

Adopting Better Corporate Governance: Evidence from Cross–Border Mergers*

Arturo Bris[†]

Neil Brisley[‡]

Christos Cabolis[§]

November 2007

*We are grateful to Judy Chevalier, Will Goetzmann, Yrjö Koskinen, Catherine Labio, Florencio López de Silanes, Toni Whited, and seminar participants at the University of Alberta, McGill University, Universitat Pompeu Fabra, Universidad Carlos III, and the 2002 Annual Conference on Financial Economics and Accounting at the University of Maryland for helpful comments and suggestions. We thank Vanessa Janowski for excellent research assistance.

[†]IMD, European Corporate Governance Institute, and Yale International Center for Finance. Address for correspondence: IMD, Chemin de Bellerive 23, P.O. Box 915, CH-1001 Lausanne, Switzerland. Tel: +41 21 6180111; fax: +41 21 618 0707, email: arturo.bris@imd.ch.

[‡]Richard Ivey School of Business, University of Western Ontario. Address for correspondence: Richard Ivey School of Business, University of Western Ontario, 1151 Richmond Street North, London, Ontario N6A 3K7 Canada; Tel: +1-519-661-3012; e-mail: nbrisley@ivey.uwo.ca .

[§]ALBA Business School and Yale International Center for Finance. Address for correspondence: ALBA, 2A, Areos Str. & Athinas Ave., 166 71 Vouliagmeni, Athens, Greece. Tel: +30-(210) 89 64 531; fax: +30 (210) 89 64 737; e-mail: ccabolis@alba.edu.gr.

Abstract

Cross-border mergers allow firms to alter the level of protection they provide to their investors, because target firms usually import the corporate governance system of the acquiring company by law. Therefore, cross-border mergers provide a natural experiment to analyze the effects of changes in corporate governance on firm value. We construct measures of the change in investor protection induced by cross-border mergers in a sample of 7,330 industries from 41 countries, spanning the period 1990 – 2001. We find that the Tobin's Q of an industry increases when firms within such industry are acquired by foreign firms coming from countries with *better* shareholder protection and *better* accounting standards. We present evidence that the transfer of corporate governance practices through cross-border mergers is Pareto improving. Firms that can adopt better practices willingly do so, and the market assigns more value to better protection.

KEYWORDS: corporate governance, market regulation, cross-border acquisitions

JEL classification: F3, F4, G3

I think that for active investors like us, corporate governance is built into the analytic process of assessing deals and will figure ultimately in the decision as to whether or not premiums have to be paid for a company. I think this is a global investor issue. When global investors look at deals, particularly cross-border deals, they will often factor corporate governance issues into the equation, and these may have a practical effect on price and value.

—Peter Clapman, Senior Vice-president and Chief Counsel Investments, TIAA-CREF (from Alexander, 2000)

I Introduction

The political economy approach to corporate governance has documented the importance of legal rules in determining corporate finance and corporate governance decisions. Legal rules—this approach argues—determine the extent to which countries differ in the degree of investor protection and, in turn, the impact of such differences on the size of capital markets, as well as firms’ value, distribution policies, ownership structures, and financial choices.¹ This article extends the existing literature by evaluating the effects of adopting better corporate governance practices induced by cross-border mergers on industry value.

Our study is based on the observation that in a cross-border merger, the target firm usually adopts the accounting standards, disclosure practices, and governance structures of the acquiring firm.² This implies that, even when there is no formal change of the legal system, firms in a country can adopt different levels of investor protection, depending on the firms they merge with. Bris and Cabolis (2008) have shown that stronger shareholder protection and accounting standards in the acquiror’s country result in higher merger premium. This result is in line with other papers in the literature that find a high correlation between transparency and accountability improvements and higher stock returns. Gompers et al. (2003)

¹Legal rules determine: corporate valuation in La Porta et al. (2002) and Himmelberg, et al. (2002); firm’s financing choices in Demirguc-Kunt and Maksimovic, (1998, 1999); the allocation of capital in Wurgler (2000), Beck and Levine (2002), and Claessens and Laeven (2003); the efficiency of the markets in Morck et al. (2000); and even the severity of currency crises, in Johnson et al. (2000).

²Of course, nothing precludes the acquiring firm from adopting some corporate governance provisions of the target firm. However this is the exception, rather than the rule.

and Cremers and Nair (2005) study the U.S. market and determine that improvement of investor protection is associated with higher returns while Bergman and Nicolaievsky (2006) examine the effect of strengthening investor protection in Mexico with similar results.

A natural question that follows is the effect of the increase in the governance quality of an individual firm in the industry as a whole. In general there are two ways how the industry may be affected. On the one hand, there will be a positive *spillover* effect: firms in an industry recognize that an input of production, corporate governance, is used more efficiently by the target firm and thus they adopt a similar strategy, that is, they strengthen their own governance level. Doige et al. (2006), for instance, show that, after controlling for country characteristics, firms do not differ much in their corporate governance levels, at least in the developing countries. This may be interpreted as an attempt by firms that participate in an industry to have a similar governance structure. Alternatively, as Bris and Brisley (2006) show, corporate governance reform by a single firm in the industry can result in benefits for the whole industry without the rest of firms being forced to reform as well. The reason is that, in a non-perfectly competitive setting, all firms tend to overproduce. Corporate governance reform induces the reforming firm to produce less, hence leaving room for competitors to increase their production further and increase their profits. Overall, the entire industry benefits from one single firm improving its corporate governance. We borrow their apparatus to model in a simpler way the relationship between industry competition and benefits from governance. Empirically, the two explanations predict that governance improvements result in valuation increases. However the imitation effect in the former explanation does not rely on the level of competition in the industry, while the latter does.

On the other hand, if the participants in an industry do not want to commit to follow the governance changes of the target firm, we may observe the opposite effect, i.e. a decrease in the returns of the industry as a whole. This may occur, for instance, because of the prohibitively high costs associated with the renegotiation of contracts related to the corporate governance standards of the firms. Empirically, this is supported in Bergman and Nicolaievsky (2006) who show that the public companies in Mexico do not improve corporate governance standards beyond what is required by the law. A negative impact in the industry may arise as well if the firm that reforms its corporate governance through a cross-border merger is the dominant firm in the industry. In that case the increase in the profits of the monopolistic firm is offset by the losses incurred by the industry followers, thus resulting in

an overall decrease in industry value.

In the end, the effect of strengthening the level of investor protection at the industry level is an empirical question. We propose to measure the average change in investor protection in a given industry and country by considering all the cross-border mergers that took place in a given year. We then relate these changes in investor protection to a measure of value—the median Tobin’s Q of the firms in the industry in order to examine whether an industry realizes an increase in the average return due to the strengthening of the investor protection level.

There are several positive aspects from working with industry level data. First, our panel of industry–country–year observations allows us to control for country–specific events, such as changes in regulation, trends in the market for corporate control, and taxation. Second, we expand the scope of our research by studying the industry instead to focusing on the impact on the participating firms in a merger only. Third, because the target firm in a cross-border merger becomes a national of the country of the acquiring firm, a firm level analysis would not assign any benefits of the improved investor protection to the country where the target is located. Finally, there exist alternative corporate governance change mechanisms such as institutional ownership and external monitoring that can be effective alternatives to mergers. A sample of firms involved in mergers is therefore biased to mostly include firms in countries where the takeover market dominates as a corporate governance mechanism. By studying all industries in all countries with available data we address all these issues.

Our sample includes more than 15,000 cross-border acquisitions in the period 1990–2001, corresponding to firms in 39 industries and 41 countries. We construct industry-wide corporate governance indices that equal the weighted average of the investor protection indices in La Porta et al. (1998). When a cross-border merger takes place in a given industry, the corporate governance indices of the industry may change since the target firm adopts the governance system of the acquirer. We use two indicators of investor protection: shareholder protection and accounting standards.

