

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

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Abstract

International law prescribes that in a cross-border merger, the target firm becomes a national of the country of the acquiror. Among other effects, the change in nationality implies a change in investor protection, because the law that is applicable to the newly merged firm changes as well. More generally, the newly created firm will share features of the corporate governance systems of the two merging firms. Therefore, cross-border mergers provide a natural experiment to analyze the effects of changes—both improvements and deteriorations—in corporate governance on firm value. We construct measures of the change in investor protection induced by cross-border mergers in a sample of 39 industries from 49 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. Interestingly, we also find positive valuation effects for the acquirors, when they come from poor-protection countries. All in all, we present evidence that the transfer of corporate governance practices through cross-border mergers increases industry value in those countries where corporate governance is weak, by allowing firms to buy and be bought by firms in more protective systems.

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 changing corporate governance practices 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. 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. Within a given industry in a country, we can measure the average change in investor protection by considering the acquisitions *of and by* firms in such industry. We then relate these changes in investor protection to a measure of value—the median Tobin's Q of the firms in the industry.

Our sample includes more than 15,000 cross-border acquisitions in the period 1990–2001, corresponding to firms in 39 industries and 49 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, we assume that the average corporate governance index of the industry changes and that merging firms adopt the governance system of the other party. We use four indicators of investor protection: shareholder protection, creditor protection, accounting standards, and corruption. We argue in the next section that shareholder protection practices can be transferred to a firm through a cross-border merger. However, as La Porta et al. (2000) recognize, creditor protection is

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 Mørck et al. (2000); and even the severity of currency crises, in Johnson et al. (2000).

not transferrable because the assets of the target firm remain under the jurisdiction of the country of the firm's physical location even in the case of a cross-border acquisition. Additionally, we consider the indices of accounting standards and corruption. We claim that, while accounting standards at the firm level are highly influenced by merger activity, corruption is inherent to the country where a firm operates and it is, therefore, invariant to changes in control. Consequently, imposing a change in creditor protection and corruption by construction, implicitly tests the validity of our initial assumptions.

We estimate panel regressions where the Tobin's Q of the corresponding industry is the endogenous variable. We control for country-year and industry fixed effects. Additionally, we control for other industry-country specific characteristics, like the concentration and the merger activity in the industry and country under consideration. The key explanatory variables are the various indices of corporate governance change that we construct. We find that a given industry's Q increases when firms of this industry are acquired by firms from countries with better shareholder protection and accounting standards. Industry Q is not affected by the quality of creditor protection or the degree of political corruption of the acquiring firm's country.

In addition, we analyze the acquiring industry's Q. When a firm from a country with strong corporate governance acquires a firm from a country with weak corporate governance, the Tobin's Q of the acquiring industry is not affected. This is consistent with the prescriptions in international law. Furthermore, there is weak evidence that when a firm from a country with poor corporate governance acquires a firm from a country with better corporate governance, the Tobin's Q of the acquiring industry increases. Given that acquirors are not required to adopt the corporate governance practices of the target, we argue that this result is an indication of private contracting on the part of the merging firms whereby the newly created firm adopts elements of the corporate governance system of the target firm. There is ample anecdotal evidence confirming that this can be the case.² We further find that there is a positive and significant impact on the Tobin's Q of the acquiring industry if the target firm belongs in a relatively less corrupted environment. This result is consistent with corruption being inherent to the country where the firm operates, not the country where the firm is either domiciled or incorporated, if different.

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

²For instance Astra AB (Sweden) merged in 1999 with Zeneca PLC (UK) to create AstraZeneca PLC, a UK-domiciled company. As a British company, AstraZeneca follows the corporate governance structure laid out in the Combined Code of the London Stock Exchange Listing rules (see Alexander, 2000). However, certain aspects of the Swedish model were more protective to shareholders. In most Swedish companies, boards are made up entirely of non-executive directors, while in the UK there is a balance between executives and non-executives on the board. The merger agreement stipulated a provision for non-executive directors to take a more proactive role than executive directors. Moreover, directors stand for re-election every year.

are enjoying an increased market valuation by the better-protected median investor. Interestingly, industries consisting of target firms that would be harmed by adopting practices of a less protective country do not seem to be negatively affected. Confirming the quote at the beginning of this paper, we do find evidence that corporate governance considerations significantly affect the valuation effects of cross-border mergers, even at the industry level.

Our choice of industries as the unit of analysis needs some explaining as to why such a level of aggregation is the appropriate one for this paper. There are three reasons why we study industries, rather than countries or firms.³ 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. This is not possible with country-level data. Second, focusing on the impact of cross-border mergers on the involved firms only limits the scope of our analysis, and—by forcing us to analyze mergers that actually happen only—severely biases the results. The use of industries solves this problem, since we can construct a control sample of industries where merger activity is absent, and we can therefore isolate the pure valuation effects of corporate governance changes. Finally, there exist alternative mechanisms to mergers that lead to corporate governance change, such as institutional ownership and external monitoring. 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.

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, 2000, for transition economies, and Hyytinen et al., 2001, for Finland). To the best of our knowledge, ours is the first attempt

³Section VII.A in page 21 is entirely devoted to issue.

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. Our paper is also related to Kuipers et al. (2003), who show that the return to targets of cross-border deals in the U.S. is positively related to the quality of the investor protection in the acquiror's country. In our paper differences in valuation arise instead mainly from differences in the legal environment in the target country. Finally, our paper is in the same spirit as Daines (2001), who provides cross-sectional 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' 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 III describes the data and its sources. Section IV outlines the construction of industry-level corporate governance indices from the original merger sample. Section V analyzes the relationship between industry value and corporate governance. Section VI furnishes some evidence using a control sample of industries without corporate governance changes and section VII concludes. To begin, however, we need to establish how cross-border mergers alter the level of protection provided to the investors of the merging firms and we do this in the following section.

II Governance Transfer due to Mergers and Acquisitions

Corporate governance concerns the enhancement of corporate performance via the supervision, or monitoring, of management performance and ensures the accountability of management to investors (Kasey and Wright, 1997). The type and the extent of management supervision—which may or may not be choice variables for the firm—depend on legal rules; they . Obviously, if the legal rules change, the governance of a firm may also change. A formal change of the law will alter the rules and, therefore, the governance. Most importantly for us, a contractual arrangement between two firms may *effectively* change the legal rules and subsequently the corporate governance structure. It is the latter type of change in the rules

that we are focusing on in this paper. Specifically we are studying the effects that cross-border mergers have on management control and ultimately on the performance of a firm. In this section we discuss how cross-border mergers affect the effective legal environment of both the acquiror and the new merged firm, and the potential corporate governance implications of such a change.

With the caveats detailed below, a cross-border merger entails a change in the nationality of the target firm, and therefore a change in the Corporate Law—or Commercial Code—applicable to the firm. For example, DaimlerChrysler, which is the result of the merger of a German and a U.S. company, is domiciled in Germany. As such, it has adopted a two-tier board structure, as required by German law. In principle, it is possible that contractual arrangements between the parties involved in a cross-border merger circumvent the legal effects of the transaction, implying that in some cases the acquiring firm adopts the practices of the target. Thus, the merging parties can make contractual arrangements so that the merged firm reports using the accounting standards of the target firm’s country or a third country. For instance, the firm resulting from the merger of Denmark Unidanmark (acquiror) and Merita Nordbanken from Sweden in 1996 started to report in Swedish GAAP—the standards of the target firm—following the agreement of both groups of shareholders. In other cases the legal system prevents the transfer of corporate governance practice: foreign firms acquiring in the U.S. with stock, for instance, must register their securities with the S.E.C., thereby acquirors must comply to some extent with the legal rules in the country of nationality of the target firm.

Our challenge is to identify changes in investor protection induced by changes in the *nationality* of the target firm.⁴ In what follows, we discuss the implications of such a change for the four indices of corporate governance that we use in the paper. In particular, we focus on the protection provided to the shareholders and the creditors of the target firm. We additionally discuss the changes in accounting standards and political corruption induced by cross-border mergers.

Finally, an important distinction to make is that the resulting corporate law that applies to a firm after a cross-border merger can be different from the law applicable to the acquisition itself. The U.S. regulation, for instance, requires foreign acquirors of a corporation where at least 10 percent of the shares are held by U.S. investors to comply with the Williams Act.⁵ Therefore U.S. law applies to the acquisition, notwithstanding the nationality of the parties involved, and the law that applies to their practices.

⁴Nationality is defined here as the location of the company’s headquarters. The law applicable to companies can be determined according to two principles. According to the ‘seat theory’, the relevant law is the law of the location of a company’s headquarters. According to the ‘incorporation theory’, the relevant law is the law of the country of incorporation. The seat theory is dominant in the U.S. and Europe (see Horn, 2001).

⁵See Securities Act Release No. 33-6897 (June).

