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ABSTRACT

Cross-Country Determinants of Mergers and Acquisitions*

This Paper studies the determinants of mergers and acquisitions around the world during the 1990s by focusing on differences in laws and regulation across countries. We find that the volume of M&A activity and the premium paid are significantly larger in countries with better investor protection. This result indicates that an active market for mergers and acquisitions is a more important component of the corporate governance regime of countries with better investor protection. We also show that in cross-border deals, the targets are typically from countries with poorer investor protection than the acquirers. Hence, cross-border transactions play a governance role by improving the degree of investor protection within target firms. This finding suggests that an increase in cross-border transactions may generate a worldwide convergence of corporate governance systems.

JEL Classification: G21, G28 and G32
Keywords: corporate governance, investor protection and mergers and acquisitions

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1 Introduction

In a perfect world corporate assets would be channeled towards their best possible use. Mergers and acquisitions help attain this goal by reallocating control over companies. However, efficient transfers of control may be prevented by frictions like transaction costs, asymmetries of information and agency conflicts. Recent contributions on corporate governance have proxied some of these frictions with measures of the quality of the legal and regulatory environment within a country, and have shown that differences in laws, regulation and enforcement correlate with the development of capital markets, the ownership structure of firms and the cost of capital.[1]

In this paper we analyze a large sample of mergers and acquisitions announced in the 1990s and completed by the end of 2001 in 49 major countries and show that differences in laws and enforcement explain the intensity and the pattern of mergers and acquisitions (M&A) around the world.

First, we show that the intensity of M&A activity is significantly higher in countries with better investor protection, where M&A activity is measured as the number of traded companies targeted in completed deals divided by the total number of traded companies. This result holds for several measures of investor protection proposed by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) and is robust when controlling for other characteristics of the regulatory environment, like the antitrust legislation and the takeover law. This finding suggests that M&A activity is a more important component of the corporate governance regime in countries with better investor protection.

Similarly, we show that hostile deals are relatively more likely in countries with better shareholder protection. A possible explanation is that countries with low protection for minority shareholders typically have high ownership concentration (La Porta, Lopez-de-Silanes, and Shleifer, 1999), which makes hostile takeovers rare.

Next, we provide evidence on cross-border mergers and acquisitions. First, we show that the probability that a given deal is cross border is decreasing in the investor protection of the target's country. Second, targets are typically from countries with poorer investor protection than the acquirers, even after controlling for bilateral trade, relative GNP per capita, and cultural and geographical differences.

This result suggests that cross-border M&A activity may be an important channel for an effective world-wide convergence in corporate governance standards.[2] The intuition is that increasing competition in the global market for corporate control may induce firms' owners in countries with weak investor protection to sell to companies from countries with stronger investor protection. Selling to a foreign firm is a form of contractual convergence similar to the decision of listing in countries with better corporate governance and more developed

[1] See La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), (1998), and Bhattacharya and Daouk (2002).

[2] For a discussion of the issue of convergence in corporate goverance standards see Coffee (1999) and Gilson (2001).

capital markets. Pagano, Randl, Roell, and Zechner (2001) and Reese and Weisbach (2002) show that firms from countries with weak legal protection for minority shareholders list abroad more frequently than firms from other countries. Our paper shows that firms in countries with weaker investor protection are sold to buyers from countries with stronger investor protection.

We also analyze the determinants of the takeover premium and the means of payment in individual transactions. We find that the premium is higher in countries with higher shareholder protection. This result is consistent with Grossman and Hart (1980), who argue that with diffuse ownership the bidder must pay a higher premium to overcome the free-rider problem. Finally, we show that the probability of an all-cash bid decreases with the degree of shareholder protection in the target country. This finding suggests that acquisitions paid with stocks require an environment with high shareholder protection.

This paper belongs to the growing literature exploring cross-country variation in governance structures around the world. It has been shown that better legal protection of minority shareholders is associated with more developed stock markets (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1997), higher valuation (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2002), greater dividend payouts (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2000b), lower concentration of ownership and control (La Porta et al., 1999), lower private benefits of control (Dyck and Zingales, 2002, and Nenova, 2002), lower earnings management (Leuz, Nanda, and Wysocki, 2002), and higher correlation between investment opportunities and actual investments (Wurgler, 2000). Our paper documents that better investor protection is correlated with a more effective market for corporate control.

The structure of the paper is as follows. The testable hypotheses are presented in Section 2. The data are described in Section 3. Section 4 contains the results and Section 5 concludes.

2 Hypotheses

The volume of M&A activity in a target country is determined by the demand for and supply of capital for mergers and acquisitions. In a simple model, the demand is downward sloping because targets can be sorted in decreasing order according to the potential value created via a takeover. The supply curve is flat and equal to the cost of capital as long as international capital markets are reasonably integrated. In this setting investor protection affects the equilibrium level of M&A activity by shifting the demand curve.

Existing literature offers two main views on the impact of investor protection on the demand for M&A activity: the "outcome hypothesis" and the "efficiency hypothesis".

2.1 Outcome hypothesis

The outcome hypothesis predicts that in countries with better investor protection there will be a greater demand for mergers and acquisitions. This happens because with low

investor protection, there are large private benefits of control (Nenova, 2002, and Dyck and Zingales, 2002), ownership is highly concentrated (Bebchuk, 1999) and therefore the market for corporate control does not operate freely. Conversely, with high investor protection, there are low private benefits of control, ownership is diffuse and there is an active market for corporate control (Manne, 1965, and Jensen, 1993).

As shown in Figure 1, a greater demand for M&A implies more mergers and acquisitions in equilibrium and a higher premium. In the figure, the volume of M&A is represented on the x-axis and the value created by the deals is on the y-axis. The equilibrium level of M&A activity in a given target country is determined by the intersection between demand and supply. According to the outcome hypothesis, an increase in investor protection shifts the demand curve to the right, increasing the equilibrium volume of M&A activity in the target country. The average premium equals the average value created by completed deals because of competition among bidders.[3] This is represented in the figure as the average distance between demand and supply schedules, which is shown to increase when investor protection goes from Low to High. The testable predictions of the outcome hypothesis are therefore that both M&A activity and the premium paid will be greater in countries with higher investor protection.

2.2 Efficiency hypothesis

The opposite predictions derive from the efficiency hypothesis. According to this view, corporate governance regimes differ in terms of efficiency. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2002) and Bhattacharya and Daouk (2002) show that the valuation of companies and their cost of capital differ systematically across corporate governance regimes. Specifically, they find higher valuations and lower cost of capital in countries with higher investor protection. In other words, they find more inefficient firms in countries with lower investor protection. The efficiency hypothesis argues that transfers of control generate value in an international market for corporate control by targeting inefficient firms. Hence, the demand for M&A activity should be greater in countries with lower investor protection.

The efficiency hypothesis is represented in Figure 2. The increase in investor protection shifts the demand curve to the left, decreasing the equilibrium volume of M&A activity in the target country. Similarly, the average premium decreases with investor protection. The testable predictions of this theory are therefore that both M&A activity and average premium will be smaller in countries with higher investor protection.

In Section 4 we test the above predictions and we also compare across countries other dimensions of mergers and acquisitions for which the two theories do not necessarily have opposite predictions. Specifically, we focus on four dimensions of takeovers around the world: the intensity of M&A activity, the nature of the deals (hostile versus friendly, cross-border

[3] In other words, we assume that target shareholders receive all surplus generated by the transfer of control.

versus domestic), the premium paid to target shareholders, and the means of payment.

2.3 Discussion

A third hypothesis can be derived from the literature and can be compared with the two above. It can be called the "free-rider hypothesis" and claims that transfers of control are easier and more likely in firms with more concentrated ownership. The reason, as argued by Grossman and Hart (1980), is that with diffuse ownership transfers of control require tender offers which push up the price and reduce buyer's incentive to launch the takeover. As shown by Shleifer and Vishny (1986), large shareholders make takeovers more likely because they are aware that they are pivotal for the transfer of control. Since ownership is more concentrated in countries with lower investor protection (as shown by La Porta et al., 1997), this hypothesis predicts a negative relationship between investor protection and M&A activity across countries. This theory also predicts higher premia in countries with higher investor protection because in completed deals bidders have to overcome the free-rider problem associated with diffuse ownership. Hence, this third hypothesis shares predictions with both theories presented above. By comparing the two main hypotheses, we will effectively test also the implications of this theory.