We estimate panel regressions where the Tobin’s Q of the corresponding industry is the endogenous variable. We control for industry–year and country effects. Additionally, we control for the concentration and the merger activity in the industry and country under consideration. The key explanatory variables are the two indicators of corporate governance change that we construct. We find that when firms in a given industry are acquired by firms

from countries with stronger corporate governance practices, there is a significant increase in the value of such industry, as measured by the industry's Tobin's Q. Similarly, importing better accounting standards creates value for the target industry. This is consistent with corporate governance reform in one firm having positive spillover effect on the rest of industry participants. We test whether such value increase is related to the degree of competition in the industry, measured by the Hefindahl index, and find a positive but insignificant relationship. Ultimately, we conclude that our results are consistent both with our theoretical model, and also with a pure imitation effect by firms in the industry.

As a robustness test, we check whether our results are due to the value of governance being greater in industries where there is greater need to raise external capital. We interact governance improvements through cross-border mergers with an indicator of external financial needs (Almeida and Wolfenzon, 2005), and find that the relationship between governance improvements and industry Tobin's Q is less positive than more financially constrained the country is, which contradicts the initial hypothesis.

In sum, we present strong evidence that the change in corporate governance practices through cross-border mergers is Pareto improving. Industries consisting of firms that adopted better governance practices enjoy an increased market valuation. Interestingly, industries consisting of target firms that would be harmed by adopting practices of a weaker corporate governance country do not seem to be negatively affected. We deem this finding as evidence that the negative effects are eliminated through private, implicit contracting. Confirming the quote at the beginning of this paper, we do not find evidence that corporate governance is a motive for cross-border acquisitions, but it is the case that corporate governance considerations significantly determine the valuation effects of cross-border mergers, even at the industry level. We also find that our results are robust to using alternative measures of governance quality, like the modified LLSV index of Pagano and Volpin (2005), and the World Bank Rule of Law Index, which are both time varying.

Our results are in accord with the literature on intra-industry valuation effects of mergers (Eckbo, 1982 and 1985; Akhigbe and Martin, 2000). Measuring the pure valuation effects of cross-border mergers is *not* our objective. Instead, we control for the pure valuation effects and study the impact to the *median investor in an industry* of changes in investor protection induced by cross-border mergers. Our paper is also related to La Porta et al. (2002) and Gompers et al. (2003) which, relying on country-level data and firm-specific

corporate governance characteristics respectively, identify a positive relationship between corporate governance quality and value. Both papers provide cross-sectional results, and indeed Gompers et al. (2003) argue that it is not possible to identify any casual relationship between governance and value in their setting. We extend this literature by using a panel data sample to confirm their results. The majority of the corporate governance literature provides cross-sectional results on the relationship between investor protection and corporate finance variables in a given year, as per the measures provided by La Porta et al. (1998). Unfortunately, when one is arguing in favor of or against legal change, such static evidence is not particularly helpful. Indeed, one cannot conclude that improvements in investor protection within a country have positive effects, unless there is episodic evidence (Glaeser et al., 2001, on the Poland–Czech Republic difference), or new indicators are constructed (as in Pistor, 2006, for transition economies, and Hyytinen et al., 2003, for Finland). To the best of our knowledge, ours is the first attempt to document the effect of changes in corporate governance by using a large sample of countries, which spans a period of eleven years, and includes both developed and emerging markets, from four different legal origins.

Cross-border acquisitions are studied also by Rossi and Volpin (2004). They conduct an empirical study in which they show, using cross-sectional data, that the vast majority of targets in cross-border acquisitions come from countries with poor investor protection, whereas the vast majority of acquirors come from more protective regimes. Our paper complements theirs, and asks whether changes in corporate governance are priced by the market. Finally, our paper is in the same spirit as Daines (2001), who provides cross-section results to show that the market assigns a higher value to the assets of firms incorporated in Delaware. Our rich panel allows us to extend Daines (2001) methodology.

The study of mergers has provided a vast empirical literature which focuses on the effects of integration on the values of both the acquiring and the target firm. However Andrade et al. (2001) point out that the empirical literature has had little to say on the more fundamental question surrounding merger activity: how—and not whether—mergers actually create or destroy value. Our work posits an interface between mergers and value change: the transfer of corporate governance practices.

The paper is organized as follows. Section II describes the data and its sources. Section III outlines the construction of industry-level corporate governance indices from the original merger sample. Section IV analyzes the relationship between industry value and corporate

governance. In section V we perform some robustness tests, and section VI concludes.

II A Model of ‘Slack’ Corporate Governance

Our basic theoretical model is a simplified version of Bris and Brisley (2007). We begin the analysis by considering a single industry consisting of n identical firms operating within a single, closed, domestic economy. A single good is produced and supplied by these firms who face an industry demand function, $Q = 1 - P$, where P is the unit market selling price of the good. When firms have a unit production cost of α and undertake Cournot Competition in quantities, q , it is well known that profit maximizing firms each produce $q = \frac{1-\alpha}{n+1}$. The industry supply is therefore $Q = \frac{n}{n+1}(1-\alpha)$ and firm profits are each $\pi = \left(\frac{1-\alpha}{n+1}\right)^2$. In this paper we relax the assumption of profit maximization and assume that the manager causes the firm to choose production quantities, q , and unit costs, α , in order to maximize the following objective function.

$$\Omega = (1 - g) \cdot \pi + g \cdot q\left(\alpha - \frac{1}{2}\alpha^2\right) \quad (1)$$

The objective function is a weighted average of the usual profit function, $\pi = q(P - \alpha)$, and what we term the “excess cost function”, $E = q\left(\alpha - \frac{1}{2}\alpha^2\right)$, or expropriation by managers. The weights, $1 - g$ and g applied to profits and excess costs, respectively, therefore give a natural measure of the relative importance ascribed to these objectives by managers in the industry. We interpret $g \in [0, 1]$ as a measure of corporate governance ‘slack’ or latitude. When g is low, corporate governance is strong in the sense that shareholder objectives are paramount. When g is high, other cost-based considerations have a strong influence on firm decisions. We interpret g as a regulatory variable that is chosen by the national government and it is therefore not a choice variable for the firm or its shareholders. Pagano and Volpin (2006) have shown theoretically and empirically that cross-border merger activity will indirectly induce improvements in investor protection. Our model can be extended with some technical complication to incorporate such effect.

A Equilibrium strategies of domestic firms

Each firm management takes as given the quantities of its competitors and so chooses its own quantity q_i and unit cost α , to maximize

$$\Omega = q_i \left[(1 - g) \left(1 - \sum_{j=1}^{n-1} q_j - q_i - \alpha \right) + g \left(\alpha - \frac{1}{2} \alpha^2 \right) \right] \quad (2)$$

The first order conditions for q_i and α and the symmetry of the equilibrium for the identical firms yield **unit costs** and **quantities**:

$$\alpha^* = 2 - \frac{1}{g} \quad (3)$$

$$\begin{aligned} q^*(n, g) &= \frac{1}{(n+1)} \left(1 + \frac{(2g-1)^2}{2(1-g)g} \right) \\ &\geq \frac{1}{(n+1)} \end{aligned} \quad (4)$$

Proposition 1 *In the presence of corporate governance slack, the optimal unit cost, α^* , and output, q^* , per firm are both greater than in the profit maximizing Cournot equilibrium and are both increasing in corporate governance slack, g .*

Proof: See Bris and Brisley (2007)

Since g gives incentives for managers to incur excess costs as well as maximize profits, this result is not surprising. Corporate governance slack rewards ‘overproduction’ when unit costs are positive. It also softens the profit maximizing behavior of the firms making them less eager to restrict supply. Notice that if $g = \frac{1}{2}$, then $\alpha^* = 0$ and $q^* = \frac{1}{(n+1)}$, there are no excess costs, firms produce the Cournot competitive output and profits are maximized. By definition, unit costs cannot be reduced below zero and therefore only if $g > \frac{1}{2}$ in our model can corporate governance truly be described as ‘slack’, causing firms voluntarily to inflate costs and quantities above the Cournot competitive level. Therefore,³ we only consider cases where $g \geq \frac{1}{2}$.