A Shareholder protection

Shareholder protection refers to the protection provided by the corresponding Corporate Law or the Commercial code to the shareholders of a company. The law applicable to companies is the law of the country of nationality of the firm. In principle, the relevant protection is not determined by the country of nationality of the shareholders, the country where the firm operates, or the country where some firm's assets are located, when these are different from the country of nationality of the firm. Therefore, the location of the shareholders of the company is in principle irrelevant (Horn, 2001.) In a cash-for-stock merger, the shareholders of the newly created firm are the old shareholders of the acquiror, but in a stock-for-stock merger, some shareholders of the newly created firm will be located in the country of nationality of the target. Consequently, a cross-border merger results in the change of nationality of the target firm, the laws applicable to the firm, and possibly a change in the level of shareholder protection provided by the law to the shareholders of the target firm.

There are important exceptions to this rule. The most important is the principle of *extraterritoriality*, which dictates that in certain cases a state can assert jurisdiction over its nationals abroad. In the case of cross-border mergers, a host state is entitled to subject a foreign-owned subsidiary to local corporate law, by reason of domicile of the subsidiary (Muchlinski, 1997). This becomes relevant when rights of minority shareholders are to be protected in a country different from the country of nationality of the firm. However, the extraterritoriality of corporate law is not applied when 100 percent of the shares of a company are acquired by a foreign firm. The reason is that the extraterritoriality of corporate law has been applied in international law following what is known as a 'nationality test' (Muchlinski, 1997). The domicile of the target firm only remains in the host country if less than 100 percent of the shares of the target are acquired by the foreign firm. The textbook case that illustrates the nationality test is Fruehauf, where Fruehauf France SA was a company two-thirds owned by its American parent. The French regulation was applied to a case involving exports by Fruehauf France to the People's Republic of China, which were prohibited under the U.S. Trading with the Enemy Legislation (Muchlinsky, 1997). The U.S. Treasury Department accepted that the French subsidiary was under control of French law by domicile, even though it was legally a U.S. corporation.

Another exception relates to the design of the cross-border merger, which can determine the law that is applicable to the new firm. In the Daimler-Chrysler merger, for instance, German incorporation was chosen because the transfer of control of a German company to a foreign firm is prohibited by law (Decher, 2001). Moreover, tax issues were also of a great importance because the exchange of Daimler-Benz shares into a U.S. corporation would have triggered an enormous tax expense for Deutsche Bank, the largest shareholder of Daimler-Benz. In the Hoechst / Rhone-Poulenc business combination, the parties agreed

that the French Rhone-Poulenc SA would be chosen as the surviving entity, irrespective of the larger business value of Hoechst, because of tax reasons. In these cases, the definition of ‘acquiror’ and ‘target’ are quite arbitrary. In the case of cross-border mergers, the Securities Data Corporation—our source of data—considers the acquiror to be the surviving firm, and therefore from SDC data, one can conclude that the corporate law applicable to the newly created firm is the law of the country of nationality of the acquiror, defined in this way.

To conclude, absent contractual arrangements between the parties, international law states that acquisitions of 100% interest in a company by a foreign firm result in a change of the law applicable to the target firm.

B Creditor rights

To the extent that a U.S. multinational, for example, cannot force Chapter 11 on the default of one of its subsidiaries in another country, creditor protection is not transferrable from the U.S. to that country. La Porta et al. (2000) intuitively argue that importing creditor protection by acquiring a firm in another country is not possible, because corporate assets remain under the jurisdiction of the country where they are located and not under the jurisdiction where the firm is incorporated. This, in principle, is correct, with some caveats that we describe next.

For secured claims, it is generally assumed that the law of the situs of the collateral is the applicable law for all purposes. Generally, this rule is well founded for real estate. There is, however, a relevant debate in international law regarding intangibles, which by nature do not have a physical location. In general, if fixed assets are the collateral of the target firm’s debt, the law applicable to those assets—and therefore to the creditors—of the target firm remains in the host country.

In certain cases, however, courts in the country of nationality of the firm have jurisdiction over assets located in other countries. U.S. courts, for instance, have jurisdiction over bankruptcy cases where creditors or assets are in the U.S., irrespective of the nationality of the firm (U.S. Bankruptcy Code §304). The U.S. law applies either when the assets or the creditors are located abroad. For instance, if a U.S. firm acquires a firm in Argentina, U.S. courts have jurisdiction over the assets of the newly created firm in Argentina. Section §541(a) of the U.S. bankruptcy code establishes that the estate includes all of the assets of the debtor, “*wherever located and by whomever held*”. The U.S. follows the *universality approach*, under which an insolvency case should be treated as a single case, and creditors should be treated equally irrespective of their location. In contrast, under the *territoriality approach* each country has jurisdiction over the assets of the firm located within the country.⁶

⁶See Bufford et al. (2001).

To summarize, the acquisition of a firm in a host state by a foreign firm does not change the jurisdiction of the insolvency proceeding to the foreign country, as long as either creditors or assets remain in the host country. However a conflict of jurisdiction may arise if the country follows—like the U.S.—the universality approach. Therefore creditor protection is—in general—invariant to changes in control. Note finally that the jurisdiction over the firm’s assets cannot be agreed upon by the merging parties, since boards of directors represent shareholders’ interests only, unless the firm is in distress.

C Final note

Corporate law provides the minimum standards that a firm must comply with, in order to be legally operational. However, nothing precludes merging firms to adopt stricter rules than the ones prescribed in the law. Indeed, the anecdotal evidence we provide above points to situations where firms opt to more austere practices than the ones imposed by the target country’s corporate law. The methodology that we adopt in the empirical section is the practice prescribed by corporate and international laws and designates the minimum adjustment that merging firms must legally undertake. The exceptions, where firms adopt stricter rules, make our findings stronger.

D Accounting standards

The resulting accounting standards of a newly merged firm are by default the accounting standards of the country of nationality of the acquiring firm. This derives from the discussion on the relevant corporate law above. As an example, in the 1999 acquisition of Canadian Seagram by French Vivendi, the newly merged firm adopted the French accounting system. Similarly, Seita, a French Tobacco company, was acquired in October 1999 by Tabacalera, from Spain, to form a new entity called Altadis, which started to report under Spanish GAAP. Firms can exceptionally alter that situation via contractual arrangements, as in the Unidanmark – Merita Nordbanken transaction described above.

Note that, although contractual arrangements can improve the accounting standards of the merged firm, in some situations firms decide not to do so. The case of Altadis is representative of this situation, whereby a French company changed its standards to Spanish GAAP, which La Porta et al. (1998) rank below the French GAAP in terms of quality.

E Corruption

The kind of corruption measured in La Porta et al. (1998) is political corruption. It refers to ‘*bribes connected with import and export licenses, exchange controls, tax assessment, policy protection, or loans*’. Therefore a firm operating internationally is affected by the corruption in the country where it operates,

the country where it pays taxes, if different, and the country where its creditors are located.

A cross-border merger affects the level of corruption that involves both the acquiring and the target firm. When acquiring abroad, a firm must get involved with the system of political relations prevailing in the country where the target firm operates. Similarly, the target firms becomes subject to the—possibly—corrupted system of the acquiring company’s country.

There is evidence in the literature that foreign investors are affected by the corruption level in the host country. Simonov and Gianetti (2002), who use data on investment choices by individual investors in Sweden, show that individuals who are more likely to have connections with the local financial community and have access to information prefer to invest in firms where there is more room for extraction of private benefits of control.

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 by the 39 industrial groups defined in Datastream.⁷ 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 hand-match 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.⁸

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 of equity (number of shares outstanding times price per share) plus the book

⁷Datastream Industrial classifications exist at six levels. Level four comprises 39 sectors based on the FTSE Actuaries System. Firms are classified depending on the first Industrial classification provided by Datastream. Our results are robust to the exclusion of conglomerates from the initial sample.

⁸Shin and Stulz (1998), and Gertner et al. (2002) also calculate industry Tobin’s Q using the median Q of the firms within each industry.

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—combining 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 Q for 7,597 observations, which correspond to 39 industries from 49 different countries, for a period of 11 years. We combine this data with our sample of mergers, as described in the following section.

B Merger and Acquisitions Data

The mergers database includes all the cross-border acquisitions of public companies available in Securities Data Corporation, from January 1, 1990, through December 31, 2001. Only completed transactions are considered, 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 privatization. Because corporate governance changes are effective by law only when 100 percent of the shares of the target get acquired, our sample includes only this type of transactions. We also exclude deals that involve firms in countries that lack corporate governance data available in La Porta et al. (1998). In sum, the base sample includes 16,772 cross-border acquisitions of targets from 49 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 the date of announcement of the merger.⁹ We group acquisitions by the industry of either the bidder or the target. 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

⁹The dollar value of the transaction is the total value of consideration paid by the acquirer, 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 acquirer 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.

merger intensity with respect to the value of acquisitions (AV) as well as the number of acquisitions (AN) in the following way:

$$AV_{jit} = \frac{VA_{jit}}{MC_{jit}}, \quad (1)$$

$$AN_{jit} = \frac{NA_{jit}}{NC_{jit}}, \quad (2)$$

for each industry j , country i and year t . In (1), 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 is acquired by foreigners in a given year. Taken together, both measures indicate to what extent an industry is the subject of acquisition activity by foreign firms.¹⁰

[INSERT TABLE 1]

In Table 1 we show 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. We report 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 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, creditor rights, efficiency of the legal system, accounting standards, and corruption

¹⁰Datastream does not provide information on *all* the firms listed in a given industry. In that regard the 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.

from La Porta et al. (1998). They also provide the legal origin for each of the 49 countries in our sample. Shareholder rights and creditor rights multiplied each by the efficiency of the legal system provide the shareholder protection and creditor protection indices, respectively.

