

Corporate Block Acquisitions around the World

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Abstract

Between 1990 and 2005, 14 percent of the world's public firms were targets in minority block acquisitions, of which one third were cross-border. These target firms are mostly financially constrained, experience significant increases in their stock prices at the announcement and increase their investment expenditures subsequent to the acquisition. In the immediate two years following the acquisition, 27 percent of target firms issue new equity and 10 percent issue new debt. The size of these new issues is between 23 and 27 percent of the target firms' market capitalization. These findings are consistent with the theory that equity stakes by other corporations certify the investment opportunities of target firms and allow them to raise additional capital. There is little evidence in support of competing theories that corporate blockowners lower contracting costs in the product market, effectively monitor insiders or capitalize on their overvalued stocks.

Between 1990 and 2005, 14 percent of public firms around the world were targets in a minority block acquisition, with the fraction of acquired equity averaging 16 percent.¹ Surprisingly, U.S. targets comprises less than 25 percent of the world minority block acquisitions, in sharp contrast to 65 percent of the world's majority control acquisitions being U.S. targets.² Furthermore, these block acquisitions are often accompanied by private equity placement from the target firms to outside corporations, of which one in three is foreign. Despite the prevalence of minority block acquisitions around the world and their distinct differences from mergers and acquisitions (M&As), little is known of their motives and consequences.³ Why do firms sell equity stakes to other corporations? Why do corporations purchase partial equity stakes in other firms? Do cross-country differences in law and regulation influence the motives and the consequences of corporate block acquisitions?

Existing research offers a number of possible explanations for why corporations purchase (sell) equity stakes from (to) other firms. For example, equity can play a key role in bonding business partners facing high contracting costs (see Allen and Phillips (2000) and Fee et al. (2006)). Large multinational firms could use partial acquisitions to access local advantages possessed by local firms (Dunning (1992)). Alternatively, the target firm could be financially constrained and block equity placement with an informed corporation provides capital directly to the issuing firm or certifies the target's investment opportunities to the capital market (or other capital providers) (Myers and Majluf (1984) and Holmstrom and Tirole (1997)). It is also likely that corporate blockholders can be effective monitors of or share control with large shareholders (Shleifer and Vishny (1986), Gomes and Novaes (2006) and Kang and Kim (2008b)). Finally, corporations potentially acquire blocks as a way of capitalizing a strong currency or overvaluation of their own stocks (Froot and Stein (1991) and Baker et al. (2007)).

¹ A minority block acquisition is one in which the acquirer purchases more than 5 percent and less than 50 percent of the target's shares.

² Majority control transactions are ones in which the acquirer purchases more than 50 percent of the target's shares.

³ Minority block acquisitions differ from M&As in that corporate control does not necessarily change from the hands of existing shareholders to those of new shareholders. Therefore the classic M&A theories are unlikely to explain the motives and impact of minority block acquisitions.

This paper examines the extent to which these various theories explain corporate block acquisitions. Existing studies have focused on a particular country such as the U.S. and/or test a specific theory.⁴ I consider a broad sample of 24,143 completed minority block acquisitions by corporations from 43 countries announced between 1990 and 2005. Of these 24,143 block acquisitions, only 4,399 were U.S. domestic deals, 13,389 were domestic deals in non-US countries, and 7,355 were cross-border deals. I find that not only public firms but also privately held ones are frequent targets of corporate block acquisitions. Furthermore, the prevalence of corporate block acquisitions varies from as low as 5 percent of public firms in South Korea to as high as 33 percent of public firms in Spain and Portugal.

Overall, my evidence is most consistent with the financing explanation. Compared to non-constrained firms, financially constrained firms are more likely to be targets in block acquisitions, experience larger announcement returns, and increase their operating cash flows, sales and investment expenditures subsequently. These findings are robust to various proxies for target firms' financing constraints, including dividend payments, an index based on a structural model of capital investment by Whited and Wu (2006), an index composed of firm size and age by Hadlock and Pierce (2008), an index composed of firm size, age, operating cash flows and leverage by Hadlock and Pierce (2008), and a financial flexibility index designed for international studies by Doidge et al. (2008). Most of the acquirers operate in industries related to the targets and so help to certify the investment opportunities of the targets. On average, the net external financing doubled for the target firm subsequent to the acquisition. Specifically, within 2 years, 27 percent of target firms issue new equity and 10 percent issue new debt. These new issuances raise between 23 and 27 percent of the target firms' market capitalization.

⁴ Allen and Phillips (2000) examine a sample of 402 large block acquisitions in the U.S. from 1981 to 1990 and emphasize the contracting motive. Fee et al. (2006) consider only 300 equity stakes in their customer-supplier pairs. Kang and Kim (2008) examine a sample of 799 partial acquisitions in the U.S. during the 1990 and 1999 period and find strong support for the monitoring role of corporate blockholders.