In the previous section, we have assumed that the supply of M&A activity is not affected by investor protection because international markets for corporate control are integrated. However, if this is not the case, investor protection may flatten the supply curve because good institutions increase the availability of funds and reduce the cost of capital for domestic bidders. For example, in countries with better investor protection bidders can use more easily their company's stock as a mean of payment because target shareholders are more willing to accept it. If so, from the supply side, the volume of M&A activity increases with investor protection. This effect reinforces the prediction of the outcome hypothesis and weakens the prediction of the efficiency hypothesis. Indeed, in the latter case, the overall effect of an increase in investor protection depends on the relative movements of the demand and supply schedules. With a relatively flat supply curve, as in Figure 2, the efficiency hypothesis predicts a decrease in both M&A activity and the premium. With a steeper supply curve, the only clear prediction of the efficiency hypothesis is about the premium: lower premium with higher investor protection. The volume of mergers and acquisitions may instead increase, decrease or be unaffected by a change in investor protection.

3 Data

Our sample contains all mergers and acquisitions announced between January 1, 1990 and December 31, 1999 and completed as of December 31, 2001, as provided by SDC Platinum, a database from Thompson Financial. We focus on mergers (business combinations where the number of companies decreases after the transaction) and acquisitions of majority interests

(all cases in which the acquirer owns less than 50 percent of the target-company's stock before the deal, and more than 50 percent after the deal) because we want to focus on transactions clearly motivated by changes in control. A second reason is that the coverage by SDC Platinum of transfers of minority stakes (below 50 percent) is likely to be severely affected by cross-country differences in diclosure requirements. By selecting only transfers of control stakes (above 50 percent), we minimize these disclosure biases.

The availability of empirical measures of investor protection limits the set of countries to the 49 countries examined by La Porta et al. (1998). Excluded deals represent about six percent of the total of deals in the original data set in number and one percent in value.

Table 1 describes all variables used in the paper and indicates their sources. These variables can be classified into three broad categories corresponding to three different levels of analysis.

The first set of variables is at country level. It includes measures of M&A activity from the target's perspective, broad macroeconomic conditions, and proxies of the legal and regulatory environment for 49 countries. These variables will be used in the cross-country analysis of the determinants of the intensity and the nature of international mergers and acquisitions.

The second set of variables focuses on cross-border deals. It comprises data on M&A activity between any ordered pair of countries (there are 49×48, that is, 2,352 ordered pairs),[4] and on cultural differences and similarities between target and acquirer for any pair of countries. In the analysis of cross-border activity, we also compute measures of the differential macroeconomic, legal and regulatory conditions for each ordered pair of countries using the variables defined above at country level.

The third set of variables is at individual-deal level. It includes data on the premium paid, the value of the deal and the means of payment. These data are used in the analysis of the determinants of the premium and the means of payment, together with country-level variables defined above.

3.1 M&A activity

The data on M&A activity are shown in Table 2 sorted by target country. The sample includes 45,536 deals. We define as M&A Activity the percentage of traded firms which were the target of successful mergers or acquisitions. As apparent from the table, the market for corporate control plays a different role in different countries. For example, in Japan M&A Activity is very low (only 6.4 percent of Japanese traded companies were the target of a completed deal during the 1990s) while in the US M&A Activity is very high (65.6 percent of US traded companies were targets of a completed deals). The table also shows some similarities across countries. For example, M&A Activity in France, Italy, and the UK is very similar although their governance regime is quite different.

[4] We use ordered pairs to distinguish between acquirer and target countries.

Of all mergers and acquisitions, we focus specifically on hostile and cross-border deals, since they are likely to play an important governance role. We define as Hostile Takeovers the number of attempted hostile takeovers as a percentage of the total number of traded companies. The intuition is that the disciplinary role of hostile takeovers is related to the threat they represent to incumbent managers. In other words, it is likely that attempted (but failed) hostile takeovers play as important a role in disciplining management as hostile takeovers that are eventually completed. In all countries hostile takeovers represent a very small phenomenon compared with overall M&A activity. In fact, they are completely absent in 21 out of 49 countries, and when present they never exceed the 6.44 percent observed in the US.

We define as Cross-Border Ratio the percentage of completed deals where the acquirer is from a different country than the target.[5] The cross-border mergers and acquisitions are 11,638, 26 percent of the total. Table 2 shows that different countries play different roles in the cross-border M&A market. Indeed, while 51 percent of the acquisition of Mexican firms are completed by a foreign acquirer, only 9.1 percent of the acquirers in US deals come from abroad.

3.2 Investor protection

Mergers and acquisitions help allocate corporate assets to their best possible use by reshuffling control over companies. Investor protection may affect the volume of mergers and acquisitions because it affects the magnitude of frictions and inefficiencies in the target country. As proxies for investor protection, we will employ several indices developed by La Porta, et al. (1998): a dummy variable for countries with English legal origin, an index of the quality of the accounting standards, an index of the quality of law enforcement (Rule of Law), and a measure of the rights that shareholders have with respect to management (Antidirector Rights). As a further control variable, we use a measure of ownership concentration also from La Porta, et al (1998).

These indices are highly correlated (their pairwise correlation ranges between 50 and 60 percent) because they all reflect to some degree the underlying quality of the investor protection in one country. However, they measure different institutional characteristics.

Specifically, Common Law equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise. La Porta et al. (1998) argue that legal origin is a broad indicator of investor protection and show that countries with common law legal origin have better protection of minority shareholders than countries with civil law legal origin. They suggest that this is because common law allows judges to enforce a broader application of such principles as managerial fiduciary duty.

[5] In the case of mergers, the distintion between acquirers and targets is arbitrary. We follow our data source, Thomson Financial Securities Data. For example, in the merger between Daimler and Chrylser, Thomson codifies Daimler as the acquirer and Chrysler as the target.

Accounting Standards measures the quality of the disclosure of accounting information. It was created by examining and rating companies' 1990 annual reports on their inclusion or omission of 90 items. Since good disclosure requirements are a necessary condition for a well developed stock market, we interpret Accounting Standards as an exogenous proxy for stock market development.

As our main measure of investor protection, we follow the work of Johnson, Boone, Breach and Friedman (2000) and define Shareholder Protection as the product between Antidirector Rights and Rule of Law. Shareholder Protection measures the rights that minority shareholders effectively hold after controlling for their enforcement by the legal system. In countries with lower shareholder protection, minority shareholders are expropriated more. Thus, Shareholder Protection is a proxy for the quality of the corporate governance.

Finally, we will also employ the measure of ownership concentration provided by La Porta, et al. (1998) as a control variable. For each country, Ownership Concentration is the average equity stake owned by the three largest shareholders in the 10 largest non-financial domestic firms in 1994. In theory, this variable should have an important impact on the effectiveness of the market for corporate control and can be used as an indirect measure of investor protection.

It is important to note that the number of observation in our empirical analysis varies with the measure of investor protection used because Accounting Standards is not available for Ecuador, Indonesia, Ireland, Jordan, Kenya, Pakistan, Sri Lanka, and Zimbabwe and Ownership Concentration is not available for Ecuador, Jordan, Kenya, and Uruguay.

4 Methodology and Results

In this section we analyze the cross-country relationship between M&A activity and investor protection. We focus on four dimensions of mergers and acquisitions: frequency, nature (hostile, cross-border), premiums, and means of payment.

4.1 Determinants of M&A activity

We start with the relationship between the volume of M&A activity and investor protection at target-country level. The most natural specification is:

$$\text{M\&A Activity} = \alpha + \beta X + \gamma \text{ Investor Protection} + \epsilon, \tag{1}$$

where the dependent variable, M&A Activity, is the percentage of traded firms that were targets of successful mergers or acquisitions. Investor Protection is proxied by the variables described in Section 3.2: Common Law, Accounting Standards, Shareholder Protection, and Ownership Concentration. According to the outcome hypothesis, M&A Activity should increase with Common Law, Accounting Standards and Shareholder Protection, and decrease with Ownership Concentration. The predictions of the efficiency hypothesis are the opposite:

M&A Activity should decrease with Common Law, Accounting Standards and Shareholder Protection, and increase with Ownership Concentration. Control factors (X) in all specifications are GDP Growth, as a proxy for the change in economic conditions, and the logarithm of the 1995 per capita GNP, as a proxy of the country's wealth.

Table 3 reports the coefficients of six Tobit models derived from specification (1). We estimate Tobit models because the dependent variable (M&A Activity) is bounded between 0 and 100 by construction.