A Corporate Governance quality

Every acquisition in our sample is characterized by eight indices: shareholder protection, creditor protection, accounting standards, and corruption, for the acquiring firm’s country, and the corresponding indices for the target firm’s country. 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 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, and 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 an index of shareholder protection of 0 to Greece, and 1 to the U.K. 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 perspective.

In an earlier version of this paper we used the absolute difference between the corporate governance indices of the acquiring and target firms.¹¹ 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.¹² By adopting the current classification between two categories, we address this issue. In addition, we reduce 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

¹¹Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=321101

¹²For instance, in absolute terms and from the shareholder protection perspective, an acquisition of a Norwegian firm by a U.S. firm is equivalent to an acquisition of a Peruvian firm by a Swiss firm.

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, creditor protection, accounting standards, and corruption indices for the cross-border acquisitions in our sample. 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. The reason for the discrepancy is that Rossi and Volpin (2004) focus on the ratio of cross-border mergers relative to the total number of mergers in a country. Therefore, their finding that there are more mergers of firms in poor corporate governance countries by firms in strong corporate governance countries is driven by the positive correlation between the frequency of mergers—both domestic and cross-border—and the quality of the governance system. 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. Also, there are more cross-border transactions where a below-median shareholder protection acquiror buys an above-median shareholder protection target (18.13 percent) than the reverse (16.93 percent). The results in the period 1990–1994 are qualitatively similar.

[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. We repeat the same procedure considering only those acquisitions where firms in the industry are the acquirors. This procedure allows us to run regressions on the same sample, but identifying the impact of the cross-border merger on acquirors' and targets' value separately.

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 approaches 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 corporate governance quality of the firms involved. 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.

B Legal Origin

Additionally we classify mergers by the legal origin—English, French, German, and Scandinavian—of the firms involved. Table 3 presents the frequency of acquisitions depending on the legal origin of both the acquiring and the target firms. The most frequent type of acquisition involves an English–legal–origin acquiror and an English–legal–origin target: 43 percent of all cross–border mergers, representing 7, 229 out of 16, 772 observations. In total, acquisitions where the target firm is of English legal origin account for 55 percent of all the deals. Similarly, acquisitions *by* firms of English legal origin represent 68 percent of the sample. Acquisitions *by* firms of French, German, and Scandinavian legal origins, account respectively for 15 percent, 10 percent, and 7 percent of the cases. Acquisitions *of* firms of French, German, and Scandinavian legal origin represent 26 percent, 13 percent, and 7 percent of the total sample, respectively. Over the period under consideration, industries in English–legal origin countries are *net acquirors*, in the sense that there are more English–legal–origin firms acquiring in non–English–legal–origin countries than the other way around. The same is true for industries in Scandinavian–legal–origin–countries. Conversely, firms in countries of French– and German– legal origins are *net targets*.

[INSERT TABLE 3]

Given the four categories outlined above, there are sixteen possible acquiror–target legal origin combinations. For every industry–country–year, we calculate the dollar value of the acquisitions that fall in each of the sixteen possible combinations. Only four of these numbers can be different from zero for each country and industry: for acquiring industries, the ones where the legal origin of the acquiror coincides with the legal origin of the corresponding country; for target industries, the ones where the legal origin of the target firm coincides with the legal origin of the corresponding country. We, similarly, divide these numbers by the market capitalization of the industry, and use the legal origin indicators as controls in our panel regressions.

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, by using a panel of 7, 597 industry–country–year observations.

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 element of the corporate governance variables vector \mathbf{G}_{jit} —be it the index corresponding to the target or acquiring firms, or the difference between them—we estimate the following regression:

$$q_{jit} = D_{it} + I_j + \gamma \mathbf{L}_{jit} + \delta AV_{jit} + \theta H_{jit} + \beta \mathbf{G}_{jit} + \varepsilon_{jit} \quad (3)$$

D_{it} is a vector of (49 x 11) country–year fixed effects, which captures any specific event affecting country i in year t , and I_j is vector of 39 industry fixed effects. Additionally, \mathbf{L}_{jit} is a vector of the legal origins variables, AV_{jit} , is determined in equation (1) and represents the relative value of an industry that has been acquired by foreign firms in a given year, H_{jit} is the Herfindahl index of the industry which is computed from Datastream by using the dollar value of sales in every firm in the industry, and ε_{jit} is random noise.

The country–year fixed effects D_{it} allow us to isolate country specific events related to the regulatory environment. In the absence of merger laws, for instance, there is no notification requirement for the acquirer and in the sample we will observe a lower number of reported acquisitions taking place. In addition to merger laws, or their lack thereof, other types of regulation may affect the number of mergers. For instance, Pagano and Volpin (2000) predict that the frequency of mergers and acquisitions is negatively correlated with employment protection. Pooling versus purchase accounting rules differ from country to country, and from year to year implying that the target firm’s assets may be valued differently when they are added into the acquirer’s financial statements. Some countries have specific legal provisions which affect the outcome of cross-border mergers. For example, under the U.S. Foreign Corrupt Practices Act of 1977, U.S. corporations are not allowed to pay bribes outside the U.S., except if they can prove that they are the normal business practice there. Finally, in countries with concentrated ownership acquisitions play a minor role as a control change mechanism. All these elements can be captured by D_{it} .

Similar types of events, only industry specific, are captured by the industry fixed effect I_j . Thus, industry level shocks such as technological innovation and deregulation, that may contribute to a structural change in the number of mergers are accounted for by means of I_j .

In addition, we control for the dollar volume of cross–border mergers, AV_{jit} , and the Herfindahl index of the industry, H_{jit} . The former allows for a separation between the corporate governance characteristics of the acquiring firm and the merger volume of the industry. The latter, a time variant index, measures the concentration in the industry. The same merger can have different effects in industries with different degrees of market power.

Finally, our specification controls for the legal origin of the merger participants. The vector \mathbf{L}_{jit} includes all sixteen possible combinations of legal origins of the target and acquiring firms. For instance, if an industry is in a country of English legal origin, there will be four variables in \mathbf{L}_{jit} which are different than zero and measure the percentage of firms in the industry acquired by companies coming from English, French, German, and Scandinavian legal origins. Intuitively, the legal-origin controls are fixed-effects for the country of nationality of the acquirors, where we estimate a different set of coefficients for each of the four possible legal origin of the target firms.

The panel data specification outlined above provide three advantages over previous estimating models. First, we improve the estimates of cross-sectional studies by estimating jointly investor protection variables and legal origin. Second, we enhance the random-effect model estimates presented by La Porta et al. (2002), by specifying a more natural fixed effects model. Finally, we interpret our results 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 the change in the Tobin's Q of the industry in period t . Moreover, our panel data specification allows us to estimate jointly the effect of investor protection variables and legal origin, something that it is not possible in a cross-sectional study.¹³

A.1 Target Industries

Table 4 reports the result of the estimation when the dependent variable is the target industry's Q. 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 difference 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, the creditor protection, the accounting standards, and the corruption indices of the target firm's country .

Table 4 shows that an increase in the average shareholder protection of the industry increases industry value. We first document that the value of the industry is higher the higher the protection provided to investors in the country, irrespective of M&A activity (model I). This result is consistent with La Porta et al. (2002). In addition, the Tobin's Q of the industry is higher the better the protection in the acquiring firm's country (model II). This result is consistent with Kuipers et al. (2003).

