returns over the difference between the previous states of the target investor protection indices and the ultimate state of shareholder protection in the firm, proxied with the bidder's governance indices. For our first estimations, we use both DGI and DGI relative, variables explained above, which represents the variation in the absolute and relative governance index from the target's to the bidder's. A positive estimated coefficient of DGI now means that improving investor protection mergers are related to greater abnormal returns. The results are presented in table 17. We find that the change in shareholder protection, both in absolute and relative terms, has a significant impact on the target's abnormal returns. The respective estimated coefficients for absolute and relative change in governance index are 0.0053 and 0.0249. In order words a decrease of one point in the governance index results in a 0.5 percent increase in abnormal return. Meanwhile, the economic significance of the relative change estimated coefficient is an increase of 2.49 percent in excess return when a firm with poor investor protection is acquired by firm with above the median investor protection. Note that the relative change in governance index induces more fluctuation in abnormal returns then the absolute estimate. It is coherent with the fact that, on average, the relative change is related to greater change than one absolute degree in the corporate governance index. The behavior of the estimated coefficients of the control variables are similar to those observed above. The variable VR and CASH present significant coefficients. There is no significance for the variable VALUE nor for the variable HOT.

We next look at the incidence of difference in the target and bidder governance subindices on the abnormal returns upon the deal announcement. The difference of the

indices between the two firms provides an indication of the corporate governance quality transfer that results from the merger. Our results are meant to indicate to regulators and managers which type of provisions results in the greatest impact on the firm value. Note that the inclusion of the four governance indices also distinctively increases the goodness of fit of the model measured with the adjusted R-Squared. We find that the *Others* group has significant influence over the announcement window with a positive coefficient of 0.0225. Taken individually in the model, the Delay group also presents a significant, though only weakly, coefficient of 0.0102.

6.2. Acquiring firms

Table 18 shows the impact of investor protection over the bidder excess returns. We do not find any evidence of a relationship between the abnormal returns upon the announcement period for the bidders and their own governance index or the target's. These results are consistent with the univariate analysis done previously that did not show any specific relation between the acquiring firm corporate governance and the abnormal returns upon the announcement of the takeover bid. Most estimated coefficients of the control variables are significant and take the same sign that in the target case. The only exceptions are the estimated coefficient of VR which is now insignificant and the estimated coefficient of VALUE which is now negative. This last result is consistent with the expectation that, the greater the price paid for the transaction, the lesser are the potential benefits for the bidder firm.

The estimated coefficients for the change in the corporate governance are examined next for the bidder firm. These results are summarized in Table 19. Once again, no meaningful relationship can be established. Only the variation in the *Delay* index is

negatively associated with the dependent variable. With respect to the control variables, the estimated coefficients are similar to those encountered above, for all models. However, we find that the deal's value occasionally impacts the returns upon the announcement date, just as the coefficient of the variable HOT.

6.3. Total Synergy

To further explore the relationship between the change in investor protection and the abnormal returns recorded upon the takeover announcement, we run another set of regressions, still based on the specification of model (4). This time, however, the independent variable is the aggregate returns of the target and the bidder. We investigate whether the change in corporate governance index has an impact on the net economic gain of the control bid. We examined this by forming a portfolio of the buyer and target firms and computing its average return weighted by the relative sizes of the two firms. The sizes of the firms are proxied by their market capitalization at the start of the hold out period, 2 days before the announcement date. We find a average positive combined result of barely 1,21 percent, with a maximum of 25.94 percent and a minimum of -17.45 percent. Our results are smaller than Mulherin and Boone (2000) who find significant average combined returns of 3.56 percent over the same event window (-1, +1) based on 281 U.S acquisitions between 1990 and 1999. However, according to Bruner (2001), barely 11 of 20 previous studies using either combined abnormal returns or dollar returns find significant positive results for the synergetic wealth effect of the mergers.

The regression results are summarized in Tables 20 and 21. Given our already small combined returns of the target and the bidder, we do not except to find great significance in our explanatory variables either. Notwithstanding, we find that, once

again, the variable VR for the bargaining power, and the dummy variable CASH for the cash settlement, presents statistically significant estimates. All the control variables also take the same sign as in the previous results of this section. Unfortunately, we are not able to establish a relationship between the aggregate transaction returns and the degree of corporate governance in the target and bidder firm. Neither can we establish a correlation between the change in the governance index and the combined returns of the deal. The estimate coefficients for our investor protection measures all turned insignificant.

7. DISCUSSION AND CONCLUSION

This thesis is primarily intended to document whether investors actually value a higher protection of minority shareholders' rights. It examines the abnormal returns experienced by the target and acquirer upon a takeover announcement depending on their respective corporate governance index, built from 24 distinct antitakeover charter provisions and state laws.

We find that firms acquired by bidders with greater investor protection experience significantly greater abnormal returns. An average increase of 2.49 percent in excess return is recorded for firms with below the median investor protection acquired by bidder with above the median shareholders rights. These findings are consistent with the managerial entrenchment hypothesis that states that greater shareholders rights are associated with greater shareholder wealth.

In contrast, we do not find evidence that bidders benefit from the increased social surplus created in transactions where the target corporate governance is improved.

Neither can we establish a relationship between the change in investor protection and the net economic gain of the deal, when proxied by the combined abnormal returns of both parties.

Although no statistically significant relation is established between the investor rights and the takeover premium, we are able to confirm a negative correlation with the intensity of M&A activity, providing additional evidence for the efficiency hypothesis. Evidence is also provided that the method of payment is influenced by the previous degree of shareholders rights in the target and acquiring firm but not by the change in corporate governance following a takeover bid.

Another, more applied, contribution of this thesis concerns "the regulation effect". According to Suret and Carpentier (2003) Canadian companies are tempted to be registered in the United State rather than Canada because the American standards for disclosure and governance set out in the Sarbanes-Oxley Act are higher and thus result in lower cost of capital and higher valuation. Our results based mainly on firm-level provisions imply that Canadian companies registered in Canada but not presenting a number of anti-takeover defenses could benefit from the same advantages as the American firms. It remains for further research to validate the causality between the governance index used herein and firm valuation by applying our methodology to randomly chosen American and Canadian firms. However, even in these countries with well-developed stock market, they will be confronted with the general lack of corporate governance disclosure. This thesis' conclusions are based on the assumption that investors can easily evaluate the firms' degree of investor protection and that this information allow them to make efficient allocation decisions. However, we are well

aware that this information still has a cost that reduced the economical benefits find herein.

Table 1 – Sample size reduction from implementation of various screens

The reduction in the sample size from the implementation of various screens is detailed below. The IRRC universe includes all firms with information available from the IRRC Corporate Takeover Defenses (Rosenbaum 1990, 1993, 1995, 1998, 2000 and 2002).

Number of firms listed in the IRRC universe from 1990 to 2002	10 121
Number of target firms in the IRRC universe from 1/1/1990 to 31/12/2001	842
Subtract acquisition with acquirer outside of IRRC universe	334
Subtract:	
Acquisition of minority interest, bankruptcy	14
Incomplete deal	2
Conflicting rumors	1
Final number of firms	491

Table 2 – Industry Classification

The industry classification used when controlling for industry fixed effects is detailed below. The categories are inspired by the main SIC classification. The Number of Target represents the number of acquired firms in our sample within a given industry group. Similarly, the Number of Bidder represents the number of acquiring firms in our sample entering into each specific industry group. Deals in same industry represent the number of transactions in our sample where both the target and the bidder were operating mainly within the same industry according to our own specification. The sample consists in all firms implicated in a merger or acquisition from January 1990 to December 2001, in the IRRC universe, and for which we possess both governance index information for the target and the acquirer.

Industry classification	2-digit SIC code	Description	Nb. of Target	Nb. of Bidder	Deals in same industry
1	01 to 14	Agriculture, forestry, fishing and mining	19	20	14
2	15 to 39	Construction and Manufacturing	163	164	144
3	40 to 49	Transport, communication, gas, electric and sanitary services	73	75	65
4	50 to 59	Wholesale and retail trade	35	31	24
5	60 to 67	Finance, insurance and real estate	86	94	85
6	70 to 89	Services	56	48	36

Table 3 – Distribution of the Governance Index before and after the transaction

This table represents the distribution of the differences between the last available governance index prior to the transaction (before) for the target and the bidder and the next available governance index after the transaction (after) for the bidder. The governance index is calculated from 24 provisions provided by the IRRC Corporate Takeover Defenses (Rosenbaum 1990, 1993, 1995, 1998, 2000 and 2002) and data on state takeover legislation (Pinnell 2000) as in Gompers et al. (2003). The sample consists in all firms involved in a merger or acquisition from January 1990 to December 2001, in the IRRC universe, and for which we possess both governance index information for the target and the acquirer.