I find mixed evidence for the governance motive. On one hand, firms from weak law countries are more likely to be targets in corporate block acquisitions, consistent with the prediction that corporate blockholders play a role in an environment characterized by severe agency problems either by monitoring (e.g. Shleifer and Vishny (1986)) or by sharing control with the controlling shareholder (e.g. Gomes and Novaes (2006)). Moreover, target firms raise large quantities of equity in the immediate aftermath of corporate block acquisitions, consistent with the prediction that the firm-level governance improves subsequently. On the other hand, target firms from weak law countries experience lower announcement returns and are less likely to raise subsequent equity, inconsistent with the prediction that target firms with more severe agency problems benefit more from improved governance. Since it could also be that firm-level corporate governance is less effective in weak law countries (see Doidge et al. (2007)), I further examine whether announcement returns and subsequent equity issuances are affected by acquirers' monitoring ability and costs (see Kang and Kim (2008a)). There is no evidence that domestic acquirers, acquirers from better or similar legal protection countries, or target firms that have an exchange-listed ADR affect announcement returns and subsequent equity issuances.

I find little evidence for either the contracting or the market timing motive. The contracting motive predicts that partial equity stakes increase with the degree of asset specificity and/or in the presence of noncontractible decisions. Thus target firms are more likely to be in sectors with high research and development expenses (R&D) where property rights become blurry and contracting is difficult (see Aghion and Tirole (1994)). However target firms do *not* tend to operate in R&D-intensive sectors. The target firms in high R&D sectors do *not* earn abnormally high returns or experience better operating performance ex post. Turning to the market timing motive, there is little evidence that target firms are mostly from countries that undergo currency depreciation or lower market returns. Though public acquirers have high stock returns prior to the acquisition, only 43 percent of the acquirers are public firms. Further, targets experience higher increases in their stock

prices at the announcement when purchased by acquirers with higher prior stock returns. Capitalizing on over-valued stocks is unlikely to be the motive of block acquisitions.

Overall, the characteristics of target firms in these minority block acquisitions, the higher announcement returns and the larger quantity of capital raised subsequently for financially constrained targets paint a clear picture that corporate block acquisitions help relieve financial constraints of target firms. Using the subsample of minority block acquisitions in the U.S., I find evidence consistent with prior studies that use only U.S. data. In particular, I find that corporations purchase equity stakes in other firms to lower contracting costs in high R&D industries, such as chemicals and drugs. However, when I include the data for the rest of the world, this finding is no longer significant. This discrepancy could be due to the fact that fewer firms operate in high R&D industries outside of the U.S. Equally likely, non-US firms may have more difficulties in raising external capital compared to the U.S. firms.

My paper contributes to the growing literature on corporate investors. Prior studies that examine this specific type of investors have emphasized their strategic interaction with the target firms (Allen and Phillips (2000), Fee et al. (2006) and Barclay et al. (2008)), their monitoring role in the targets (Kang and Kim (2008a, 2008b)), and their impact (or lack of) on dividend policy of the targets (Barclay et al. (2008)). I examine corporate investors around the globe and find that these explanations do not have much power for the broader sample. Corporate investors are most useful in relieving the financial constraints of the target firms by mitigating information asymmetry between target firms and outside shareholders.

My findings also add to the law and finance literature. Previous studies on corporate governance show that differences in laws and enforcement are correlated with the development of capital markets, the ownership structure of firms, and the cost of capital (see, e.g., La Porta et al. (1997, 1998)). Rossi and Volpin (2004) find that the volume of mergers and acquisitions activity is significantly lower in weak law countries, consistent with the view that high market frictions, such as agency and transaction costs, prevent efficient transfer of control. I find that corporate block

acquisitions are more prevalent in weak law countries and that they do not represent as effective governance mechanisms as mergers and acquisitions do.

Finally, this study helps to understand how financially constrained firms fund their growth opportunities. Previous studies have documented several channels through which financial constraints are alleviated. For example, firms could use cash (Almeida et al. (2004)), lines of credit (Sufi (2007)), or trade credit (Petersen and Rajan (1997)) to overcome capital market frictions for funding future projects. Firms could also use an ADR listing to improve access to capital (Reese and Weisbach (2002)), especially when facing higher barriers to access capital (Lins et al. (2005)). Managers sometimes increase their ownership when firms are financially constrained because they may be the cheapest providers of external funding (Fahlenbrach and Stulz (2008)). This paper finds that equity stake sales to outside corporations also help to relieve financial constraints and are frequently used by firms around the world.

The paper is organized as follows. Section 2 discusses possible determinants and consequences of corporate block acquisitions. Section 3 presents data and deal statistics. Section 4 examines whether proxies for the benefits of block acquisitions are systematically related to the presence of equity stakes in target firms. Section 5 presents results on announcement returns of target firms. Subsequent new equity issuances are examined in Section 6, followed by analysis of the target firms' investment expenditures, sales and operating profitability in Section 7. Section 8 concludes the paper.