[INSERT TABLE 4]

The Tobin's Q of the target industry is higher the larger the difference in protection between the acquiring and the target firms (model III). This result is significant at the 10 percent level. In model IV we

¹³The Appendix shows the correlation matrix of the variables in the regressions. Because our indices or corporate governance quality are industry-specific, their correlations with legal origin variables are either very low, or insignificant.

split the difference variables into two, depending on whether the difference is either positive or negative (we ignore differences equal to zero). When we consider only the industries where the difference in shareholder protection between the acquiror and the target is positive, the estimated coefficient is 0.0344, and it is 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, a country with a below-median index of shareholder protection, equal to 10.7. Suppose 21.7 percent of the capitalization in the industry is acquired in 1998 by Spanish firms. Spain has a shareholder protection index equal to 25, a value that is above the median. Therefore, the shareholder protection index difference of the Telecommunications industry in 1998 in South Korea increases by 0.217 (one standard deviation), and, from the regression in model IV, Table 4, the Tobin’s Q of the industry increases 0.018 standard deviations. This is irrespective of the pure valuation effect of the merger, which in economic terms is equivalent to 0.08 standard deviations increase in q for one standard deviation increase in the acquisition activity of firms in the industry.¹⁴

We do not find evidence of the opposite effect. That is, the value of an industry in a strong corporate governance environment is not negatively affected by acquisitions of its member firms by companies in weak corporate governance environments. The coefficient of “Shareholder Protection Difference for <0” in model IV is negative, but marginally insignificant. The reason is that, for countries with strong corporate governance, mergers of this type involve a small fraction of the industry’s market capitalization.¹⁵

We also find that adopting better accounting standards significantly increases industry value. In model IV, the coefficient of the “Accounting Standards Difference for >0” is 0.0459, significant at the 10 percent level. Translated into economic terms, the coefficient means that an increase in the accounting standards of the industry by one standard deviation—which is equivalent to 21.2 percent of the market capitalization of an industry in a below-median-accounting standards country being acquired by a firm in an above-median country—leads to an increase in q of 0.024 standard deviations.

The coefficients with respect to creditor protection are not significant. This result should be interpreted with caution since the calculation of the Tobin’s Q does not incorporate the market value of debt. Given this caveat, this outcome points to two possible explanations. First, it confirms the hypothesis that creditor protection cannot be transferred, which is outlined in section II. Second, it implies that the market does not value significantly even the partial strengthening of creditor protection that may result from an acquisition. Similarly, the level of corruption of the acquiring firm is not significant. This result

¹⁴The standard deviation of $\log(Q)$ is 0.093 in this sample.

¹⁵The mean value of the independent variable is -0.011 , which implies that on average, the reduction in shareholder protection induced by cross-border mergers in countries with above-median shareholder protection is only 1.1 percent—this compares to a 5.2 percent increase for the symmetric case.

also confirms the hypothesis that corruption is inherent to the country where the target firm operates, not to the country where the firm is incorporated.

Finally, the legal-origin controls highlight the benefits and costs of certain types of cross-border mergers. The results suggest that French-legal-origin firms benefit significantly from being acquired by English-legal-origin firms. The coefficient of the ‘English Acquiror - French Target’ indicator implies that, the French industry realizes an increase of 0.031 standard deviations when 5.5 percent of industry’s capitalization is acquired by English-legal-origin firms, holding everything else constant. In the same way, firms of English and Scandinavian-legal-origin benefit from being acquired by German-legal-origin firms.

A.2 Acquiring Industries

The previous section shows that better shareholder protection induced by cross-border mergers translates into higher value for the target industry. Subsequently, we want to study the implications of cross-border mergers for the acquiring industry.

We repeat the previous exercise by using the Tobin’s Q and the corporate governance indicators, from the acquiring firm’s perspective. There are two main results from the regressions in Table 5. First we confirm the hypothesis that corporate governance practices of the target firm do not affect the industry valuation of the acquiring firm, as is outlined in section II. Furthermore, as in La Porta et al. (2002), industry value is positively related to shareholder protection (model II).

[Insert Table 5]

Second, the results in Table 5 confirm the hypothesis outlined in section II. More specifically, we find that the value of an industry with firms that acquire in a relatively less corrupted environment increases significantly. This stems from the negative and significant coefficient for the variable “Corruption Index Difference for ≤ 0 ” in model IV in Table 5. Recall that low levels of the index imply high levels of corruption, and consider as an example a Spanish firm (a country with a below-median corruption index) representing 8.3 percent (one standard deviation of the independent variable) of the market capitalization of its industry, acquiring a firm in the UK, (a country with an above-median corruption index). The corresponding coefficient suggests that the Spanish industry experiences an increase in Q of 0.022 standard deviations. This result is again consistent with the idea that corruption is inherent to the country where the firm operates.

VI Alternative Specification: Control Sample Procedure

In the previous section we use the whole sample to estimate the effects of corporate governance changes induced by cross-border mergers. In this section we divide the sample into industries with and without merger activity. Our intention is to use information from the industries that do not experience a change in their corporate governance indices to evaluate the effect of changes in corporate governance in the industries that do experience them. We estimate this effect by using a three-step approach. First, we estimate the coefficients in equation (3), by using a sample that includes only the industries that do not experience a change in their corporate governance indices. Second, we use the estimated coefficients from the first step to estimate the Tobin's Q for the industries that experience changes in their corporate governance indices. Finally, we estimate the incremental effect of corporate governance changes by regressing the difference between the actual and estimated Tobin's Q from step two on the corporate governance indices that we study.

More specifically in the first step we estimate

$$q_{jit} = D_{it} + I_j + \gamma \mathbf{L}_{jit} + \delta AV_{jit} + \theta H_{jit} + \varepsilon_{jit} \quad \text{for } (j, i, t) \text{ such that } \mathbf{G}_{jit} \equiv 0 \quad (4)$$

Note that this regression, by construction, includes only industries for which our corporate governance index differences are equal to zero.¹⁶

Then, we use the estimated values in the first step to calculate the expected Tobin's Q by using the sample of industries that do experience changes in their corporate governance indices

$$\widehat{q}_{jit} = \widehat{D}_{it} + \widehat{I}_j + \widehat{\gamma} \mathbf{L}_{jit} + \widehat{\delta} AV_{jit} + \widehat{\theta} H_{jit} \quad \text{for } (j, i, t) \text{ such that } \mathbf{G}_{jit} \neq 0 \quad (5)$$

Finally, we construct the difference $q_{jit} - \widehat{q}_{jit}$ for the sample of industries that realize changes in their corporate governance indices. Note that the difference $q_{jit} - \widehat{q}_{jit}$ is a measure of the incremental effect of corporate governance changes in industry j 's Tobin's Q. We regress this difference on indices of corporate governance change, as follows:

$$q_{jit} - \widehat{q}_{jit} = \varepsilon_{jit} = \alpha + \lambda \mathbf{G}_{jit} + \eta_{jit} \quad \text{for } (j, i, t) \text{ such that } \mathbf{G}_{jit} \neq 0 \quad (6)$$

where the coefficients λ measure the incremental effect of corporate governance changes in industry value.

¹⁶The sample for the first step includes both firms where AV_{jit} (total cross-border merger volume relative to market capitalization) is zero, as well as firms where AV_{jit} is different from zero, but where cross-border mergers do not imply a change in investor protection (because the relevant firms have all similar levels of investor protection).

We find that, for the observations where $\mathbf{G}_{jit} \neq 0$, regression (4) captures 49.5 percent of the variation in q_{it} .¹⁷

A Results for Target Industries

In Table 6 we display the results of the estimation of equation (6) when the endogenous variable is the Tobin’s Q of the target industries. There are 1,499 industries in the sample—out of 7,597—that experience changes in corporate governance as a result of cross-border mergers.

[INSERT TABLE 6]

The only coefficient that is significant is the one corresponding to the shareholder protection difference between the acquiring and the target firm. The value of the coefficient is 0.037 in Model I, and it is significant at the 5 percent level. The effect of the shareholder protection is driven by mergers where the acquiring firm belongs in a country with better shareholder protection relative to the target firm. This finding results from Model VI, where we split shareholder protection differences between *positive* and *negative* values, ignoring zero differences. Positive (negative) differences arise when the acquiring firm is from a country with stronger (weaker) corporate governance practices than the target firm. In terms of economic significance, a one standard deviation increase in the shareholder protection index difference (equivalent to a cross-border merger by a firm in a weak corporate governance country that buys in a strong country, representing 45.07 percent of the market capitalization of the industry) increases the dependent variable by 0.068 standard deviations.¹⁸

Our finding regarding shareholder protection is consistent with the results in Table 4, where we estimate the model with the whole sample. Because of the relatively low frequency of negative differences relative to the industry’s market capitalization, we do not find significant effects of those type of mergers on the overall industry’s Q. However, the sign and magnitude of the coefficients is consistent with the provisions of international law outlined above.

B Results for Acquiring Industries

In section A.A.2 we find that the coefficient of corruption changes is the only significant one for the acquiring industry. In Table 7 we show that, once a control sample of industries without corporate governance changes is used, both shareholder protection and corruption yield significant coefficients.

[INSERT TABLE 7]

¹⁷That is, the variance of \widehat{q}_{jit} calculated as in equation (5) is 0.069, while the variance of q_{jit} is 0.136, for $\mathbf{G}_{jit} \neq 0$.

¹⁸The dependent variable is the unexplained Tobin’s Q of the industry, which accounts for 51.5 percent of the variance of the total Q. The standard deviation of $\widehat{\varepsilon}_{jit}$ for the observations such that $\mathbf{G}_{jit} \neq 0$ is 0.2619.

In Model IV in Table 7 the coefficient of accounting standards is also significant at the 10 percent level. However, as it can be seen in Table A in the Appendix, this result can be driven by the high correlation between the indices of shareholder protection difference, and accounting standards difference.¹⁹ When we interact the four indices of corporate governance (Model I), the significance of the accounting standards difference disappears.