Panel A : Difference between the bidder's governance index (GI) before and after the transaction (absolute terms)

Pearson correlation coefficient: 0,8919

-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	TOT+	TOT-	TOT
0	0	0	0	0	0	0	0	4	14	49	221	108	35	15	3	3	1	1	0	0	0	387	67	454

Panel B: Difference between the bidder's GI after the transaction and the target's GI before the transaction (absolute terms)

Pearson correlation coefficient: 0,1056

-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	TOT+	TOT-	TOT
0	1	1	1	5	13	21	21	22	42	39	50	58	41	33	38	29	16	12	6	5	0	288	166	454

Panel C: Difference between the target's GI and the bidder's GI before the transaction (absolute terms)

Pearson correlation coefficient: 0,0656

-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	TOT+	TOT-	TOT
1	0	4	6	12	14	31	36	33	43	50	49	57	45	30	25	19	19	8	5	2	2	261	230	491

Table 4- Distribution of the Governance Index across firms and over time

The table provides summary statistics on the distribution of GI, the Governance Index, over time, and for the target and the bidder respectively. The GI is calculated from 22 charter provisions and 2 bylaws as in Gompers et al. (2003). The greater the GI, the poorer is the investor protection. The sample consists in all firms involved in a merger or acquisition from January 1990 to December 2001, in the IRRC universe, and for which we possess both governance index information for the target and the acquirer.

	1990		1993		1995		1998		2000		TOTAL	
	Target	Bidder	Target	Bidder	Target	Bidder	Target	Bidder	Target	Bidder	Target	Bidder
Governance index												
Minimum	2	4	4	4	4	3	3	4	4	3	2	3
Maximum	14	14	15	15	16	15	16	17	15	16	16	17
Mean	8.5	9.3	9.4	9.2	9.3	9.4	9.4	9.8	9.4	9.6	9.3	9.5
Median	9	9	10	9	9	9	10	10	10	10	10	10
Mode	10	9	10	8	12	9	10	11	10	11	10	11
Standard deviation	3.2	2.6	2.9	2.9	2.6	2.7	3.1	2.7	2.6	2.5	2.8	2.6
Number of firms												
GI=2	2	0	0	0	0	0	0	0	0	0	2	0
GI=3	3	0	0	0	0	1	3	0	0	1	6	2
GI=4	3	1	2	1	2	0	3	2	3	3	13	7
GI=5	3	4	1	2	7	2	11	6	6	7	28	21
GI=6	3	6	4	5	8	13	11	14	15	13	41	51
GI=7	8	3	3	3	7	11	12	4	17	18	47	39
GI=8	7	9	3	6	12	8	13	15	25	13	60	51
GI=9	6	10	4	5	13	19	6	13	19	22	48	69
GI=10	8	7	9	2	12	4	17	20	30	25	76	58
GI=11	5	7	5	6	9	12	14	21	17	32	50	78
GI=12	4	2	2	2	15	11	15	13	18	19	54	47
GI=13	4	6	1	3	5	5	13	6	13	12	36	32
GI=14	3	4	1	1	3	5	5	13	4	4	16	27
GI=15	0	0	3	2	0	3	3	0	5	2	11	7
GI=16	0	0	0	0	1	0	2	0	0	1	3	1
GI=17	0	0	0	0	0	0	0	1	0	0	0	1
Total	59	59	38	38	94	94	128	128	172	172	491	491

Table 5 - Distribution of the Governance Provisions

This table presents the percentage of firms with each antitakeover provision between 1993 and 2000. The data are derived from the IRRC Corporate Takeover Defenses publications (Rosenbaum 1993, 1995, 1998 and 2000). The sample consists in all firms involved in a merger or acquisition from January 1993 to December 2001, in the IRRC universe, and for which we possess both governance index information for the target and the acquirer.

		1993			1995			1998			2000		
		Target	Bidder	Sample	Target	Bidder	Sample	Target	Bidder	Sample	Target	Bidder	Sample
Delay													
	Blank check	81.58	86.84	84.21	82.98	95.74	89.36	90.63	98.44	94.53	87.79	94.77	91.28
	Classified board	57.89	60.53	59.21	58.51	54.26	56.38	57.81	60.16	58.98	58.14	54.07	56.10
	Special meeting	31.58	31.58	31.58	29.79	46.81	38.30	39.06	46.09	42.58	38.37	54.07	46.22
	Written consent	26.32	26.32	26.32	28.72	41.49	35.11	36.72	42.19	39.45	36.05	41.86	38.95
Protection													
	Compensation plans	86.84	63.16	75	86.17	74.47	80.32	60.94	75	67.97	82.56	76.16	79.36
	Contracts	10.53	7.89	9.21	12.77	9.57	11.17	7.03	11.72	9.38	5.81	15.12	10.47
	Golden Parachutes	78.95	39.47	59.21	67.02	48.94	57.98	69.53	60.16	64.84	78.49	61.63	70.06
	Indemnification	42.11	50.00	46.05	37.23	34.04	35.64	28.91	28.91	28.91	21.51	33.14	27.33
	Liability	65.79	68.42	67.11	67.02	63.83	65.43	46.88	56.25	51.56	38.37	59.30	48.84
	Severance	7.89	18.42	13.16	9.57	13.83	11.70	10.16	10.16	10.16	8.14	9.30	8.72
Voting													
	Bylaws	15.79	10.53	13.16	12.77	12.77	12.77	23.44	27.34	25.39	22.67	18.02	20.35
	Charter	5.26	2.63	3.95	0	4.26	2.13	5.47	6.25	5.86	5.23	2.33	3.78
	Cumulative voting	18.42	18.42	18.42	13.83	17.02	15.43	13.28	7.03	10.16	12.21	9.88	11.05
	Secret ballot	10.53	13.16	11.84	12.77	24.47	18.62	9.38	16.41	12.89	11.63	22.09	16.86
	Supermajority	13.16	15.79	14.47	18.09	15.96	17.02	22.66	10.94	16.80	12.21	9.30	10.76
	Unequal voting	0	0	0	0	0	0	0.78	0.78	0.78	1.74	1.16	1.45
Other													
	Antigreenmail	7.89	15.79	11.84	2.13	9.57	5.85	9.38	6.25	7.81	6.40	5.23	5.81
	Director's duties	0	0	0	0	0	0	0	0	0	0	0	0
	Fair price	26.32	34.21	30.26	25.53	42.55	34.04	28.91	40.63	34.77	30.23	37.21	33.72
	Pension parachutes	13.16	10.53	11.84	6.38	8.51	7.45	0.78	0.78	0.78	4.65	1.74	3.20
	Poison pills	44.74	63.16	53.95	51.06	54.26	52.66	60.16	53.13	56.64	69.77	48.84	59.30
	Silver parachutes	7.89	5.26	6.58	2.13	3.19	2.66	2.34	3.13	2.73	2.33	2.33	2.33
Number of firms		38	38	76	94	94	188	128	128	256	256	172	344

Table 6- Correlations between the Subindices

This table provides the correlation between the subindices over different subsamples of the data. The subindices composition is detailed in table 3 and is the same as in Gompers et al. (2003).

Panel A: Correlations between the subindices - Target and bidders *(n=864)*				
	Delay	*Protection*	*Voting*	*Other*
Delay	1			
Protection	0.1641*	1		
Voting	0.2528*	-0.0394*	1	
Other	0.3162*	0.2552*	0.1148*	1
Panel B: Correlations between the subindices - Target firms *(n= 432)*				
	Delay	*Protection*	*Voting*	*Other*
Delay	1			
Protection	0.1269*	1		
Voting	0.2352*	-0.0278	1	
Other	0.2864*	0.2836*	0.0659	1
Panel C: Correlations between the subindices - Acquiring firms *(n=432)*				
	Delay	*Protection*	*Voting*	*Other*
Delay	1			
Protection	0.2077*	1		
Voting	0.2985*	-0.0439	1	
Other	0.3484*	0.2244*	0.1716*	1

The symbol * denotes a statistical significance at 1% level.

