Investor Protection and the Mode of Acquisition: An Implication for the Formation of Pyramids

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Abstract

This paper investigates whether the level of investor protection affects the choice between a full scale merger and a purchase of a controlling stake in an acquisition, and examines the consequences of these decisions on target shareholders' welfare. Using a sample of 10,402 acquisitions from 38 countries between 1990 and 2003, I find that targets from countries with poor investor protection are more likely to be acquired through a '*control stake acquisition*' than a '*merger*' thereby creating inter-corporate control chains. The returns to target minority shareholders in low protection countries are significantly positive in both '*control stake acquisitions*' and '*mergers*', but they are substantially lower than those found in countries with high investor protection.

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A pyramid is a hierarchical chain of corporate ownership that allows the controlling shareholder at the apex to control multiple layers of firms through indirect ownership of the firms in between. For example, a person X may own 50% of firm A which in turn owns 50% of firm B. This guarantees X full control over B with only 25% cash flow stake. It is fairly well documented by now that a large number of firms outside U.S. and U.K. typically have a single individual controlling shareholder and are in many cases controlled through pyramid structures[1], which may affect firm performance and economic growth as well as wealth distribution between the outside minority shareholders and the controlling party.[2]

Despite the recent efforts to broaden our understanding of corporate pyramids, there is little empirical evidence on how and why these pyramidal structures arise instead of many independent stand-alone firms or a single large conglomerate firm which is typically the case in U.S. The relative lack of literature is presumably due to the fact that panel data with detailed inter-corporate holdings information that traces back to the origins of the pyramidal business groups are not readily available.

In this paper, I focus on a tractable subset of pyramid forming activities, specifically control chains that are formed through acquisitions, to examine how pyramids are being created and evolve over time. The key advantage of this approach is that acquisitions provide a convenient setting under which one can actually observe the incremental changes in corporate structure that leads to the creation of a pyramidal control chain. For example, if the bidding firm (controlled through a block ownership) acquires only a controlling stake in the target – which will be referred to as a '*control acquisitio*n' throughout the paper – rather than acquire 100% stake through a '*merger*', then according to the definition provided in La Porta, Lopez-de-Silanes and Shleifer (LLS) (1999), a pyramidal control chain has been created. In the context of the previous example, bidder's controlling shareholder would correspond to X, bidder would correspond to firm A, and the target would correspond to firm B. Previous

[1] For example, La Porta, Lopez-de-Silanes and Shleifer (LLS) (1999). Claessens, Djankov, and Lang (2000), Faccio and Lang (2002) and Gadhoum, Lang, and Young (2005) provide detailed analysis for Asia, Europe, and U.S., respectively.

[2] For consequences of pyramids, see Bertrand, Mehta, Mullainathan (2002), Claessens, Djankov, Fan, and Lang (2002), Bae, Kang, and Kim (2002), Bertrand, Johnson, Samphantharak, and Schoar (2004), and Holmén and Högfeldt (2005). Morck, Wolfenzon, and Yeung (2005) provide a comprehensive survey.

research suggests that business groups indeed utilize acquisitions to create and expand pyramid structures. For example, Aganin and Volpin (2004) show that three major family business groups in Italy - Pesentis, Pirelli, and Agnelli - expanded into non-core business sectors through acquisitions.

Using a sample of 10,402 acquisitions from 38 countries between 1990 and 2003, I first examine whether there is any systematic pattern in the distribution of the percentage acquired from the target across different regions around the world. I find that there is a wide cross-country variation in the mode of acquisition that firms undertake. In U.S. and U.K. the dominant form of acquisition is a full scale '*merger*' whereas in Asia '*control acquisition*' is the norm, with continental European countries somewhere in between. The prevalence of '*control acquisitions*' in each region roughly corresponds to the prevalence of pyramids that has been previously documented, which is consistent with the conjecture that '*control acquisition*' could be a mechanism through which pyramids are being created and expanded.

More importantly, firms - especially the targets - in countries with low investor protection are more likely to be engaged in '*control acquisitions*' than in '*mergers*'. In addition, bidders with controlling shareholders are more likely to '*control acquire*' the targets than '*merge*' them. These results are stronger for non-U.S. targets than for U.S. targets, and still hold after controlling for a variety of other firm and deal specific characteristics that could potentially affect the mode of acquisition. The findings are also robust to the variations in the definition of '*control acquisition*' and '*merger*' as well as to the exclusion of certain sub-samples.

I then examine the effect of investor protection on the welfare of target minority shareholders. In both '*mergers*' and '*control acquisitions*', target minority shareholders in civil law countries realize a significantly positive five day market-adjusted announcement return. However, the magnitudes of the returns are significantly smaller compared to those earned by the targets from common law countries. These findings are consistent with the interpretation that there is either more expropriation or less value creation from the target in countries with poor investor protection.

Overall, these results support the hypothesis that the mode of acquisition at least partially depends on the extent to which extraction of private benefits from the target is allowed by the legal system, thus

leading to creation and further expansion of pyramids in poor investor protection countries. Type of acquisition that is more prone to expropriation (i.e. '*control acquisition*') is more likely to be found in countries with poor investor protection, and target shareholders in these countries realize a significantly smaller return compared to their counterparts in countries with good protection.

The rest of the paper is organized as follows. Section I summarizes the existing literature and develops the main hypothesis. Section II describes the data sources and the sample. Section III reports the distribution of the mode of acquisition, i.e. '*merger*' vs. '*control acquisition*', across the 38 countries in the sample and compares the differences between low and high investor protection countries. Section IV investigates the effect of the investor protection on the mode of acquisition in a multivariate setting. Section V examines how investor protection affects target minority shareholders. Section VI provides a brief conclusion.

I. Literature Review and Hypothesis Development

A number of papers have shown that pyramids seem to affect firm value by expropriating or '*tunneling*' (Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000) corporate resources out of the firm. For a sample of Indian business groups, Bertrand et al. (2002) show that firms in which the controlling shareholders have high cash flow rights benefit the most from shocks that affect other firms within the same business group. Similarly, Bae, Kang, and Kim (2002) show that controlling shareholders of Korean *chaebols*, or family-controlled pyramidal business groups, benefit by merging member firms within the same business group at non-market prices. Bertrand et al. (2004) provide some support that firms lower down in the pyramid exhibit lower ROA in Thailand. In contrast, Holmén and Högfeldt (2005) argue that the lower valuation for Swedish pyramidal firms are not because of '*tunneling*' but because of overinvestment stemming from leveraged control of internal funds.

A common characteristic of these studies is that they treat pyramidal structure as exogenous. However, as Almeida and Wolfenzon (2006) point out, this approach ignores the fact that pyramids are being created over time and implicitly assumes that they are relatively stable. A more fundamental

question about pyramids would be to ask how they arose in the first place. This paper attempts to fill this gap by focusing on acquisitions as a potential mechanism of pyramid creation and expansion.

Few studies have examined acquisitions from investor protection perspective. Rossi and Volpin (2004) consider implications of investor protection on various characteristics of acquisitions and find that the volume of M&A activity is significantly larger in countries with better accounting standards and stronger shareholder protection. In contrast, Faccio and Masulis (2005) examine the method of payment decision in European acquisitions and find little evidence that legal origin is related with the choice between cash versus stock. However, neither of these studies explores the potential relationship between the percentage acquired from the target and the level of investor protection, which is the main contribution of this paper.

A. Expropriation Hypothesis

Theoretically, if bidders are only interested in proportional cash flow rights or *security benefits* (Grossman and Hart, 1988) from the target, it would always be optimal for them to acquire 100% of target shares as long as investment in the target yields positive NPV and there are no capital market frictions. Thus, we should only observe either 100% acquisitions (i.e. '*mergers*') or no acquisitions. Under such circumstances, acquisitions would not contribute to creation or further expansion of corporate pyramids. To the contrary, the fact that at least some bidders acquire less than 100% ownership stake indirectly demonstrates that bidder shareholders are not only interested in proportional *security benefits*, but also in various forms of *private benefits* that only accrue to the controlling party.

From empirical perspective, this argument provides predictions regarding the relationship between the percentage ownership bought from the target and the level of investor protection. LLS (1999) show that concentrated control of firms through pyramidal ownership is more likely to be found in countries with poor investor protection. Dyck and Zingales (2004) find that controlling shareholders in these countries enjoy a high level of private benefits of control. Almeida and Wolfenzon (2006) present a model which predicts that family business groups organized as pyramids should be more prevalent in countries with poor investor protection. A recent work by Doidge, Karolyi, and Stulz (2007) show that

country level characteristics, such as legal protection for minority investors, are more important than firm level characteristics in explaining corporate governance, especially in less-developed countries.

More directly, Bertrand and Mullainathan (2003), Bertrand et al. (2002) and Bebchuck, Kraakman, and Triantis (2000) argue that pyramids provide the controlling shareholders the ability (stemming from high control rights) and the incentive (due to low cash flow rights) to *tunnel* corporate resources from the lower end of the pyramid to the higher end where they have larger cash flow stakes.