The results show that Common Law, Accounting Standards and Shareholder Protection are positively and significantly correlated with M&A Activity. These legal variables are also economically significant. The frequency of mergers among traded companies is 7.5 percent higher in common law countries than in civil law ones. Raising Accounting Standards by 12 points (from the quality of accounting standards in Italy to the one in Canada) increases the frequency of mergers by 6.6 percent. An increase in Shareholder Protection by 1 point (for instance, the adoption of voting by mail in a country like Germany) raises M&A Activity by 4.3 percent. These results are in support of the outcome hypothesis and against the efficiency hypothesis.

The coefficient on Ownership Concentration (in column 4) is instead positive (but not statistically significant). A positive sign is difficult to reconcile with the outcome hypothesis. Indeed, when ownership is more concentrated, the market for corporate control should be *less* (rather than more) effective. We know from previous studies that ownership concentration is higher in countries with lower investor protection. Hence, we run a regression in which we control for both investor protection and ownership concentration.

In column 5, we include as regressors Accounting Standards, Shareholder Protection and Ownership Concentration. The results are quite interesting. On the one hand, the coefficients on Accounting Standard and Shareholder Protection are positive and significant, as predicted by the outcome hypothesis, and they are unaffected by the additional control variable. On the other hand, the coefficient on Ownership Concentration is also positive and significant: controlling for investor protection, countries with more concentrated ownership have more mergers and acquisitions. This finding is consistent with the free-rider hypothesis according to which transfers of control are easier in countries with concentrated ownership. However, it is difficult to argue that this is a robust result because ownership structure and protection of minority shareholders are highly correlated and, as shown in column 4, the relationship between M&A Activity and Ownership Concentration is not statistically significant when we do not control for Shareholder Protection. We interpret therefore the free-rider hypothesis as a complementary explanation to the outcome hypothesis.

In column 6, we evaluate the robustness of the results on investor protection by adding some control variables to capture cross-country differences in the regulatory environment, following Comment and Schwert (1995). We focus on Shareholder Protection as our main proxy for investor protection. First, we add Mandatory Bid Rule, a dummy variable that equals 1 if acquirers are forced to make a tender offer to all shareholders when passing a given

ownership threshold and 0 otherwise. We expect that this regulatory requirement reduces the volume of mergers and acquisitions because it imposes further costs to the potential bidder. Second, we include Aggregate Returns, the average annual stock market return from 1991 to 2000. We expect more mergers when the stock market is booming because acquirers can pay with overvalued stocks.[6] Third, we include Market Dominance, a survey measure of product market concentration. We expect fewer mergers in countries with greater market concentration because of smaller availability of targets.[7]

The results in column 6 show that Shareholder Protection is still significant and its coefficient is virtually unchanged from column 3. None of the control variables are significant although they have the predicted sign. The results in Table 3 characterize M&A Activity as being driven by good legal environments. Hence, they provide evidence in favor of the outcome hypothesis and against the efficiency hypothesis.

4.2 Hostile takeovers

We now turn to the analysis of cross-country differences in the nature of M&A activity, starting with hostile takeovers. We expect hostile takeovers to be more frequent in countries with higher investor protection. The reason is that hostile takeovers require control to be contestable, a feature that is less common in countries with poorer investor protection. This prediction is consistent with both hypotheses presented in Section 2.

We adapt specification (1) by changing the dependent variable:

$$\text{Hostile Takeovers} = \alpha + \beta X + \gamma \text{ Investor Protection} + \epsilon, \tag{2}$$

where Hostile Takeovers is the number of attempted hostile takeovers in the 1990s as a percentage of the number of domestic traded companies. Investor Protection is proxied by Common Law, Accounting Standards, Shareholder Protection, and Ownership Concentration, as described in Section 3.2. We expect Hostile Takeovers to increase with Common Law, Accounting Standards and Shareholder Protection, and to decrease with Ownership Concentration. We include GDP Growth and the logarithm of GNP per Capita as control factors in all specifications.

The results are presented in Table 4. The first 3 columns show that Common Law, Accounting Standards, and Shareholder Protection are positively and significantly correlated with Hostile Takeovers. Column 4 shows that the coefficient on Ownership Concentration is negative and statistically significant. The frequency of attempted hostile takeovers among traded companies is 1.5 percent higher in common law countries than in civil law ones. Raising Accounting Standards by 12 points (going from Italy's to Canada's accounting standards) increases the frequency of attempted hostile takeovers by 1 percentage point. An

[6] Aggregate Returns is not available for Taiwan and Uruguay.

[7] Market Dominance is not available for Ecuador, Kenya, Nigeria, Pakistan, Sri Lanka, Uruguay, and Zimbabwe.

increase in Shareholder Protection by 1 point (for instance, the adoption of voting by mail in Germany) makes hostile takeovers more likely by 0.9 percentage point. An increase in ownership concentration of 14 percent (going from US ownership concentration to France's) decreases the probability of hostile takeovers by 0.75 percentage point. As shown in column 5, Shareholder Protection is the only significant variable when we include all three measures of investor protection.

To evaluate the robustness of the results, in column 6 we focus again on Shareholder Protection and add some control variables to capture cross-country differences in the regulatory environment. We control for Mandatory Bid Rule because we expect fewer attempted hostile deals associated with more regulatory requirement. We control for Aggregate Returns because we expect more attempted hostile takeovers when the stock market is booming because acquirers can pay with overvalued stocks. Finally, we include Cross-Border Regulation, a dummy variable that equals 1 if a foreign buyer needs governemnt approval before acquiring control of a domestic firm and 0 otherwise. We expect that this regulatory requirement reduces the frequency of hostile takeovers because deals initiated by foreign bidders are more likely to be hostile.

The results in column 6 show that Shareholder Protection is still significant and its coefficient is unaffected. Cross-Border Regulation is also negative and significant, as predicted. Specifically, the requirement of government approval for foreign acquisitions reduces the frequency of attempted hostile takeovers by 2.2 percent. Aggregate Returns and Mandatory Bid Rule have the predicted sign, but they are not are statistically significant.

4.3 Cross-border mergers and acquisitions

We now turn to cross-border deals. A prediction of both hypotheses described in Section 2 is that more value is created when the acquirer has a better corporate governance than the target. The efficiency hypothesis relies on an international market for corporate control to operate in this way. The outcome hypothesis has a similar prediction because, as described by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000a): "When a British firm fully acquires a Swedish firm, the possibility for legal expropriation of investor diminish. Because the controlling shareholders of the Swedish company are compensated in such a friendly deal for the lost private benefits of control, they are more likely to go along. By replacing the wasteful expropriation with publicly shared profits and dividends, such acquisitions enhance efficiency." (p. 23) This discussion suggests two testable hypotheses in an international setting that are addressed in this section: 1) The probability that a deal is cross border rather than domestic is higher in countries with lower investor protection; and 2) in cross-border deals, the acquirers will come from countries with higher investor protection than the targets.

4.3.1 Target-country analysis

As before, we adapt specification (1) by changing the dependent variable:

$$\text{Cross-Border Ratio} = \alpha + \beta X + \gamma \text{ Investor Protection} + \epsilon, \tag{3}$$

where Cross-Border Ratio is the number of cross-border deals as a percentage of all completed deals by target country. Investor Protection is proxied by Common Law, Accounting Standards, Shareholder Protection, and Ownership Concentration, as described in Section 3.2. We expect Cross-Border Ratio to decrease with Common Law, Accounting Standards and Shareholder Protection, and to increase with Ownership Concentration. As before, we control for the logarithm of GNP per Capita, as a measure of a country's wealth, and GDP Growth as a proxy of the change in macroeconomic conditions.

Table 5 reports the coefficients of six Tobit models derived from specification (3). The results confirm our prediction: the probability that a completed deal is cross border rather than domestic is higher in countries with lower investor protection. Specifically, the coefficients on Common Law, Accounting Standards and Shareholder Protection are all negative and significant at the 1 percent level. The coefficient on Ownership Concentration is positive but not significant. In economic terms, the probability that a completed deal is cross border is 14.5 percent higher in civil law countries than in common law ones. Raising Accounting Standards by 12 points (from Italy's to Canada's accounting standards) decreases cross-border deals by 8 percent. An increase in Shareholder Protection by 1 point (for instance, the adoption of voting by mail in Germany) decreases the cross-border ratio by 6 percent.