2 Potential Explanations for Corporate Block Acquisitions

In this section, I discuss possible reasons for minority block acquisitions by corporations. In each sub-section, I discuss predictions of existing theories, review findings of empirical studies and derive testable hypotheses.

2.1 Product Market Relationships and the Contracting Motive

In the context of a product market relationship, equity stakes can be regarded as a form of partial integration between two firms. There is extensive theoretical discussion of the factors that influence full or shared ownership between trade partners.⁵ Earlier studies focus on explaining full integration as one way to organize a trading relationship and generally regard partial ownership to be suboptimal (Williamson (1979), Klein et al. (1978), and Grossman and Hart (1986)). Subsequent work identifies circumstances in which joint ownership could be optimal, including settings with incomplete information (see Aghion and Tirole (1994)). An alternative view of partial ownership is that it mitigates the underinvestment problem without diluting the target's incentives too much. The underinvestment problem occurs when one party does not want to invest in actions that help the other party (e.g. Mathews (2006)).

These theories predict that partial equity stakes increase with business relationships that are characterized by a high degree of asset specificity and/or in the presence of noncontractible decisions. Further, equity stakes encourage more relationship-specific investment and more stable partnerships. An empirical proxy for an incomplete-contracting environment could be research and development (R&D) expenses in a sector. As argued by Aghion and Tirole (1994), property rights become blurry when it comes to R&D activities. R&D activities of one party can easily benefit the other party in ways outside of any contracting scope. In addition, when business partners share knowledge in cooperating, it is hard to write all contingencies in contracts.

Prior U.S. studies have found a number of results consistent with the contracting motive. Firms are more likely to sell equity stakes to their customer in high R&D sectors (Fee et al. (2006)), exhibit larger increases in announcement returns and improvements in operating performance in high R&D sectors especially when they have joint ventures or alliances with their corporate acquirers (Allen and Phillips (2000)), and have higher success rates when they have a strategic overlap with

⁵ In the foreign direct investment (FDI) literature, the question faced by multinational firms in choosing full versus shared ownership of foreign affiliates is coined "entry mode". Theoretical considerations in that literature all stem from similar work on transaction costs and contract theory discussed here.

their corporate venture parent (Gompers and Lerner (2000)). In the context of foreign direct investment, existing empirical work suggests that firms select ownership levels that economize on transaction costs (see Asiedu and Esfahani (2001)), facilitate the coordination of pricing and production decisions (Kant (1990)), learn from their local partners (Kogut (1991)) and curry favors with host governments (Henisz (2000)). Desai et al. (2004) find a marked decline in the use of partial ownership by multinational firms over the last 20 years and conclude that the forces of globalization appear to have diminished the use of shared ownership.

In this study, I examine predictions of the contracting motive on the characteristics, the announcement returns, subsequent operating performance, and investment expenditures of target firms. I use high R&D industry dummy as a proxy for high contracting costs and a dummy indicating the presence of joint ventures or alliances as a proxy for product market relationship.

2.2 Financial Constraints and the Financing Motive

An alternative reason for partial equity stakes is that firms lacking financial slack sell equity to a well-informed corporation. Firms facing high asymmetric information problem in the capital markets often seek financing from intermediaries, such as commercial banks (Fama (1985) and James (1987)), private placement investors (Hertzel and Smith (1993)), and venture capitalists (Chan (1983)) that can conduct intensive ex-ante due-diligence and ex-post monitoring. However these due-diligence and monitoring activities are often costly to the intermediaries and therefore they charge higher rates to compensate these costs. In contrast, an outside corporation might already possess substantial knowledge and experience in an industry that makes it a cheaper provider of external finance (see Petersen and Rajan (1997) for trade partnerships and Lerner et al. (2003) for alliance agreements).

A few predictions follow from the financing motive. First, firms facing difficulties in raising capital are more likely to sell equity stakes to other corporations. Second, targets experience higher announcement returns and larger increases in their operating profitability when they are ex-ante

financially constrained. Last, compared to unconstrained targets, financially-constrained targets are more likely to issue equity subsequently and to raise larger amount of capital.

With the exception of Allen and Phillips (2000), Pablo and Subramaniam (2004) and Fee et al. (2006), prior studies of partial equity stakes largely ignore the role of financial frictions. The findings of the studies that examine the financing motive are mixed. As well put by Fee et al. (2006) “the types of financial frictions and the mechanism by which they lead to partner financing are quite murky.”

In this paper, I examine implications of the financing motive on the characteristics, announcement returns, subsequent operating performance, investment expenditures, and equity issuances of target firms. There are various proxies for financial constraints that have been proposed and which particular measure is best is a matter of debate in the literature (see Almeida et al. (2004)). I include six widely used proxies, including a dummy variable indicating that the firm does not pay dividends (see Fazzari et al. (1988)), a composite index of financial constraints based on a standard intertemporal investment model augmented to account for financial frictions (see Whited and Wu (2006)), an index proposed by Hadlock and Pierce (2008) incorporating firm size and age only, a composite index proposed by Hadlock and Pierce (2008) incorporating firm size, age, operating cash flows and leverage, a financial flexibility index designed for international studies by Doidge et al. (2008) and finally a dummy variable indicating that the firm has no public debt in the five years prior to the acquisition.