In principle, one should not expect that a change in nationality of the target firm, and the change in shareholder protection that it entails, affects the shareholders of the acquiring industry. However we find that acquirors' benefits from cross-border mergers are negatively related to the corporate governance improvement resulting from the merger. Model VI shows that the effect of shareholder protection on acquirors is driven by acquisitions of strong shareholder protection firms by weak-protection acquirors. An acquisition carried out by a firm in a below-median shareholder protection country, representing 39.41 percent of the value of an industry (one standard deviation) in an above-median shareholder protection country, results in a $q_{jit} - \widehat{q}_{jit}$ increase for the acquiring industry of 0.531 standard deviations. For the same type of deals, Table 5 shows that there is no significant effect on the target industries.

We interpret this result as an indication of private contracting between the two firms to overcome the negative effects of applying international law to cross-border mergers in terms of corporate governance provisions. That is, acquirors borrow better practices from more protective targets, and markets with low-quality corporate governance recognize that when industry participants acquire firms in relatively better legal environments, the industry is more valuable because the average shareholder protection of the industry increases.

In terms of corruption, the results of this section are similar to the ones described in section V.A.2: acquiring industries benefit from acquisitions of firms in less corrupted environments.

VII Robustness Issues

A Industry- versus Firm-specific Evidence

The results of this paper may invite some skepticism because they are based on industry-level, rather than firm-level evidence. Ideally, we want to provide merger-specific evidence relating the difference in investor protection between the acquiring and the target firm, and the value changes in both companies. This is, however, not possible. The reason is that 100 percent acquisitions result in the delisting of the target firm and, consequently, do not have an observable market value. It would be possible to analyze the market reaction to the announcement of such acquisitions. However, the sample would be biased towards firms that

¹⁹The correlation is 0.651, significant at the 1 percent level, using the whole dataset. The correlation when we restrict the sample to the industries with corporate governance changes is 0.658, which is also significant at the 1 percent level.

actually merge. Suppose for instance that firms willingly acquire firms in countries that provide weaker protection to investors than in their own. Because acquisitions create value for the target firm in general, such an analysis would yield a spurious, positive relationship between corporate governance changes, and the value of the target firm. Unfortunately a sample of merging firms would not include firms that *do not* merge, which introduces a serious bias in the results.

In the standard corporate finance paper, the way to circumvent such a bias is to construct a matching sample of acquisitions with similar characteristics, except for the induced changes in corporate governance, and then to compare the differences in valuation. Unfortunately, the matching-sample methodology is problematic in such a setting. The reason is that, to the extent that differences in valuation are systematically related to unobservable firm characteristics, it is again possible to find a significant, yet spurious, relationship between corporate governance and firm valuation. Suppose for example that firms in the U.K. tend to acquire only in Brazil—a country with below-median investor protection—rather than Argentina—a country with above-median investor protection. Suppose as well that U.K. acquirors manage their acquisitions better than French acquirors. For each merger with a U.K. acquiror, it would be very difficult to find a matching merger with similar characteristics—potential synergies, characteristics of the target and the acquiror, time and value considerations—but different corporate governance effects. But even if we could, we would find again that improvements in corporate governance through acquisitions of Brazilian firms by U.K. firms are associated with positive valuation effects. However, such an evidence would be spurious. This is so because the value effects of the mergers are associated with systematic characteristics of the firms involved—in this case the fact that they are U.K. firms.

Our focus on industries provides a way to address these issues. First, it allows us to focus on *all* industries and countries with available data, even if they do not experience any merger activity. Second, it allows us to separate the valuation effects of the merger from the change of corporate governance effects, by controlling for the merger activity within the industry. Third, it allows us to take into consideration the possible effects on rival firms by concentrating on the median investor of the industry. Finally, it allows us to interpret the results in a very intuitive way.

Moreover, a focus on industries rather than firms is an approach that has been used in other studies as well. Claessens and Laeven (2003) study the effects of the protection of property rights on industry value added, for a sample of 20 industrial sectors in 44 countries. Our sample is particularly rich because it includes industries that are not involved in any merger activity in any given year, as well as industries where, even if mergers happen, there is no change in the investor protection for the median investor. Thus our data includes a natural control sample. In the next section we exploit this feature of our sample.

B Other Issues

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.²⁰ It is questionable that we consider this merger as corporate governance quality decreasing for Chrysler. Nevertheless, the La Porta et al. (1998) indices are, to date, the only available data for a large sample like the one we consider in our paper.

Finally, an econometric issue related to the previous one may raise some concerns. If the independent variables in our regressions are estimated with errors, then the resulting parameters will be biased (Griliches and Hausman, 1986). We circumvent the possible errors–in–variables problem by ignoring the absolute values of the corporate governance indices, and constructing a binary variable depending on whether these indices are below or above the overall median.

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, which in turn may be 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 a target firm opts into a less protective country, the market valuation of the target firm’s industry decreases. This result suggests that the merging parties engage in private contracting that aims to overcome the loss in protection for the target’s shareholders.

We also find evidence of the *symmetric* effect. That is, when a firm acquires in a more protective environment, its shareholders—and the shareholders of the whole industry by extension—benefit from the stronger protection provided to the shareholders of the target firm. Because there is no legal requirement in international law which forces the acquiror’s shareholders to transfer the nationality of the newly merged firm to the host country, this result is hard to interpret. We argue that private contracting between the parties serves as a mechanism for the transfer of investor protection.²¹ Unfortunately, we lack information

²⁰See Baums (1999).

²¹There can be country–specific provisions that make this possible. However, because in our study we control for country–fixed effects, national laws do not explain our results.

on these deal-specific agreements, despite the anecdotal evidence we describe in the paper.

The quality of the accounting standards in a cross-border merger is important. By default, a transfer of nationality of the target firm implies a change in the accounting standards. In section V.A.1 we find some 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.

Finally, we find that it is the corruption in the country where the firm operates that matters. That is, while being acquired by a firm in a less-corrupted environment does not affect the value of the target industry, acquiring firms benefit from entering less-corrupted environment. In the former case, the political connections, side-payments to government officials and tax authorities, that are required to operate the firm in the target country, are still necessary even though the firm is domiciled in a foreign country. In the latter case, transferring part of the firm's operations overseas benefits the firm if the foreign country is less corrupted than its own.

We claim that changes in investor protection have an impact in the industry of both the acquiror and the target. We are aware of the potential difficulties of studying industries rather than firms directly. Our paper does not have a strong theoretical prediction regarding the effects to an industry of improving investor protection in some firms of the industry. If the governance of one firm improves as a consequence of the cross-border acquisition, it is possible that rival firms in the same industry suffer a loss in value. If better investor protection leads to more efficiency, the target firm could become a formidable competitor with 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.²² 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.²³ These mergers are, at most, corporate

²²Indeed, we have modelled a simple game where firms compete in quantities, and some industry participants receive a shock—an improvement in investor protection—that reduces their marginal costs. This very simple model—available from the authors upon request—shows that overall, industry profits increase if firms compete *à la* Cournot, and decrease under Stackelberg competition. Because the resulting number of firms does not change after the shock, our results are qualitatively different to Salant et al. (1983), that applies to domestic acquisitions, and where rival firms are harmed by the monopolistic position gained by the merging companies.

²³The effects of corporate events on rival firms have been studied extensively: for stock repurchases, Hertzler (1991); for bankruptcy announcements, Lang and Stulz (1992); for dividend announcements, Laux et al. (1998); for corporate capital

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 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. Therefore, there is convergence in corporate governance practices within an industry (see Coffee, 1999; and Gilson, 2000).

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 49 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. Four corporate governance indicators are considered: shareholder protection, creditor protection, accounting standards, and corruption. 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.

We undertake a simple and intuitive experiment. By using a large panel of approximately nine thousand industry-country-year observations, we are able to isolate the direct relationship between corporate investment, Chen et al. (2002); for mergers and acquisitions, Eckbo (1985), among others.

governance and value. Moreover, because we provide time-series evidence, the interpretation of our results is richer. Our study does not claim that countries or firms that better protect their shareholders are more valuable. Instead, we show that changes in corporate governance within an industry have value implications. Besides, unlike country-specific studies, ours provides a setting where corporate governance quality improves as often as it worsens. In fact, we find that opting into a more protective regime is sometimes not the opposite to opting into a less protective one. Finally, because we construct industry-level indicators, the power of our results is high.

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 acquisitions by firms in worse corporate governance environments lose value decrease the Tobin's Q of the target industry.

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.²⁴

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.

²⁴As 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. See also Caves (1996), who provides an economic analysis of the existence and consequences of multinational firms.