To evaluate the robustness of the results, in column 6 we focus again on Shareholder Protection as our main explanatory variable and add some control variables. We control for Cross-Border Regulation because we expect fewer cross-border deals associated with more regulatory requirements. We control for Aggregate Returns because we expect fewer cross-border deals when the stock market is booming because foreign acquirers need to buy (potentially-) overvalued stocks. Finally, we also include Openness, a survey measure of the cultural attitude towards cross-border deals because cross-border deals are more likely if the country is more friendly to foreigners.[8] The results show that Shareholder Protection is still significant and its coefficient is unaffected. Openness is negative and significant, as predicted. Finally, the coefficients on Aggregate Returns and Cross-Border Regulation are not significant but have the expected signs.

These results confirm the predictions of both theories that the likelihood of being targeted in a cross-border deals decreases with investor protection. An interesting hypothesis to test

[8] Another potential determinant of international mergers and acquisitions is tax competition across countries. For instance, taxes may affect M&A activity because it is easier for domestic firms to take advantage of investment tax credits and accelerated depreciation in the target country than for foreign firms. Moreover, the tax treatment of foreign income differs across countries. However, we do not control for taxes in our study because the complexity of the issue requires a paper on its own.

is whether the investor protection of the acquirer is significantly higher than the target's. We address this issue in the next section.

4.3.2 Ordered-pair analysis

The results in Table 5 suggest that cross-border mergers and acquisitions play a governance role by targeting firms in countries with lower investor protection. To explore this hypothesis fully, we arrange our data-set to produce a "worldwide matrix" of mergers and acquisitions, where each entry – Cross-Border Deals$_{s,b}$ – is defined as the number of deals where the acquirer comes from country b (for buyer) and the target is in country s (for seller), as a percentage of the total number of deals in country s.

With the newly-arranged data-set, we can study the pattern of cross-border mergers and acquisitions by controlling at the same time for characteristics of target and acquirer countries. An appropriate specification is:

$$\text{Cross-Border Deals}_{s,b} = \beta X_{s,b} + \gamma \Delta \left(\text{Investor Protection}\right)_{b-s} + \delta_b + \zeta_s + \epsilon_{s,b}, \qquad (4)$$

where the dependent variable is the number of cross-border deals with the acquirer coming from country b and the target from country s ($b \neq s$) as a percentage of the total number of deals (cross border and domestic) in country s. Our hypothesis is that the volume of cross-border M&A activity between country b (the acquirer) and country s (the target) correlates positively with the difference in investor protection between the two countries. Hence, the main explanatory variable in specification (4) is the difference in Shareholder Protection between the two countries. As an alternative measure of investor protection, we use the difference in Accounting Standards. It is important to notice that our specification also includes fixed effects for target and acquirer countries. These fixed effects control for all cultural and institutional characteristics of the two countries, included the level of investor protection in the individual countries.

The results are reported in Table 6. In the first 3 columns, we run a regression with no controls except for acquirer- and target-country fixed effects. As predicted by our hypotheses, the volume of M&A activity between two countries is positively correlated with their difference in investor protection. This means that acquirers typically come from countries with better Shareholder Protection and better Accounting Standards than the targets. In column 4, we control for differences in the logarithm of GNP per Capita of acquirer and target country as a measure of the relative economic development of the two countries, and we also include two dummy variables equal to one if acquirer and target share the same cultural background, that is, if they come from the same linguistic and geographical area.[9]

[9] Language is the main official language spoken in a country according to the World Atlas 1995. Geographical area is one of the following four: i) Africa, ii) Asia and Oceania, iii) Europe, and iv) North and South America.

The result on Shareholder Protection is identical to column 1. Column 4 shows that richer countries are more likely to be acquirer rather than target. Also, more cross-border deals happen between countries sharing the same language and geographical area. We show only the result for Shareholder Protection because the difference in Accounting Standards is not significant when added to the regression estimated in column 4 (not shown in the table).

A potential important missing variable in the analysis is the volume of trade between two countries. Indeed, companies exporting into a given country may engage in M&A activity in that country for reasons that have nothing to do with governance. To control for this alternative explanation, in column 5 we add Bilateral Trade to our regression, where we define Bilateral Trade as imports from country b to country s, as a percentage of total imports of country s.[10] The results are unchanged. We find that the acquirer typically has stronger Shareholder Protection than the target. As expected, Bilateral Trade is positive and significant confirming that trade is an important motive for cross-border mergers and acquisitions.

4.3.3 Discussion

The case for target shareholders to sell out to bidders with higher governance standards is clear: they stand to gain from the lower cost of capital associated with higher investor protection. However, it is not obvious why acquirers seek to take over a poorly governed company. The efficiency hypothesis suggests that they create value by improving the corporate governance within the target. A possible concern with this view is that the acquirer firms may, to some extent, import the poorer governance of their targets (poor accounting and disclosure practices, board structures and so on). However, anecdotal evidence of cross-border deals with high press coverage seems to suggest that this is not the case: the targets almost always adopt the governance standards of the acquirers, whether good or bad.[11] Thus, if convergence is to happen, it is towards the acquirers' governance standards.

A second issue in relation with the efficiency hypothesis is that the deal may be motivated by agency and hubris problems of the acquirer and not by the desire to improve the governance regime in the target company. If so, the deal may not create value. This question demands a study of the price reaction of the target and acquirer, which cannot be done with our large sample. An indirect test of this hypothesis is possible instead. Indeed, if countries with poorer investor protection (in particular, lower governance standards as measured by lower Shareholder Protection) have more severe agency problems, the hypothesis suggests more acquisitions by companies in countries with lower Shareholder Protection. This is not what we observe. In a regression that is not displayed in the paper, we find rather the opposite: more acquisitions by companies in countries with higher Shareholder Protection.

[10] Bilateral Trade is not available for six countries: Belgium, Brazil, Israel, Nigeria, Switzerland and Zimbabwe. The number of observations in Table 7 changes accordingly.

[11] For instance in the acquisition of Chrysler by Daimler, the resulting company has adopted a two-tier board structure, as required by German law.

The paper also suggests several opportunities for future research on cross-border deals. As shown by Mitchell and Mulherin (1996), industry shocks are an important determinant of M&A activity. The importance of cross-border deals is also likely to vary across industries. For example, according to the efficiency hypothesis we should observe more cross-border deals in industries that need more external capital. Moreover, the efficiency hypothesis suggests that cross-border deals should reduce the cost of capital in the target companies when the acquirer's investor protection is higher than the target's. To verify this prediction, an analysis of post acquisition performance may be performed for cross-border deals, following Healy, Palepu, and Ruback (1992).

4.4 Analysis of individual deals

The final step in our analysis is the study of the cross-country variation in the premium and means of payment. For this purpose, we turn to transaction-level data. We compute the premium as the logarithm of the price paid by the acquirer divided by the closing price of the target four weeks before the announcement. This variable is computed using data available from SDC Platinum. After excluding missing observations, we have 4,414 observations from 36 countries.

4.4.1 Premium

In this section, we use the sample of individual transactions to analyze the cross-country determinants of the takeover premium. We estimate the specification:

$$\text{Premium} = \alpha + \beta X + \gamma \text{ Investor Protection} + \epsilon \tag{5}$$

where Premium is the logarithm of the ratio of the bid price and the closing price of the target 4 weeks before the announcement of the deal, Investor Protection is measured at target-country level and X is a set of control factors. We use alternatively Common Law and Shareholder Protection as proxies for Investor Protection because the premium paid to shareholders should mainly reflect the degree of protection offered to minority shareholders. Control variables at deal level are: Target Size, the logarithm of the target's market capitalization 4 weeks before the announcement; Cross Border, a dummy variable that equals 1 if the deal is cross border and 0 otherwise; Hostile Bid, a dummy variable that equals 1 if the deal is hostile and 0 otherwise; Tender Offer, a dummy variable that equals 1 if the deal involves a tender offer and 0 otherwise; and Bidder M/B, the equity market-to-book ratio of the bidder 4 weeks before the announcement. We expect larger deals to be associated with lower premia because of reduced competition among potential bidders. Also, Cross Border and Hostile Bid should be correlated with higher premia because these deals are typically more contested. We expect Tender Offer to be associated with higher premia because of Grossman and Hart (1980) free-riding hypothesis. Finally, Bidder M/B should be correlated

with higher premia because companies with higher book-to-market ratio face lower cost of capital and are therefore able to pay more.