³A reasonable restriction in Bris and Brisley (2007) is that Corporate Governance should not be *so* slack as to permit all firms to make losses, which in their model translates as $g \leq L(n) = \frac{1}{2}n - \frac{1}{2}\sqrt{2n+n^2} + 1$ in order to ensure non-negative margins. We use the same constraint here.

B Reform by a subset of firms in the industry through cross-border mergers

Consider the case where, of the n identical domestic firms in an industry initially with $g > \frac{1}{2}$, a subset $m \in \{1, 2, \dots, n\}$ are acquired by m foreign firms with *better* corporate governance. As Bris and Cabolis (2008) show, the target firms adopt the better governance of the acquirors by default in 100 percent mergers. Without loss of generality, let us assume that the m targets adopt a stricter corporate governance regime such that $g = \frac{1}{2}$. Using superscripts, T and U , to identify the acquired and unaffected firms respectively, these firms act strategically to maximize their respective objective functions, Ω^T and Ω^U which now place differing weights on profits and excess costs.

Deriving firm strategies we get **unit costs**:

$$\alpha^U = 2 - \frac{1}{g} \quad \text{and} \quad \alpha^T = 0 \quad (5)$$

And **quantities**:

$$q^T(m, n, g) = q^*(n, g) - \frac{(n - m + 1)(2g - 1)^2}{2g(1 - g)(n + 1)} < q^*(n, g) \quad (6)$$

$$q^U(m, n, g) = q^*(n, g) + \frac{m(2g - 1)^2}{2g(1 - g)(n + 1)} > q^*(n, g) \quad (7)$$

where $q^*(n, g)$ is defined in (4).

Unaffected firms choose some $\alpha^U > 0$, due to their incentives to incur excess costs. However, target firms operate to a stronger corporate governance standard, $g = \frac{1}{2}$. These firms are profit maximizers and so eliminate all excess unit costs, $\alpha^R = 0$. Furthermore, stronger corporate governance causes target firms to *decrease* output below the pre-reform level, and this permits unaffected firms to *increase* output above the pre-reform level. These effects are stronger, the greater the proportion of firms being acquired. The net effect is a *reduction* in total industry output, corresponding to the intuition that the average level of corporate governance slack in the industry has reduced.

Industry output:

$$mq^T(m, n, g) + (n - m)q^U(m, n, g) = nq^* - \frac{m(2g - 1)^2}{2g(1 - g)(n + 1)} \quad (8)$$

$$< nq^*$$

Interestingly, both target and unaffected firms increase **shareholder profits**, $\pi^T(m, n, g) > \pi^*(n, g)$, $\pi^U(m, n, g) > \pi^*(n, g)$, where $\pi^*(n, g)$ is firm profits in the basic Cournot equilibrium.

Proposition 2 *Corporate governance improvement through cross-borders affecting a subset of the firms in an industry increases the profits of all target and unaffected firms. Industry profits are increasing in m , the number of acquired firms.*

Proof: See Bris and Brisley (2007)

That target firms, with their focus on maximizing shareholder profits, do indeed increase profits is not surprising. But the mechanism by which it occurs is interesting and illuminating for the less obvious result that their reform also increases the profits of unaffected firms.

The logic is as follows. Target firms eliminate excess unit costs and have no incentive to ‘overproduce’. They are therefore less aggressive in terms of output than pre-reform. Indeed, their production is even less than it would be had *all* firms target. Target firms have relatively low output because the output of unaffected firms is still relatively high. Ironically, restricting output by the target firms leaves even more room for the unaffected firms to expand output and overproduce even more than before. The net effect is a *decrease* in output for the industry and hence an increase in prices. Higher prices and lower costs for target firms, albeit on reduced volumes, improves their profits. Higher prices and higher output for unaffected firms increases their profits.

Overall, this simple model provides a competitive argument for why corporate governance improvement through cross-border mergers is beneficial for an industry. The intuition is that competition acts as a complement to corporate governance at the industry level. Once one single firm in an industry decides to improve corporate governance, the increase in efficiency that such improvement brings about results in an increase in the value of the firm. Through competition, the benefits of good governance are spread out to the rest of industry participants. The reason is that, by reducing overproduction, the better-governed firm leaves

more room for profits to the industry incumbents. The model then provides a rational for increases in industry value that does not rely on competing firms being implicitly forced to reform. Instead, good governance forces the target firm to become a *better competitor*, and unaffected firms then capture a larger market share. Overall, the total industry value increases. We next test such prediction.

III Data

A Industry data

We use all the available firms in CRSP + Compustat and Datastream to construct annual series of industry specific variables within each country for the years 1990–2001. We classify firms within each of the 39 industrial groups defined in Datastream.⁴ Initially, firms in the U.S. are classified depending on their two–digit SICs. Since there is no mechanical correspondence between Datastream industries and SIC codes, we handmatch two–digit SIC codes with their corresponding four–digit Datastream Industrial Classification Codes. For each industry within a country we calculate the annual Tobin’s Q. Datastream calculates the book value of the assets net of intangible assets, so Tobin’s Q calculated from both Compustat and Datastream are not exactly comparable. Besides, the resulting book–equity values from Datastream can occasionally be negative. To overcome the distorting effect of the negative values, we calculate the annual industry Tobin’s Q by inverting the median of the inverted firm–specific Tobin’s Qs.⁵ Additionally, in the econometric analysis, we use country random effects, and time-invariant, country-specific controls.

Individual firm Qs for U.S. firms are calculated following Kaplan and Zingales (1997) and Gompers et al. (2003), as the market value of the firm’s assets divided by its book value. The market value of the assets is computed as the book value of the assets plus the market value of common stock, minus the sum of the book value of common stock and deferred taxes. For non–U.S. firms, the market value of the firm is calculated as the market value

⁴Datastream Industrial classifications exist at six levels. Level four comprises 39 sectors based on the FTSE Actuaries System.

⁵Shin and Stulz (1998), and Gertner et al. (2002) also calculate industry Tobin’s Q using the median Q of the firms within each industry.

of equity (number of shares outstanding times price per share) plus the book value of the firm’s liabilities. The latter is computed by subtracting the book value of equity (Datastream company account item # 307) from the book value of total assets (Datastream item # 392).

We calculate individual Qs at the end of the corresponding year for firms that remain listed as of December 31. Because we also want to include in our industry measures those firms that are acquired, we include in the Tobin’s Q calculations target firms of acquisitions which are delisted during the corresponding year. We record the last information available for those firms—we have stock data for target firms in the month prior to delisting, and accounting data for the year of delisting. Because delisting happens after the acquisition announcement, the market value of the target firms incorporates the effect of the takeover premium on stock prices.

We are able to calculate industry Tobin’s Qs for 7,233 observations, which correspond to 39 industries from 41 different countries, for a period of 11 years. We consider only the countries for which we have merger data and corporate governance indices, as described in the following section.

B Merger and Acquisitions Data

The base mergers sample includes all the cross-border acquisitions of public companies available in Securities Data Corporation, from January 1, 1990, through December 31, 2001. We only consider completed transactions, and we exclude from the initial sample LBOs, as well as spin-offs, recapitalizations, self-tender and exchange offers, repurchases, acquisitions of minority stakes, and privatizations. Because corporate governance changes are effective only when 100 percent of the shares of the target get acquired, our sample includes only this type of transactions.⁶ We also exclude deals that involve firms in countries without corporate governance data available in La Porta et al. (1998). Countries of socialist legal origin in La Porta et al. (1998) terminology are excluded as well. In sum, the base sample includes 16,772 cross-border acquisitions of targets from 41 different countries.

For each observation, we obtain information on the industry classification of the bidder and the target, the dollar value of the transaction, the nationality of the parties involved, and

⁶See Bris and Cabolis (2008).

the date of announcement of the deal.⁷ We have data on the dollar value of the transaction for 7,597 acquisitions. Throughout the paper, we report results for the original sample, unless data on the dollar value of the deal is necessary, in which case we report results for the reduced sample.