Extending these arguments in the context of acquisitions, we come up with a testable hypothesis that '*control acquisitions*' would be more likely in countries with poor investor protection as compared to full scale '*mergers*' since this type of acquisition facilitates corporate pyramids by adding the target firm at the end of the control chain. In an economy where outside investors are well protected, any non-market price transactions between member firms within a pyramidal business group that could potentially benefit the controlling party at the expense of the minority shareholders - for example, transactions that could incur a drop in the target stock price - will be contested in the court of law. Hence, leaving the target company as a separately traded entity could turn out to be costly, which bidders might prefer to avoid and thus favor a complete "*merger*" instead. In contrast, bidders acquiring targets in countries with inadequate protection of outside investors would be tempted to acquire only part of the target ownership just enough to exercise effective control but low enough to maintain incentives to expropriate, which would create and expand the pyramidal business group structure.[3]

B. Other Control Variables

1. Bidder Characteristics

The likelihood of "*control acquisition*" could be higher when bidders have controlling shareholders than are widely held, since there is already an extra layer of block ownership at the bidder level which would reduce the ultimate cash flow ownership in the target. This tendency could be reinforced when bidders with controlling shareholders are reluctant to implement '*mergers*' – which tends

[3] I thank Andrei Shleifer for pointing this out.

to be financed by stocks (Faccio and Masulis, 2005) - for fear of dilution in their control rights and potential loss of private benefits.[4]

Alternatively, as some bidders may argue, less than 100% acquisitions could simply reflect a lack of enough resources to fully acquire the target – especially in countries with less developed capital markets – rather than explicit intentions to extract private benefits. If so, bidders that are more likely to be financially constrained would tend to engage in '*control acquisitions*' than in '*mergers*'.

Bidders' valuation could also influence the mode of acquisition. Shleifer and Vishny (2003) show that bidders' high valuations lead to stock acquisitions and Faccio and Masulis (2005) report positive relationship between stock financing and incidences of "*mergers*". Thus, high market to book bidders might be more likely to engage in "*merger*s" than in "control acquisitions".

2. Target Characteristics

If there is already a controlling block assembled in the target, then it may be easier for the bidder to directly negotiate with the target's controlling shareholder through a block trade. On the other hand, if the target is widely held, the only way to assemble a new block would be through a tender offer or a new equity issue which may be more costly. Burkart, Gromb and Panunzi (2000) show that if there is a block in the target, then firms would prefer a block trade over a tender offer to avoid sharing increases in value with the minority shareholders.

Target's profitability might also have an effect. If the bidders are mainly interested in the cash flows or *security benefits* from investment in the target, then bidders would prefer to buy a larger ownership stake in targets with higher profitability. On the other hand, if the bidders are more interested in expropriation or extraction of private benefits, then they could prefer to buy just enough ownership stake in targets with higher profitability since there are more resources to expropriate from.

3. Deal Characteristics

[4] See Amihud, Lev, and Travlos (1990), Martin (1996) and Ghosh and Ruland (1998) for evidence on method of payments in U.S. Faccio and Masulis (2005) examine European M&As and find similar results.

Deals that are made between borders or across industries might be structured differently due to increased level of potential information asymmetry. Holding other things equal, we would expect that cross-border or cross-industry deals are more likely to be "*control acquisitions*", which are relatively easier to revert than "*mergers*" in case something goes wrong.

Some countries provide tax benefits for '*mergers*' which are not provided to '*control acquisitions*'. For example, '*mergers*' are tax free in U.S. with no recognition of gains and losses. Thus, differences in tax provisions across countries could also potentially affect the mode of acquisition.

II. Data and Sample

A. Acquisitions Data

SDC Mergers & Acquisitions provide information on announcement dates, percentage of the target acquired and other deal specific characteristics. From SDC, I first extract all completed mergers and acquisitions of equity stakes that involve public bidders and public targets from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV) (1998) 49 countries. Restricting the sample to public firms ensures that there exists at least some outside shareholders in both bidders and targets, which is a prerequisite for defining a pyramidal control chain. SDC has very limited coverage for non-U.S. acquisitions prior to 1990, so I set my sample period to be from January 1990 to December 2003. I then filter out those that either lack information on percentage of the target acquired or has this information but is inconsistent with the percentage held before and after by more than one percentage point.

The second set of filters is then applied to identify acquisitions (1) between independent business entities (2) that could potentially lead to a change in control. These filters are similar to those in Dyck and Zingales (2004) that are used to identify control transactions. Acquisitions between firms that already had more than 5% equity relationships or have the same ultimate parents were excluded, since these are more likely to be a within business group transaction under a common decision making party and therefore would be more close to a reorganization than an acquisition in the conventional sense.[5] In fact,

[5] SDC sometimes reports different ultimate parents for bidders and targets even though they are from the same business group. For example, in the merger between Kokusai Electric and Yagi Antenna, both of which are

controlling shareholders in business groups commonly use '*mergers*' between member firms for *tunneling* purposes as reported in Bae, Kang and Kim (2002).[6] Less than 5% acquisitions are also excluded since these are more likely to be portfolio investments rather than control transactions. As a final step, acquisitions from countries that involve less than 10 targets during the sample period were dropped for tractability. After applying these filters, I end up with 10,402 acquisitions in 38 countries, each occurring between 1990 and 2003.

B. Proxies for Investor Protection

There are three proxies that I use to measure the level of investor protection in the bidder and target countries; legal origins, anti-director rights, and anti-self dealing indices. Legal origins and anti-director rights are taken from original LLSV (1998). The newly assembled anti-self dealing index is drawn from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (DLLS) (2006). The correlations between legal origin and anti-director rights or anti-self dealing indices are 0.75 and 0.72, respectively, and the correlation between anti-director rights and anti-self dealing indices is 0.47.

C. Ownership Data

Ownership data are primarily obtained from WorldScope which provides information on names and immediate holdings of all owners that hold more than 5% of a company's stock. To ensure that acquisitions are matched with ownership information prior to the announcement, I first construct a panel of ownership data at annual frequency using WorldScope 1996 to WorldScope 2002.[7] Acquisitions are then matched with the closest ownership date available prior to the announcement.[8]

For US, ownership data are augmented by SEC's computerized Ownership Reporting System (ORS). ORS is assembled from SEC forms 3, 4, and 5, which requires officers and 10% beneficial

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subsidiaries of Hitachi, a Japanese electronics manufacturer, SDC's reported ultimate parents are the two merging entities themselves. For '*mergers*', I manually verified them through company websites and on-line news articles.

[6] In their sample of 107 Korean "*mergers*", 93% were made between firms that belong to the same business group.

[7] Previous research uses one cross section from WorldScope, assuming that ownership structure is relatively stable over time. (LLS (1999) is based on WorldScope 1996 whereas Claessens et al. (2000) use WorldScope 1998) However, for the purpose of this study, single cross section of ownership would not be appropriate since acquisitions are by definition meant to change ownership structures.

[8] If a firm has been a target by at least 5% or acquired another firm by at least 5% where the means of payment was at least 5% stocks, between ownership information date and acquisition announcement, then I do not use this ownership information and treat it as missing since these could potentially affect the control structure.

owners to disclose their holdings whenever there is a buy or a sell. From this dataset, I create a monthly holdings data, allowing the holdings to be stale for a maximum of 2 years without transaction. After matching acquisitions with WorldScope and ORS, roughly 75% (7,649) of the sample has ownership information for bidders, about half (5,454) for targets, and 45% (4,706) for both bidders and targets.

D. Accounting and Market Data

Accounting Data are primarily drawn from WorldScope and for U.S. firms these are augmented by Compustat.[9] Daily returns for bidders and targets as well as the market index returns in each country are obtained from Datastream, which is augmented by CRSP for U.S. firms. After matching acquisition sample with returns data, about 81% (8,449) of the sample has announcement returns for bidders, 65% (6,747) for targets, and 57% (5,957) for both bidders and targets.

III. Distribution of the Mode of Acquisition around the World: *'Control Acquisitions'* vs. *'Mergers'*

Given an opportunity to acquire another firm, the bidders have a choice of buying 100% of the target through a '*merger*' or less than 100% - or even less than 50% for a publicly traded firm - through a '*control acquisition*'. I categorize acquisitions into four types based on the percentage ownership acquired from the target; '*non-control acquisitions*' (5 to 19.9%), '*control acquisitions*' (20 to 79.9%), '*quasi mergers*' (80 to 99.9%) and '*mergers*' (100%).[10] Previous literature refers to acquisitions between 5% and 49.9% as 'partial' or 'toehold' acquisitions and treats them separately from more than 50% acquisitions. But 25% acquisition would actually be more close to a 50% acquisition than a 5% acquisition in terms of the degree of control that the bidder can exercise over the target's assets, especially when the target is publicly traded.[11]

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[9] SDC provides their own accounting numbers for bidders and targets, but they are often missing. The information on total assets is taken from SDC when these are not available from either WorldScope or Compustat.

[10] 100% subsidiaries are conceptually the same as '*mergers*' and will be treated as such in the subsequent analysis.

[11] Some theoretical work, for example Berkovitch and Khanna (1991) and Burkart, Gromb, and Panunzi (1998) model 'tender offer' as an alternative to a 'merger'. But in practice, most tender offers – 90% in the sample used in this study - eventually end up as complete mergers through 'clean-up' or 'freeze-out' offers. Empirical research has focused on either more than 50% acquisitions only including mergers (for example, Rau and Vermaelen (1998), Rossi and Volpin (2004), Agrawal, Jaffe, and Mandelker (1992)) or less than 50% but more than 5% acquisitions only (for example, Choi (1991), Akhigbe et at.(1998)) or control block transactions only excluding mergers(for example, Barclay and Holderness(1989), Dyck and Zingales (2004)). But these studies do not explore what determines the percentage ownership acquired from the target.