Table 7 - Target response to a takeover announcement between firms with different investor protection level

The event study is performed using the Eventus program from 1990 to 2001. The estimation period has 241 days and ends 11 days before the event date at t=0. The Cumulative Abnormal Return (CAR) are measured based on a market model using value weighted index. Differences are defined as the difference between the target's governance index (GI) and the bidder's GI before the transaction. The greater the GI, the poorer is the investor protection. Hence, Improving transactions are when the target is acquired by a bidder with a lower GI by at least 4 provisions and Deteriorating transactions are when the target is acquired by a bidder with a higher GI by at least 4 provisions. Maintaining transactions are when the difference in the target and bidder GI is of less than 3 provisions. All the CAR values are expressed as percentage.

	n	Mean CAR	Median CAR	Boot CAR
Panel A: Total sample				
Total Sample				
(-10, -2)	469	3.75***	1.87***	3.75***
(+2, +10)	468	0.10	-0.35	0.10
(-5,+5)	469	21.87***	17.97***	21.87***
(-1,+1)	469	20.15***	17.83***	20.15***
Panel B: Difference				
Improving				
(-10, -2)	80	4.42***	2.17***	4.42***
(+2, +10)	80	1.21	0.17	1.21**
(-5,+5)	80	22.61***	21.78***	22.61***
(-1,+1)	80	19.12***	15.40***	19.12***
Deteriorating				
(-10, -2)	81	4.14***	3.77***	4.14***
(+2, +10)	80	-1.01	-0.93**	-1.01**
(-5,+5)	81	16.19***	14.94***	16.19***
(-1,+1)	81	15.80***	14.85***	15.80***
Maintaining				
(-10, -2)	300	3.31***	1.47***	3.31***
(+2, +10)	300	0.26	-0.33	0.26
(-5,+5)	300	22.88***	18.31***	22.88***
(-1,+1)	300	21.13***	18.63***	21.13***

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively, using a 2-tail test Student's t-test for the mean, Wilcoxson Sign test for the median and non-parametric bootstrap analog t for bootstrapping.

Table 7 (continued) - Target response to a takeover announcement between firms with different investor protection level

The event study was performed using the Eventus program from 1990 to 2001. The estimation period has 241 days and ends 11 days before the event date at t=0. The Cumulative Abnormal Return (CAR) are measured based on a market model using value weighted index. The greater the Governance Index, GI, the poorer is the investor protection. Target's GI and bidder's GI are defined as High when GI is above median (10) and Low otherwise. All the CAR values are expressed as percentage.

	n	Mean CAR	Median CAR	Boot CAR
Panel C: Original Governance index				
High target GI (10 and more)				
(-10, -2)	245	3.16***	1.47***	3.16***
(+2, +10)	245	0.58	-0.32	0.58*
(-5,+5)	245	22.95***	20.17***	22.95***
(-1,+1)	245	20.44***	16.92***	20.44***
High target GI with High bidder GI				
(-10, -2)	127	2.59***	0.87**	2.59**
(+2, +10)	127	-0.29	-0.77	-0.29
(-5,+5)	127	23.01***	17.94***	23.01***
(-1,+1)	127	20.69***	17.90***	20.69***
High target GI with Low bidder GI				
(-10, -2)	118	3.77***	2.24***	3.77***
(+2, +10)	118	1.52**	0.43*	1.52***
(-5,+5)	118	22.88***	22.17***	22.88***
(-1,+1)	118	20.18***	16.58***	20.18***
Low target GI (9 and less)				
(-10, -2)	215	4.49***	2.18***	4.49***
(+2, +10)	214	-0.24	-0.34	-0.24
(-5,+5)	215	20.83***	17.38***	20.83***
(-1,+1)	215	19.81***	18.40***	19.81***
Low target GI with High bidder GI				
(-10, -2)	114	4.78***	3.36***	4.78***
(+2, +10)	113	-0.95	-1.11**	-0.95*
(-5,+5)	114	18.67***	18.10***	18.67***
(-1,+1)	114	18.20***	19.93***	18.20***
Low target GI with Low bidder GI				
(-10, -2)	107	3.98***	1.52***	3.98***
(+2, +10)	107	0.19	0.29	0.19
(-5,+5)	107	21.33***	17.38***	21.33***
(-1,+1)	107	20.13***	16.95***	20.13***

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively, using a 2-tail test Student's t-test for the mean , Wilcoxson Sign test for the median and non-parametric bootstrap analog t for bootstrapping.

Table 8 - Bidder response to a takeover announcement between firms with different investor protection level

The event study was performed using the Eventus program from 1990 to 2001. The estimation period has 241 days and ends 11 days before the event date at t=0. The Cumulative Abnormal Return (CAR) are measured based on a market model using value weighted index. Differences are defined as the difference between the target's governance index (GI) and the bidder's GI before the transaction. The greater the GI, the poorer is the investor protection. Hence, Improving transactions are when the target is acquired by a bidder with a lower GI by at least 4 provisions and deteriorating transactions are when the target is acquired by a bidder with a higher GI by at least 4 provisions. Maintaining transactions are when the difference in the target and bidder GI is of less than 3 provisions. All the CAR values are expressed as percentage.

	n	Mean CAR	Median CAR	Boot CAR
Panel A: Total sample				
Total Sample				
(-10, -2)	482	0.38	-0.07	0.38*
(+2, +10)	482	-0.45*	-0.60**	-0.45**
(-5,+5)	482	-2.13***	-2.05***	-2.13***
(-1,+1)	482	-2.07***	-1.73***	-2.07***
Panel B: Difference				
Improving				
(-10, -2)	79	0.90	0.88	0.90*
(+2, +10)	79	-1.27*	-1.05*	-1.27**
(-5,+5)	79	-1.82**	-0.73**	-1.82***
(-1,+1)	79	-2.60***	-2.03***	-2.60***
Deteriorating				
(-10, -2)	102	0.19	-0.59	0.19
(+2, +10)	102	-0.36	-0.86	-0.36
(-5,+5)	102	-2.17***	-2.21**	-2.17***
(-1,+1)	102	-1.40***	-1.33**	-1.40***
Maintaining				
(-10, -2)	306	0.29	-0.15	0.29
(+2, +10)	306	-0.32	-0.25	-0.32
(-5,+5)	306	-2.10***	-2.10***	-2.10***
(-1,+1)	306	-2.04***	-1.59***	-2.04***

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively, using a 2-tail test Student's t-test for the mean , Wilcoxson Sign test for the median and non-parametric bootstrap analog t for bootstrapping.

Table 8 (continued) - Bidder response to a takeover announcement between firms with different investor protection level

The event study was performed using the Eventus program from 1990 to 2001. The estimation period has 241 days and ends 11 days before the event date at t=0. The Cumulative Abnormal Return (CAR) are measured based on a market model using value weighted index. The greater the Governance Index, GI, the poorer is the investor protection. Target's GI and bidder's GI are defined as High when GI is above median (10) and Low otherwise. All the CAR values are expressed as percentage.

	n	Mean CAR	Median CAR	Boot CAR
Panel C: Original Governance index				
High bidder GI (10 and more)				
(-10, -2)	244	0.03	-0.39	0.03
(+2, +10)	244	-0.46	-0.85*	-0.46*
(-5,+5)	244	-2.65***	-2.70***	-2.65***
(-1,+1)	244	-2.19***	-1.73***	-2.19***
High bidder GI with High target GI				
(-10, -2)	127	-0.38	-0.45	-0.38
(+2, +10)	127	-0.92*	-1.04**	-0.92**
(-5,+5)	127	-3.24***	-3.03***	-3.24***
(-1,+1)	127	-2.77***	-2.42***	-2.77***
High bidder GI with Low target GI				
(-10,-2)	121	0.42	-0.07	0.42
(+2, +10)	121	-0.02	-0.50	-0.02
(-5,+5)	121	-1.84***	-1.33**	-1.84***
(-1,+1)	121	-1.38***	-0.78**	-1.38***
Low bidder GI (9 and less)				
(-10, -2)	239	0.74*	0.20	0.74**
(+2, +10)	239	-0.48	-0.27	-0.48
(-5,+5)	239	-1.57***	-1.50***	-1.57***
(-1,+1)	239	-1.91***	-1.73***	-1.91***
Low bidder GI with Low target GI				
(-10, -2)	121	0.29	-0.35	0.29
(+2, +10)	121	-0.57	-0.08	-0.57
(-5,+5)	121	-1.82***	-1.66**	-1.82***
(-1,+1)	121	-1.38***	-1.34***	-1.38***
Low bidder GI with High target GI				
(-10, -2)	118	1.20**	0.75**	1.20**
(+2, +10)	118	-0.39	-0.95	-0.39
(-5,+5)	118	-1.32**	-0.61*	-1.32**
(-1,+1)	118	-2.45***	-2.01***	-2.45***

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively, using a 2-tail test Student's t-test for the mean , Wilcoxson Sign test for the median and non-parametric bootstrap analog t for bootstrapping.