We group acquisitions within an industry depending on the industry classification of either the bidder or the target, as outlined above. We calculate the number of listed firms in a given industry, country, and year, as the number of firms recorded by CRSP and Datastream for U.S. and non-U.S. industries, respectively. This allows us to construct measures of merger intensity by country, industry, and year, in the following way:

$$AV_{jit} = \frac{VA_{jit}}{MC_{jit}}, \quad (9)$$

$$AN_{jit} = \frac{NA_{jit}}{NC_{jit}}, \quad (10)$$

for each industry j , country i and year t , and where VA denotes the dollar value of all completed cross-border acquisitions of firms from industry j , and MC the dollar denominated market capitalization of industry j . Similarly, NA is the number of completed cross-border acquisitions and NC is the number of listed companies in the corresponding industry and country. Thus AV_{jit} is a measure of the relative acquisition value in a given industry-country and can be interpreted as the percentage of an industry's market capitalization that is bought by foreigners in a given year. Similarly, AN_{jit} represents the percentage of the publicly listed companies in an industry that are acquired by foreigners in a given year. Taken together, both measures indicate to what extent firms in an industry tend to be acquired by foreign firms.⁸

⁷The dollar value of the transaction is the total value of consideration paid by the acquiror, excluding fees and expenses. It includes the amount paid for all common stock, common stock equivalents, preferred stock, debt, options, assets, warrants, and stake purchases made within six months of the announcement date of the transaction. Assumed liabilities are included in the value if they are publicly disclosed. Preferred stock is included only if it is being acquired as part of a 100% acquisition. If a portion of the consideration paid by the acquiror is common stock, the stock is valued by using the closing price on the last full trading day before the announcement of the terms of the stock swap. If the exchange ratio of shares offered changes, the stock is valued based on its closing price on the last full trading date before the date of the exchange ratio change.

⁸Datastream does not provide information on *all* the firms listed in a given industry. In that regard the

[INSERT TABLE 1]

In Table 1 we report the aggregate AV_{jit} and AN_{jit} series by geographic region. We compare the frequency of cross-border mergers with respect to the frequency of all mergers, be it cross-border or domestic. We distinguish between European-E.U. countries, and European-non E.U. countries. North America, Oceania, and Africa are the regions with the largest volume of acquisitions, relative to market capitalization. In general there is a significant increase in the merger volume during the second half of the 1990s. There are significant differences across regions. The number and value of cross border mergers of firms in North America., Oceania, Central and South America, and Western Europe is relatively higher, compared to Africa and Asia. In North America for instance, 0.45 percent of the market capitalization was acquired by foreign corporations between 1990 and 1994; the ratio increased to 1.43 percent during the years 1995 and 2001.

IV Corporate Governance Indices

In this section we assemble industry-specific corporate governance indices. Our starting point is the indices on shareholder rights and accounting standards from La Porta et al. (1998). As Bris and Cabolis (2008) discuss, these are the indices which are affected by a change in nationality of the target firm in a cross-border merger. The shareholder protection index is the product of shareholder rights multiplied by the efficiency of the judicial system index.

merger ratios we calculate are an approximation. We have also reestimated the regressions in the paper using the market capitalization of a country, and the number of listed firms in the country, as denominators in the corresponding ratios of merger activity. Data on market capitalization and number of firms at the country level is obtained from the IFC manuals. There is no qualitative change in the results. In any case, the discrepancy between the IFC numbers and the by-country data in Datastream is negligible after 1985. That is, the total number of firms (in a country) that we obtain from Datastream, and the total market capitalization of the country, do not differ much from their IFC equivalents. We report results based on industry because their interpretation is more meaningful.

A Corporate Governance quality

Every acquisition in our sample is characterized by four indices: shareholder protection and accounting standards for the country of the acquiring firm, and the corresponding indices for the country of nationality of the target firm. The difference of the corresponding indices between the two countries provides an indication of the *corporate governance quality transfer* that results from the cross-border merger. To illustrate this point suppose for instance that a U.K. firm acquires a Greek firm. Since the shareholder protection index in Greece is 14, and the shareholder protection index in the U.K. is 50, the acquisition serves as a way of contractual transfer of corporate governance practices from the U.K. to Greece, and vice versa.

Given that the La Porta et al. (1998) indices have different ranges, it is difficult to draw comparisons in absolute terms. To overcome this issue we classify countries into two groups for each index, depending on whether the corporate governance indicator for a country is above or below the median. We assign a value of 1 to the corresponding index when the country of nationality of the firm has an index above the median, zero otherwise. We use this procedure to characterize both the target and the acquiring firm. In the previous example, since the median shareholder protection index is 20, we assign to Greece an index of shareholder protection of 0, and we assign to the U.K. an index of shareholder protection of 1. We measure the corporate governance transfer from the U.K. to Greece as the difference between the shareholder protection indices in the two countries: $1 - 0 = 1$.

Ultimately, we have three types of cross-border mergers with respect to corporate governance transfer index: *corporate-governance-improving* acquisitions (difference index equals to one), *corporate-governance-preserving* acquisitions (difference index equals to zero), and *corporate-governance-worsening* acquisitions (difference index equals to minus one). We classify the acquisitions from both the target and the acquiring firm's point of view.

In an earlier version of this paper⁹ we used the absolute difference between the corporate governance indices of the acquiring and target firms. Qualitatively, our results were not different from the ones presented here. However, our methodology implicitly weighted equally acquisitions between firms with very different levels of investor protection.¹⁰ By adopting the

⁹Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=321101

¹⁰For instance, in absolute terms and from the shareholder protection perspective, an acquisition of a

current classification between two categories, we address this issue. In addition, we reduced the impact of a potential errors-in-variables problem that may exist in the La Porta et al. (1998) indices. Finally, we take the conservative approach of considering the effect of corporate governance changes in mergers between firms with very high and very low levels of investor protection.

Table 2 shows the shareholder protection and accounting standards indices for the cross-border acquisitions in our sample, classified into two equal time subperiods. The numbers reported are the percentage of cross-border mergers that are corporate-governance worsening, preserving, and improving, from the point of view of the target firm. Our results are in contrast with Rossi and Volpin (2004), who report that the corporate governance quality of acquirors in cross-border mergers is significantly higher than the quality of targets. We show that in the period 1995–2001, the largest percentage of cross-border mergers—64.94 percent—are between firms in countries with similar levels of shareholder protection. Indeed, there are more cross-border transactions where a below-median shareholder protection acquiror buys an above-median shareholder protection target (18.13 percent of the cases) than the reverse (16.93 percent).

[INSERT TABLE 2]

The next step is to average the previous indicators across firms in an industry, country and year. To separate the effect of the acquisitions on acquiring and target firms, we first consider, for every industry, only those acquisitions where firms in the industry are target firms. We then calculate weighted averages where the weight is the dollar value of the acquisition. In the case of no cross-border merger activity within a particular industry and year, we set the corresponding difference index to zero. This is equivalent to having cross-border mergers between firms in countries which both have corporate governance indices either above or below the median.

Weighting by the dollar value of the merger has one important advantage. The difference in corporate governance quality between the acquiring and target firms for a given industry will tend to zero as the number of cross-border mergers tends to zero. Therefore, our indices reflect the volume of cross-border mergers in a given industry, as well as the differential

Norwegian firm by a U.S. acquiror is equivalent to an acquisition of a Peruvian firm by a Swiss firm.

quality of the firms involved in the acquisition in terms of corporate governance practices. However, because we only weight those cross-border mergers where the levels of investor protection in the acquiror and the target differ, we are in fact using the subsample of mergers where the levels of investor protection in the acquiror and the target are the same, and the subsample of firms that do not get involved in acquisition activity, as a natural control sample.

V The Value of Corporate Governance: Industry-level Evidence

In this section, we analyze the relationship between industry value measured by the Tobin’s Q and the merger-specific corporate governance indicators.