Table 7 shows the results of four regressions based on specification (5). In all regressions, the standard errors shown in parenthesis are adjusted for heteroskedasticity using White's (1980) correction and for clustering at country level. We also include year dummies but we do not report their coefficients.

Across all specifications, Common Law and Shareholder Protection significantly increase the takeover premium. In particular, the premium is 13-percent higher in common law countries. An increase in the level of Shareholder Protection by 1 point (say, the introduction of voting by mail) leads to a 5-percent increase in the premium. Target Size is negative and significant: larger deals are associated with lower premia. As expected, Cross Border, Hostile and Tender Offer are positive and significant in the first three columns. In column 3 we add Mandatory Bid Rule and find a negative and significant coefficient. A simple explanation for this finding is that a mandatory bid rule increases the cost of a takeover. In column 4 Bidder M/B is added: as expected, its coefficient is positive and significant. The equity market-to-book ratio of the bidder is collected from Datastream. As a result of the matching procedure the number of observations in regression 4 falls down to 1,169.

From Table 7, we can conclude that higher shareholder protection in the target company induces the bidder to pay higher premia. This result is consistent with the outcome hypothesis and against the efficiency hypothesis. It is also consistent with the free-rider hypothesis since strong shareholder protection results in diffuse ownership. This in turn increases the bargaining power of the marginal shareholder and the premium paid in successful takeovers.

4.4.2 Discussion

The results in Table 7 contrasts sharply with the finding by Dyck and Zingales (2002). In a sample of 393 private control transactions, they show that larger block premia are associated with less developed capital markets and more concentrated ownership. We find substantially the opposite: larger premia in countries with higher Shareholder Protection. The different results can be explained by differences of approch.

First, Dyck and Zingales (2002) use information on the block prices to compute an indirect measure of the private benefits of control, defined as the difference between the price paid per share and the market price *after* the announcement of the deal. Instead, we simply compute the premium as the percentage difference between the price paid by the buyer and the closing price four weeks *before* the announcement of the deal, which is a measure of minority shareholders' benefits from the deal.

Their sample is also very different from ours: we have 4,414 deals while they have only 393 deals. This is because they restrict their attention to private purchases of blocks while we also include public offers and acquisition paid with stocks. Moreover, they need to observe both the price per share of the control block and the stock price after the announcement, while we do not impose this restriction.

Finally, they focus on transfer of blocks larger than or equal to 10 percent of the stock, where the acquirers hold less than 20 percent of the shares before the deal, and more than 20 percent of the shares after the deal. In contrast, we define control as the ownership of the majority (50 percent or more) of the voting shares, and therefore we focus on all mergers and acquisitions of majority interests. This difference is important because the size of the block (and the stake owned by the bidder after the deal) has a non-monotonic relation with the private benefits. For a small block (well below 50 percent) the larger the block, the larger the private benefits that the ownership of the block may confer. However, when the block is large (above 50 percent) a larger block simply reduces the private benefits deriving from expropriation of minority shareholders, as shown by Burkart, Gromb, and Panunzi (1998).

Our sample focuses on clear cases of changes of control in which an acquirer (holding less than 50 percent before the transaction) ends up controlling at least 50 percent of the shares upon completion of the deal. Hence, we believe that in our sample the takeover premium reflects the security benefits generated by the deal and shared by all shareholders rather than the private benefits of control.

Moreover, the results are not affected by controlling for the stake traded or the stake held by the bidder after the deal (not tabulated). We believe that this is the case because in our sample the average stake owned by the acquirer after the completion of the deal is 94 percent of the common shares and in 84 percent of the observations the acquirer stake after the deal is 100 percent. With such a large stake, the acquirer is unlikely to expropriate minority shareholders.

4.4.3 Means of payment

Legal protection of investors may also affect the form of payment used in mergers and acquisitions. The theories presented in Section 2 suggest that we should observe less equity financing and more cash financing in countries with lower shareholder protection. This is because in a country with low investor protection target shareholders are likely to prefer cash rather than that bidder's shares as merger compensation.

Hence, we estimate a regression similar to (5) for the means of payment:

$$\text{Prob(All-Cash Bid)} = \pi_0 + \pi_1 X + \pi_2 \text{ Investor Protection} + \eta, \tag{6}$$

where we expect that higher shareholder protection should be associated with fewer cash bids. We use alternatively Common Law and Shareholder Protection as proxies for Investor Protection. Control variables are the same as in Table 7: Target Size, Cross Border, Hostile Bid, Tender Offer, Bidder M/B, and Mandatory Bid Rule.

Table 8 reports the results of four regressions based on specification (6). In all regressions, the standard errors shown in parenthesis are adjusted for heteroskedasticity using White's (1980) correction, and for clustering at country level. We also include year dummies but we do not report their coefficients.

In all specifications, we find that Shareholder Protection significantly decreases the use of cash in takeovers as suggested by the two theories. In particular, an increase in the level of Shareholder Protection by one point leads to a 11-percent reduction in the probability of using cash. Consistent with the hypotheses, Cross Border, Hostile and Tender Offer are positive and significant in all specifications. Also, Target Size is always negative, and it is significant in regressions 1 to 3. In column 4 we add Bidder M/B, the equity market-to-book ratio of the bidder, and we find it to be not significantly different from zero.

One concern is that the control variables used in regressions (5) and (6) (Tender Offer, Hostile Bid, and Cross Border) are themselves endogenous. As a result, our estimates could be inconsistent. To address this issue we estimated a recursive system with five equations: one for each endogenous variable, Premium, All-Cash Bid, Tender Offer, Hostile Bid, and Cross-Border Deal. Exogenous variables are Target Size, Bidder M/B, Shareholder Protection, and Mandatory Bid Rule. The output of this regression is not shown in the paper because the coefficients on Shareholder Protection are virtually identical to those in Tables 7 and 8.

5 Conclusion

Our paper belongs to the growing literature comparing governance structures around the world. It documents that better investor protection is associated with more mergers and acquisitions.

We have proposed two alternative theories on the relationship between investor protection and M&A activity. The first theory (the outcome hypothesis) argues that the market for corporate control will be more active in countries with higher legal protection for investors. The intuition is that investor protection reduces ownership concentration, increasing the need for disciplining takeovers and weakening the barriers to the market for corporate control. The second theory (the efficiency hypothesis) predicts a negative relationship between investor protection and M&A activity across countries. The intuition is that companies in countries with low investor protection are plagued by inefficiency and they stand to gain a lot from a transfer of control to a more efficient owner. This is particularly true when the buyer comes from a country with higher investor protection than the seller.

Using a large sample of deals announced in the 1990s and completed by the end of 2001 in 49 major countries, we find that both the level of M&A activity and the premium paid are significantly higher in countries with better investor protection.

These findings suggest that good domestic investor protection is a requirement for mergers and acquisitions and the international market for corporate control is not able to overcome the barriers to entry in countries with poor investor protection. Hence, this result supports the outcome hypothesis and rejects the efficiency hypothesis.

The paper then focuses on cross-border deals. The probability that a deal is cross border rather than domestic decreases with the degree of investor protection in the target's country.

Furthermore, when looking at the identity of targets and acquirers, acquirers have higher investor protection than targets, that is, cross-border deals increase the effective investor protection within target firms.

This is an interesting result for the on-going debate among legal scholars on the possibility of effective world-wide convergence in corporate governance standards. Coffee (1999) argues that differences in corporate governance will persist but with some degree of functional convergence. Hansmann and Kraakman (2001) believe that formal convergence will happen soon. Bebchuk and Roe (1999) question the idea of a rapid convergence because political and economic forces will slow down any change. Gilson (2001) argues that convergence will happen through all three channels (formal, contractual and functional).

Our findings are consistent with the prediction by Coffee (1999) that companies from countries with better protection of investors will end up buying companies from countries with weaker protection. Cross-border mergers and acquisitions have become more common. In the 1980s only 15 percent of the deals were cross border, compared with 26 percent in the 1990s. A further increase in the number of cross-border mergers and acquisitions may indeed generate a convergence by contract in governance standards across countries.

Furthermore, an increase of foreign acquisitions may prompt governments in countries with low investor protection to improve laws and institutions, motivated by the desire to keep domestic companies in domestic hands. Hence, convergence by contract can lead to formal convergence, as discussed by Hansmann and Kraakman (2001).