2.3 Investor Protection and the Governance Motive

Corporate governance literature has emphasized the monitoring role of outside shareholders (e.g., Shleifer and Vishny (1986), Pagano and Roell (1998), and Bloch and Hege (2001)). Yet, monitoring does not necessarily assure value-maximizing policies (see Grossman and Hart (1986) for a model of under-monitoring and Burkart et al. (1997) for a model of excessive monitoring by large shareholders). Recent studies emphasize shared control among multiple large shareholders, especially

in closely-held firms, as an effective governance mechanism that could increase firm value (see Bennedsen and Wolfenzon (2000) and Gomes and Novaes (2006)).

These theoretical models of large blockholders can be very specialized. Thus it is hard to interpret them as literal descriptions of typical multi-dimensional corporate blockowners. Nonetheless, this work suggests that corporate blockholders could play a role in an environment characterized by severe agency problems. In addition, target firms experience higher announcement returns and larger increases in their operating profitability when they face more severe agency problems. Empirically, insider ownership is often used as a proxy for the agency cost in the target firm (see Faccio and Lang (2002) and Doidge et al. (2008)). Weak Law and poor legal protection can also be used as a proxy for severe agency problems due to market frictions; these market frictions limit access to information and result in ineffective corporate control market (see La Porta et al. (1997) and Rossi and Volpin (2004)).

Existing empirical studies have focused on the effect of multiple blockholders on firm value. A number of papers show that multiple blockholders increase firm value by cross-monitoring.⁶ Other studies show that the effect of multiple blockholders on firms varies across countries depending on whether blockholders cross-monitor or cooperate with each other to expropriate outside minority shareholders (see Redding (1995) and Faccio et al. (2001)). However, this literature has been silent on the identity of multiple blockholders except for the family blockholders. Few studies examine corporate blockholders and find mixed results. For example, Allen and Phillips (2000) find no evidence that corporate blockholders effectively monitor target firms whereas Kang and Kim (2008b) find that corporate blockholders, especially those geographically close to targets, can actively pursue post-acquisition governance activities in target firms including board representation and replacing poorly performing target management.

⁶ See Lehmann and Weigand (2000) for German firms, Volpin (2002) for Italian firms, Maury and Pajuste (2005) for Finnish firms, and Gutiérrez and Tribo (2004) for Spanish firms; for cross-country studies, see Laeven and Levine (2008) for publicly listed firms in Western Europe, Doidge et al. (2008) for foreign firms' cross-listing choices.

In this study, I examine implications of the governance motive for corporate blockholders on the characteristics, announcement returns, subsequent operating performance, investment expenditures, and equity issuances of target firms. To proxy for the agency problems of target firms, I use their insider ownership, whether they have an exchange-listed ADR and their country's law and legal protection proxied by a newly assembled anti-self dealing index (see Djankov et al. (2007)). Following Kang and Kim (2008b), I also examine whether acquirers' monitoring costs (e.g. geographic distance) and their monitoring ability (e.g. similar legal origin) affect cross-sectional variation in the consequences of corporate block acquisitions.

2.4 Market Conditions and the Timing Motive

Market conditions can also influence firms' decision to be involved in a minority block acquisition. Recent theories on mergers and acquisitions (M&As) predict that misvaluation drives mergers (see Rhodes-Kropf and Viswanathan (2004), Shleifer and Vishny (2003) and Dong et al. (2006)). In the cross-border context, not only stock market valuation but also currency valuation can affect the decision to be an acquirer in the M&As (see Froot and Stein (1991), Baker et al. (2007) and Desai et al. (2008)).

These theories would predict that firms likely become targets in a minority block acquisition by other corporations that have cheaper capital or an overvalued currency. Furthermore, unlike previous hypotheses, target firms do not necessarily benefit or lose from these acquisitions if the medium of the transaction is cash.

Existing studies on M&As have found that high market to book ratios coincide with periods of intense merger activity, especially in stock-financed deals. Multinational firms engage in cross-border arbitrage. Specifically, FDI flows increase sharply with source country market valuations (see Baker et al. (2007)) and multinational firms increase their investments in countries that undergo currency depreciation episodes (see Desai et al. (2008)).

In this paper, I examine implications of the market timing motive on the characteristics of both target firms and acquirer firms. Further, I examine whether announcement returns, subsequent operating performance and equity issuance activities of target firms differ depending on whether acquirers have higher stock returns prior to the acquisition. I use both target and acquirer firm prior stock returns as well as exchange-rate returns as proxies for market conditions.