Following the literature on ownership and control structures of firms around the world (LLS (1999), Faccio and Lang (2002), Claessens et al. (2000)), I set 20% as the primary lower cutoff for defining effective control. One may question that 20% may not be enough to guarantee changes in control. However, according to Barclay and Holderness (1991), average block size in control transaction is only 27% even in U.S., and 90% of block trades reflect a change in largest shareholder. Moreover, regulatory authorities in many countries regard 30% ownership as a critical cutoff for effective control.[12] The fact that regulations tend to be conservative in setting these standards suggests that effective control could be achieved with less than 30%. Claessens et al. (2000) document that median voting rights held by the largest shareholder in nine East Asian countries is only 19.8% and the corresponding number for the 3rd quartile was a modest 30.5%. As a robustness check, I also employ other thresholds such as 10%, 30% and 50% in the subsequent analysis.

I use 80% as the baseline upper limit in defining '*control acquisitions*' for a couple of reasons. First, the deviation of cash flow rights from control rights gets smaller as the percentage acquired increases. In fact, acquisitions that obtain more than 80% of the target's voting rights are treated the same as 100% '*mergers*' in U.S. for tax purposes.[13] Moreover, in some countries stock exchange regulation imposes a mandatory delisting if the ownership of the largest shareholder, including the related parties, exceeds 80%.[14]

Acquisitions of more than 80% but less than 100% is classified as a separate category because in some of these acquisitions targets are eventually merged into the bidders through 'clean up mergers' while in other cases the targets still trade as separate entities, and therefore mixing them with either

[12] According to Dyck and Zingales (2004), the median threshold that triggers a mandatory tender offer of remaining shares is 30%, of which U.K. City Code is a typical example. Korean Fair Trade Commission considers 30% equity relationship as one of the key quantitative criteria in defining the boundaries of a business group.
[13] U.S. law allows 3 types of tax free acquisitions with no recognition of gains and losses. Type A is the statutory merger (100% acquisition) and type B is more than 80% acquisition using only stocks as the method of payment. Type C is similar to B except that assets are being acquired rather than shares.
[14] For example, Hong Kong Stock Exchange GEM Listing Rule 11.23 (market cap below HK$1 billion), TSX Venture Exchange listings requirements, and Korea Stock Exchange Listings Regulation.

'*control acquisitions*' or '*mergers*' would simply add noise.[15] Later on, I redefine these acquisitions as '*mergers*' and repeat the analysis as a further robustness check.

Table I presents the statistics on the four types of acquisitions across the 38 target countries in my sample. I also report the level of investor protection in each country proxied by legal origin, anti-director rights and anti-self dealing indices. Civil law countries, or countries with anti director rights below 5, or anti self dealing index below 0.65 are classified as low investor protection countries, respectively.

The results from table I indicate that there are substantial differences across geographic regions in the mode of acquisition that firms undertake. In U.S., 84% of the acquisitions are '*mergers*' and '*control acquisitions*' only account for less than 6%. U.K. exhibits similar patterns. In contrast, the proportion of '*control acquisitions*' is much higher in Asia taking up more than 40% whereas '*mergers*' are relatively rare. Continental Europe seems to be somewhere in between, where the proportion of '*mergers*' is higher than in Asia but lower than in U.S. or U.K. The higher frequency of '*control acquisitions*' in Asia followed by Europe is broadly consistent with the previous literature which finds that pyramids are the most prevalent in Asia and then in Europe.[16] These findings are consistent with the conjecture that '*control acquisitions*' could be used as a mechanism through which pyramids are being created and expanded.

Table I also suggests that the mode of acquisition could be highly correlated with the level of investor protection. For example, Asia and Continental Europe's investor protection levels are relatively low compared to U.S. and U.K. Figure 1 elaborates on this point. The sample is first split into two based on whether the bidder is from a low or high protection country based on legal origin, anti-director rights or anti-self dealing index. Then, within each category, acquisitions are assigned to 10 groups based on

[15] I manually verified this through LexisNexis for a small sub-sample of 59 observations where information on the bidder's ownership as well as the target's ownership and returns are available. For 52 targets that were identified in LexisNexis, 36 were eventually merged into the bidder and 16 remained as separately traded entity.
[16] Claessens et al. (2000) report that 38.7% of the Asian firms that have controlling shareholders at 20% threshold are controlled through pyramids, whereas Faccio and Lang(2002) shows that it reduces to 18.16% in Europe.

percentage acquired from the target.[17] The three histograms in the left column show the relative frequencies of the 10 groups based on bidders' investor protection, and the right column is created similarly using target's investor protection.

Figure 1 indicates that when bidders or targets are from high investor protection countries, then in roughly 70 to 75% of all acquisitions, they engage in full scale '*mergers*'. In contrast, bidders and targets from low protection countries are much less likely to be engaged in 100% acquisitions and more likely to be involved in less than 100% acquisitions. These results suggest that investor protection in bidder and target countries could be strongly related to the mode of acquisition.

In table II, I report the distribution of the mode of acquisition for different combinations of level of investor protection in bidder and target countries to investigate which country's investor protection is relatively more important. Panels A, B, and C report results based on legal origins, anti-director rights and anti-self dealing indices, respectively. The results indicate that firms from countries with low investor protection are much more likely to be involved in '*control acquisitions*' than in '*mergers*' and that target's investor protection seems to be more important than the bidder's. For example, when bidders from common law countries acquire targets from civil law countries, only 22.3% of them are acquired through '*mergers*', almost identical to and insignificantly different from 22.9% when civil law bidders acquire civil law targets. Similar results hold in panels B and C. Bidders from high protection countries also engage in '*control acquisitions*' as much as bidders from low protection countries when the targets are from low protection countries. For example, 31% of acquisitions by bidders from countries with high anti-director rights are implemented through '*control acquisitions*' when targets are from low anti-director rights countries, which is virtually identical to 31% reported for bidders from low anti-director rights countries.

The relative importance of the target's investor protection makes sense since target's corporate resources are the potential source of extraction of private benefits and it would be contested in the court of

[17] The first group consists of acquisitions of greater than or equal to 5% but less than 10%. The last (10^{th}) group consists of 100% acquisitions only. The rest eight groups are formed based on incremental 10%.

law that has jurisdiction over the target. These findings suggest that investor protection especially in the target countries could be an important factor in determining the mode of acquisition.

IV. Investor Protection and the Mode of Acquisition

Presumably, there could be a number of reasons why firms choose one form of acquisition over another when they are faced with an opportunity to buy another firm. The large differences across countries undoubtedly reflect institutional features of the particular markets, such as taxes, accounting standards and competition laws. In this study, I focus on the characteristics that could provide insights on the motivations behind the formation of pyramids such as the level of investor protection.

A. Country/Firm/Deal Characteristics by the Mode of Acquisition: Univariate Analysis

Table III reports the characteristics of the bidders and the targets as well as some of the deal characteristics for '*control acquisitions*' (20 to 79.9% acquired) and '*mergers*' (100% acquired). t-stats from comparing the means for each type are also reported. Following the previous literature and for reasons described in the previous section, I classify bidders and targets as having a controlling shareholder if the largest shareholder holds at least 20% ownership.

The dummy variables for investor protection and ownership structures are defined so that a value of zero would respond to a typical acquisition in U.S. For example, the bidder's and target's legal origin and control block dummy variables would all be zero if the bidder and the target are both from the common legal origin and both are widely held.

Table III indicates that targets are more likely to be from low investor protection countries when the mode of acquisition is a '*control acquisition*'. The percentage of targets from low investor protection countries that are engaged in '*control acquisitions*' is five times as large as those engaged in '*mergers*'. The results also indicate that the bidder's ownership structure is strongly correlated with the form of acquisition as well. Proportions of bidders that are controlled by a block of at least 20% ownership are more than twice as large in '*control acquisitions*' as in '*mergers*'. These univariate comparisons between '*control acquisitions*' and '*mergers*' suggest that the level of investor protection in the target country and

the bidder's ownership structure could influence the mode of acquisition in various countries, which in turn might help to explain the existence of pyramids.

The next four variables are proxies for additional bidder characteristics that could be related with the mode of acquisitions. Bidder interest burden – designed to proxy for potential resource constraint - is defined as the three year average of interest expense scaled by operating income before depreciation.[18] The results indicate that bidders engaging in '*control acquisitions*' could be more cash constrained than those in '*mergers*' which might limit them from purchasing a full ownership stake in the target. Bidder's market to book ratio is significantly smaller in '*control acquisitions*' than in '*mergers*' which suggests that bidders tend to acquire full ownership stake of the target when they are valued more favorably by the stock market. This is consistent with Shleifer and Vishny (2003)'s argument that stock acquisitions follow high valuations of bidders. Bidders are also much more likely to be from civil law countries and tend to be larger in '*control acquisitions*' than in '*mergers*'.

The following three variables are additional target characteristics that might affect the mode of acquisition. Targets are more likely to be controlled by a block of at least 20% in '*control acquisitions*' than in '*mergers*', implying that the existence of a controlling block in the target could potentially affect the mode of acquisition. On the other hand, neither profitability - defined as the three year average of net income before extraordinary items plus depreciation and amortization scaled by total assets – nor size proxied by total assets do not seem to be different across the two groups.