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Table 1.
Merger Activity Around the World

The following table provides measures of Merger Intensity with respect to the Value of Acquisitions relative to the Total Market Capitalization and the Number of Acquisitions relative to the Number of Listed Firms by geographical region and sub-periods of years. Value of Transaction (in million US\$) is calculated as 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 excluding fees and expenses. Liabilities are included if their value has been publicly disclosed. Preferred stock is included only if it is being acquired as part of a 100% acquisition. The common stock used as a payment in an acquisition is valued by using the closing price of the last full trading day before the announcement of the stock swap's terms. In the case of a change in the exchange ratio of shares offered, the stock is valued according to the closing price of the last full trading date. The number of listed firms is the number of firms with available stock price information in Datastream. The sample includes all the completed acquisitions of 100% interest in a public company available in the Securities Data Corporation, from January 1, 1990 to December 31, 2001. The sample does not include LBOs, spinoffs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations.

	1990-1994				1995-2001			
	All Mergers		Cross-Border		All Mergers		Cross-Border	
	\$ Value	Number	\$ Value	Number	\$ Value	Number	\$ Value	Number
Africa	0.60%	3.27%	0.27%	0.86%	2.07%	9.98%	0.55%	2.39%
Asia	0.37%	1.46%	0.03%	0.48%	1.02%	3.43%	0.15%	0.93%
North America	2.63%	17.92%	0.45%	2.25%	7.42%	35.12%	1.43%	5.12%
Oceania	2.24%	12.98%	1.05%	5.55%	3.17%	24.05%	1.48%	7.55%
Central and South America	0.04%	3.92%	0.02%	2.94%	0.84%	8.71%	0.69%	6.47%
Western Europe - Eurozone	1.81%	15.55%	0.69%	5.04%	3.97%	15.87%	2.08%	6.09%
Western Europe - No Euro	1.49%	5.65%	0.96%	3.25%	2.14%	6.77%	0.76%	4.72%
All countries	1.19%	12.25%	0.27%	2.58%	4.47%	17.82%	1.26%	4.24%

Table 2.
Cross-Border Mergers and Corporate Governance Quality

The following table provides indices for Shareholder Protection, Creditor Protection, Accounting Standard and Corruption for each cross-border merger in our sample. We obtain the corporate governance index for the country of nationality of both the acquiror and target from La Porta et al. (1998). We classify each country into one of two categories: “Above the median” and “Below the median” for each of the four indices. Each acquisition is classified as “Corporate Governance Worsening” if the acquiror’s corresponding index is below the median while the target’s is above the median; “Corporate Governance Improving” if the acquiror’s corresponding index is above the median while the target’s is below the median; and “Corporate Governance preserving” otherwise. The table reports the number as well as the percentage of the cross-border mergers which are Corporate Governance Worsening, Preserving and Improving for each index and sub-periods of years. The sample includes all the completed acquisitions of 100% interest in a public company available in the Securities Data Corporation, from January 1, 1990 to December 31, 2001. The sample does not include LBOs, spinoffs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations.

		1990-1994			1995-2001		
		Worsening	Preserving	Improving	Worsening	Preserving	Improving
Shareholder Protection	Number of Acquisitions	449	2,124	602	1,523	5,454	1,422
	Percent	14.14%	66.90%	18.96%	18.13%	64.94%	16.93%
Creditor Protection	Number of Acquisitions	471	1,583	1,121	1,247	4,253	2,899
	Percent	14.83%	49.86%	35.31%	14.85%	50.64%	34.52%
Accounting Stantdards	Number of Acquisitions	370	2,232	573	1,310	5,557	1,532
	Percent	11.65%	70.30%	18.05%	15.60%	66.16%	18.24%
Corruption	Number of Acquisitions	104	2,749	322	306	7,211	882
	Percent	3.28%	86.58%	10.14%	3.64%	85.86%	10.50%

Table 3.
Cross-Border Mergers and Legal Origin

This table reports the number of cross-border mergers depending on the legal origin of the country of nationality of the acquiring and target firms. The sample includes all the completed acquisitions of 100% interest in a public company available in the Securities Data Corporation, from January 1, 1990 to December 31, 2001. The sample does not include LBO's, spinoffs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations.

			Target Firm				Total
			English Legal Origin	French Legal Origin	German Legal Origin	Scandinavian Legal Origin	
Acquiring Firm	English Legal Origin	From 1990 to 1994	1855	719	302	146	3022
		From 1995 to 2001	5374	1742	905	334	8355
	French Legal Origin	From 1990 to 1994	178	267	113	39	597
		From 1995 to 2001	679	847	342	75	1943
	German Legal Origin	From 1990 to 1994	276	163	88	19	546
		From 1995 to 2001	504	309	267	92	1172
	Scandinavian Legal Origin	From 1990 to 1994	85	52	27	96	260
		From 1995 to 2001	254	187	127	309	877
	Total	From 1990 to 1994	2394	1201	530	300	4425
		From 1995 to 2001	6811	3085	1641	810	12347

Table 4.
Tobin's Q and Corporate Governance Quality of Target firms

This table presents regressions of Tobin's Q (in logs) by industry, country, and year, on corporate governance indices. Each acquisition is characterized by the corporate governance characteristics of the acquiring and target firms. We consider the indices of shareholder protection, creditor protection, accounting standards, and corruption, from La Porta et al. (1998). We classify countries either as "Above the median" or "Below the median" for each of the four indices. Each index equals 1 if it is "Above the median", and zero otherwise. The index difference is calculated for each acquisition as the difference between the corresponding corporate governance indices of the acquirer, minus that of the target. We then calculate the weighted average of the indices by industry, country and year, where each observation is weighted by the dollar value of the acquisition. The legal origin indices of the parties involved are weighted by the market capitalization of the respective industry. The sample extends between 1990 and 2001 and includes 39 industries in 49 countries. Standard errors are adjusted for heteroskedasticity, and for clustering within countries.

Dependent Variable: Tobin's Q			Model I		Model II		Model III		Model IV	
	Mean	Std. Dev	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Independent Variables:										
Industry Herfindahl Index	0.38	40.67%	0.0014	0.12	0.0024	0.20	0.0010	0.08	0.0017	0.14
\$ Value of Cross-Border Mergers / Industry Market Capitalization	2.67%	13.05%	0.2440 ***	2.85	0.2429 ***	2.85	0.2442 ***	2.87	0.2571 ***	3.01
English Acquiror - English Target	0.46%	4.81%	0.1820 *	1.66	0.1728	1.58	0.1950 *	1.78	0.1987 *	1.81
English Acquiror - French Target	0.47%	5.49%	0.2050 *	1.70	0.2263 *	1.88	0.2271 *	1.87	0.2268 *	1.87
English Acquiror - Scandinavian Target	0.14%	3.03%	0.0936	0.68	0.0792	0.57	0.1016	0.74	0.1060	0.76
English Acquiror - German Target	0.35%	5.21%	0.0623	0.60	0.0389	0.38	0.0614	0.59	0.0667	0.64
French Acquiror - English Target	0.07%	2.03%	-0.0075	-0.04	-0.0099	-0.05	-0.0035	-0.02	-0.0245	-0.12
French Acquiror - French Target	0.31%	4.71%	0.0515	0.41	0.0699	0.56	0.0707	0.57	0.0535	0.43
French Acquiror - Scandinavian Target	0.03%	1.30%	0.3243	1.45	0.3241	1.46	0.3115	1.40	0.3059	1.37
French Acquiror - German Target	0.11%	2.87%	-0.0598	-0.47	-0.0680	-0.54	-0.0687	-0.54	-0.0695	-0.55
Scandinavian Acquiror - English Target	0.02%	0.67%	-0.0698	-0.09	-0.0733	-0.09	-0.0846	-0.11	-0.0553	-0.07
Scandinavian Acquiror - French Target	0.04%	1.56%	0.4609	1.34	0.5078	1.48	0.4632	1.34	0.4592	1.33
Scandinavian Acquiror - Scandinavian Target	0.09%	2.44%	0.1848	0.97	0.1715	0.91	0.1823	0.96	0.1870	0.99
Scandinavian Acquiror - German Target	0.07%	2.30%	0.0703	0.45	0.0489	0.31	0.0682	0.43	0.0698	0.44
German Acquiror - English Target	0.06%	1.64%	0.7254 ***	2.75	0.7467 ***	2.83	0.7006 ***	2.66	0.6632 **	2.49
German Acquiror - French Target	0.05%	1.56%	0.1484	0.48	0.2159	0.71	0.0889	0.29	0.0379	0.12
German Acquiror - Scandinavian Target	0.05%	1.97%	0.2952 *	1.72	0.2980 *	1.74	0.2636	1.54	0.2537	1.48
German Acquiror - German Target	0.05%	2.02%	0.5644	1.24	0.5271	1.15	0.4835	1.06	0.4598	1.00
Shareholder Protection Index - Acquiror	0.251	0.428	0.0127	0.42	0.0460 *	1.70				
Shareholder Protection Index - Target	0.205	0.404	0.0674 ***	2.73						
Creditor Protection Index - Acquiror	0.148	0.341	-0.0189	-1.10	-0.0296 **	-2.08				
Creditor Protection Index - Target	0.157	0.364	-0.0229	-1.11						
Accounting Standards - Acquiror	0.256	0.432	0.0146	0.44	0.0151	0.51				
Accounting Standards - Target	0.210	0.407	0.0535 *	1.94						
Corruption Index - Acquiror	0.267	0.440	0.0305	0.99	0.0049	0.20				
Corruption Index - Target	0.235	0.424	-0.0254	-0.92						
Shareholder Protection Index Difference, Acquiror minus Target	0.041	0.237					0.0408 *	1.81		
Creditor Protection Index Difference, Acquiror minus Target	-0.010	0.237					-0.0099	-0.60		
Accounting Standards - Difference Acquiror minus Target	0.041	0.227					0.0476 *	1.91		
Corruption Index - Difference Acquiror minus Target	0.027	0.175					0.0305	1.17		
Shareholder Protection Index Difference for > 0	0.052	0.217							0.0344 *	1.85
Shareholder Protection Index Difference for < 0	-0.011	0.090							-0.0737	-1.47
Creditor Protection Index Difference for > 0	0.028	0.150							0.0057	0.21
Creditor Protection Index Difference for < 0	-0.038	0.178							-0.0228	-1.04
Accounting Standards Difference for > 0	0.049	0.212							0.0459 *	1.89
Accounting Standards Difference for < 0	-0.008	0.077							0.0351	0.64
Corruption Index Difference for > 0	0.030	0.168							0.0355	1.23
Corruption Index Difference for < 0	-0.003	0.048							-0.03175	-0.43
Number of Observations			7,597		7,597		7,597		7,597	
Adjusted R-squared			35.84%		35.91%		36.42%		39.88%	
YEAR FIXED EFFECTS			YES		NO		NO		NO	
COUNTRY x YEAR FIXED EFFECTS			NO		YES		YES		YES	
INDUSTRY FIXED EFFECTS			YES		YES		YES		YES	