Moreover, an increase in cross-border M&A financed with stocks may increase market integration, alleviating the home bias in equity portfolios. Indeed, if the foreign bidder pays with stock, target shareholders face the problem of disposing of a new investment domiciled abroad. As a result, they may choose to keep the foreign shares. In aggregate, this would imply a reduction of the home bias in equity investment in target countries. In turn, this would also reduce the cost of capital at country level, because investors would be able to diversify their portfolio more, as argued by Stulz (1996).

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Table 1. Description of the variables used in the analysis

This table describes the variables included in our study and their sources.

Country-level variables	
M&A Activity	Percentage of domestic traded companies targeted in completed deals in 1990s. Sources: SDC Platinum, provided by Thompson Financial Securities Data, and the World Development Indicators.
Hostile Takeovers	Attempted hostile takeovers as a percentage of domestic traded companies. Sources: SDC Platinum and the World Development Indicators.
Cross-Border Ratio	Number of cross-border deals as target as a percentage of all completed deals, sorted. Source: SDC Platinum.
GDP Growth	Average annual real growth rate of the Gross Domestic Product in 1990s. Source: World Development Report.
GNP per Capita	Gross National Product in 1995 (in US$) divided by the population. Source: World Development Report.
Common Law	It equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise. Source: La Porta, et al. (1998).
Accounting Standards	Index created by the Center for International Financial Analysis and Research to rate the quality of 1990 annual reports on their disclosure of accounting information. Source: La Porta, et al. (1998).
Rule of Law	Assessment of the law and order tradition in the country produced by the risk-rating agency International Country Risk (ICR). Average of the months of April and October of the monthly index between 1982 and 1995. It ranges between 0 and 10. Source: La Porta, et al. (1998).
Antidirector Rights	The index is formed by adding 1 when (1) the country allows shareholders to mail their proxy vote to the firm, (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting, (3) cumulative voting or proportional representation of minorities in the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10 percent (the sample median), or (6) shareholders have preemptive rights that can be waived only by a shareholders' vote. Source: La Porta, et al. (1998).
Shareholder Protection	Measure of the effective rights of minority shareholders computed as the product of Rule of Law and Antidirector Rights divided by 10. It ranges between 0 and 6.
Ownership Concentration	Average equity stake owned by the three largest shareholders in the 10 largest non-financial domestic firms in 1994. Source: La Porta, et al. (1998).
Cross-Border Regulation	It equals 1 if in 1995 a foreign buyer needed government approval before acquiring control of a domestic firm and 0 otherwise. Source: Economist Intelligence Unit, Country Surveys.
Aggregate Returns	Average annual stock market return in 1990s adjusted for inflation with the Consumer Price Index. Source: WorldScope.
Market Dominance	Survey-based measure of product market concentration ranging between 0 and 10. Source: Global Competitiveness Report, 1996.
Mandatory Bid Rule	It equals 1 if in 1995 there was a legal requirement of making a tender offer when passing some ownership threshold was passed and 0 otherwise. Source: Economist Intelligence Unit, Country Surveys.
Openness	Survey-based measure of the cultural attitude towards cross-border deals ranging between 0 and 10. Source: Global Competitiveness Report, 1996.
Cross-border variables	
Cross-Border Deals $_{s,b}$	Number of deals where the target is from country *s* and the acquirer is from country *b* as a percentage of the total number of deals with target in country *s*. Source: SDC Platinum.
Same Language	It equals 1 when target and acquirer's countries share the same main language and 0 otherwise. Source: World Atlas 1995.
Same Geographical Area	It equals 1 when target and acquirer's countries are from the same broadly defined continent and 0 otherwise. All countries are classified into four areas (Africa, America, Asia, and Europe). Source: World Atlas 1995.
Bilateral Trade	Value of imports by country s from country b as a percentage of total import by country s. Source: World Bank Trade and Production Database.
Transaction-level variables	
Premium	Logarithm of the ratio of the bid price and the closing price of the target 4 weeks before the announcement. Source: SDC Platinum.
All-Cash Bid	It equals 1 if no stock is used in the transaction and 0 otherwise. Source: SDC Platinum.
Target Size	Logarithm of the market capitalization of the target 4 weeks before the announcement of the deal in US$ million. Source: SDC Platinum.
Tender Offer	It equals 1 if the acquisition is done through a tender offer and 0 otherwise. Source: SDC Platinum.
Cross Border	It equals 1 if the target country differs from the acquirer country and 0 otherwise. Source: SDC Platinum.
Hostile Bid	It equals 1 if our source classifies the bid as unsolicited and 0 otherwise. Source: SDC Platinum.
Bidder M/B	Equity market-to-book ratio of the bidder computed 4 weeks before the announcement. Source: Datastream.

Table 2. International M&A activity

This table presents the data on international mergers and acquisitions used in the paper sorted by target country. M&A Activity is the percentage of traded companies targeted in a completed deal. Hostile Takeovers is the number of attempted hostile takeovers as a percentage of domestic traded firms. Cross-Border Ratio is the number of cross-border deals as a percentage of all completed deals. Table 1 provides definitions for the variables.

Country	M&A Activity (%)	Hostile Takeovers (%)	Cross-Border Ratio (%)
Argentina	26.80	0.65	53.73
Australia	34.09	4.60	27.16
Austria	38.14	1.03	51.55
Belgium	33.33	0.56	45.14
Brazil	23.08	0.00	52.03
Canada	30.05	2.73	22.66
Chile	10.57	0.42	64.79
Colombia	19.42	0.00	66.67
Denmark	24.03	0.81	38.26
Ecuador	10.53	0.00	68.97
Egypt	1.46	0.00	47.62
Finland	45.45	0.91	22.67
France	56.40	1.68	33.81
Germany	35.51	0.30	26.05
Greece	12.66	0.00	23.13
Hong Kong	33.91	0.41	38.52
India	2.01	0.02	56.02
Indonesia	10.60	0.48	61.03
Ireland	28.90	4.62	52.73
Israel	9.43	0.23	46.94
Italy	56.40	3.04	36.13
Japan	6.43	0.00	13.25
Jordan	0.00	0.00	55.56
Kenya	1.80	0.00	28.57
Malaysia	15.23	0.19	11.27
Mexico	27.51	0.00	51.02
Netherlands	26.49	1.32	43.43
New Zealand	49.82	0.70	46.15
Nigeria	0.61	0.00	58.33
Norway	61.24	5.86	36.76
Pakistan	0.48	0.00	55.56
Peru	12.21	0.00	56.88
Philippines	21.41	0.00	37.97
Portugal	31.37	1.96	40.00
Singapore	34.06	0.40	31.41
South Africa	23.89	0.45	24.65
South Korea	4.81	0.00	53.85
Spain	15.72	0.17	37.55
Sri Lanka	4.83	0.00	42.86
Sweden	62.06	3.74	35.48
Switzerland	38.48	1.43	43.59
Taiwan	0.89	0.00	49.37
Thailand	17.14	0.00	43.24
Turkey	6.12	0.00	45.45
United Kingdom	53.65	4.39	23.46
United States	65.63	6.44	9.07
Uruguay	7.55	0.00	85.00
Venezuela	14.91	0.00	56.60
Zimbabwe	6.35	0.00	46.15

Table 3. Determinants of the M&A activity across countries.

The table presents results of five Tobit models estimated by maximum likelihood on the sample of 49 target countries. The dependent variable is M&A Activity, the percentage of traded companies targeted in a completed deal. The independent variables are: (1) Common Law, a dummy variable that equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise; (2) Accounting Standards, an index of the quality of accounting disclosure; (3) Shareholder Protection, a measure of the effective rights of minority shareholders; (4) Ownership Concentration, the average equity stake owned by the three largest shareholders in the 10 largest non-financial domestic firms in 1994; (5) Mandatory Bid Rule, a dummy variable that equals 1 if acquirers are forced to make a tender offer to all shareholders when passing a given ownership threshold and 0 otherwise; (6) Aggregate Returns, the average annual stock market return in the 1990s; and (7) Market Dominance, a survey-based measure of product market concentration. Table 1 provides definitions for the variables. The logarithm of GNP per Capita and GDP Growth are included in all regressions as control variables. Standard errors are shown in parentheses. Superscript letters a, b, c indicate significance at 1 percent, 5 and 10 percent level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Log (GNP per Capita)	9.00^a	5.61^a	6.40^a	8.48^a	4.75^b	6.97^b
	(1.24)	(1.94)	(1.48)	(1.51)	(2.01)	(2.21)
GDP Growth	-2.42	-2.57^c	-2.42^b	-1.32	-3.11^b	-1.94
	(1.12)	(1.31)	(1.07)	(1.19)	(1.30)	(1.30)
Common Law	7.52^c					
	(3.97)					
Accounting Standards		0.47^b			0.43^b	
		(0.18)			(0.20)	
Shareholder Protection			4.27^a		4.65^b	4.57^b
			(1.69)		(2.31)	(1.84)
Ownership Concentration				1.22	37.9^c	
				(16.2)	(19.7)	
Mandatory Bid Rule						-1.75
						(4.02)
Aggregate Returns						13.2
						(14.1)
Market Dominance						-4.46
						(3.44)
Constant	-48.1^a	-43.1^a	-31.8^a	-48.1^a	-58.4^a	-25.6
	(12.0)	(16.5)	(12.5)	(12.0)	(22.1)	(18.5)
Pseudo R^2	0.10	0.08	0.10	0.10	0.09	0.10
N. Observations	49	41	49	49	39	41

Table 4. Incidence of hostile takeovers.