Within industry deals and within border deals are relatively more frequent in '*mergers*' than in '*control acquisitions*'. Some countries provide tax benefits for "*mergers*", especially when they are stock swaps. Following Faccio and Masulis (2005), merger tax benefit is set to 0 if neither the bidder nor the target's country provides such benefits, 1 if only one of them provides the benefits, and 2 if both provide

[18] Following Core and Guay (2001), I set interest burden equal to one for firms with interest expense greater than operating income before depreciation (i.e., where interest expense is positive and operating income is negative or else positive but less than interest expense), to mitigate the influence of a discontinuity in interest burden at zero.

the benefits.[19] This variable is strongly significantly different across the two groups but the results are mainly driven by within U.S. acquisitions.

The mean and median deal values for '*control acquisitions*' are roughly a fifth of those for '*mergers*', even though target's averages asset sizes were similar. The smaller deal values could indirectly reflect the smaller percentage acquired from the target in '*control acquisitions*'. Percentage cash financed is strongly significantly different for the two groups; average percentage of cash used in '*control acquisitions*' is close to 90%, while it is only 36% for mergers.

B. Multivariate Tests

Although the results in the previous subsection suggest that investor protection might be driving the mode of acquisition, these results may not hold when other possible factors are simultaneously accounted for. In this sub-section, I estimate a probit model where the dependent variable is set to 1 if the acquisition being considered is a '*control acquisition*' (20 to 79.9% acquired) and 0 if it is a '*merger*' (100% acquired) controlling for various firm and deal characteristics reported in table III.[20] All specifications include year fixed effects with heteroscedasticity robust standard errors clustered by target's 2 digit SIC codes. Bidders' and targets' market to book and total assets are first log transformed to deal with skewness and then standardized for an easier interpretation of the magnitude of the marginal effects.

Table IV presents the results of the probit estimation where the marginal effects (dF/dx) for each explanatory variable are reported. In column (1), I run the regression only incorporating target civil law dummy and bidder control block dummy (threshold set at 20% ownership for reasons described in the previous section). In columns (2), (3) and (4), additional bidder, target, and deal characteristics are included sequentially. In column (5), I interact bidder's resource constraints (proxied by interest burden)

[19] The source of this indicator is Economic Intelligence Unit (EIU)'s Country Commerce Report

[20] Percentage cash financed and deal values are excluded in the estimation due to their highly endogenous nature. Unreported regressions where they are included as regressors yield similar results. IV specifications where percentage cash financed were instrumented by bidder's past 1 year return and a measure of cash flow constraint also yields similar results.

and valuation (proxied by market to book) with bidder control block dummy to test whether widely held bidders behave differently from bidders with controlling shareholders.

The results from table IV indicate that the investor protection in the target country is still highly significantly correlated with the mode of acquisition even after controlling for other firm and deal specific characteristics. For example in column (5), targets from civil law countries are 20.9% more likely to be bought through a '*control acquisition*' compared to a comparable target from a common law country. Bidders with controlling shareholders are also generally more likely to engage in '*control acquisition*'. The positive coefficient on the bidder's ownership structure has further implications for pyramid formation. When there is a controlling shareholder in the bidder, the bidder (and its controlling shareholder) is more likely to create and expand the corporate pyramid by adding the target firm at the end of the control chain through a '*control acquisition*'.

The results for other variables are pretty much consistent with the univariate results from table III. Specifically, '*control acquisition*' is more likely when bidders are large, have high interest burden, low market to book and are from civil law countries. In addition, we observe some interesting results from the coefficients on interaction terms reported in column (5). Bidder's cash constraints proxied by interest burden seem to force them to acquire only part of the target ownership when the bidders are widely held. But when the bidder has a controlling shareholder, the effect of cash constraints is reduced by more than half. Similarly, bidder's market to book has significant effect on the mode of acquisition only when the bidders are widely held. For bidders with controlling shareholders, their market to book has almost no effect on the mode of acquisition. These findings suggest that bidders with controlling shareholders do not consider their own financial constraints or valuation as importantly as widely held bidders.

Targets with controlling blocks are also more likely to be acquired through '*control acquisition*'. The fact that target control block dummy is significantly positive suggests that pyramids formed through acquisitions could be driven by transfers of existing control blocks and that creating a new control block from widely held targets may be difficult. Indeed, 69% of '*control acquisitions*' by bidders with

controlling shareholders involved targets with a controlling block and only 31% of them involved newly assembled blocks from widely held targets.[21]

There is one variable with results that are different from those reported in table III. The coefficient on target assets is significantly negative, indicating that bidders are more likely to '*merge*' if the target is large. This could potentially be related to the usage of stocks as the method of payment when targets are large.

The last set of regressors, i.e. same industry dummy, cross border dummy and indicator for tax benefits in '*mergers*' are all significant and have the expected signs. Specifically, '*control acquisitions*' are more likely when the bidders and targets are from different industries, when they go across the border, and when there is less tax benefit for '*mergers*'.

C. Sub-sample Analysis: Non-U.S. vs. U.S. Targets

Previous literature documents that pyramids are mainly a non-U.S. phenomenon. Consistent with this finding, the results from table I indicate that '*control acquisitions*' are much more prevalent outside U.S. This suggests that the main determinants of the mode of acquisition could be different across countries. Moreover, one may further conjecture that the previous results are not driven by the level of investor protection in the target country but simply by geographic location, for example, whether the targets are from U.S. or not. To address these issues, I divide the sample into non-U.S. versus U.S. targets and re-estimate probit specifications (1), (4) and (5) from table IV using these sub-samples.

Table V reports the results of this analysis. Column (1) through (3) report results for non-U.S. targets, whereas columns (4) through (6) report those for U.S. targets. The results indicate that the effect of investor protection in the target country is even stronger when I exclude the U.S. targets. Specifically, civil law targets are roughly 25% more likely to be acquired through '*control acquisition*' than common law targets.

[21] I manually checked through LexisNexis for a sub-sample of 222 cases where targets were originally widely held but control blocks are newly created through '*control acquisitions*'. Out of 183 observations identified in LexisNexis, 113 of them (62%) involved issues of new equity to the third party, 51 of them(28%) were bought from a group of investors or controlling parties, and 19 of them(10%) were tender offers.

Examination of other variables yields some interesting results. First, bidders do not seem to consider their own valuation in determining the mode of acquisition for non-U.S. targets. More importantly, there is a clear difference in the effect of ownership between U.S. and non-U.S. targets. For non-U.S. targets, bidder's and target's ownership structures have significant effect on the mode of acquisition. In contrast, ownership structures of both bidders and targets do not have any effect on U.S. targets. This suggests that existence of block ownership might contribute to further expansion of pyramids in non-U.S. countries, but not in U.S.

On the other hand, profitability seems to matter for U.S. targets, with the expected sign when bidders are mainly interested in cash flow or *security benefits*. For non-U.S. targets, however, the sign is actually the opposite indicating that profitable targets are more likely to be '*control acquired*'.[22] This is consistent with the expropriation hypothesis in non-U.S. targets since there are more resources to divert away from when the target is profitable. These findings are also broadly consistent with Doidge, Karolyi, and Stulz (2007) who show that firm level characteristics are more important in developed countries.

D. Using Different Thresholds for Effective Control

In the previous section, the cutoffs used to define effective control required at least 20% ownership along the control chain – for both bidder ownership and percentage acquired from the target. However, it is also possible that the percentage ownership needed for effective control may vary across firms and countries, and the results obtained in this section may be sensitive to the cutoff being used. Similarly, the results could be sensitive to the upper limit for defining the boundaries of '*control acquisition*' which is currently set at 80%.

To check for this possibility, I allow the cutoffs for effective control to vary from 10% to 20%, 30%, and 50% in the lower end and from 70% to 80%, 90% and 100% in the upper end. Table VI presents the results of this analysis. Panels A and B present the variations in the lower limit and upper limit, respectively. Each threshold is represented by a column where the regression specifications are from column (5) of table IV. For example, the result for 30% threshold is reported in column (3) of panel

[22] These opposite signs might explain why target profitability was insignificant in the full sample.

A, where the dependent variable now equals 1 if the percentage acquired is more than 30% (rather than 20%) but less than 80%.[23] Similarly, the result for 70% threshold is reported in column (1) of panel B, and in this case the dependent variable would be 1 if the percentage acquired is more than 20% but less than 70% (not 80%). The results for 20% cutoff originally reported in table IV are reported again for an easier comparison.

Panel A of table VI indicates that investor protection in the target country is strongly correlated with the mode of acquisition regardless of the cutoff used for the lower bound, although the magnitude of the coefficient decreases somewhat as the threshold used increases. However, bidder control block dummy becomes insignificant when the threshold is larger than 30%. This is consistent with the conventional agency framework which predicts that as ownership increases the incentive to expropriate decreases. The results from panel B show that the coefficient on the target investor protection is not much sensitive to the upper threshold being employed.

E. Additional Robustness Checks

One could argue that '*control acquired*' targets may be subsequently '*merged*' into the bidder or sold to another firm within a few years after the '*control acquisition*', which could affect the estimation results. To deal with this concern, I exclude those '*control acquisitions*' that are subsequently '*merged*' into the bidder or that are sold to another firm within 3 years after the '*control acquisition*' and repeat the probit estimation based on specification (5) from table IV.