Table 9 – Summary Statistics for Control Variables

The table presents the summary statistics of the main control variables used in this paper for all the 491 targets and bidders in our sample. TSIZE and ASIZE are respectively the market value four weeks before the announcement date for the target firm and the acquiring firm. TBM and ABM are respectively the target book-to-market ratio four weeks before the announcement date for the target firm and the acquiring firm. Finally, VR is the natural log of the bidder market value of equity divided by the target market value of equity.

	Target		Acquirer		Both
	TSIZE	TBM	ASIZE	ABM	VR
Maximum	84,322,023,500	16.55	521,259,882,375	100.45	1.86
Minimum	1,898,750	-29.15	129,519,000	-0.04	8.05
Mean	3,373,432,801	0.53	21,974,228,800	1.25	-2.78
Median	865,912,625	0.52	5,560,081,562	0.38	1.63
Standard deviation	8,975,289,236	2.06	54,492,306,209	7.72	1.49

Table 10 – Takeover activity and Corporate Governance of the Target firm

The table presents results of a Tobit model estimated by maximum likelihood on the sample of 15 degrees of governance index. The dependent variable is the M&A activity, the percentage of traded firms targeted in a completed deal included in our sample compared to the whole IRRC universe, for a given level of governance index in the target firm. The independent variables are TGI, the target governance index, TSIZE, the natural logarithm of the target market value four weeks before the announcement date and TBM, the target book-to-market ratio four weeks before the announcement date. The regression is run over an initial-bid value weighted portfolio of the independent variables for a given level of TGI for every transaction with all three control variables and initial bid value available in the sample. The greater the GI, the poorer is the investor protection.

	Model I: Prob(merger)	
	Estimates	Chi-sqr
Intercept	0.083	1.01
TGI	0.0012*	3.68
TSIZE	-0.0023	0.46
TBM	0.0253	0.89
Nb. of observations	15	
Log likelihood	51.02	

The symbols * denotes statistical significance at the 10% level respectively, using the chi-squared statistic.

Table 11 –Method of Payment and Corporate Governance in the Target firm

The table presents results of a logit model. The dependent variable is the probability of a stock swap settlement within our sample. The independent variable TGI is the target governance index (GI). DGI is the absolute change in the target GI from its previous GI to the bidder GI . TSIZE is the natural logarithm of the target market value four weeks before the announcement date and TBM is the target book-to-market ratio four weeks before the announcement date. The greater GI, the poorer is the investor protection. The greater DGI, the greater is the improvement in governance.

	Model I		Model II	
	Estimates	Chi-sqr	Estimates	Chi-sqr
Intercept	-4.0408***	16.52	-4.4553***	20.11
TGI	-0.0904**	6.24		
DGI			-0.0139	0.28
TSIZE	0.3416***	22.10	0.3103***	19.00
TBM	0.0336	0.23	0.0321	0.22
Frequency of i=1	205		205	
Nb of observations	443		443	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the chi-squared statistic.

Table 12 –Method of payment and Corporate Governance in the Bidder firm

The table presents results of two logit models. The dependent variable is the probability of a stock swap settlement for a given level of governance index (GI) in the bidder firm within our sample of transactions. AGI is the bidder governance index and DGI is the change in the target corporate governance. ASIZE is the natural logarithm of the acquirer market value four weeks before the announcement date and ABM, the bidder book-to-market ratio four weeks before the announcement date. The greater the GI, the poorer is the investor protection. The greater DGI, the greater is the improvement in governance.

	Model I		Model II	
	Estimates	Chi-sqr	Estimates	Chi-sqr
Intercept	-0.8202	0.52	-1.7253*	2.69
AGI	-0.0836**	4.87		
DGI			0.0142	0.28
ASIZE	0.0928	1.94	0.0998	2.26
ABM	-0.0327	1.69	-0.0286	1.32
Frequency of i=1	188		188	
Nb. of obs.	415		415	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the chi-squared statistic.

Table 13 – Method of Payment and Change in Corporate Governance

The table presents results of three logit models. The dependent variable is the probability of a stock swap settlement for a given level of governance index (GI) in the bidder firm within our sample of transactions. DGI relative is the change from the target to the bidder GI in relative term. High TGI low AGI is a dummy variable that takes the value of one when the target GI change from above to below the median, zero otherwise. Low TGI high AGI is a dummy variable that takes the value of one when the target GI change from below to above the median, zero otherwise. ASIZE is the natural logarithm of the acquirer market value four weeks before the announcement date and ABM, the bidder book-to-market ratio four weeks before the announcement date. The greater the GI, the poorer is the investor protection. A positive DGI relative measures an improvement in governance.

	Model III		Model IV		Model V	
	Estimates	Chi-sqr	Estimates	Chi-sqr	Estimates	Chi-sqr
Intercept	-1.7376*	2.72	-1.7609	2.8	-1.723	2.68
DGI relative	0.1761	1.54				
High TGI low AGI			0.2835	1.46		
Low TGI high AGI					-0.1877	0.68
ASIZE	0.1006	2.29	0.0975	1.16	0.1025	2.38
ABM	-0.0287	1.31	-0.0281	1.25	-0.0285	1.33
Frequency of i=1	188		188		188	
Nb. of obs.	415		415		415	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the chi-squared statistic.

Table 14 – One-day premium and Corporate Governance of Target firm

The table presents results of OLS models. The dependent variable is the deal one day premium calculated as the logarithm of the initial bid price over the market price of the target firm one day before the announcement. TGI is the target governance index (GI). AGI is the acquiring firm GI. DGI is the change in the target corporate governance in absolute terms. DGI relative is the change from the target to the bidder GI in relative term. High TGI low AGI is a dummy variable that takes the value of one when the target GI change from above to below the median, zero otherwise. Low TGI high AGI is a dummy variable that takes the value of one when the target GI change from below to above the median, zero otherwise. $TSIZE_j$ is the logarithm of the target market capitalization four weeks prior to the announcement date, TBM_j is the Target Book-to-market ratio four weeks prior to the announcement date, ABM_j is the Acquirer Book-to-market ratio four weeks before the announcement date, HOSTILE is a dummy variable that equals one in presence of a Hostile Bid and zero otherwise, TENDER is a dummy variable with a value of one if the deals involve a Tender Offer and zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection. A positive DGI measures an improvement in governance.

	Model I		Model II		Model III		Model IV		Model V		Model VI	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Intercept	1.8155***	3.12	1.8557***	3.08	1.8014***	3.04	1.7839***	3.02	1.8167***	3.11	1.7557***	2.96
TSIZE	-0.0187	-0.7	-0.0209	-0.8	-0.0202	-0.73	-0.0194	-0.7	-0.0208	-0.76	-0.0187	-0.68
TBM	0.3162***	4.78	0.3143***	4.76	0.3149***	4.76	0.3160***	4.77	0.3143***	4.75	0.3167***	4.79
ABM	-0.0022	-0.5	-0.0023	-0.5	-0.0021	-0.47	-0.0021	-0.47	-0.0021	-0.48	-0.002	-0.45
TENDER	-0.1080	-1.2	-0.1130	-1.3	-0.1106	-1.23	-0.1102	-1.23	-0.1119	-1.25	-0.1084	-1.21
HOSTILE	0.1910	0.89	0.1849	0.86	0.1898	0.88	0.1909	0.89	0.1882	0.87	0.1953	0.9
TGI	-0.0054	-0.4										
AGI			-0.0036	-0.3								
DGI					-0.0011	-0.11						
DGI relative							-0.0147	-0.29				
High TGI-Low AGI									0.0053	0.06		
Low TGI- High AGI											0.0427	0.53
Nb. of obs.	337		337		337		337		337		337	
Adj. R-Squared	7.80		7.78		7.76		7.78		7.75		7.83	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic.