The table presents results of five Tobit models estimated by maximum likelihood on the sample of 49 target countries. The dependent variable is Hostile Takeovers, attempted hostile takeovers as a percentage of traded firms. The independent variables are: (1) Common Law, a dummy variable that equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise; (2) Accounting Standards, an index of the quality of accounting disclosure; (3) Shareholder Protection, a measure of the effective rights of minority shareholders; (4) Ownership Concentration, the average equity stake owned by the three largest shareholders in the 10 largest non-financial domestic firms in 1994; (5) Cross-Border Regulation, a dummy variable that equals 1 if foreign buyers need government approval and 0 otherwise; (6) Aggregate Returns, the average annual stock market return in the 1990s; and (7) Mandatory Bid Rule, a dummy variable that equals 1 if acquirers are forced to make a tender offer to all shareholders when passing a given ownership threshold and 0 otherwise. Table 1 provides definitions for the variables. The logarithm of GNP per Capita and GDP Growth are included in all regressions as control variables. Standard errors are shown in parentheses. Superscript letters a, b, c indicate significance at 1 percent, 5 and 10 percent level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Log (GNP per Capita)	1.30^a	0.93^b	0.75^a	1.00^a	0.64^b	0.53^b
	(0.26)	(0.35)	(0.27)	(0.27)	(0.32)	(0.26)
GDP Growth	0.08	0.04	0.06	0.25	−0.05	0.07
	(0.19)	(0.21)	(0.17)	(0.18)	(0.19)	(0.16)
Common Law	1.53^b					
	(0.68)					
Accounting Standards		0.07^b			0.02	
		(0.03)			(0.03)	
Shareholder Protection			0.88^a		0.73^b	0.97^a
			(0.25)		(0.31)	(0.25)
Ownership Concentration				-5.29^b	−1.36	
				(2.43)	(2.73)	
Cross-Border Regulation						-2.15^b
						(0.92)
Aggregate Returns						0.33
						(1.75)
Mandatory Bid Rule						−0.53
						(0.55)
Constant	-12.0^a	-12.2^a	-8.34^a	-6.81^b	-7.06^c	-5.90^b
	(2.63)	(3.32)	(2.53)	(3.32)	(3.61)	(2.42)
Pseudo R^2	0.20	0.17	0.24	0.18	0.22	0.29
N. Observations	49	41	49	44	39	47

Table 5. Cross-border versus domestic deals.

The table presents results of five Tobit models estimated by maximum likelihood on the sample of 49 target countries. The dependent variable is Cross-Border Ratio, cross-border deals as a percentage of all completed deals. The independent variables are: (1) Common Law, a dummy variable that equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise; (2) Accounting Standards, an index of the quality of accounting disclosure; (3) Shareholder Protection, a measure of the effective rights of minority shareholders; (4) Ownership Concentration, the average equity stake owned by the three largest shareholders in the 10 largest non-financial domestic firms in 1994; (5) Cross-Border Regulation, a dummy variable that equals 1 if foreign buyers need government approval and 0 otherwise; (6) Aggregate Returns, the average annual stock market return in the 1990s; and (7) Openness, a survey-based measure of the cultural attitude towards cross-border deals. Table 1 provides definitions for the variables. The logarithm of GNP per Capita and GDP Growth are included in all regressions as control variables. Standard errors are shown in parentheses. Superscript letters a, b, c indicate significance at 1 percent, 5 and 10 percent level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Log (GNP per Capita)	-5.32^a	-1.99	-1.47	-4.12^a	-1.21	-3.23
	(1.20)	(1.74)	(1.50)	(1.37)	(1.72)	(2.03)
GDP Growth	1.75	0.90	1.44	0.48	1.38	1.90^c
	(1.08)	(1.17)	(1.08)	(1.08)	(1.16)	(1.09)
Common Law	-14.5^a					
	(3.83)					
Accounting Standards		-0.67^a			-0.41^b	
		(0.16)			(0.17)	
Shareholder Protection			-6.03^a		-4.14^b	-5.36^a
			(1.71)		(1.98)	(1.54)
Ownership Concentration				21.0	-10.9	
				(14.6)	(16.8)	
Cross-Border Regulation						3.34
						(4.50)
Aggregate Returns						-0.57
						(13.4)
Openness						6.03^c
						(3.60)
Constant	87.7^a	96.5^a	62.7^a	65.7^a	85.0^a	44.0^b
	(11.7)	(14.8)	(12.7)	(17.2)	(18.8)	(20.0)
Pseudo R^2	0.06	0.07	0.05	0.05	0.08	0.08
N. Observations	49	41	49	44	39	41

Table 6. The governance motive in cross-border M&A.

The table presents results of four OLS regressions for the sample of matched country pairs. The dependent variable is Cross-Border Deals$_{s,b}$, the number of cross-border deals where the target is from country s and the acquirer is from country b ($s \neq b$) as a percentage of the total number of deals in country s. The independent variables are the difference between acquirer and target countries' Investor Protection as measured alternatively by Shareholder Protection, a measure of the effective rights of minority shareholders, and Accounting Standards, an index of the quality of accounting disclosure. In columns 4 and 5 we include as control variables: the difference between acquirer's and target's logarithm of GNP per Capita; Same Language, a dummy variable that equals 1 if target and acquirer come from countries with the same official language and 0 otherwise; and Same Geographical Area, a dummy variable that equals 1 if target and acquirer come from the same geographical area. In column 5, we also add Bilateral Trade, the value of imports by country s from country b as a percentage of total import by country s. Table 1 provides definitions for the variables. The regressions contain fixed effects both for target and acquirer country (not shown). The standard errors shown in parentheses are adjusted for heteroskedasticity using White's (1980) correction. Superscript letters a, b, c indicate significance at 1 percent, 5 and 10 percent level, respectively.

	(1)	(2)	(3)	(4)	(5)
Δ(Shareholder Protection)$_{b-s}$	1.97^a		0.37^a	1.93^a	1.21^a
	(0.20)		(0.10)		(0.23)
Δ(Accounting Standards)$_{b-s}$		0.02^a	0.02^a		
		(0.01)	(0.00)		
Δ(Log(GNP per Capita))$_{b-s}$				0.97^a	0.06
				(0.10)	(0.07)
Bilateral Trade					0.67^a
					(0.09)
Same Language				0.97^a	0.07
				(0.30)	(0.22)
Same Geographical Area				1.12^a	0.36^b
				(0.12)	(0.15)
Adjusted R^2	0.45	0.46	0.46	0.50	0.67
N. observations	2352	1640	1640	2352	1677

Table 7. Determinants of the takeover premium.

The table presents results of three OLS regressions for the sample of 4414 individual deals. The dependent variable is Premium, the logarithm of the ratio of the bid price and the closing price of the target 4 weeks before the announcement. Independent variables at country level are: Common Law, a dummy variable that equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise; Shareholder Protection, a measure of the effective rights of minority shareholders; and Mandatory Bid Rule, a dummy variable that equals 1 if acquirers are forced to make a tender offer to all shareholders when passing a given ownership threshold and 0 otherwise. Control variables at deal level are: (1) Target Size, the logarithm of the target's market capitalization 4 weeks before the announcement; (2) Cross Border, a dummy variable that equals 1 if the deal is cross border and 0 otherwise; (3) Hostile Bid, a dummy variable that equals 1 if the deal is hostile and 0 otherwise; (4) Tender Offer, a dummy variable that equals 1 if the deal involves a tender offer and 0 otherwise; and (5) Bidder M/B, the equity market-to-book ratio of the bidder 4 weeks before the announcement. Table 1 provides definitions for the variables. In all regressions, we also include year dummies (not shown). The standard errors (in parenthesis) are adjusted for heteroskedasticity using White's (1980) correction and corrected for clustering at country level. Superscript letters a, b, c indicate significance at 1 percent, 5 and 10 percent level, respectively.