Some countries require the bidder to implement a mandatory tender offer for the remaining shares to protect the minority shareholders if the shares being acquired exceeds a certain threshold, for example 30% in U.K. City Code (Dyck and Zingales, 2004). I next exclude those acquisitions that exceed this trigger in each country.

A related concern may be that the current definition of '*mergers*', which requires 100% acquisition, may be too restrictive. To handle this issue, I redefine the following acquisitions as

[23] Threshold for bidder and target's control block dummies are also redefined so that they would equal one when the largest shareholder holds at least 30% ownership. This applies to other thresholds (10%, 50%) as well.

'*mergers*' and repeat the analysis; '*quasi mergers*' (80 to 99.9% acquisition), '*control acquisitions*' that are subsequently merged into the bidder within 3 years, and acquisitions that exceed the mandatory tender offer trigger in each country.

Table VII presents the results of these regressions. The results show that excluding subsequent mergers or resales or mandatory tender offers yields similar results as in the full sample. Redefning '*quasi mergers*' (80 to 99.9% acquisition) as '*mergers*' also strengthens the correlation between the target investor protection and the mode of acquisitions. For example, the difference in the likelihood of a '*control acquisition*' for targets in civil law versus common law countries is almost 30% holding all other things equal. Redefinition of subsequent mergers and mandatory tender offers provides qualitatively similar results.

In summary, the analysis in this section suggests that targets in countries with low investor protection are indeed more likely to be engaged in '*control acquisitions,*' creating and further expanding pyramidal control chains.

V. Target Minority Shareholder Welfare and Investor Protection

Conceptually, target announcement return in any acquisition would be determined by the following equation;

$$R_{\text{Target}} = [(1-\phi^{\alpha}_{\text{New})})V_{\text{New}} - (1-\phi^{\alpha}_{\text{Old}})V_{\text{Old}}] \quad (1)$$

where ϕ is the level of diversion or expropriation by the controlling party, α is the percentage acquired from the target, V is the non-diverted security benefits, and Old and New are indices for the management of the target before and after the acquisition, respectively.

According to equation (1), R_{Target} could either be positive or negative depending on parameter values. For example, R_{Target} would be negative when;

$$V_{\text{New}} < V_{\text{Old}} \text{ and } \phi^{\alpha}_{\text{New}} = \phi^{\alpha}_{\text{New}} \quad (2)$$

or

$$V_{\text{New}} = V_{\text{Old}} \text{ and } \phi^{\alpha}_{\text{New}} > \phi^{\alpha}_{\text{New}} \quad (3)$$

or some combination of both (2) and (3). Since it would be very difficult to distinguish between (2) and (3) empirically, we may not be able to tell much about the motivation behind the acquisition – whether to increase firm value or to expropriate more – just by examining the magnitude of R_{Target} itself.

However, if there are differences in R_{Target} for a given level of α (based on continuous characterization), or a given mode of acquisition (based on discrete characterization), we may infer that larger target return are due to larger increases (or smaller decreases) in firm value or larger reductions (or smaller increases) in expropriation or both. Although we may not be able to distinguish between the above possibilities, it is clear that target shareholders are better off in any case.

Table VIII provides averages of target announcement returns for '*mergers*' (100% acquired) and '*control acquisitions*' (more than 20%, less than 80% acquired) separately for targets from common law countries and targets from civil law countries. Target announcement returns are 5 day (-2 to + 2) cumulative buy-and-hold market adjusted returns in percentages.[24] The intersection of '*merger*' with common law targets would correspond to a typical acquisition in U.S.

The results indicate that although the target announcement returns in civil law countries are significantly positive, they are substantially smaller than those found in common law countries. For example, average return for civil law targets in '*mergers*' is only about half of those experienced by common law targets. Similarly, targets of '*control acquisitions*' in civil law countries exhibit roughly 40% smaller announcement return compared to those in common law countries. These findings indicate that target shareholders in countries with low investor protection do not gain as much as their counterparts in common law countries during acquisition process.

Although this univariate analysis provides some useful implications regarding the target shareholder's welfare, there are other factors that would influence the target returns, such as percentage of the total payment financed by cash and whether the purchase was done through a tender offer. In table IX, I regress target announcement returns on the mode of acquisition and target investor protection,

[24] Many stock exchanges outside U.S. require a suspension of trading for a few hours or even a few days around an acquisition announcement. To minimize the effect of stale prices, I require at least one of the daily returns within the 5 day window to be non-zero. 1.8% of available target returns are dropped due to this filter.

controlling for these other factors. I also include an interaction term between the mode of acquisition dummy and the percentage being acquired to test whether there is any additional information in the continuous characterization of the ownership being acquired above and beyond the information contained in discrete characterization of the mode of acquisition being a '*control acquisition*' or a '*merger*'. Columns (1) through (4) present the results for the full sample. Column (5) provides result using '*control acquisitions*' only, and column (6) presents result using '*mergers*' only. The last two columns are designed test whether the effect of target investor protection holds within each acquisition category.

The results indicate that target investor protection level is significantly negatively related with the target announcement return in all specifications after controlling for percentage acquired, percentage cash financed and tender offers. Even within '*control acquisitions*' and '*mergers*' respectively, shareholders in civil law targets realize returns that are roughly 12% smaller than their common law counterparts, holding other things equal. Percentage cash financed and tender offer dummies are significantly positive as expected in columns (4) and (6), although they are not significant in column (5) presumably due to smaller number of observations.

VI. Conclusion

Corporate pyramids are a ubiquitous phenomenon outside U.S. and U.K. Although there have been some cross sectional evidence on the consequence of pyramids such as implications for firm value and *tunneling*, the underlying mechanism behind the formation of pyramids has been largely unexplored presumably due to the difficulty of assembling an appropriate dataset. In this paper, I focus on a tractable subset of investment opportunities, specifically investments made through acquisitions, to explicitly examine under what circumstances firms choose to create a pyramidal subsidiary through a '*control acquisition*' rather than expand an existing firm through a '*merger*'.

I first document that there is a wide cross country variation in the mode of acquisition being used around the world. While '*mergers*' are the dominant form of acquisition in U.S. and U.K., in other countries, especially the ones with civil legal origin, '*mergers*' are much less frequent and more firms are being acquired through '*control acquisitions*'.

Next, I test whether the level of investor protection in the target countries affect the mode of acquisition controlling for a variety of other firm and deal specific characteristics. I find that targets in countries with low investor protections are indeed more likely to be engaged in '*control acquisitions*' creating and expanding pyramidal control chains when encountered by a bidder which has a controlling shareholder. These results are robust to the variations in the lower and upper limits used to define the boundaries of a '*control acquisition*' and a '*merger*' as well as to the exclusion of various sub-samples.

I then examine how target minority shareholders are affected in countries that provide different levels of investor protection. I find that target announcement returns are still significantly positive for both '*mergers*' and '*control acquisitions*' in civil law targets, but they are also substantially smaller than their counterparts in common law countries.

Overall, the results seem to indicate that given an opportunity to buy or sell an existing firm, the level of investor protection in the target country as well as the existence of a controlling block seem to be important factors in determining the mode of acquisition. If the target is from a country with low investor protection and there is already a controlling block assembled, the block tends to be transferred over to a bidder with a controlling shareholder, thereby facilitating corporate pyramids in these countries.

The analyses presented in this study are limited to only those pyramids that are formed through acquisitions. Nevertheless, the results are broadly consistent with the previous research in terms of implications for tunneling and other consequences of pyramids.

A natural extension of this study would be to examine pyramid formations through IPOs of existing divisions. Specifically, parent firms (with controlling shareholders) in countries with low investor protection may prefer to do a carve-out instead of a spin-off to create a pyramidal subsidiary and expropriate from the carved-out division. More in depth analysis of the various ways through which pyramids are being formed and restructured would provide us with a better understanding of the merits and demerits of the pyramids around the world.

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Table I

Distribution of the Mode of Acquisition by Geographic Region

This table presents the distribution of the mode of acquisition across 38 target countries based on the percentage ownership acquired. Civil law countries or countries with anti-director rights below 5 (based on LLSV 1998) or anti-self dealing index below 0.65 (based on Djankov et al. 2006) are classified as low investor protection countries. Relative proportions of each acquisition type within each country are presented in parenthesis. The sample period is from 1990 to 2003.