3 Data and Sample Statistics

I use Security Data Corporation's (SDC) Mergers and Corporate Transactions database to collect data on partial-equity-stake acquisitions announced during the period of 1990 to 2005 and completed by the end of 2007. As defined in SDC, partial equity acquisitions are transactions in which the acquirer owns less than 49.99 percent in the target company. I therefore exclude deals that are mergers or majority control acquisitions, LBOs, spin-offs, recapitalizations, self-tender, exchange offers, repurchases, acquisitions of remaining interest, and privatizations.

Starting with all partial equity purchases reported in SDC, I first eliminate those observations in which the acquirer owns more than 50 percent before the deal or less than 5 percent after the deal.⁷ Then I exclude acquisitions involving either target or bidder or both from outside of La Porta, Lopez-De-Silanes, Shleifer and Vishny (LLSV, 1997) 49 countries and from countries that involve less than 10 targets during the sample period. I also filter out deals that either lack information on the 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. A total of 20,620 deals were dropped using these initial filters. I then exclude the following deals from my sample:

- (a) The target's ultimate parents and the acquirer's ultimate parents are the same: 2,383 deals.
- (b) The acquirer firm already had more than 20 percent equity in the target firm at the time of announcement: 1,415 deals.

⁷ For most countries in my sample, firms are required to report new shareholders with more than five percent ownership. In nine countries, the trigger for ownership disclosure is ten percent or non-existent. I would like to thank Peter Pham and Jason Zein for sharing the list of countries.

- (c) The acquirer is an individual investor: 2,487 deals.
- (d) The acquirer is a government agency: 1,999 deals.
- (e) The target is owned by government: 826 deals.
- (f) The target operates in the utility industry: 1,045 deals.
- (g) The target operates in the financial industry: 8,971 deals.

After applying these filters, I have a sample of 24,143 minority block acquisitions in 43 countries involving 18,939 target firms with the total transaction value of \$810 billion.^{8,9}

Table 1 summarizes the distribution of these block acquisitions across the 43 target countries in my sample. I also report each country's legal origin as a proxy for the level of investor protection in each country (La Porta et al. (1998)) and a newly assembled anti-self dealing index (Djankov et al. (2006)). Almost one third of all the world's targets in corporate block acquisitions are Continental European firms. Asia and U.S. are the second most popular places and each has 22 percent of all partial equity purchases.

More than half of the targets in partial equity acquisitions are private firms. Almost one third of deals are cross-border in nature.¹⁰ Financial firms, such as private equity or venture capital firms, acquired only 17 percent of the partial equity stakes in corporations. Moreover, 72 percent of the acquirers are in related industries as target firms.¹¹ Almost 80 percent of the targets in these equity stake acquisitions do *not* operate in high R&D industries, suggesting that these transactions are not motivated by incomplete contracting environment.¹²

There are substantial differences across geographic regions. Almost 80 percent of corporate blockholders in Latin America acquire firms in related industries, whereas only 20 percent do so in the

⁸ In total, these excluded deals represent 25 percent of the sample in number and 35 percent in value.

⁹ \$810 billion underestimates the total value of the equity stakes since only 13,674 out of 24,143 acquisitions have non-missing deal value.

¹⁰ For deals occurred post 1999 within EU countries, I classify them as domestic. 608 cross-border deals within the EU are classified as domestic.

¹¹ Related industry dummy equals to one when the total requirement coefficients between target and acquirer industries are in the upper quartile of all industries in the U.S. input-output accounts.

¹² Following Allen and Phillips (2000), I define high R&D industries to be the upper quartile of R&D expenditures among all nonfinancial four-digit SIC industries on Compustat.

United States. Sixty-seven percent of target firms in Australia and New Zealand are public versus only thirty percent in the Latin America and Continental Europe. About 80 percent of the U.S. firms are purchased by domestic acquirers, in sharp contrast to only 33 percent of the Latin American firms. The U.S. target firms are more likely to be in high R&D industries compared to the rest of the world (except Israel and Taiwan).

The patterns for large minority block acquisitions are quite different from those of M&As in the same time period summarized in Table A.2 of the appendix. I use SDC's Mergers and Corporate Transactions database to collect reports of all the mergers announced during the period of 1990 to 2005 and completed by the end of 2007. As defined in SDC, mergers are majority control acquisitions in which the acquirer owns more than 50 percent in the target company. I also use similar filters as those applied to minority block acquisitions. Compared to minority block acquisitions, public target firms are rare in M&A deals (5 percent) and U.S. targets are the most popular (as large as 65 percent of all M&As).