	(1)	(2)	(3)	(4)
Common Law	0.13^b			
	(0.05)			
Shareholder Protection		0.05^a	0.04^b	0.05^b
		(0.01)	(0.01)	(0.02)
Mandatory Bid Rule			-0.07^b	-0.07^b
			(0.03)	(0.03)
Target Size	-0.01^a	-0.02^a	-0.02^a	-0.02^a
	(0.00)	(0.00)	(0.00)	(0.00)
Cross Border	0.04^b	0.04^b	0.04^a	0.02
	(0.02)	(0.02)	(0.01)	(0.02)
Hostile Bid	0.06^c	0.06^c	0.07^b	0.03
	(0.03)	(0.03)	(0.03)	(0.05)
Tender Offer	0.05^a	0.06^a	0.08^a	0.08^a
	(0.01)	(0.01)	(0.01)	(0.02)
Bidder M/B				0.01^b
				(0.00)
R^2	0.04	0.04	0.05	0.07
N. Observations	4414	4414	4414	1169
N. Countries	36	36	36	29

Table 8. Means of payment.

The table reports estimates of four Probit models for the sample of 4414 individual deals. The dependent variable is All-Cash Bid, a dummy variable that equals 1 if no stock is used as a mean of payment in the deal and 0 otherwise. Independent variables at country level are: Common Law, a dummy variable that equals 1 if the origin of the Company Law is the English Common Law and 0 otherwise; Shareholder Protection, a measure of the effective rights of minority shareholders; and Mandatory Bid Rule, a dummy variable that equals 1 if acquirers are forced to make a tender offer to all shareholders when passing a given ownership threshold and 0 otherwise. Control variables at deal level are: (1) Target Size, the logarithm of the target's market capitalization 4 weeks before the announcement; (2) Cross Border, a dummy variable that equals 1 if the deal is cross border and 0 otherwise; (3) Hostile Bid, a dummy variable that equals 1 if the deal is hostile and 0 otherwise; (4) Tender Offer, a dummy variable that equals 1 if the deal involves a tender offer and 0 otherwise; and (5) Bidder M/B, the equity market-to-book ratio of the bidder 4 weeks before the announcement. Table 1 provides definitions for the variables. In all regressions, we also include year dummies (not shown). The standard errors (in parenthesis) are adjusted for heteroskedasticity using White's (1980) correction and corrected for clustering at country level. Displayed coefficients are the change in probability for an infinitesimal change in the independent variables. Superscript letters a, b, c indicate significance at 1 percent, 5 and 10 percent level, respectively.

	(1)	(2)	(3)	(4)
Common Law	-0.25^a			
	(0.06)			
Shareholder Protection		-0.11^a	-0.12^a	-0.08^a
		(0.02)	(0.02)	(0.03)
Mandatory Bid Rule			-0.05	-0.11^c
			(0.06)	(0.05)
Target Size	-0.08^a	-0.08^a	-0.08^a	-0.03
	(0.01)	(0.01)	(0.01)	(0.02)
Cross Border	0.19^a	0.19^a	0.19^a	0.28^a
	(0.03)	(0.03)	(0.02)	(0.03)
Hostile Bid	0.09^a	0.09^a	0.09^a	0.09^c
	(0.02)	(0.02)	(0.02)	(0.05)
Tender Offer	0.36^a	0.33^a	0.35^a	0.39^a
	(0.07)	(0.08)	(0.09)	(0.09)
Bidder M/B				0.00
				(0.00)
Pseudo R^2	0.17	0.18	0.18	0.19
N. Observations	4414	4414	4414	1169
N. Countries	36	36	36	29

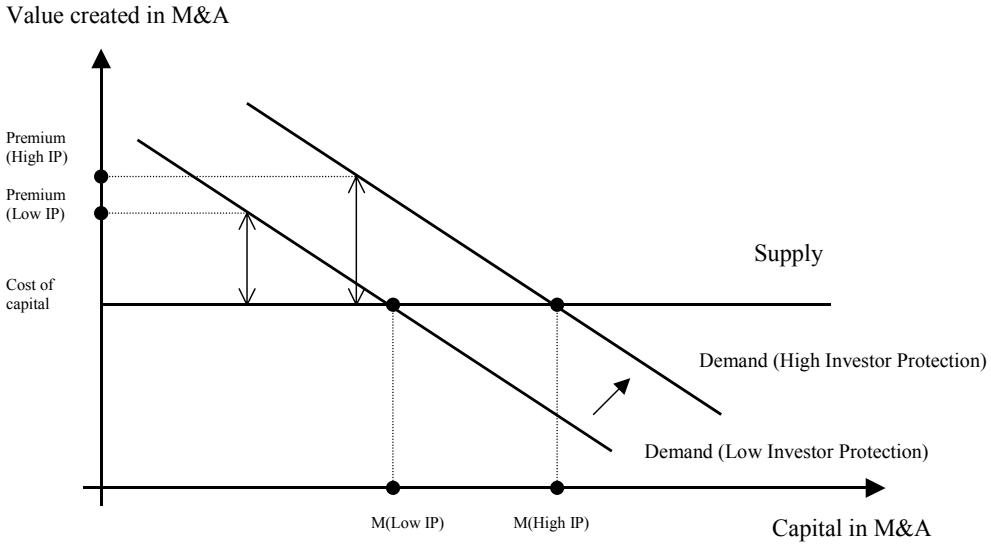

Fig. 1. The Outcome Hypothesis. This figure represents the demand for and supply of capital available for M&A activity in a target country. The volume of M&A is represented on the x-axis and the value created by the deals is on the y-axis. The supply curve is flat and equal to the cost of capital. The demand curve is downward sloping. The premium is the average distance between demand and supply schedules for completed deals. According to the outcome hypothesis, an increase in investor protection from Low to High shifts the demand curve to the right.

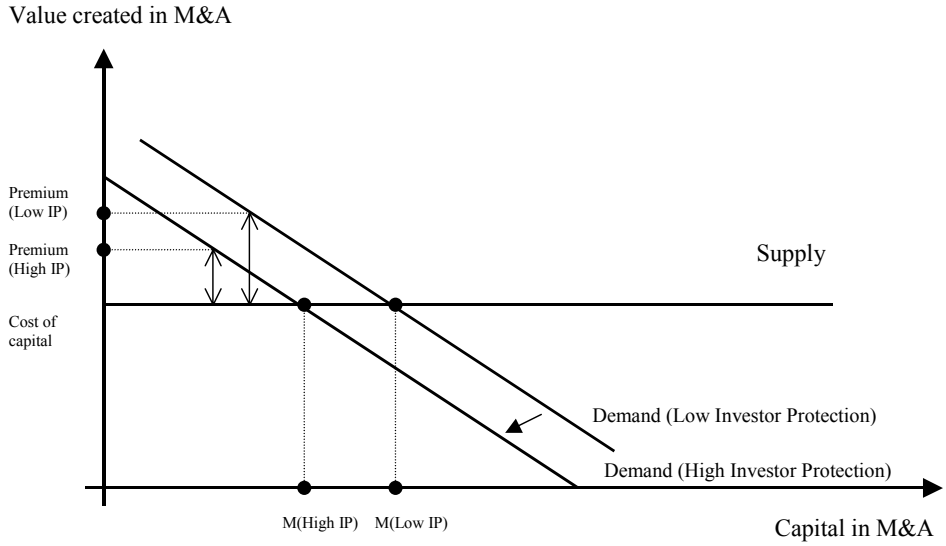

Fig. 2. The Efficiency Hypothesis. This figure represents the demand for and supply of capital available for M&A activity in a target country. The volume of M&A is represented on the x-axis and the value created by the deals is on the y-axis. The supply curve is flat and equal to the cost of capital. The demand curve is downward sloping. The premium is the average distance between demand and supply schedules for completed deals. According to the efficiency hypothesis, an increase in investor protection from Low to High shifts the demand curve to the left.