			Low Investor Protection			Non-Control		Control Acq.		Quasi Merger		Merger	
Region	Nation	Total	Civil	low anti	low anti	5%-20%		20%-79.9%		80-99.9%		100%	
		N	Law	director	self dealing	N	%	N	%	N	%	N	%
Asia	Hong Kong	169	0	0	0	75	(44.4)	77	(45.6)	5	(3.0)	12	(7.1)
	India	85	0	0	1	29	(34.1)	38	(44.7)	2	(2.4)	16	(18.8)
	Indonesia	33	1	1	0	17	(51.5)	15	(45.5)	1	(3.0)	0	(0.0)
	Japan	350	1	1	1	145	(41.4)	112	(32.0)	4	(1.1)	89	(25.4)
	Malaysia	124	0	1	0	30	(24.2)	82	(66.1)	3	(2.4)	9	(7.3)
	Philippines	41	1	1	1	12	(29.3)	23	(56.1)	4	(9.8)	2	(4.9)
	Singapore	78	0	1	0	28	(35.9)	32	(41.0)	3	(3.8)	15	(19.2)
	South Korea	82	1	1	1	35	(42.7)	29	(35.4)	5	(6.1)	13	(15.9)
	Taiwan	26	1	1	1	10	(38.5)	3	(11.5)	0	0.0	13	(50.0)
	Thailand	86	0	1	0	43	(50.0)	37	(43.0)	4	(4.7)	2	(2.3)
	Total	**1,074**	**0.5**	**0.8**	**0.5**	**424**	**(39.5)**	**448**	**(41.7)**	**31**	**(2.9)**	**171**	**(15.9)**
Conti-	Austria	33	1	1	1	11	(33.3)	16	(48.5)	1	(3.0)	5	(15.2)
Nental	Belgium	36	1	1	1	14	(38.9)	10	(27.8)	5	(13.9)	7	(19.4)
Europe	Denmark	45	1	1	1	9	(20.0)	14	(31.1)	2	(4.4)	20	(44.4)
	Finland	58	1	1	1	19	(32.8)	23	(39.7)	2	(3.4)	14	(24.1)
	France	295	1	1	1	98	(33.2)	77	(26.1)	60	(20.3)	60	(20.3)
	Germany	228	1	1	1	71	(31.1)	95	(41.7)	32	(14.0)	30	(13.2)
	Greece	39	1	1	1	16	(41.0)	18	(46.2)	1	(2.6)	4	(10.3)
	Ireland-Rep	22	0	1	0	7	(31.8)	2	(9.1)	0	(0.0	13	(59.1)
	Israel	64	0	1	0	28	(43.8)	20	(31.3)	3	(4.7)	13	(20.3)
	Italy	100	1	1	1	49	(49.0)	28	(28.0)	10	(10.0)	13	(13.0)
	Netherlands	74	1	1	1	21	(28.4)	12	(16.2)	8	(10.8)	33	(44.6)
	Norway	93	1	1	1	27	(29.0)	18	(19.4)	11	(11.8)	37	(39.8)
	Portugal	36	1	1	1	16	(44.4)	14	(38.9)	3	(8.3)	3	(8.3)
	Spain	94	1	1	1	49	(52.1)	21	(22.3)	9	(9.6)	15	(16.0)
	Sweden	149	1	1	1	49	(32.9)	32	(21.5)	10	(6.7)	58	(38.9)
	Switzerland	69	1	1	1	20	(29.0)	24	(34.8)	7	(10.1)	18	(26.1)
	Total	**1,435**	**0.9**	**1.0**	**0.9**	**504**	**(35.1)**	**424**	**(29.5)**	**164**	**(11.4)**	**343**	**(23.9)**
UK		**895**	**0**	**0**	**0**	**190**	**(21.2)**	**96**	**(10.7)**	**8**	**(0.9)**	**601**	**(67.2)**
US		**4,940**	**0**	**0**	**0**	**454**	**(9.2)**	**287**	**(5.8)**	**72**	**(1.5)**	**4,127**	**(83.5)**
Other	Argentina	33	1	1	1	11	(33.3)	19	(57.6)	1	(3.0)	2	(6.1)
Region	Australia	628	0	1	0	307	(48.9)	98	(15.6)	14	(2.2)	209	(33.3)
	Brazil	68	1	1	1	18	(26.5)	29	(42.6)	8	(11.8)	13	(19.1)
	Canada	986	0	0	1	185	(18.8)	173	(17.5)	14	(1.4)	614	(62.3)
	Chile	28	1	0	1	8	(28.6)	12	(42.9)	5	(17.9)	3	(10.7)
	Colombia	16	1	1	1	1	(6.3)	9	(56.3)	1	(6.3)	5	(31.3)
	Mexico	46	1	1	1	8	(17.4)	20	(43.5)	7	(15.2)	11	(23.9)
	New Zealand	85	0	1	0	38	(44.7)	29	(34.1)	2	(2.4)	16	(18.8)
	Peru	23	1	1	1	3	(13.0)	8	(34.8)	3	(13.0)	9	(39.1)
	South Africa	145	0	0	1	25	(17.2)	54	(37.2)	4	(2.8)	62	(42.8)
	Total	2,058	0.6	0.7	0.8	604	(29.3)	451	(21.9)	59	(2.9)	944	(45.9)
Total		**10,402**	**0.7**	**0.8**	**0.7**	**2,176**	**(20.9)**	**1,706**	**(16.4)**	**334**	**(3.2)**	**6,186**	**(59.5)**

Table II

Distribution of the Mode of Acquisition by the Level of Investor Protection

This table presents the distribution of the mode of acquisition based on the level of investor protection. Bidder and target countries are considered separately. The numbers in each cell, except for the last column, represent the relative proportions (in percentages) of each acquisition type across each combination of bidder and target countries. Panels A, B, and C present results based on legal origin, anti-director rights (LLSV 1998) and anti-self dealing index (Djankov et al. 2006), respectively. Civil law countries and countries with anti-director rights below 5 (based on LLSV 1998) or anti-self dealing index below 0.65 (based on Djankov et al. 2006) are classified as low investor protection countries. Z-stat tests the equality of proportions within the two groups immediately above. The sample period is from 1990 to 2003.

Panel A: Legal Origin

		Non-Control	Control Acq.	Quasi Merger	Merger	Total
Bidders	Targets	5-19.9%	20-79.9%	80-99.9%	100%	N
Common	Common	16.5	11.8	1.6	70.1	7,840
Civil	Common	31.7	21.8	1.3	45.2	467
z-stat		-8.45	-6.43	0.58	11.30	
Common	Civil	28.7	36.9	12.1	22.3	355
Civil	Civil	36.5	31.6	9.0	22.9	1,740
z-stat		-2.79	1.94	1.81	-0.25	

Panel B: Anti Director Rights

Bidders	Targets	5-19.9%	20-79.9%	80-99.9%	100%	Total N
High	High	12.0	9.3	1.5	77.3	6,710
Low	High	30.1	21.6	1.7	46.7	538
z-stat		-11.90	-9.09	-0.31	15.77	
High	Low	36.6	30.7	9.2	23.6	522
Low	Low	38.7	30.7	6.7	23.9	2,632
z-stat		-0.91	-0.04	2.04	-0.15	

Panel C: Anti Self Dealing Index

Bidders	Targets	5-19.9%	20-79.9%	80-99.9%	100%	Total N
High	High	16.0	9.9	1.6	72.5	6,496
Low	High	28.2	20.5	1.9	49.4	628
z-stat		-7.74	-8.14	-0.62	12.11	
High	Low	25.2	30.2	7.3	37.3	560
Low	Low	30.1	28.0	6.5	35.3	2,718
z-stat		-2.33	1.02	0.67	0.90	

Table III

Country/Firm/Deal Characteristics by the Mode of Acquisition

This table presents the mean and median values of bidder, target, and deal characteristics for '*control acquisitions*' (more than 20%, less than 80% acquired) and '*mergers*' (100% acquired). Minimum percentage ownership required for having a control block is set at 20%. Interest burden is the 3 year average of interest expense scaled by operating income before depreciation, where negative values and values greater than one are set equal to one. Market to book is total assets minus book value of equity plus market value of equity over total assets. Profitability is the 3 year average of net income before extraordinary items plus depreciation and amortization scaled by total assets. Merger tax benefit equals 2 if both the bidder's and the target's country provide tax benefits for '*mergers*' (versus '*control acquisitions*'), 1 if only one of them provides the benefits, and 0 if neither of them provides the benefits. t-statistics for comparisons of means between '*control acquisitions*' and '*mergers*' are also provided. The sample period is from 1990 to 2003.

	Mean				Median		
	control acquisition	merger	t-stat	All	control acquisition	Merger	All
	20-79.9%	100%			20-79.9%	100%	
Target civil law dummy	0.40	0.08	35.90	0.15	0	0	0
Bidder control block (20%) dummy	0.46	0.21	18.20	0.26	0	0	0
Bidder interest burden	0.33	0.27	6.11	0.28	0	0	0
Bidder market to book	1.92	2.19	-2.50	2.14	1.28	1.36	1.34
Bidder civil law dummy	0.38	0.09	30.07	0.16	0	0	0
Bidder total assets (US$ mil)	18,388	12,706	3.57	14,004	1,109	1,137	1,136
Target control block (20%) dummy	0.56	0.24	15.51	0.28	1	0	0
Target profitability	0.00	0.00	-0.46	0.00	0	0	0
Target total assets (US$ mil)	2,203	2,509	-0.56	2,451	106	160	149
Same industry(1 digit SIC) dummy	0.59	0.79	-17.38	0.75	1	1	1
Cross border deal dummy	0.36	0.14	20.63	0.19	0	0	0
Merger tax benefit	0.79	1.59	-37.58	1.42	0	2	2
Deal value(US$ mil)	212	1,068	-5.54	914	24	120	92
Percentage cash financed	0.88	0.36	39.73	0.46	1.00	0.00	0.30

Table IV

Investor Protection and the Mode of Acquisition: Multivariate Analysis

This table presents the marginal effects (dF/dx) from probit estimation where the dependent variable equals 1 if the form of acquisition is a '*control acquisition*' (more than 20%, less than 80% acquired) and 0 if a '*merger*' (100% acquired). The explanatory variables are as defined in Table III. Market to book and total assets are log transformed and then standardized. All specifications include year fixed effects. z-statistics using heteroscedasticity robust standard errors clustered by target's 2 digit SIC are reported in parenthesis. ***, **, * correspond to statistical significance at 1, 5, 10%. The sample period is from 1990 to 2003.