I match my SDC sample with DataStream which provides daily returns for bidders and targets as well as the market index return in each country. Accounting and ownership data are from WorldScope.¹³ Among 8,177 public targets from SDC, 5,262 firms have return information for target firms (comprising 6,631 events). The matching results are similar to studies that match SDC M&A database with Worldscope database (e.g. Kim (2008)).¹⁴

Table 2 reports the corporate block acquisition activities in public target firms by year. Cumulatively from 1990 to 2005, 16 percent of all publicly traded firms were targets in a minority block acquisition by other corporations. Forty-three percent of these targets are purchased by public

¹³ I avoid augmenting with CRSP/Compustat data for U.S. firms because of the difference in coverage between WorldScope and Compustat. It will likely bias against other countries since smaller firms are less likely covered in WorldScope and more likely to be covered in Compustat.

¹⁴ To examine whether there is systematic difference between target firms that are matched with WorldScope and those unmatched, I analyze both deal characteristics between the two samples and the percentage of matched firms by country and by year. In general, I do not find significant difference in deal characteristics between matched and unmatched deals. The only noticeable difference is that the percentage of matched firms is higher after 1998, which could reflect a better coverage by Worldscope. In my empirical analysis, I report results only for the full sample but discuss results using only the post-1998 sample if these robustness results are different.

acquirers. Similar to the full sample reported in Table 1, financial acquirers, foreign acquirers, and related-industry acquirers purchase respectively 21 percent, 28 percent, and 68 percent of all public target firms. In addition, most of the acquirers are friendly, purchase their blocks through private negotiations and use cash as the transaction medium.¹⁵ The size of the equity stakes is predominantly smaller than 20 percent.¹⁶

One concern with the current definition of minority block acquisition is that the purchasing corporation has gained majority control even with less than 50 percent ownership of the target firm. Recent research on ownership and control structures of firms around the world has chosen 20 percent as a critical cutoff for defining effective control (LLS(1999), Faccio and Lang (2002) and Claessens et al. (2000)).¹⁷ Nevertheless, to address these potential concerns, I examine the sensitivity of my results to different ownership cutoff level in all subsequent analysis. A related concern is that the purchasing corporation can still be control-motivated and use the minority block as its toehold in the target firm, resulting in transitory block positions. Since strategies of successful/failed takeovers are not within the scope of this study, I eliminate 178 deals in which the firm is subsequently merged with the blockholder during a two-year period following the equity purchase.¹⁸ I also eliminate 140 deals in which the acquiring corporation subsequently sold its shares during a two-year period.

Using Worldscope, I calculate various firm characteristics, namely size, operating performance, growth opportunities, leverage, investment and ADR listing.¹⁹ Firm size is measured in millions of U.S. dollars. Return on assets is calculated as earnings before interest, taxes, depreciation and amortization (EBITDA) divided by book value of total assets. Book leverage is the ratio of long-

¹⁵ Cash dummy is equal to 1 if SDC indicates that the deal is paid entirely in cash. Only 48 percent of the target firms in M&As are paid in cash (see Rossi and Volpin (2004)).

¹⁶ When SDC reports voting ownership of the stakes, I use voting ownership instead of cash flow ownership. Only 53 events have differential cash flow ownership and voting ownership.

¹⁷ Regulatory authorities in many countries regard 30 percent ownership as a critical cutoff for effective control. According to Dyck and Zingales (2004), the median threshold that triggers a mandatory tender offer of remaining shares is 30 percent. The typical example is U.K. City Code on Takeovers and Mergers.

¹⁸ For robustness check, I have do all analyses dropping 220 (231) deals in which the firm is subsequently merged with the blockholder during a five-year (ten-year) period.

¹⁹ Observations that have lower than \$1 million in book value of assets or have negative book value of equity are discarded. Financial and utility firms are also excluded.

term debt to book value of total assets. Sales growth is the one-year inflation-adjusted growth in sales. Market-to-book is calculated as the book value of total assets subtracting the book value of equity and adding the market value of equity and divided by the book value of total assets. Investment expenditures are calculated as the sum of capital expenditures, R&D expenditures and net assets from acquisitions. An ADR dummy indicates whether the firm has an ADR listing in the year under consideration.

Table III provides a comparison of these summary statistics for target firms and non-target firms. For each target firm of a given year, I benchmark it with non-target firms in the same country to mitigate impact of cross-country differences in financial reporting practices.²⁰ Firms that are ultimately targets in the minority block acquisitions are included in the non-target category in all years except the announcement year.²¹ Compared to a typical firm in the same country, the target firm in minority block acquisitions is smaller. However, the size difference is mainly driven by U.S. targets; non-U.S. targets are about the same size, or a little larger, than the average firm in their country. Target firms have higher leverage than non-targets. In terms of operating performance, target firms have lower EBITDA than non-targets. That target firms have higher leverage and lower profitability could indicate that they are in financial distress; however, their sales growth is significantly higher than non-targets and their investment expenditures are similar to non-targets. Target firms are also more likely have an ADR listing than non-target firms.

I also include key variables used in testing implications of various motives. For the contracting motive, I construct a high R&D dummy which is equal to one if the firm operates in the upper tercile of all industries by their median firm R&D expenses.²² I find that targets are less likely to operate in

²⁰ I have also used two alternative benchmarks and find similar results. First, I compare target firms with rest of the world. Second, I compare target firms with those in the same industry.