A Investor Protection and Industry Value

Let q_{jit} be the natural logarithm of the Tobin’s Q in industry j , country i , and year t , calculated as described in III.A. For any set of corporate governance variables \mathbf{G}_{jit} —be it the index corresponding to either the target or the acquiring firms, or the difference between them, or both—we estimate the following regression:

$$q_{jit+1} = D_{jt} + \delta AV_{jit} + \theta H_{jit} + \beta \mathbf{G}_{jit} + \varepsilon_{jit} \quad (11)$$

We use a panel of 7,233 industry-country-year observations. D_j is a vector of (39×11) industry-year fixed effects, which captures any specific event affecting industry j in year t . We estimate the model with country-year random effects, which allow us to isolate idiosyncratic events like, for instance, the prediction by Pagano and Volpin (2005) that the frequency of mergers and acquisitions is negatively correlated with employment protection. Similarly, merger laws or their lack thereof, affect the number of mergers. In countries and periods without a merger law, SDC reports a limited number of acquisitions. The reason is that, absent a merger law, there are not notification requirements for the acquiror, and therefore mergers take place without public knowledge. Finally, in some countries, acquisitions represent an important part of the drive to change control, while in other countries

acquisitions play a minor role.¹¹ This type of effects will be captured by our I_{it} .

The value of the industry is also determined by three industry–country–year specific characteristics. We first control for the dollar volume of cross–border mergers, AV_{jit} , as calculated in equation (9). Therefore we separate the corporate governance characteristics of the acquiring firms from the merger volume in a particular industry. We additionally control for the Herfindahl index of the industry, H_{jit} , which is calculated using the dollar value of the sales in every firm in the industry, with available data from Datastream. The Herfindahl index is also time-variant. Eckbo (1985) fails to find evidence that there exists a positive relationship between industry concentration and the benefits to rivals of merging firms, as industrial organization models like Stigler (1964) would predict.

An usual claim is that dual listing of securities in the U.S. is a means for foreign issuers to commit to better governance (Coffee, 1999B). There is some evidence that the announcement of an American Depositary Receipt (ADR) has a positive and significant effect (Miller, 1999), which becomes larger for firms from countries with weaker investor protection (Lins et al., 2001). These results would seem to indicate that convergence to a better corporate governance is possible through a cross listing, and it creates firm value. To measure the importance of cross-listings as an alternative way in which corporate governance can be imported, we collect, for each industry and country in our sample, information on how many firms are listing in a U.S. exchange every year either through a direct listing or an ADR, and compute the percent of listed firms. We use this fraction as explanatory variable in the regression. Our hypothesis is that industries will be more valuable the more foreign-listed firms there are.

Our specification offers two additional advantages. Unlike La Porta et al. (2002), who have to estimate a random effect model because of the time invariance of the corporate governance measures, we specify the more natural industry–year fixed effect model. In addition, because of the availability of time–varying industry data, our results are interpretable in a time–series setting. That is, the vector of coefficients β indicates to what extent a change in the corporate governance indices in industry j , country i , from time $t - 1$ to t , determine

¹¹In countries with concentrated ownership—all except the U.S., Canada, and the U.K.—control changes take the other forms different from public acquisitions. See Dyck and Zingales (2004) and Bris et al. (2007), for an analysis of takeover laws and their effect on merger activity.

the change in the Tobin's Q of the industry in the next period.

A.1 First Results

Table 3 reports the result of the estimation when the dependent variable is the Tobin's Q of the industry of the target firms. The independent variables in the estimation are the corresponding corporate governance indicators for the average acquiror in that industry, the average of the corporate governance index differences between the acquiror and the target, and a decomposition of the previous variable between positive and negative values. We also control for the shareholder protection and the accounting standards of the target firm's country.

Our results show that adopting better shareholder protection increases industry value. We find that the Tobin's Q of the industry is higher the better the protection provided in the country of origin of the firms acquiring in the home industry.

[INSERT TABLE 3]

The Tobin's Q of the target industry is higher the larger the difference in protection between the acquiring and the target firms. However, this result is not statistically significant. We obtain similar results for accounting standards. Therefore, it seems in principle that changes in corporate governance induced by cross-border mergers do not bring about any valuation effect in the industries involved, in contrast with the firm-specific results presented by Bris and Cabolis (2008).

There is a positive and significant effect of cross-listings. In model I, a 10 percent increase in the number of cross-listed firms in the industry, increases Tobin's Q by about one percent. This result is statistically significant at the 10 percent probability level.

VI Improvements and Deteriorations in Investor Protection

In this section we differentiate cross-border mergers depending on the relative indices of investor protection of the acquiror and the target. Specifically, we decompose the industry corporate governance indices into positive and negative values. A positive value means that

the average investor protection of the industry improves as a result of cross-border mergers. Similarly, a negative value means that the average acquiror comes from a country with a lower value of the corresponding index of investor protection.

In Table 4 we present the results of our panel estimation. In contrast to Table 4, we now find significant effects of corporate governance changes. In particular, when we consider only the industries where the difference in shareholder protection between the acquiror and the target is positive, the estimated coefficient is 0.046, significant at the 10 percent level. The economic significance of such an effect can be substantial. To illustrate that, suppose we consider the ‘Telecommunications’ industry in South Korea. South Korea has a shareholder protection index of 10.7, a value below the median. Suppose 20 percent of the firms in that industry are acquired in 1998 by Spanish firms. Spain has a shareholder protection index of 25, a value that is above the median. Therefore, the shareholder protection index of the Telecommunications industry in 1998 in South Korea increases by 0.2 points, and, from the regression in Table 4, the Tobin’s Q of the industry increases 0.9 percent. Note that this result is independent of the quality of the firms involved and depends only on the quality of corporate governance in the country of nationality of both the acquiring and the target firms.

We also find that adopting better accounting standards significantly increases industry value. In model II, the coefficient of the “Accounting Standards Difference if >0” is 0.059, significant at the 10 percent level. Translated into economic terms, the coefficient means that an increase in the accounting standards of the industry of 0.2 (meaning that 20 percent of the firms in the industry are bought by firms coming from better governance environments) leads to an increase in Tobin’s Q of 1.2 percent.

[INSERT TABLE 4]

The valuation effects of changes in investor protection are not symmetric. That is, while we find that increases in the level of shareholder protection increase the value of the industry in which the target firm operates, it is not true that reductions in the level of protection harm target industries. Given that acquiring firms are not required to alter the corporate management, we suspect that there is some contractual arrangements that facilitate a transfer of better practices.

With respect to accounting standards though, we find a highly significant impact of reduction in accounting standards on industry valuation. In fact, when 20% of the industry value is acquired by firms coming from countries with weaker accounting standards, the Tobin's Q of the industry increases by 1.6%. We show in the next sections that this result is driven by a non-linear relationship between accounting standard changes and Tobin's Q.

A Results by OECD membership

We are now interested in determining which countries benefit the most from improvements in investor protection induced by cross-border mergers. In this section we classify the country of origin of the target firms by OECD membership. OECD membership proxies for economic development and does not depend on subjective classification based on GDP per capita groupings.

In our sample, we have 21 OECD members,¹² and 20 non-OECD members¹³. For the subgroup of non-OECD members, we find a marginally insignificant effect of improvements of shareholder protection, and a positive and significant effect of deteriorations in shareholder protection. The latter result implies that, when 20% of the value of the industry in a non-OECD country is acquired by firms coming from countries with lower levels of investor protection, the industry's Q drops by 3.5%. Conversely, we find a positive valuation effect of deteriorations in accounting standards, for non-OECD members. In economic terms, when 20% of an industry in a non-OECD country is acquired by firms coming from countries with below-median accounting standards, the Tobin's Q of the industry increases by 3.3%. In a (non-reported) regressions with individual countries we find that this result is caused by acquisitions in Ireland.¹⁴

[INSERT TABLE 5]

¹²Australia, Austria, Belgium, Canada, Denmark, France, Germany, Greece, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, South Korea, Spain, Sweden, Switzerland, Turkey, U.S.A., and the U.K.