	(1)	(2)	(3)	(4)	(5)
Target civil law dummy	0.460***	0.377***	0.252***	0.205***	0.209***
	(18.709)	(12.947)	(6.796)	(6.324)	(6.270)
Bidder control block (20%) dummy	0.155***	0.114***	0.035**	0.019	0.034**
	(5.564)	(7.174)	(2.125)	(1.521)	(2.549)
Bidder interest burden		0.138***	0.093***	0.077***	0.099***
		(5.136)	(3.308)	(3.339)	(4.018)
Bidder interest burden *Bidder control block (20%) dummy					-0.053*
					(-1.697)
ln[Bidder market to book]		-0.028***	-0.016**	-0.012**	-0.019***
		(-3.678)	(-2.394)	(-2.125)	(-3.535)
ln[Bidder market to book] * Bidder control block (20%) dummy					0.020**
					(2.321)
Bidder civil law dummy		0.114***	0.120***	0.049**	0.044*
		(4.002)	(4.070)	(2.143)	(1.948)
ln[Bidder total assets (US$ mil)]		0.034***	0.036***	0.027***	0.028***
		(3.653)	(3.611)	(3.202)	(3.282)
Target control block (20%) dummy			0.071***	0.046***	0.046***
			(4.056)	(3.235)	(3.244)
Target profitability			-0.007	-0.008	-0.008
			(-0.989)	(-1.098)	(-1.116)
ln[Target total assets (US$ mil)]			-0.040***	-0.040***	-0.040***
			(-2.939)	(-3.756)	(-3.892)
Same industry(1 digit SIC) dummy				-0.060***	-0.059***
				(-4.837)	(-4.763)
Cross border deal dummy				0.047**	0.045**
				(2.276)	(2.174)
Merger tax benefit				-0.071***	-0.071***
				(-6.468)	(-6.854)
Pseudo R^2	0.186	0.208	0.206	0.272	0.275
N	5,718	3,577	2,095	2,095	2,095

Table V

Sub-sample Analysis: Non-U.S. vs. U.S. Targets

This table presents the marginal effects (dF/dx) from probit estimation where the dependent variable equals 1 if the form of acquisition is a '*control acquisition*' (more than 20%, less than 80% acquired) and 0 if a '*merger*' (100% acquired). First three columns present results for non-U.S. targets and the last three columns present those for U.S. targets. The explanatory variables are as defined in Table III. Market to book and total assets are log transformed and then standardized. All specifications include year fixed effects. z-statistics using heteroscedasticity robust standard errors clustered by target's 2 digit SIC are reported in parenthesis. ***, **, * correspond to statistical significance at 1, 5, 10%. The sample period is from 1990 to 2003.

	Non-U.S. Targets			U.S. Targets		
	(1)	(2)	(3)	(4)	(5)	(6)
Target civil law dummy	0.268***	0.236***	0.240***			
	(7.011)	(3.390)	(3.370)			
Bidder control block (20%) dummy	0.174***	0.090	0.132*	0.044**	-0.000	0.003
	(7.745)	(1.642)	(1.679)	(2.524)	(-0.038)	(0.261)
Bidder interest burden		0.218**	0.332**		0.056***	0.064***
		(2.414)	(2.324)		(3.394)	(3.922)
Bidder interest burden			-0.167			-0.026
*Bidder control block (20%) dummy			(-0.880)			(-1.005)
ln[Bidder market to book]		-0.004	-0.032		-0.009***	-0.014***
		(-0.109)	(-0.672)		(-2.844)	(-3.263)
ln[Bidder market to book]			0.052			0.017**
* Bidder control block (20%) dummy			(1.329)			(2.328)
Bidder civil law dummy		0.052	0.039		0.083**	0.079**
		(0.667)	(0.496)		(2.166)	(2.060)
ln[Bidder total assets (US$ mil)]		0.029	0.028		0.023***	0.023***
		(0.699)	(0.676)		(3.216)	(3.305)
Target control block (20%) dummy		0.224***	0.223***		0.001	0.001
		(4.162)	(4.126)		(0.124)	(0.185)
Target profitability		0.064*	0.061*		-0.009**	-0.009**
		(1.738)	(1.677)		(-2.185)	(-2.181)
ln[Target total assets (US$ mil)]		-0.061	-0.062		-0.029***	-0.029***
		(-1.472)	(-1.540)		(-4.872)	(-4.996)
Same industry(1 digit SIC) dummy		-0.160***	-0.160**		-0.033***	-0.032***
		(-2.584)	(-2.518)		(-3.138)	(-3.125)
Cross border deal dummy		0.067	0.068		0.031	0.028
		(0.843)	(0.856)		(1.239)	(1.133)
Merger tax benefit		-0.131***	-0.130***		-0.017	-0.019
		(-3.718)	(-3.776)		(-0.991)	(-1.133)
Pseudo R^2	0.118	0.227	0.230	0.031	0.178	0.183
N	1,890	411	411	3,828	1,673	1,673

Table VI

Using Different Thresholds for Effective Control

This table presents marginal effects (dF/dx) from probit estimation where different thresholds are used to define the boundaries of effective control. Lower limit varies from 10 to 50% and upper limit varies from 70% to 100%. Panels A and B present results from variations in the lower and upper limit, respectively. In panel A, minimum percentage ownership required for having a control block also varies from 10 to 50%. Dependent variable equals 1 if the form of acquisition is a '*control acquisition*' and 0 if a '*merger*'. The explanatory variables are as defined in Table III. Market to book and total assets are log transformed and then standardized. All specifications include year fixed effects. z-statistics using heteroscedasticity robust standard errors clustered by target's 2 digit SIC are reported in parenthesis. ***, **, * correspond to statistical significance at 1, 5, 10%. The sample period is from 1990 to 2003.

Panel A: Variations in Lower Limit (upper limit fixed at 80%)

	Threshold=10%	threshold=20%	threshold=30%	threshold=50%
	(1)	(2)	(3)	(4)
Target civil law dummy	0.283***	0.209***	0.172***	0.083***
	(6.835)	(6.270)	(5.646)	(4.732)
Bidder control block (10-50%) dummy	0.024*	0.034**	0.014	-0.003
	(1.680)	(2.549)	(1.286)	(-0.395)
Bidder interest burden	0.109**	0.099***	0.057***	0.024***
	(2.512)	(4.018)	(3.365)	(3.008)
Bidder interest burden	-0.025	-0.053*	-0.043**	-0.020**
*Bidder control block (10-50%) dummy	(-0.454)	(-1.697)	(-2.345)	(-2.285)
ln[Bidder market to book]	-0.018***	-0.019***	-0.014***	-0.003
	(-2.585)	(-3.535)	(-2.912)	(-1.115)
ln[Bidder market to book]	0.029*	0.020**	0.015**	0.002
*Bidder control block (10-50%) dummy	(1.872)	(2.321)	(2.196)	(0.513)
Bidder civil law dummy	0.069***	0.044*	0.041***	0.050***
	(2.754)	(1.948)	(2.656)	(4.217)
ln[Bidder total assets (US$ mil)]	0.063***	0.028***	0.014**	0.002
	(4.546)	(3.282)	(2.286)	(0.615)
Target control block (10-50%) dummy	0.041**	0.046***	0.040***	0.026**
	(2.341)	(3.244)	(2.752)	(2.458)
Target profitability	-0.024***	-0.008	-0.006	-0.002
	(-2.883)	(-1.116)	(-1.273)	(-0.659)
ln[Target total assets (US$ mil)]	-0.061***	-0.040***	-0.034***	-0.015***
	(-5.153)	(-3.892)	(-4.726)	(-3.839)
Same industry(1 digit SIC) dummy	-0.075***	-0.059***	-0.023**	-0.008
	(-4.361)	(-4.763)	(-2.462)	(-1.285)
Cross border deal dummy	0.048*	0.045**	0.028*	0.024**
	(1.879)	(2.174)	(1.901)	(2.476)
Merger tax benefit	-0.123***	-0.071***	-0.039***	-0.014***
	(-8.411)	(-6.854)	(-5.030)	(-3.043)
Pseudo R^2	0.251	0.275	0.260	0.279
N	2,242	2,095	1,967	1,889