Table 15 –One-week premium and Corporate Governance of Target firm

The table presents results of OLS models. The dependent variable is the deal one week premium calculated as the logarithm of the initial bid price over the market price of the target firm one week before the announcement. TGI is the target governance index (GI). AGI is the acquiring firm GI. DGI is the change in the target corporate governance in absolute terms. DGI relative is the change from the target to the bidder GI in relative term. High TGI low AGI is a dummy variable that takes the value of one when the target GI change from above to below the median, zero otherwise. Low TGI high AGI is a dummy variable that takes the value of one when the target GI change from below to above the median, zero otherwise. $TSIZE_j$ is the logarithm of the target market capitalization four weeks prior to the announcement date, TBM_j is the Target Book-to-market ratio four weeks prior to the announcement date, ABM_j is the Acquirer Book-to-market ratio four weeks before the announcement date, HOSTILE is a dummy variable that equals one in presence of a Hostile Bid and zero otherwise, TENDER is a dummy variable with a value of one if the deals involve a Tender Offer and zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection. A positive DGI measures an improvement in governance.

	Model I		Model II		Model III		Model IV		Model V		Model VI	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Intercept	2.3157***	4.20	2.2534***	3.95	2.1959***	3.92	2.1962***	3.93	2.2822***	4.12	2.1683***	3.87
TSIZE	-0.03564	-1.36	-0.0401	-1.55	-0.036	-1.38	-0.0358	-1.37	-0.0388	-1.49	-0.0358	-1.38
TBM	0.2853***	4.56	0.2814***	4.50	0.2849***	4.56	0.2866***	4.58	0.2831***	4.52	0.2864***	4.58
ABM	-0.0037	-0.89	-0.0034	-0.80	-0.0032	-0.77	-0.0035	-0.83	-0.0036	-0.88	-0.0032	-0.78
TENDER	-0.1441*	-1.70	-0.1519*	-1.80	-0.1429*	-1.68	-0.1475*	-1.75	-0.1524*	-1.8	-0.1452*	-1.72
HOSTILE	0.0747	0.37	0.0724	0.35	0.0824	0.40	0.0779	0.38	0.0684	0.33	0.0851	0.42
TGI	-0.0134	-1.11										
AGI			0.0049	0.39								
DGI					-0.0102	-1.12						
DGI relative							-0.0571	-1.21				
High TGI-Low AGI									-0.0433	-0.56		
Low TGI- High AGI											0.1051	1.39
Nb. Of obs	337		337		337		337		337		337	
Adj. R-Squared	9.03		8.73		9.04		9.09		8.77		9.22	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic.

Table 16 – Target abnormal returns and Corporate Governance in the firm

The table presents results of an OLS model. The dependent variable is the target abnormal returns over the event window (-1,+1) around the announcement date. TGI is the target governance index (GI). VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection.

	Model I	
	Estimate	t-stat
Intercept	0.2393	1.46
VR	0.0408***	5.07
VALUE	0.0101	0.53
CASH	0.1022***	3.97
HOT	-0.0061	-0.27
TGI	0.0094**	2.51
Nb. Of obs.	410	
Adj. R-Squared	18.57	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

Table 17 – Target Abnormal Returns and Change in Corporate Governance

The table presents results of OLS models. The dependent variable is the target abnormal returns over the event window (-1,+1) around the announcement date. DGI is the change in the target corporate governance (GI) in absolute terms. DGI relative is the change from the target to the bidder GI in relative term. High TGI low AGI is a dummy variable that takes the value of one when the target GI change from above to below the median, zero otherwise. Low TGI high AGI is a dummy variable that takes the value of one when the target GI change from below to above the median, zero otherwise. No change is a dummy variable for all the other cases. VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection. A positive DGI measures an improvement in governance.

	Model I		Model II		Model III		Model IV		Model V	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Intercept	0.3061*	1.84	0.2990*	1.8	0.2611	1.58	0.3231*	1.93	0.25443	1.55
VR	0.0387***	4.85	0.0386***	4.82	0.0372***	4.67	0.0396**	4.94	0.0382***	4.76
VALUE	0.0106	0.56	0.0106	0.56	0.0136	0.72	0.0099	0.52	0.0140	0.74
CASH	0.1059***	4.10	0.1072***	4.15	0.1060***	4.09	0.1066***	4.13	0.1046***	4.04
HOT	-0.0037	-0.2	-0.0010	0	-0.0034	-0.2	-0.0012	-0.1	-0.0049	-0.2
DGI	0.0053**	1.94								
DGI relative			0.0249*	1.68						
High TGI- low AGI					0.0161	0.67				
Low TGI- high AGI							-0.0495**	-2.1		
No change									0.0238	1.16
Nb. Of obs.	410		410		410		410		410	
Adj. R-Squared	18.05		17.86		17.38		18.15		17.56	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

Table 17 (continued) – Target Abnormal Returns and Change in Corporate Governance

The table presents results of OLS models. The dependent variable is the target abnormal returns over the event window (-1,+1) around the announcement date. DGI is the change in the target corporate governance (GI) in absolute terms. DGI relative is the change from the target to the bidder GI in relative term. High TGI low AGI is a dummy variable that takes the value of one when the target GI change from above to below the median, zero otherwise. Low TGI high AGI is a dummy variable that takes the value of one when the target GI change from below to above the median, zero otherwise. No change is a dummy variable for all the other cases. VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection. A positive DGI measures an improvement in governance.

	Model VI		Model VII		Model VIIII		Model IX		Model X	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Intercept	0.3404**	1.98	0.3054*	1.78	0.2809*	1.63	0.2975*	1.73	0.3369**	1.97
VR	0.0368***	4.51	0.0365***	4.52	0.0359***	4.38	0.0355***	4.39	0.0384***	4.77
VALUE	0.0068	0.35	0.0093	0.47	0.0110	0.56	0.0090	0.46	0.0079	0.40
CASH	0.1111***	4.24	0.1117***	4.24	0.1108***	4.19	0.1112***	4.21	0.1120***	4.28
HOT	-0.0181	-0.8	-0.0058	-0.2	-0.0068	-0.3	-0.0055	-0.2	-0.0147	-0.6
T-A Delays	0.0045	0.66	0.0102*	1.63						
T-A Protection	-0.0062	-0.9			-0.0022	-0.3				
T-AVoting	0.0056	0.55					0.0128	1.33		
T-A Others	0.0225**	2.45							0.0237***	2.8
Nb. Of obs.	390		490		490		490		490	
Adj. R-Squared	18.65		17.79		17.24		17.61		18.89	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

Table 18 – Bidder Abnormal Returns and Corporate Governance in the firm

The table presents results of an OLS model. The dependent variable is the bidder abnormal returns over the event window (-1,+1) around the announcement date. TGI is the target governance index (GI). AGI is the bidder GI. VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection.

	Model I		Model II	
	Estimate	t-stat	Estimate	t-stat
Intercept	0.0345	0.68	0.0385	0.74
VR	-0.0024	-0.98	-0.0018	-0.75
VALUE	-0.0086	-1.48	-0.0096*	-1.65
CASH	0.0296***	3.75	0.0295***	3.72
HOT	-0.0097	-1.42	-0.0099	-1.45
TGI	-0.0017	-1.46		
AGI			-0.0006	-0.52
Nb. Of obs.	420		420	
Adj. R-Squared	6.08		5.65	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

Table 19 – Bidder Abnormal Returns and Change in Corporate Governance

The table presents results of OLS models. The dependent variable is the bidder abnormal returns over the event window (-1,+1) around the announcement date. DGI is the change in the target corporate governance (GI) in absolute terms. DGI relative is the change from the target to the bidder GI in relative term. T-A Delays is the difference between the target score in the *Delays* subindex and the bidder's score. Similarly, we use the difference from *Protection*, *Voting* and *Others* groups. The subindices are detailed in Table 5. VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection. A positive DGI measures an improvement in governance.