¹³Argentina, Brazil, Chile, Colombia, Egypt, Hong Kong, India, Indonesia, Ireland, Israel, Malaysia, Pakistan, Peru, Philippines, Singapore, South Africa, Taiwan, Thailand, Venezuela, and Zimbabwe.

¹⁴We think the case of Ireland deserves further research.

B Industry Concentration and Investor Protection

The valuation effect that we identify in the previous sections derives from a spillover of the benefits of improving investor protection in a firm, to the whole industry. As we argue earlier, one argument is that competitors of a firm that is the target of a cross-border mergers are pressured to improve the level of protection they provide to their investors as well, resulting in an overall increase in industry value. Alternatively, pure competition would also predict that, without being forced to improve their governance, non-acquired firms would enjoy the benefits of the cross-border merger because it would allow them to increase their output. Therefore, such spillover effects depends ultimately on competitive forces.

[INSERT TABLE 6]

We proxy competition with the Herfindahl index in each industry, country, and year. In Table 6 we re-estimate our panel regressions using an interactive term between industry concentration and investor protection. Irrespective of which proxy for concentration we use, the sign of the interaction is positive (a negative coefficient when there are governance deteriorations is evidence of a positive effect), but results are statistically insignificant. We conclude that this result is consistent with the theoretical model in Section II, which shows that cross-border mergers always result in increases in profitability irrespective of the number of firms that are acquired, if the industry is competitive enough. Additionally, it is evidence in favor of an imitation effect by other industry participants.

C Possible non-linearities

As in the previous section, the effects of industry concentration suggest a non-linearity in the relationship between corporate governance improvements and valuation effects. If 90% of the market capitalization of a industry is acquired by foreign companies that bring a much better level of investor protection, the effect on industry value will be large. Similarly for industries not exposed to foreign entrants, where one of the firms is acquired by a foreigner: in this case the spillover effects can be sizeable as well. However, for intermediate acquisition volumes the market concentration effect partly offsets the benefits of improving the average investor protection in the industry.

[INSERT TABLE 7]

We test this hypothesis by computing the square value of the indices of investor protection that we use in the previous analyses, and we report the results in Table 7. Once we control for non-linearities, the relationship between improvements in shareholder protection and accounting standards, and Tobin's Q, is positive and statistically significant. The magnitude of the effect of shareholder protection and accounting standards is very similar.

The effect of accounting standard deteriorations reported in Table 3 (which results in an increase in Tobin's Q) is due to a non-linear relationship between accounting standard changes and Tobin's Q. Model I shows a significant concavity, which suggests a maximum level of accounting standard deterioration at which point it has no effect on industry's Tobin's Q.

D Results by Industry

We finally provide results by industry, exploiting the cross-sectional variation in our sample. In Table 8 we report the estimated coefficients in regressions similar to Table 4, by industry group. The positive valuation effect of improvements in shareholder protection is concentrated in a few industries—Construction & Materials, Healthcare Equipment & Services, Pharmaceuticals and Biotechnology, and Steel. Likewise, the positive valuation effects of improvements in accounting standards are driven by: Construction & Materials, Media, Mobile Telecommunications, Tobacco, Travel & Leisure. Interestingly, even though the coefficient of "Difference in Accounting Standards if <0" is negative and significant for the whole sample, it is only significant, but positive, for two industries—Diversified Industrials, and Electronic & Electrical Equipment.

[INSERT TABLE 8]

VII Robustness Issues

A Alternative measures of Corporate Governance Quality

Our study relies exclusively on the corporate governance indices in La Porta et al. (1998). Our seminar audiences have expressed concerns over some aspects of these indices. For instance, La Porta et al. (1998) report that the index of shareholder protection in Germany is lower than the one in the U.S. However, in the Daimler–Chrysler merger, and because the new company was going to be domiciled in Germany, the company had to be run by a two-tier board structure, as required by European regulation.¹⁵ It is questionable that we consider this merger as corporate governance quality decreasing for Chrysler.

Another reasonable concern is that the LLSV index are time invariant and computed from 1998 only, while our dataset spans the period 1998 – 2001. We therefore use two alternative indices of governance quality. The first index is the World Bank indicator of Rule of Law. This index is one of the World Bank Worldwide Governance Indicators (WGI), available for 212 countries and territories over the period 1996–2006. As we use an earlier period, we extend the 1996 indices back to 1990. Additionally, because the World Bank data does not cover all years between 1996 and 2001, we assume for each year without data the value of the index from the previous year. We are therefore able to construct a (somehow) time-varying index of corporate governance quality that takes into account within-country regulatory reform.¹⁶ It measures the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence.

We also employ the adjusted LLSV index constructed by Pagano and Volpin (2005) using questionnaires.¹⁷ We construct similar measures to the differences described in Section IV. With respect to the World Bank (WB) Rule of Law Index, we compute, for each industry, a weighted average of the differences in the index between the acquiror and the target countries, where the weight is the dollar value of the acquisition. We standardize the difference by the market capitalization of the industry. With respect to the Pagano and Volpin (PV) Index, we classify countries in two groups, depending on whether the value of the index is above or below the median. We then weight the $+1/ - 1$ differences by the dollar value of the

¹⁵See Baums (1999).

¹⁶The correlation matrix in the Appendix shows that this measure is positively and significantly correlated with the LLSV indices.

¹⁷For details on the construction of the index, see http://www.e-aer.org/data/sept05_data_snyder.zip

acquisition, and standardize by the market capitalization of the industry.

The two indices are preferable because they are time varying. However, they are both based on purely legal variables that ignore the role of enforcement. The WB Index is based on the quality of the written law alone, and the PV Index is based on the LLSV Antidirector Rights Index, which is a summary of the legal provisions related to shareholder protection. In some countries, and in particular with regards to merger regulation, there is a great difference between what the law says and the common practice.

[INSERT TABLE 9]

We report results in Table 9. We confirm our previous results and show a positive relationship between governance quality and industry's Tobin's Q. Model IV also shows that governance deteriorations are significantly related to reductions in industry value.

B Alternative Explanations. The role of Financial Constraints

The previous sections show that cross-border mergers result in an increase in industry value, and that such increase is larger the better the acquiring firm is, in governance terms, relative to the target industry. We find support for the conjecture that there are spillover effects in corporate governance reform that benefit other firms in the same industry.

An alternative explanation is that cross-border mergers are an efficient way for firms in an industry to reduce their financial dependence on external sources of capital. If the availability of capital is limited in a country, having one firm being acquired by a foreign firm with available capital makes the target firm more valuable. Additionally, it frees up capital to be used by domestic, non-target firms which will also enjoy positive valuation effects.

We test such hypothesis by collecting data on firm's financial dependence. Unfortunately, the standard measure in the literature, which is based on Rajan and Zingales (1998) study in the U.S., provides a measure of financial dependence only for manufacturing firms. In our paper, it can be used only in four of the 39 industries we consider. The Rajan and Zingales (1998) approach has been extended to all industries using regression analysis. The methodology consists of estimating financial dependence as a linear combination of firm

characteristics. However, one of these characteristics is Tobin's Q, which is the endogenous variable in our regressions.

Almeida and Wolfenzon (2005) construct a country-specific measure of financial dependence which is based on Rajan and Zingales (1998). They compute, for each country in their sample, the percent of output produced by manufacturing industries. Then they calculate the weighted average of the Rajan and Zingales (1998) industry measures. The advantage of the Almeida and Wolfenzon (2005) EFN Index is that it proxies financial dependence for all industries. It has the disadvantage that it is not industry specific.

In Table 10 we interact measures of governance improvement with the EFN Index of financial dependence. If our results are caused by more dependent firms benefiting more from cross-border mergers, then the interaction should have a positive coefficient. We find the opposite instead: in model I, the interaction between EFN Index and Negative Difference in Shareholder Protection has a positive coefficient, which suggests a negative effect. In model II, the interaction between EFN Index and Positive Difference in Accounting Standards displays a negative coefficient as well. Overall, we do not find evidence of a role for financial dependence, at least based on the proxies that we have available.