*, **, *** denote significant at the 10 percent, 5 percent, 1 percent levels or better, respectively

Table 5.
Tobin's Q and Corporate Governance Quality of Acquiring firms

This table presents regressions of Tobin's Q (in logs) by industry, country, and year, on corporate governance indices. Each acquisition is characterized by the corporate governance characteristics of the acquiring and target firms. We consider the indices of shareholder protection, creditor protection, accounting standards, and corruption, from La Porta et al. (1998). We classify countries either as "Above the median" or "Below the median" for each of the four indices. Each index equals 1 if it is "Above the median", and zero otherwise. The index difference is calculated for each acquisition as the difference between the corresponding corporate governance indices of the acquirer minus that of the target. We then calculate the weighted average of the indices by industry, country and year, where each observation is weighted by the dollar value of the acquisition. The legal origin indices of the parties involved are weighted by the market capitalization of the respective industry. The sample extends between 1990 and 2001 and includes 39 industries in 49 countries. Standard errors are adjusted for heteroskedasticity, and for clustering within countries.

Dependent Variable: Tobin's Q				Model I		Model II		Model III		Model IV	
Independent Variables:		Mean	Std. Dev	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Industry Herfindahl Index		0.38	40.67%	0.0073	0.56	0.0010	0.08	-0.0003	-0.03	-0.0001	-0.01
\$ Value of Cross-Border Mergers / Industry Market Capitalization		2.10%	11.47%	-0.0345	-0.31	-0.0252	-0.25	-0.0244	-0.24	-0.0051	-0.05
English Acquiror - English Target		0.46%	4.78%	0.0690	0.46	0.0483	0.36	0.0645	0.48	0.0717	0.53
English Acquiror - French Target		0.08%	2.21%	-0.1608	-0.57	-0.1218	-0.48	-0.1059	-0.42	-0.1158	-0.45
English Acquiror - Scandinavian Target		0.00%	0.17%	1.3813	0.79	0.4913	0.31	0.4902	0.31	0.5639	0.36
English Acquiror - German Target		0.05%	1.63%	0.0743	0.31	0.0928	0.43	0.0831	0.38	0.0703	0.32
French Acquiror - English Target		0.28%	4.19%	-0.0274	-0.18	-0.0979	-0.73	-0.1084	-0.81	-0.1152	-0.86
French Acquiror - French Target		0.23%	3.97%	0.1536	0.91	0.0312	0.21	0.0682	0.45	0.0357	0.23
French Acquiror - Scandinavian Target		0.01%	0.79%	-0.0983	-0.09	0.1152	0.12	0.0793	0.08	0.0756	0.08
French Acquiror - German Target		0.04%	1.43%	-0.2334	-0.73	-0.2421	-0.85	-0.2629	-0.91	-0.2802	-0.97
Scandinavian Acquiror - English Target		0.11%	2.76%	-0.2369	-1.48	-0.1902	-1.32	-0.1789	-1.25	-0.1626	-1.13
Scandinavian Acquiror - French Target		0.02%	0.78%	-1.0293 **	-2.50	-1.0350 ***	-2.82	-0.9927 ***	-2.69	-0.9922 ***	-2.68
Scandinavian Acquiror - Scandinavian Target		0.08%	2.17%	-0.3106	-1.24	-0.2753	-1.22	-0.2806	-1.25	-0.2616	-1.16
Scandinavian Acquiror - German Target		0.02%	1.05%	-0.8457 *	-1.76	-0.5214	-1.20	-0.5719	-1.31	-0.5760	-1.31
German Acquiror - English Target		0.01%	0.88%	-0.0432	-0.35	-0.1051	-0.94	-0.1104	-0.98	-0.0933	-0.82
German Acquiror - French Target		0.34%	5.32%	-0.1376	-0.95	-0.0779	-0.60	-0.0658	-0.51	-0.0748	-0.57
German Acquiror - Scandinavian Target		0.12%	2.93%	-0.1405	-0.74	-0.2234	-1.28	-0.2296	-1.31	-0.2230	-1.27
German Acquiror - German Target		0.05%	2.10%	-0.2361	-0.66	-0.1833	-0.58	-0.2133	-0.67	-0.1981	-0.62
Shareholder Protection Index - Acquiror		0.004	0.017	0.0376	1.18	0.0568 **	2.34				
Shareholder Protection Index - Target		-0.014	0.196	-0.0153	-0.43						
Creditor Protection Index - Acquiror		0.019	0.220	0.0001	0.00	-0.0167	-0.96				
Creditor Protection Index - Target		-0.011	0.182	-0.0250	-1.15						
Accounting Standards - Acquiror		0.002	0.118	-0.0065	-0.18	-0.0274	-0.98				
Accounting Standards - Target		0.015	0.105	0.0011	0.03						
Corruption Index - Acquiror		-0.029	0.162	-0.0435	-1.13	-0.0018	-0.07				
Corruption Index - Target		0.039	0.178	0.0909 **	2.31						
Shareholder Protection Index Difference, Acquiror minus Target		-0.019	0.124					0.0381	1.42		
Creditor Protection Index Difference, Acquiror minus Target		0.013	0.100					-0.0125	-0.67		
Accounting Standards - Difference Acquiror minus Target		-0.024	0.150					-0.0342	-1.12		
Corruption Index - Difference Acquiror minus Target		0.009	0.084					0.0578 *	1.74		
Shareholder Protection Index Difference for > 0		-0.007	0.083							0.0521	1.13
Shareholder Protection Index Difference for < 0		-0.029	0.162							0.0369	1.13
Creditor Protection Index Difference for > 0		0.039	0.178							-0.0002	-0.01
Creditor Protection Index Difference for < 0		-0.019	0.124							-0.0528	-1.42
Accounting Standards Difference for > 0		0.013	0.100							-0.0463	-0.97
Accounting Standards Difference for < 0		-0.024	0.150							-0.0306	-0.77
Corruption Index Difference for > 0		0.009	0.084							-0.0131	-0.27
Corruption Index Difference for < 0		-0.007	0.083							-0.1072 **	-2.24
Number of Observations				7,230		7,230		7,230		7,230	
Adjusted R-squared				33.28%		34.84%		36.41%		38.74%	
YEAR FIXED EFFECTS				YES		NO		NO		NO	
COUNTRY x YEAR FIXED EFFECTS				NO		YES		YES		YES	
INDUSTRY FIXED EFFECTS				YES		YES		YES		YES	

*, **, *** denote significant at the 10 percent, 5 percent, 1 percent levels or better, respectively

Table 6.
Matching Firm Estimation: Tobin's Q of Target Firms

This table presents regressions that estimate the impact of corporate governance changes on industry Tobin's Q in three steps. The first step considers the sub-sample of industries that do not experience a change in their corporate governance indices. Industry Tobin's Q (in logs) is regressed on country-year and industry fixed effects, legal origin dummies for the acquiror-target combinations, a dummy variable that equals one when there is no merger activity in the corresponding industry and year, and the Herfindahl index of the industry. In the second step, the estimated coefficients are used to estimate the Tobin's Q for the sub-sample of industries that experienced changes in their corporate governance indices. In the third step, we estimate the incremental effect of corporate governance changes by regressing the difference between the actual and estimated Tobin's Q from step two on the corporate governance indices that we study. The following Table presents the estimated coefficients of the third step. Standard errors are adjusted for heteroskedasticity and for clustering within countries.