²¹ In merging SDC event data with Worldscope and Datastream, I associate accounting variables in the fiscal year prior to the announcement date with the acquisition dummy.

²² I also construct an alternative dummy variable to proxy for high R&D industries as those in the upper quartile of R&D expenditures divided by total net assets among all four digit SIC industries on Compustat (see Allen and Phillips (2000)). For all dummy variables used as proxies of various motives, I use methods such as quartiles or quintiles for robustness checks and find similar results.

high R&D industries than the typical firm in their country. This univariate statistic suggests that the contracting motive for partial equity purchases does not hold up in the sample.

For the financing motive, I include six dummies measuring financial constraints. A zero-dividend dummy is equal to one if the firm pays no dividend in that year and zero otherwise. The second dummy is based on an index documented in Whited and Wu (WW, 2006) and is equal to one if the firm's WW index is in the upper tercile of all Worldscope firms in that year. The Whited and Wu index is a composite index of financial constraints based on a standard intertemporal investment model augmented to account for financial frictions. The third dummy is based on a new index recommended by Hadlock and Pierce (2008) who states that "firm size and age are particularly useful predictors of constraints". The high HP index is equal to one if the firm's HP size and age index is in the upper quartile of all WorldScope firms in the year under consideration. The fourth dummy is based on an index recommended by Hadloack and Pierce (2008) that incorporates Whited and Wu variables, firm size, and age. For lack of a better name, I refer to it as high HP index 2 that equals to one if the firm's composite index incorporating operating cash flows, leverage, firm size and age is in the upper quartile of all Worldscope firms in the year under consideration. The fifth dummy is based on an index proposed by Doidge et al. (DKLMS, 2008) for non-U.S. firms ("Financial flexibility index"). The Financial flexibility index is constructed as a count variable by adding one point for a firm with high cash and liquid assets, one point for high dividends, and one point for low capital expenditures. A firm is classified as having high cash and liquid assets if its cash and liquidity asset holdings are in the upper quartile of all firms within their country. A similar rule is applied to both dividends and capital expenditures. I refer to the fifth dummy as DKLMS low flexibility index which equals to one if the firm's Financial flexibility index is equal to 0 or 1. The last dummy for financial constraints is called no public debt dummy which equals to 1 for those firms that have not issued public debt in the 5 years prior to the acquisition. All measures of financial constraints except no

public debt dummy are higher for target firms than non-targets, which is consistent with the predictions of the financing motive.²³

For the governance motive, I also use two dummies measuring governance problems. The high closely-held shares dummy is set to one if the firm's insider ownership is in the upper tercile of all Worldscope firms in that year.²⁴ The low anti-self dealing index (ASDI) dummy is equal to one if the country's ASDI is lower than the world median (see Djankov et al. (2007)). Univariate test suggests that target firms have lower insider ownership, which is the opposite of the predication of the governance motive; however target firms are more likely from countries with a low ASDI index, consistent with the prediction of the governance motive.²⁵

Finally, for the market timing motive I examine firm level stock returns, country-level stock returns and exchange-rate returns. The dummy variable indicating low country-level returns in the prior year is equal to one if the firm's country-level cumulative 12 month stock market return is lower than the world median in that year. The currency depreciation dummy equals one if the real exchange rate increases by over 25 percent compared to the value of the exchange rate one year earlier. I also include public acquirers' 12 month cumulative stock returns both prior to the acquisition and after the acquisition. Univariate test suggests that target firms have lower prior stock returns than non-target firms and public acquirers have high stock returns in the year prior to the acquisition, consistent with the market timing motive.

²³ No public debt dummy is a questionable proxy for financial constraint because firms with the most financing needs likely tap the public debt market the most. For example, Microsoft has no public debt and is not likely to be financial constrained by all measures.

²⁴ Worldscope defines closely-held shares as shares held by insiders, which include senior corporate officers and directors, and their immediate families, shares held in trusts, shares held by another corporation (except shares held in a fiduciary capacity by financial institutions), shares held by pension/benefit plans, and shares held by individuals who hold five percent or more of shares outstanding. In Japan, closely-held shares represent the holdings of the ten largest shareholders. For firms with more than one class of shares, closely-held shares for each class are added together. This measure is far from perfect since it relies on information disclosed by firms and this disclosure is often voluntary. For detailed discussions of the reliability of this variable, see Kho et al. (2008).

²⁵ Other proxies for the country-specific governance problems include shareholder protection, creditor protection and legal origin (La Porta et al. (1998)). They yield similar results as the anti-self dealing index.

4 Which Firms Have Corporate Blockholders?

In this section, I examine which firms are likely to be targets in corporate block acquisitions. Logit models are estimated where the dependent variable is set to one if the firm is the target in a minority block acquisition. Firm size, GDP per capita and stock market capitalization to GDP are controlled for but not reported in all regressions. All specifications include year fixed effects with heteroscedasticity-robust standard errors clustered by a firm's two-digit SIC code. Table IV reports marginal effects of logit regression results.