VIII Interpretation of the Results

This paper presents evidence that cross-border mergers may induce firms to improve the protection they provide to their investors, and that this improvement is positively valued by the market. In general, target firms in a weaker corporate governance environment relative to the acquiring firms, adopt the better practices because of a change in the country of incorporation of the firm. We show that this change in the nationality of the target firm is positively valued by the market. It is, however, not true that, when the target firm opts into a less protective country, the market valuation of the target firm's industry decreases. This result is a clear evidence that the merging parties engage in private contracting that aims to overcome the loss in protection for the target's shareholders. We claim that changes in corporate governance for the resulting firm happen at the corporate charter level.

The quality of the accounting standards in the firms involved in a cross-border merger matter. In principle, a transfer of nationality of the target firm implies a change in the accounting standards, by default. In section V.A.1 we find some weak evidence that importing

good accounting standards increases the Tobin's Q of the target industry. As the anecdotal evidence in this paper shows, opting into a particular standard during merger negotiations is fairly easy, and the merging parties sometimes choose accounting standards that are even different from the ones in either the acquiror's or the target's country—the most common choice being either U.S. GAAP or I.A.S. Hence it is not surprising that the evidence we find regarding accounting standards is not conclusive.

We claim that changes in investor protection have an impact on the whole industry of the target firm. We are aware of the potential problems of dealing with industries rather than with firms directly. Initially, if the governance of one firm improves as a consequence of the cross-border acquisition, it is possible for rival firms in the same industry to suffer a loss in value. If better investor protection leads to more efficiency within the target firm, it could make it a formidable competitor with a negative effect on industry valuations. Expropriation of investors in the target firm would then be lower relative to the other industry participants, and investors in the competing firms will prefer to transfer funds to the newly merged firm. The average industry value can therefore increase or decrease as a consequence of the merger. Our results are not consistent with this explanation. However Akhigbe and Martin (2000) provide evidence in favor of value reductions: they show that domestic competitors of cross-border acquisition targets in the U.S. experience a significant increase in stock price upon the announcement of the merger.¹⁸ These mergers are, at most, corporate governance preserving transactions, because acquirors come from less- or equally-protective regimes. From the point of view of the acquiring industry, the rivals of an acquiring firm can perceive the capital investment undertaken by such firm as a positive signal about the value of the industry (Woolridge and Snow, 1990). Mitchell and Mulherin (1996) show that takeover activity has industry-driven factors, which is consistent with this hypothesis.

Whatever the transmission mechanism is, we still prefer to analyze industry-wide effects rather than firm effects. Our interest is on the country-wide benefits of cross-border mergers, so we can draw implications for public policy. In fact, our results at the industry level

¹⁸The effects of corporate events of rival firms have been studied extensively: for stock repurchases, Hertzell (1991); for bankruptcy announcements, Lang and Stulz (1992); for dividend announcements, Laux et al. (1998); for corporate capital investment, Chen et al. (2002); for mergers and acquisitions, Eckbo (1985), among others.

show that, from the point of view of investor protection, cross-border mergers are Pareto improving. We cannot find evidence that the value of an industry reduces as the result of a corporate-governance improving acquisition affecting only some of the industry participants. Quite the opposite, there is strong evidence that the *whole industry* benefits from the improvement in investor protection affecting some firms in an industry. This is evidence, we argue, that the median investor in the industry values it more. Because some firms in the industry are more protective to their investors, competitors feel forced to commit to a better protection themselves, at the risk of being dominated by the more protective firm.

IX Conclusion

This paper presents evidence showing that improvements in investor protection are positively valued by the market. We consider the changes in corporate governance induced by cross-border mergers. For each of 39 industries in 41 different countries, and in the period 1990–2001, we construct measures of the corporate governance quality of the industry by considering the cross-border mergers *by* and *of* firms in that industry. Two corporate governance indicators are considered: shareholder protection and accounting standards. In the absence of cross-border mergers we assign no change in the quality of the investor protection at the firm level. However, for each cross-border acquisition, we calculate the difference in investor protection measured by each of the previously mentioned indicators, provided by the acquiring firm, and the investor protection in the country of the target firm. We weight such a difference by the dollar value of the acquisition and aggregate it across industries, countries, and years. We then investigate the relationship between corporate governance quality changes and Tobin's Q at the industry level.

Our main result is that acquisitions of firms in weaker shareholder protection countries by firms in stronger protective regimes significantly increase the Tobin's Q of the target industry. This result is robust to country, year, and industry characteristics. It is however not true that firms that are acquired by firms in worse corporate governance environments lose value. This evidence is consistent with private contracting between the merging parties that overcomes the negative corporate governance effects of the deal.

Our results do not suggest that corporate governance is a motive for cross-border acquisitions. Even if target firms could opt into the best corporate governance system, it is not

clear that acquirors in such a system would be willing to take over a firm in an environment with worse investor protection. Quite the contrary, our study finds that acquiring firms do not gain or lose value by merging with firms that provide weaker protection to investors and poorer accounting standards. The question is then why these mergers happen, and it goes beyond the scope of this paper.¹⁹

An area for future research is the study of the specific characteristics of cross-border mergers that affect industry value. In our paper, we control for the value of the cross-border acquisitions affecting a particular industry, and show that this ratio has a positive valuation effect for the target industry, and negative effect for the acquiror. Exploring the factors behind these costs and benefits, and documenting the differences between domestic and cross-border mergers, deserves future work.

¹⁹As Alexander (2000) indicates, there can be several reasons why firms undertake cross-border mergers: intensive consolidation or preempting restructuring, battle for scale driven by structural pressures, response to technological changes, increases in scale to market, the need to advertise globally, exhaustion of the domestic merger route, and the opportunity to gain a foothold in new markets.

References

- Akhigbe, Aigbe, and Anna D. Martin, 2000, Information–signalling and competitive effects of foreign acquisitions in the U.S., *Journal of Banking & Finance* 24, 1307-1321.
- Alexander, Lucy, 2000, Corporate Governance and Cross–Border Mergers, Conference Board Research Report 1273-00-RR.
- Almeida, Heitor, and Daniel Wolfenzon, 2005, The effect of external finance on the equilibrium allocation of capital, *Journal of Financial Economics* 75, 133-164.
- Andrade, Gregor, Mark Mitchell, and Erik Stafford, 2001, New Evidence and Perspective on Mergers, *Journal of Economic Perspectives* 15, 103-120.
- Baums, Theodor, 1999, Corporate Contracting Around Defective Regulations: The Daimler–Chrysler Case, *Journal of Institutional and Theoretical Economics* 119, 122-134.
- Beck, Thorsten, and Levine, Ross, 2002, Industry Growth and Capital Allocation: Does Having a Market- or Bank-Based System Matter? *Journal of Financial Economics* 64, 147-180.
- Bris, Arturo, and Christos Cabolis, 2008, The Value of Investor Protection: Firm Evidence from Cross-Border Mergers, *Review of Financial Studies*, forthcoming.
- Bris, Arturo, Christos Cabolis, and Vanessa Janowski, 2007, The Effect of Merger Laws on Merger Activity: International Evidence, in Greg N. Gregoriou and Luc Renneboog, eds., *International Mergers and Acquisitions Activity Since 1990: Quantitative Analysis of Recent Research*, Elsevier.
- Bris, Arturo, and Neil Brisley, 2006, A Theory of Optimal Expropriation, Mergers, and Industry Concentration, working paper.
- Bufford, Samuel L., Louise DeCarl Adler, Sidney B. Brooks, and Marcia S. Krieger, 2001, *International Insolvency*, manuscript, Federal Judicial Center.
- Chen, Sheng-Syan, Lan-Chih Ho, and Yi-Cheng Shih, 2002, Intra-industry effects of corporate capital investments, working paper.

Claessens, Stijn, and Luc Laeven, 2003, Financial Development, Property Rights, and Growth, *Journal of Finance* 58, 2401-2436.