Table VI - *continued*

Panel B: Variations in Upper Limit (lower limit fixed at 20%)				
	threshold=70%	threshold=80%	threshold=90%	threshold=100%
	(1)	(2)	(3)	(4)
Target civil law dummy	0.202***	0.209***	0.243***	0.294***
	(6.126)	(6.270)	(7.394)	(8.175)
Bidder control block (20%) dummy	0.038***	0.034**	0.041***	0.031**
	(2.692)	(2.549)	(2.909)	(2.044)
Bidder interest burden	0.099***	0.099***	0.092***	0.091***
	(3.837)	(4.018)	(3.292)	(3.042)
Bidder interest burden	-0.055*	-0.053*	-0.051	-0.043
*Bidder control block (20%) dummy	(-1.695)	(-1.697)	(-1.493)	(-1.168)
ln[Bidder market to book]	-0.020***	-0.019***	-0.022***	-0.022***
	(-3.360)	(-3.535)	(-3.866)	(-3.442)
ln[Bidder market to book]	0.019**	0.020**	0.020**	0.021*
* Bidder control block (20%) dummy	(2.303)	(2.321)	(1.978)	(1.850)
Bidder civil law dummy	0.040**	0.044*	0.037	0.053*
	(1.965)	(1.948)	(1.555)	(1.789)
ln[Bidder total assets (US$ mil)]	0.032***	0.028***	0.028***	0.027**
	(3.506)	(3.282)	(2.911)	(2.517)
Target control block (20%) dummy	0.042***	0.046***	0.056***	0.061***
	(2.855)	(3.244)	(3.717)	(3.746)
Target profitability	-0.009	-0.008	-0.010	-0.012
	(-1.137)	(-1.116)	(-1.261)	(-1.600)
ln[Target total assets (US$ mil)]	-0.038***	-0.040***	-0.043***	-0.043***
	(-3.687)	(-3.892)	(-4.124)	(-4.040)
Same industry(1 digit SIC) dummy	-0.055***	-0.059***	-0.062***	-0.063***
	(-4.810)	(-4.763)	(-4.773)	(-4.700)
Cross border deal dummy	0.044**	0.045**	0.048**	0.046**
	(2.046)	(2.174)	(2.156)	(2.016)
Merger tax benefit	-0.070***	-0.071***	-0.071***	-0.077***
	(-6.458)	(-6.854)	(-6.778)	(-6.468)
Pseudo R^2	0.264	0.275	0.271	0.280
N	2,007	2,095	2,115	2,147

Table VII

Additional Robustness Checks

This table presents the marginal effects (dF/dx) from probit estimation where the dependent variable equals 1 if the form of acquisition is a '*control acquisition*' and 0 if a '*merger*', excluding certain observations or redefining certain observations as '*mergers*'. Column (1) excludes '*control acquisitions*' that are subsequently merged or sold to another firm within 3 years and column (2) excludes acquisitions that exceed the cutoff for mandatory tender offers in each country (Dyck and Zingales, 2004). Column (3) redefines quasi mergers (80-99.8% acquisition) as '*mergers*', column (4) redefines '*control acquisitions*' that are subsequently merged within 3 years as '*mergers*', and column (5) redefines any acquisition that is above the cutoff for mandatory tender offer as a '*merger*'. z-statistics using heteroscedasticity robust standard errors clustered by target's 2 digit SIC are reported in parenthesis. ***, **, * correspond to statistical significance at 1, 5, 10%. The sample period is from 1990 to 2003.

	Exclude		Redefine/Include as Mergers		
	Subsequent Mergers/Resales	Mandatory Tender Offers	Quasi Mergers (80-99.9%)	Subsequent Mergers	Mandatory Tender Offers
	(1)	(2)	(3)	(4)	(5)
Target civil law dummy	0.160***	0.158***	0.294***	0.153***	0.091***
	(5.838)	(4.345)	(8.175)	(5.287)	(2.875)
Bidder control block (20%) dummy	0.020*	0.036***	0.031**	0.025**	0.041***
	(1.828)	(2.859)	(2.044)	(1.983)	(3.485)
Bidder interest burden	0.066**	0.091***	0.091***	0.087***	0.102***
	(2.575)	(4.634)	(3.042)	(3.367)	(5.468)
Bidder interest burden	-0.012	-0.042*	-0.043	-0.028	-0.053**
*Bidder control block (20%) dummy	(-0.424)	(-1.671)	(-1.168)	(-0.836)	(-2.116)
Ln[Bidder market to book]	-0.017***	-0.015***	-0.022***	-0.016***	-0.014***
	(-3.044)	(-3.390)	(-3.442)	(-2.706)	(-3.146)
Ln[Bidder market to book]	0.020**	0.011	0.021*	0.018**	0.010
* Bidder control block (20%) dummy	(2.575)	(1.410)	(1.850)	(2.366)	(1.224)
Bidder civil law dummy	0.038*	0.048*	0.053*	0.051**	0.048*
	(1.829)	(1.819)	(1.789)	(2.393)	(1.832)
Ln[Bidder total assets (US$ mil)]	0.028***	0.027***	0.027**	0.032***	0.028***
	(4.081)	(3.634)	(2.517)	(3.876)	(3.433)
Target control block (20%) dummy	0.035***	0.028***	0.061***	0.035***	0.021**
	(2.749)	(2.633)	(3.746)	(2.706)	(2.017)
Target profitability	-0.008	-0.008	-0.012	-0.008	-0.002
	(-1.378)	(-1.400)	(-1.600)	(-1.366)	(-0.489)
Ln[Target total assets (US$ mil)]	-0.036***	-0.032***	-0.043***	-0.038***	-0.029***
	(-4.130)	(-3.636)	(-4.040)	(-4.034)	(-3.557)
Same industry(1 digit SIC) dummy	-0.051***	-0.046***	-0.063***	-0.054***	-0.040***
	(-4.999)	(-4.337)	(-4.700)	(-4.528)	(-3.602)
Cross border deal dummy	0.040**	0.025	0.046**	0.033*	0.020
	(2.349)	(1.550)	(2.016)	(1.763)	(1.287)
Merger tax benefit	-0.062***	-0.041***	-0.077***	-0.067***	-0.028***
	(-6.966)	(-3.797)	(-6.468)	(-7.542)	(-2.864)
Pseudo R^2	0.279	0.228	0.280	0.265	0.178
N	2,055	2,031	2,147	2,095	2,122

Table VIII

Target Announcement Returns

by Mode of Acquisition and Investor Protection in Target Countries

This table presents the averages of target announcement returns for '*mergers*' (100% acquired) and '*control acquisitions*' (more than 20%, less than 80% acquired) sorted by the level of investor protection in the target country proxied by legal origin. Target announcement returns are 5 day (-2 to + 2) cumulative market adjusted buy-and-hold returns in percentages. At least one of the target daily returns within the 5 day window should be non-zero to be included in this analysis. Bold letters indicate statistical significance at less than 5% from testing that the reported values are zero. t-stats are reported in parentheses. The sample period is from 1990 to 2003.

			Target Investor Protection		
		All	Common Law	Civil Law	Difference
Merger	mean	**21.16%**	**21.84%**	**11.17%**	**-10.66%**
	t-stat	*(51.448)*	*(51.162)*	*(8.067)*	*-(6.368)*
	N	4,106	3,844	262	
Control Acquisition	mean	**9.53%**	**11.49%**	**7.09%**	**-4.40%**
	t-stat	*(12.009)*	*(9.851)*	*(6.944)*	*-(2.765)*
	N	923	512	411	

Table IX

Target Announcement Returns: Multivariate Analysis

This table presents results from regressing target announcement returns on the mode of acquisition and investor protection in the target country proxied by legal origin. Target announcement returns are 5 day (-2 to + 2) cumulative market adjusted buy-and-hold returns. At least one of the target daily returns within the 5 day window should be non-zero to be included in this analysis. Columns (1) through (4) presents results for the full sample, whereas columns (5) and (6) present results using '*control acquisitions*' only or '*mergers*' only, respectively. t-statistics using heteroscedasticity robust standard errors clustered by targets' 2 digit SIC are reported in parenthesis. ***, **, * correspond to statistical significance at 1, 5, 10%. The sample period is from 1990 to 2003.

	Full Sample				Control Acquisitions	Mergers
	(1)	(2)	(3)	(4)	(5)	(6)
Mode of Acquisition: 1 if control	-0.087***	-0.086***	-0.094***	-0.179***		
acquisition, 0 otherwise	(-8.924)	(-8.778)	(-7.014)	(-4.736)		
Target Civil Law	-0.076***	-0.086***	-0.140***	-0.120***	-0.122***	-0.124***
: 1 if yes, 0 otherwise	(-8.132)	(-7.936)	(-5.171)	(-4.901)	(-3.081)	(-3.435)
Bidder Civil Law			0.065***	0.030*	0.034	0.034
: 1 if yes, 0 otherwise			(2.973)	(1.761)	(0.830)	(1.380)
Target has cont. shrholder(20%)			0.023**	0.014	0.040	0.011
: 1 if yes, 0 otherwise			(2.080)	(1.359)	(1.225)	(0.962)
Bidder has cont. shrholder(20%)			-0.008	-0.013	-0.013	-0.013
: 1 if yes, 0 otherwise			(-0.697)	(-1.091)	(-0.477)	(-0.987)
Mode of Acquisition				0.123	0.141	
*Percentage Acquired				(1.400)	(1.458)	
Percentage Financed by Cash				0.111***	0.075	0.114***
				(5.564)	(1.505)	(5.235)
Tender Offer				0.051**	0.063	0.048*
				(2.208)	(1.157)	(1.928)
Year Fixed Effects	No	Yes	Yes	Yes	Yes	Yes
R2	0.037	0.046	0.039	0.090	0.088	0.081
N	5,029	5,029	3,576	3,485	302	3,183

Figure 1. Distribution of the Percentage Ownership Acquired from Target

This figure presents the relative frequencies of the percentage ownership acquired from the target by level of investor protection in the bidder and target countries. The sample period is from 1990 to 2003.