	Model I		Model II		Model III		Model IV		Model V		Model VI		Model VII	
	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Intercept	0.0266	0.52	0.0284	0.55	0.0562	1.06	0.0559	1.06	0.0656	1.24	0.0636	1.2	0.0595	1.12
VR	-0.0019	-0.8	-0.0019	-0.8	-0.0016	-0.6	-0.0017	-0.7	-0.0015	-0.6	-0.0015	-0.6	-0.0018	-0.7
VALUE	-0.0090	-1.5	-0.0091	-1.6	-0.0119**	-2	-0.0119**	-2	-0.0130**	-2.1	-0.0124**	-2.1	-0.0122**	-2
CASH	0.0291***	3.68	0.0290***	3.66	0.0288***	3.57	0.0286***	3.55	0.0290***	3.57	0.0289***	3.57	0.0289***	3.57
HOT	-0.0102	-1.5	-0.0104	-1.5	-0.0140*	-1.9	-0.0151**	-2.1	-0.0152**	-2.1	-0.0154**	-2.1	-0.0144**	-2
DGI	-0.0006	-0.7												
DGI relative			-0.0019	-0.4										
T-A Delays					-0.0049**	-2.3	-0.0048**	-2.5						
T-A Protection					0.0012	0.59			0.0004	0.22				
T-AVoting					0.0010	0.32					-0.0014	-0.5		
T-A Others					-0.0008	-0.3							-0.0025	-1
Nb. Of obs.	420		420		400		400		400		400		400	
Adj. R-Squared	5.70		5.63		7.82		8.42		6.97		7.01		7.17	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

Table 20 – Combined Abnormal Returns and Corporate Governance in the firms

The table presents results of an OLS model. The dependent variable is the combined abnormal returns of the target and the bidder over the event window (-1,+1) around the announcement date. It is calculated from a market capitalization 2 days prior the announcement date- weighted portfolio of both parties of the deal. TGI is the target governance index (GI). AGI is the bidder GI. VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection.

	Model I		Model II	
	Estimate	t-stat	Estimate	t-stat
Intercept	0.0363	0.68	0.0383	0.70
VR	-0.0124***	-5.28	-0.0127***	-5.47
VALUE	-0.0033	-0.59	-0.0029	-0.53
CASH	0.0402***	5.30	0.0404***	5.32
HOT	-0.0102	-1.56	-0.0101	-1.54
TGI	0.0007	0.61		
AGI			0.0001	0.06
Nb. Of obs.	423		423	
Adj. R-Squared	13.60		13.53	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

Table 21 – Combined Abnormal Returns and Change in Corporate Governance

The table presents results of OLS models The dependent variable is the combined abnormal returns of the target and the bidder over the event window (-1,+1) around the announcement date. It is calculated from a market capitalization 2 days prior the announcement date- weighted portfolio of both parties of the deal. DGI is the change in the target corporate governance (GI) in absolute terms. DGI relative is the change from the target to the bidder GI in relative term. VR is the natural log of the bidder market value of equity divided by the target market value of equity. VALUE is the log of the closing price. CASH is a dummy variable that takes a value of one if the offer is in cash, zero otherwise. HOT is a dummy variable that takes a value of one if the transaction occurs form 1998 onward, zero otherwise. We also include industry dummies but we do not report their coefficients. The greater the GI, the poorer is the investor protection. A positive DGI measures an improvement in governance.

	Model I		Model II	
	Estimate	t-stat	Estimate	t-stat
Intercept	0.0416	0.78	0.0445	0.83
VR	-0.0126***	-5.40	-0.0125***	-5.36
VALUE	-0.0032	-0.58	-0.0036	-0.64
CASH	0.0405***	5.35	0.0408***	5.38
HOT	-0.0101	-1.53	-0.0096	-1.46
DGI	0.0003	0.40		
DGI relative			0.0037	0.85
Nb. Of obs.	423		423	
Adj. R-Squared	13.56		13.68	

The symbols *, ** and *** denote statistical significance at the 10%, 5% and 1% level respectively, using the t-statistic

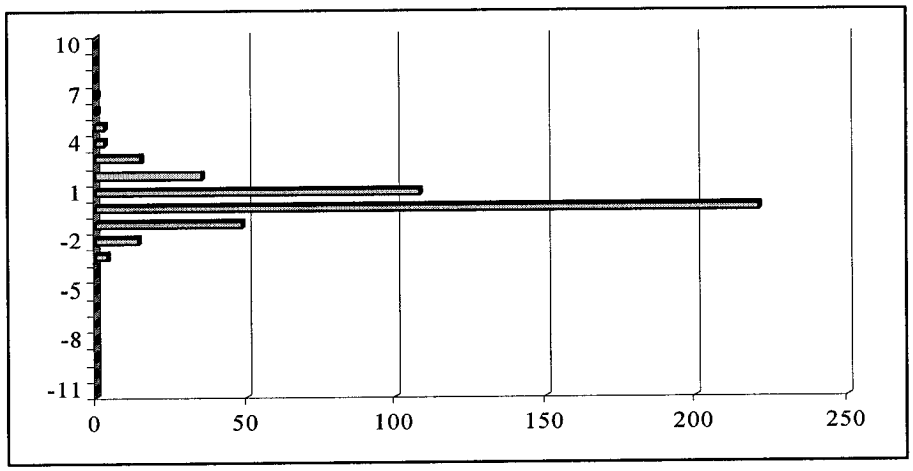

Figure 1 – Distribution of the difference between the bidder Governance Index before and after the transaction

This figure depicts the difference between the governance indexes of the acquirer before and after the transaction. The governance index is calculated from 24 provisions provided by the IRRC Corporate Takeover Defenses (Rosenbaum 1990, 1993, 1995, 1998, 2000 and 2002) and data on state takeover legislation (Pinnell 2000) as in Gompers et al. (2003). The sample consists in all firms involved in a merger or acquisition from January 1990 to December 2001, in the IRRC universe, and which we possess both governance index information for the target and the acquirer.

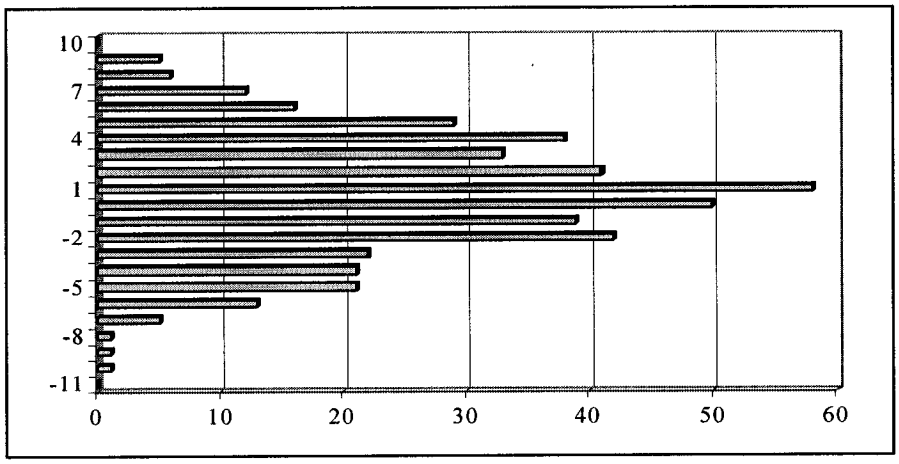

Figure 2 – Distribution of the difference between the bidder Governance Index after the transaction and the target Governance Index before the transaction

This figure depicts the difference between the governance indexes of the acquirer after the transaction and the target's before the transaction. The governance index is calculated from 24 provisions provided by the IRRC Corporate Takeover Defenses (Rosenbaum 1990, 1993, 1995, 1998, 2000 and 2002) and data on state takeover legislation (Pinnell 2000) as in Gompers et al. (2003). The sample consists in all firms involved in a merger or acquisition from January 1990 to December 2001, in the IRRC universe, and which we possess both governance index information for the target and the acquirer

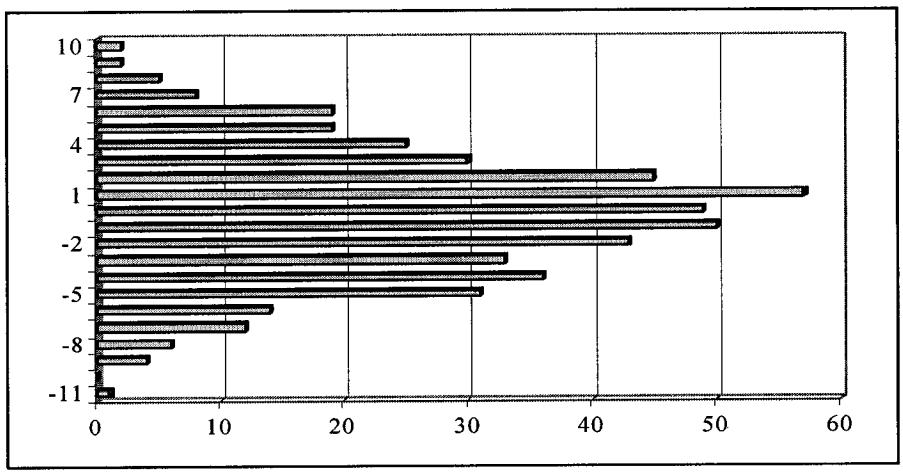

Figure 3 – Distribution of the difference between the bidder Governance Index before the transaction and the target Governance Index before the transaction

This figure depicts the difference between the governance indexes of the acquirer before the transaction and the target's before the transaction. The governance index is calculated from 24 provisions provided by the IRRC Corporate Takeover Defenses (Rosenbaum 1990, 1993, 1995, 1998, 2000 and 2002) and data on state takeover legislation (Pinnell 2000) as in Gompers et al. (2003). The sample consists in all firms involved in a merger or acquisition from January 1990 to December 2001, in the IRRC universe, and which we possess both governance index information for the target and the acquirer.