Coffee, John C., 2006, Privatization and Corporate Governance: The Lessons from Securities Market Failure, in Merritt B. Fox and Michael A. Heller, eds, Corporate Governance Lessons from Transition Economy Reforms, Princeton University Press.

Coffee, John C., 1999B, The Future as History: The Prospects for Global Convergence in Corporate Governance and its Implications, The Center for Law and Economic Studies, Columbia University School of Law Working Paper No. 144.

Daines, Robert, 2001, Does Delaware Law improve firm value?, *Journal of Financial Economics* 62, 525-558.

Decher, Christian E., 2001, The Daimler'Chrysler Merger, in Horn, Norbert, (Ed.), *Cross-Border Mergers & Acquisitions and the Law*. Kluwer Law International, U.K., pp. 3-28.

Demirgüç-Kunt, Asli and Vojislav Maksimovic, 1998, Law, Finance and Firm Growth. *Journal of Finance* 53, 2107-2137.

Demirgüç-Kunt, Asli and Vojislav Maksimovic, 1999, Institutions, Financial Markets and Firm Debt Maturity *Journal of Financial Economics*, 54, 295-336.

Dyck, A. and L. Zingales, 2004, "Private Benefits of Control: An International Comparison," *Journal of Finance* 59, 537-600.

Eckbo, B. Espen, 1982, Horizontal Mergers, collusion, and stockholder wealth. *Journal of Financial Economics* 11, 241-273.

Eckbo, B. Espen, 1985, Mergers and the Market Concentration Doctrine: Evidence from the Capital Market, *Journal of Business* 58, 325-349.

Gertner Robert, Eric Powers, and David Scharfstein, 2002, Learning about Internal Capital Markets from Corporate Spinoffs, *The Journal of Finance* 57, 2479-2506.

Gilson, Ronald J., 2002, Globalizing Corporate Governance: Convergence of Form or Function, *The American Journal of Comparative Law* 49, 329-357.

- Gompers, Paul A., Joy L. Ishi, and Andrew Metrick, 2003, Corporate Governance and Equity Prices, *Quarterly Journal of Economics*, forthcoming.
- Griliches, Zvi, and Jerry A. Hausman, 1986, Errors in variables in panel data, *Journal of Econometrics* 31, 93-118.
- Hertzel, Michael G., 1991, The Effects of Stock Repurchases on Rival Firms, *The Journal of Finance* 46, 707-716.
- Himmelberg, Charles, Hubbard, R. Glenn, and Love, Inessa, 2002, Investor Protection, Ownership, and the Cost of Capital. World Bank Working Paper Series No. 2834, Washington, D.C.: World Bank.
- Horn, Norbert, 2001, Cross-Border Mergers & Acquisitions and the Law: A General Introduction, in Horn, Norbert, (Ed.), *Cross-Border Mergers & Acquisitions and the Law*. Kluwer Law International, U.K., pp. 3-28.
- Hyytinen, A., I. Kuosa, and T. Takalo, 2003, Law or finance? Evidence from Finland, *European Journal of Law and Economics* 16, 59-89.
- Johnson, Simon, Boone, Peter, Breach, Alasdair, and Friedman, Eric, 2000, Corporate Governance in the Asian Financial Crisis. *Journal of Financial Economics* 58, 141-186.
- Glaeser Edward, Simon Johnson, and Andrei Shleifer, 2001, Coase versus The Coasians, *The Quarterly Journal of Economics* 116, 853-899.
- Johnson, Simon, and Andrei Shleifer, 2002, Coase and Corporate Governance in Development, working paper.
- Kaplan, Steven N., and Luigi Zingales, 1997, Do investment-cash flow sensitivities provide useful measures of financing constraints?, *Quarterly Journal of Economics* 112, 169-216.
- Kasey Kevin, and Mike Wright, 1997, Corporate Governance. John Wiley and Sons, New York.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny, 1998, Law and Finance, *Journal of Political Economy* 106, 1113-1147.

- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny, 2000, Investor Protection and Corporate Governance, *Journal of Financial Economics* 58, 3-27.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny, 2002, Investor Protection and Corporate Valuation, *The Journal of Finance* 57, 1147-1170.
- Lang, Larry, and René Stulz, 1992, Contagion and competitive intra-industry effects of bankruptcy announcements, *Journal of Financial Economics* 32, 45-60.
- Laux, Paul A., Laura Starks, and P. Yoon, 1998, The relative importance of competition and contagion in intra-industry information transfers: An investigation of dividend announcements, *Financial Management* 27, 5-16.
- Lins, Karl V., Deon Strickland, and Marc Zenner, 2001, Do Non-U.S. Firms Issue Equity on U.S. Exchanges to Relax Capital Constraints?, *The Journal of Financial and Quantitative Analysis* 40, 2005, 109-133.
- Mitchell, Mark L., and J. Harold Mulherin, 1996, The impact of industry shocks on takeover and restructuring activities, *Journal of Financial Economics* 41, 193-229.
- Moon, H. Song, and Ralph A. Walkling, 2000, Abnormal returns to rivals of acquisition targets: A test of the ‘acquisition probability hypothesis, *Journal of Financial Economics* 55, 143-172.
- Mørck, Randall Yeung, Bernard, and Yu, Wayne, 2000, The Information Content of Stock Markets: Why do Emerging Markets have Synchronous Price Movements? *Journal of Financial Economics* 58, 215-260, 2000.
- Muchlinski, Peter, 1997, *Multinational Enterprises and the Law*. Blackwell Publishers, U.K.
- Pagano, Marco, and Paolo Volpin, 2005, The Political Economy of Corporate Governance, *American Economic Review* 95(4), 1005-1030.
- Pagano, Marco, and Paolo Volpin, 2006, Alfred Marshall Lecture Shareholder Protection, Stock Market Development, and Politics, *Journal of the European Economic Association* 4, 315-341.

Pistor, Katharina, 2006, Patterns of legal change: shareholder and creditor rights in transition economies, in Merritt B. Fox and Michael A. Heller, eds, *Corporate Governance Lessons from Transition Economy Reforms*, Princeton University Press.

Pistor, Katharina, Yoram Keinan, Jan Kleinheisterkamp, and Mark West, 2003, Evolution of Corporate Law and the Transplant Effect: Lessons from Six Countries, *World Bank Research Observer* 18, 89-112.

Rajan, Raghuram, and Luigi Zingales, 1998. Financial dependence and growth. *American Economic Review* 88, 559–573.

Rossi, Stefano, and Paolo Volpin, 2004, Cross-Country Determinants of Mergers and Acquisitions, *Journal of Financial Economics* 74, 277-304

Salant, Stephen W., Sheldon Switzer, and Robert J. Reynolds, 1983, Losses from Horizontal Merger: The Effects of an Exogenous Change in Industry Structure on Cournot-Nash Equilibrium, *The Quarterly Journal of Economics* 98, 185-199.

Shin Hyun-Han, and René M. Stulz, 1998, Are Internal Capital Markets Efficient?, *The Quarterly Journal of Economics* 113, 531-552.

Shleifer, Andrei and Robert W. Vishny ,1986, Large Shareholders and Corporate Control, *Journal of Political Economy* 94, 461-488.

Shleifer, Andrei, and Robert Vishny, 2003, Stock Market Driven Acquisitions, *Journal of Financial Economics* 70, 295-311.

Simonov, Andrei, and Mariassunta Gianetti, 2006, Which Investors Fear Expropriation? Evidence from Investors' Stock Picking, *The Journal of Finance* 61, 1507-1547.

Stigler, George J., 1964, A Theory of Oligopoly, *The Journal of Political Economy* 72, 44-61.

Stulz René M., 1981, On the Effects of Barriers to International Investment, *The Journal of Finance* 36, 923-934.

Woolridge, J. Randall, and Charles C. Snow, 1990, Stock Market Reaction to Strategic Investment Decisions, *Strategic Management Journal*, 11, 353-363

Wurgler, Jeffrey, 2000, Financial Markets and the Allocation of Capital. *Journal of Financial Economics* 58, 187-214.