Dependent Variable: Unexplained Tobin's Q			Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VIII	Model IX
	Mean	Std. Dev	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)	Estimate (p-value)
Intercept			-0.015 ** (-1.98)	-0.019 ** (-2.53)	-0.015 ** (-2.14)	-0.012 * (-1.74)	-0.012 * (-1.72)	-0.017 * (-1.94)	-0.017 * (-1.73)	-0.011 (-1.39)	-0.010 (-1.38)
Shareholder Protection Index Difference, Acquiror minus Target	0.247	53.79%	0.037 ** (2.05)	0.034 ** (2.46)							
Creditor Protection Index Difference, Acquiror minus Target	-0.064	58.05%	0.006 (0.46)		0.003 (0.27)						
Accounting Standards - Difference Acquiror minus Target	0.248	51.08%	-0.031 (-1.57)			-0.013 (-0.84)					
Corruption Index - Difference Acquiror minus Target	0.166	40.35%	-0.015 (-0.66)				-0.019 (-0.91)				
Shareholder Protection Index Difference for > 0	0.313	45.07%						0.040 ** (2.40)			
Shareholder Protection Index Difference for < 0	-0.065	21.26%						0.027 (0.78)			
Creditor Protection Index Difference for > 0	0.168	33.47%							0.008 (0.37)		
Creditor Protection Index Difference for < 0	-0.232	38.36%							0.000 (-0.01)		
Accounting Standards Difference for > 0	0.297	44.48%								-0.016 (-0.88)	
Accounting Standards Difference for < 0	-0.048	18.54%								-0.001 (-0.03)	
Corruption Index Difference for > 0	0.184	37.74%									-0.026 (-1.16)
Corruption Index Difference for < 0	-0.018	11.76%									0.036 (0.52)
Number of Observations			1,499	1,499	1,499	1,499	1,499	1,499	1,499	1,499	1,499
Adjusted R-squared			0.14%	0.01%	-0.06%	-0.01%	0.01%	0.05%	-0.12%	-0.06%	0.01%

*, **, *** denote significant at the 10 percent, 5 percent, 1 percent levels or better, respectively

**Appendix
Table A
Correlations Among the Variables**

The following table shows the correlation matrix of the variables used in the paper. It provides indices for Shareholder Protection, Creditor Protection, Accounting Standard and Corruption for each cross-border merger in our sample. We obtain the corporate governance index for the country of nationality of both the acquirer and target from La Porta et al. (1998). We classify each country into one of two categories: "Above the median" (value 1) and "Below the median" (value -1) for each of the four indices. We then compute the difference between the acquirer's and the target's indices, and average across industries and countries, where each acquisition is weighted by the dollar value of the transaction. The sample includes all the completed acquisitions of 100% interest in a public company available in the Securities Data Corporation, from January 1, 1990 to December 31, 2001. The sample does not include LBOs, spinoffs, recapitalizations, self-tender and exchange offers, repurchases, minority stake purchases, acquisitions of remaining interest, and privatizations.

	Tobin's Q	No Merger Dummy	\$ Value of Cross-Border Mergers / Industry Market Capitalization	English Acquiror - English Target	English Acquiror - French Target	English Acquiror - Scandinavian Target	English Acquiror - German Target	French Acquiror - English Target	French Acquiror - French Target	French Acquiror - Scandinavian Target	French Acquiror - German Target	Scandinavian Acquiror - English Target	Scandinavian Acquiror - French Target	Scandinavian Acquiror - Scandinavian Target	Scandinavian Acquiror - German Target	German Acquiror - English Target	German Acquiror - French Target	German Acquiror - Scandinavian Target	German Acquiror - German Target	Shareholder Protection Difference, Acquiror minus Target	Creditor Protection Difference, Acquiror minus Target	Accounting Standards - Difference Acquiror minus Target	
No Merger Dummy	-0.096 ***																						
\$ Value of Cross-Border Mergers / Industry Market Capitalization	0.061 ***	-0.136 ***																					
English Acquiror - English Target	0.091 ***	-0.568 ***	0.210 ***																				
English Acquiror - French Target	0.042 ***	-0.411 ***	-0.085 ***	-0.063 ***																			
English Acquiror - Scandinavian Target	0.025 **	-0.202 ***	-0.048 **	-0.031 ***	-0.022 ***																		
English Acquiror - German Target	0.032 ***	-0.252 ***	-0.004	-0.038 ***	-0.028 ***	-0.014																	
French Acquiror - English Target	0.049 ***	-0.257 ***	0.322 ***	0.365 ***	-0.028 ***	-0.014 *	-0.017 **																
French Acquiror - French Target	0.008	-0.256 ***	0.109 ***	-0.039 ***	0.225 ***	-0.014 *	-0.017 **	-0.018 **															
French Acquiror - Scandinavian Target	0.010	-0.079 ***	0.044 **	-0.012	-0.009	0.178 ***	-0.005	-0.005	-0.005														
French Acquiror - German Target	0.017	-0.135 ***	0.091 ***	-0.021 **	-0.015 *	-0.007	0.273 ***	-0.009	-0.009	-0.003													
Scandinavian Acquiror - English Target	0.045 ***	-0.178 ***	0.159 ***	0.264 ***	-0.020 **	-0.010	-0.012	0.254 ***	-0.012	-0.004	-0.006												
Scandinavian Acquiror - French Target	0.020 *	-0.122 ***	0.047 **	-0.019 **	0.198 ***	-0.007	-0.008	-0.008	0.119 ***	-0.003	-0.004	-0.006											
Scandinavian Acquiror - Scandinavian Target	0.003	-0.155 ***	0.023	-0.024 ***	-0.017 **	0.219 ***	-0.011	-0.011	-0.011	0.125 ***	-0.006	-0.007	-0.005										
Scandinavian Acquiror - German Target	0.010	-0.085 ***	0.049 **	-0.013	-0.009	-0.005	0.142 ***	-0.006	-0.006	-0.002	0.088 ***	-0.004	-0.003	-0.004									
German Acquiror - English Target	0.045 ***	-0.248 ***	0.267 ***	0.363 ***	-0.027 ***	-0.013	-0.017 **	0.370 ***	-0.017 **	-0.005	-0.009	0.229 ***	-0.008	-0.010	-0.006								
German Acquiror - French Target	0.005	-0.158 ***	0.067 ***	-0.024 ***	0.171 ***	-0.009	-0.011	-0.011	0.140 ***	-0.003	-0.006	-0.008	0.090 ***	-0.007	-0.004	-0.010							
German Acquiror - Scandinavian Target	0.036 ***	-0.074 ***	0.052 ***	-0.011	-0.008	0.190 ***	-0.005	-0.005	-0.005	0.088 ***	-0.003	-0.004	-0.002	0.180 ***	-0.002	-0.005	-0.003						
German Acquiror - German Target	0.009	-0.097 ***	0.019	-0.015 *	-0.011	-0.005	0.200 ***	-0.007	-0.007	-0.002	0.077 ***	-0.005	-0.003	-0.004	0.029 ***	-0.006	-0.004	-0.002					
Shareholder Protection Difference, Acquiror minus Target	0.050 ***	-0.121 ***	-0.234 ***	-0.192 ***	0.311 ***	0.047 ***	0.355 ***	-0.330 ***	-0.006	-0.026 ***	0.147 ***	-0.163 ***	0.026 ***	-0.018 **	0.136 ***	-0.303 ***	-0.046 ***	-0.054 ***	0.087 ***				
Creditor Protection Difference, Acquiror minus Target	-0.014	0.001	-0.004	0.117 ***	0.001	-0.191 ***	-0.125 ***	0.089 ***	0.061 ***	-0.087 ***	-0.068 ***	0.053 ***	0.052 ***	-0.091 ***	-0.008	0.120 ***	0.046 ***	-0.048 ***	0.001	-0.291 ***			
Accounting Standards - Difference Acquiror minus Target	0.057 ***	-0.095 ***	-0.269 ***	-0.175 ***	0.238 ***	0.051 ***	0.246 ***	-0.244 ***	0.035 ***	0.005	0.109 ***	-0.160 ***	-0.004	-0.018 **	0.079 ***	-0.271 ***	-0.043 ***	-0.036 ***	0.032 ***	0.651 ***	-0.150 ***		
Corruption Index - Difference Acquiror minus Target	0.055 ***	-0.162 ***	-0.184 ***	-0.078 ***	0.403 ***	-0.011	-0.046 ***	-0.169 ***	0.113 ***	-0.004	-0.122 ***	-0.054 ***	0.079 ***	-0.008	-0.020 **	-0.100 ***	0.149 ***	-0.004	-0.012	0.355 ***	-0.162 ***	0.474 ***	

*, **, *** denote significant at the 10 percent, 5 percent, 1 percent levels or better, respectively