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APPENDICES

APPENDIX A – Corporate Governance Provisions

This appendix describes the provisions listed in Table 2 and used as components of the Governance Index. These descriptions are given in alphabetical order and are direct quotes from Gompers et al. (2003). The title of each provision is given in boldface. For a few provisions, their impact on shareholders rights and the logic behind their categorization in Table I of Gompers et al. (see appendix B) is discussed.

Antigreenmail. Greenmail refers to a transaction between a large shareholder and a company in which the shareholder agrees to sell his stock back to the company, usually at a premium, in exchange for the promise not to seek control of the company for a specified period of time. Antigreenmail provisions prevent such arrangements unless the same repurchase offer is made to all shareholders or approved by a shareholder vote. Such provisions are thought to discourage accumulation of large blocks of stock because one source of exit for the stake is closed, but the net effect on shareholder wealth is unclear [Shleifer and Vishny 1986, Eckbo 1990]. Five states have specific **Antigreenmail laws**, and two other states have "recapture of profits" laws, which enable firms to recapture raiders' profits earned in the secondary market. We consider recapture of profits laws to be a version of Antigreenmail laws (albeit a stronger one). The presence of firm-level Antigreenmail provisions is positively correlated with 18 out of the other 21 firm-level provisions, is significantly positive in eight of these cases, and is not significantly negative for any of them. Furthermore, states with Antigreenmail laws tend to pass them in conjunction with laws more clearly designed to prevent takeovers [Pinnell 2000]. Since it seems likely that most firms and states perceive Antigreenmail as a takeover "defense", we treat Antigreenmail like the other defenses and code it as a decrease in shareholder rights.

Blank Check preferred stock is stock over which the board of directors has broad authority to determine voting, dividend, conversion, and other rights. While it can be used to enable a company to meet changing financial needs, its most important use is to implement poison pills or to prevent takeover by placing this stock with friendly investors. Because of this role, blank check preferred stock is a crucial part of a "delay" strategy. Companies that have this type of preferred stock but require shareholder approval before it can be used as a takeover defense are *not* coded as having this provision in our data.

Business Combination laws impose a moratorium on certain kinds of transactions (e.g., asset sales, mergers) between a large shareholder and the firm, unless the transaction is approved by the Board of Directors. Depending on the State, this moratorium ranges between two and five years after the shareholder's stake passes a prespecified (minority) threshold. These laws were in place in 25 states in 1990 and two more by 1998. It is the only state takeover law in Delaware, the state of incorporation for about half of our sample.

Bylaw and **Charter** amendment limitations limit shareholders' ability to amend the governing documents of the corporation. This might take the form of a supermajority vote requirement for charter or bylaw amendments, total elimination of the ability of shareholders to amend the bylaws, or the ability of directors (beyond the provisions of state law) to amend the bylaws without shareholder approval.

Control-share **Cash-out laws** enable shareholders to sell their stakes to a "controlling" shareholder at a price based on the highest price of recently acquired shares. This works something like fair-price provisions (see below) extended to nontakeover situations. These laws were in place in three states by 1990 with no additions during the decade.

A **Classified Board** (or "staggered" board) is one in which the directors are placed into different classes and serve overlapping terms. Since only part of the board can be replaced each year, an outsider who gains control of a corporation may have to wait a few years before being able to gain control of the board. This slow replacement makes a classified board a crucial component of the *Delay* group of provisions, and one of the few provisions that clearly retains some deterrent value in modern takeover battles [Daines and Klausner 2001].

Compensation Plans with changes-in-control provisions allow participants in incentive bonus plans to cash out options or accelerate the payout of bonuses should there be a change in control. The details may be a written part of the compensation agreement, or discretion may be given to the compensation committee.

Director indemnification **Contracts** are contracts between the company and particular officers and directors indemnifying them from certain legal expenses and judgments resulting from lawsuits pertaining to their conduct. Some firms have both "Indemnification" in their bylaws or charter and these additional indemnification "Contracts".

Control-share Acquisition laws (see Supermajority, below).

Cumulative Voting allows a shareholder to allocate his total votes in any manner desired, where the total number of votes is the product of the number of shares owned and the number of directors to be elected. By allowing them to concentrate their votes, this practice helps minority shareholders to elect directors. Cumulative Voting and Secret Ballot (see below) are the only two provisions whose presence is coded as an *increase* in shareholder rights, with an additional point to the Governance Index if the provision is absent.

Directors' Duties provisions allow directors to consider constituencies other than shareholders when considering a merger. These constituencies may include, for example, employees, host communities, or suppliers. This provision provides boards of directors with a legal basis for rejecting a takeover that would have been beneficial to shareholders. 31 states have **Directors' Duties laws** allowing similar expansions of constituencies, but in only two of these states (Indiana and Pennsylvania) are the laws

explicit that the claims of shareholders should not be held above those of other stakeholders [Pinnell 2000]. We treat firms in these two states as though they had an expanded directors' duty provision unless the firm has explicitly opted out of coverage under the law.

Fair-Price provisions limit the range of prices a bidder can pay in two-tier offers. They typically require a bidder to pay to all shareholders the highest price paid to any during a specified period of time before the commencement of a tender offer, and do not apply if the deal is approved by the board of directors or a supermajority of the target's shareholders. The goal of this provision is to prevent pressure on the target's shareholders to tender their shares in the front end of a two-tiered tender offer, and they have the result of making such an acquisition more expensive. Also, 25 states had **Fair-Price laws** in place in 1990, and two more states passed such laws in 1991. The laws work similarly to the firm-level provisions.

Golden Parachutes are severance agreements that provide cash and non-cash compensation to senior executives upon an event such as termination, demotion, or resignation following a change in control. They do not require shareholder approval. While such payments would appear to deter takeovers by increasing their costs, one could argue that these parachutes also ease the passage of mergers through contractual compensation to the managers of the target company [Lambert and Larcker 1985]. While the net impact on managerial entrenchment and shareholder wealth is ambiguous, the more important effect is the clear decrease in shareholder rights. In this case, the "right" is the ability of a controlling shareholder to fire management without incurring an additional cost. Golden Parachutes are highly correlated with all the other takeover defenses. Out of 21 pairwise correlations with the other firm-level provisions, 15 are positive, 10 of these positive correlations are significant, and only one of the negative correlations is significant. Thus, we treat Golden Parachutes as a restriction of shareholder rights.

Director **Indemnification** uses the bylaws, charter, or both to indemnify officers and directors from certain legal expenses and judgments resulting from lawsuits pertaining to their conduct. Some firms have both this "Indemnification" in their bylaws or charter and additional indemnification "Contracts". The cost of such protection can be used as a market measure of the quality of corporate governance [Core 1997 and 2000].

Limitations on director **Liability** are charter amendments that limit directors' personal liability to the extent allowed by state law. They often eliminate personal liability for breaches of the duty of care, but not for breaches of the duty of loyalty or for acts of intentional misconduct or knowing violation of the law.

Pension Parachutes prevent an acquirer from using surplus cash in the pension fund of the target to finance an acquisition. Surplus funds are required to remain the property of the pension fund and to be used for plan participants' benefits.

Poison Pills provide their holders with special rights in the case of a triggering event such as a hostile takeover bid. If a deal is approved by the board of directors, the poison pill can be revoked, but if the deal is not approved and the bidder proceeds, the pill is triggered. Typical poison pills give the holders of the target's stock other than the bidder the right to purchase stock in the target or the bidder's company at a steep discount, making the target unattractive or diluting the acquirer's voting power. Poison pills are a crucial component of the "delay" strategy at the core of modern defensive tactics. Nevertheless, we do not include poison pills in the *Delay* group of provisions, but include it in the *Other* group because the pill itself can be passed on less than one-day's notice, so it need not be in place for the other *Delay* provisions to be effective. The other provisions in this group require a shareholder vote, so they cannot be passed on short notice. See Coates [2000] and Daines and Klausner [2001] for a discussion of this point.

Under a **Secret Ballot** (also called confidential voting), either an independent third party or employees sworn to secrecy are used to count proxy votes, and the management usually agrees not to look at individual proxy cards. This can help eliminate potential conflicts of interest for fiduciaries voting shares on behalf of others, and can reduce pressure by management on shareholder-employees or shareholder-partners. Cumulative Voting (see above) and Secret Ballots are the only two provisions whose presence is coded as an *increase* in shareholder rights, with an additional point to the Governance Index if the provision is absent.

Executive **Severance** agreements assure high-level executives of their positions or some compensation and are not contingent upon a change in control (unlike Golden or Silver parachutes).

Silver Parachutes are similar to Golden Parachutes in that they provide severance payments upon a change in corporate control, but differ in that a large number of a firm's employees are eligible for these benefits. Since Silver Parachutes do not protect the key decision makers in a merger, we classified them in the *Other* group rather than in the *Protection* group.

Special Meeting limitations either increase the level of shareholder support required to call a special meeting beyond that specified by state law or eliminate the ability to call one entirely. Such provisions add extra time to proxy fights, since bidders must wait until the regularly scheduled annual meeting to replace board members or dismantle takeover defenses.This delay is especially potent when combined with limitations on actions by written consent (see below).

Supermajority requirements for approval of mergers are charter provisions that establish voting requirements for mergers or other business combinations that are higher than the threshold requirements of state law. They are typically 66.7, 75, or 85 percent, and often exceed attendance at the annual meeting. In practice, these provisions are similar to **Control-Share Acquisition laws**. These laws require a majority of disinterested shareholders to vote on whether a newly qualifying large shareholder has voting rights. They were in place in 25 states by September 1990 and one additional state in 1991.

Unequal Voting rights limit the voting rights of some shareholders and expand those of others. Under time-phased voting, shareholders who have held the stock for a given period of time are given more votes per share than recent purchasers. Another variety is the substantialshareholder provision, which limits the voting power of shareholders who have exceeded a certain threshold of ownership.

Limitations on action by **Written Consent** can take the form of the establishment of majority thresholds beyond the level of state law, the requirement of unanimous consent, or the elimination of the right to take action by written consent. Such requirements add extra time to many proxy fights, since bidders must wait until the regularly scheduled annual meeting to replace board members or dismantle takeover defenses. This delay is especially potent when combined with limitations for calling special meetings (see above).

APPENDIX B –Distribution of the Governance index from Gompers et al. (2003)

TABLE II

The Governance Index

This table provides summary statistics on the distribution of *G*, the Governance Index, and the subindices (*Delay*, *Protection*, *Voting*, *Other*, and *State*) over time. *G* and the subindices are calculated from the provisions listed in Table I as described in Section II. Appendix A gives detailed information on each provision. We divide the sample into ten portfolios based on the level of *G* and list the number of firms in each portfolio. The Democracy Portfolio is composed of all firms where $G \leq 5$, and the Dictatorship Portfolio contains all firms where $G \geq 14$.

	1990	1993	1995	1998
Governance Index				
Minimum	2	2	2	2
Mean	9.0	9.3	9.4	8.9
Median	9	9	9	9
Mode	10	9	9	10
Maximum	17	17	17	18
Standard Deviation	2.9	2.8	2.8	2.8
Number of Firms				
$G \leq 5$ (Democracy Portfolio)	158	139	120	215
$G=6$	119	88	108	169
$G=7$	158	140	127	186
$G=8$	165	139	152	201
$G=9$	160	183	183	197
$G=10$	175	170	178	221
$G=11$	149	168	166	194
$G=12$	104	123	142	136
$G=13$	84	100	110	106
$G \geq 14$ (Dictatorship Portfolio)	85	93	87	83
Total	1357	1343	1373	1708
Subindex Means				
Delay	1.8	2.0	2.1	2.1
Protection	2.4	2.5	2.5	2.1
Voting	2.2	2.1	2.1	2.2
Other	1.1	1.2	1.1	1.0
State	1.8	1.8	1.8	1.7

APPENDIX C – Distribution of the Governance Provisions from Gompers et al. (2003)

TABLE I

Governance Provisions

This table presents the percentage of firms with each provision between 1990 and 1998. The data are drawn from the IRRC Corporate Takeover Defenses publications [Rosenbaum 1990, 1993, 1995, and 1998] and are supplemented by data on state takeover legislation coded from Pinnell [2000]. See Appendix A for detailed information on each of these provisions. The sample consists of all firms in the IRRC research universe except those with dual class stock.

	Percentage of firms with governance provisions in			
	1990	1993	1995	1998
Delay				
Blank Check	76.4	80.0	85.7	87.9
Classified Board	59.0	60.4	61.7	59.4
Special Meeting	24.5	29.9	31.9	34.5
Written Consent	24.4	29.2	32.0	33.1
Protection				
Compensation Plans	44.7	65.8	72.5	62.4
Contracts	16.4	15.2	12.7	11.7
Golden Parachutes	53.1	55.5	55.1	56.6
Indemnification	40.9	39.6	38.7	24.4
Liability	72.3	69.1	65.6	46.8
Severance	13.4	5.5	10.3	11.7
Voting				
Bylaws	14.4	16.1	16.0	18.1
Charter	3.2	3.4	3.1	3.0
Cumulative Voting	18.5	16.5	14.9	12.2
Secret Ballot	2.9	9.5	12.2	9.4
Supermajority	38.8	39.6	38.5	34.1
Unequal Voting	2.4	2.0	1.9	1.9
Other				
Antigreenmail	6.1	6.9	6.4	5.6
Directors' Duties	6.5	7.4	7.2	6.7
Fair Price	33.5	35.2	33.6	27.8
Pension Parachutes	3.9	5.2	3.9	2.2
Poison Pill	53.9	57.4	56.6	55.3
Silver Parachutes	4.1	4.8	3.5	2.3
State				
Antigreenmail Law	17.2	17.6	17.0	14.1
Business Combination Law	84.3	88.5	88.9	89.9
Cash-Out Law	4.2	3.9	3.9	3.5
Directors' Duties Law	5.2	5.0	5.0	4.4
Fair Price Law	35.7	36.9	35.9	31.6
Control Share Acquisition Law	29.6	29.9	29.4	26.4
Number of Firms	1357	1343	1373	1708

APPENDIX D - Methodology

1. The Event Study and the Market Model

Brown and Warner (1985) investigate the issues related to event studies using daily stock returns. They confirm that OLS market model and parametric tests are generally well-specified notwithstanding any problems related to the non-normality of daily returns, the non-synchronous trading and a reasonable autocorrelation.

The OLS market model is the following:

$$A_{i,t} = R_{i,t} - (\alpha + \beta R_{m,t})$$

Each security returns from -241 to -11 days are regressed on the market portfolio, here the CRSP equally weighted portfolio, and α et β are the resulting OLS values from the estimation period. $R_{i,t}$ is the firm return upon the announcement date. Standard t-statistic can be used to establish the significance of the estimates.

2. The TOBIT model

The TOBIT model is employed with censored sample. Censored regression model are used for sample in which information on the dependent variable is available only for some observations.

The TOBIT model is the following:

$$Y_i = \alpha + \beta X_i + \varepsilon \quad \text{if } Y>0$$
$$= 0, \text{ otherwise}$$

Maximum likelihood can be used to estimate the parameters.

3. The LOGIT model

A logit model is a univariate binary model. That is, for dependent variable y_i that can be only one or zero, and a continuous independent variable x_i,:

$$P[Y_j = 1|X_j] = F(\alpha_0 + \beta_0 X_j)$$

where

$$F(x) = \frac{1}{1+\exp(-x)}$$

is the distribution function of the Logit distribution. B_0 is a parameter to be estimated. The model is non linear and require maximum likelihood estimation.