Columns (1) through (6) incorporate various proxies of financial constraints one at a time. All key variables for the different theoretical motives are included.²⁶ Four out of six financial constraint dummies are significantly positively related to the probability of being a target in a minority block acquisition. The probability of being a target as a firm becomes financially constrained increases between 0.2 percent and 0.5 percent depending on the financial constraint proxy. For example, the probability of a firm selling equity stakes to another corporation increases 0.5 percent when the firm is a non-dividend payer. This is equivalent to a 17 percent increase for the average firm with 3 percent probability of being a target in a minority block acquisition in a given year.

Turning to other motives, the high R&D industry dummy is not significant, suggesting that the contracting motive does not explain which firms are more likely to be targets in corporate block acquisitions. The two proxies of governance problems suggest opposite results. On one hand, firms with higher insider ownership are less likely to be targets in a block acquisition; on the other, the coefficient on low ASDI dummy is significantly negative, indicating that firms in weak law countries are more likely to be targets. There is also mixed evidence for the cheap-capital motive, target firm's stock returns are significantly negative, suggesting that acquirers purchase equity stakes when the target firm's stocks are relatively cheap; however target firm's exchange-rate returns are not significant, opposite to the prediction of the cheap currency motive. Furthermore, target firm's prior

²⁶ In unreported tables, I incorporate key variables of various motives one at a time; they yield qualitatively similar results as the comprehensive regression models.

stock returns are likely to be correlated with whether it is financially constrained. Though the univariate analysis suggests that public acquirers have much higher stock returns in the year prior to the partial equity acquisition, acquirers' stock returns could also be a proxy for their growth opportunities. I will examine target announcement returns in the next section, which will better differentiate these two effects.

Because both the SDC sample and the matched SDC-Worldscope sample are likely to be biased towards U.S. firms, it is possible that my findings are driven mainly by U.S. firms. Therefore for robustness, I examine non-U.S. firms and the post-1998 sample, since, as discussed earlier, the coverage in Worldscope for non-U.S. firms is much better after 1998.²⁷ Using only non-U.S. firms, I find that four out of six financial constraint dummies are both statistically and economically significant. After incorporating all firm-level controls, the probability of a zero-dividend firm receiving equity stakes in the non-U.S. sample is 0.7 percent higher than a dividend payer. It is a 30 percent increase for an average firm that has an average 2.5 percent probability of receiving equity stakes. For other motives, the results in the non-U.S. sample are similar to the whole sample. Considering the sample period after 1998, three out of six financial constraint dummies are statistically significant. For other motives, high R&D industry dummy is still not significant. Low ASDI index and high closely-held shares have the same sign as before. However, currency depreciation dummy now becomes significantly negative, which is opposite of the prediction of the market timing motive.

The results in this section show strong support for the financing motive. Firms that are financially constrained are more likely to be targets in partial equity acquisitions. For the contracting motive, I do not find supporting evidence, i.e. firms in high R&D industries are *not* more likely to be targets. For both the governance and the cheap-capital motive, I find mixed evidence. Target announcement returns analyzed in the next section can shed further light.

²⁷ The tables of these results are omitted but available under request.

5 The Announcement Effects of Corporate Block Acquisitions

In this section, I examine the excess returns for both the target and the acquirer at the announcement of the partial block acquisition. The analysis in the last section reveals that financially constrained firms are most likely to sell partial equity stakes to other corporations. The reliability of such analysis depends critically on the assumption that the sample of equity stakes is unbiased. This section examines market reaction to the acquisitions, which is not sensitive to omission of unobserved equity stakes. I first summarize the excess returns at the announcement and the premium paid for the partial equity stake in the univariate analysis. Then I examine the determinants of announcement returns in multivariate tests, followed by further tests to incorporate the effects of acquirer information advantages. Last, I run alternative tests using other proxies of key variables.

5.1 Univariate Analysis

To assess the valuation effects of partial equity acquisitions, I compute cumulative market adjusted buy-and-hold returns over a 21 day period (-10, +10) centered at announcement date. I use a long window because of the possibility that announcements of this type may not be reported until several days after the actual purchase (see Allen and Phillips (2000)).²⁸ Table V presents the announcement-period excess stock returns to target firms, purchasing firms and the combined excess returns of both target firms and corporate blockowners. The premium for these blocks, calculated as the price paid over the target firm's stock price 1 week prior to the acquisition, is also included in the analysis. However, only about one third of the sample has premium information.

For the full sample, an average target firm earns statistically significant 8 percent cumulative abnormal return during the announcement period. It is within the range of excess returns found in existing studies.²⁹ The purchasing firm also experiences an average 1.2 percent wealth gain over a 21

²⁸ I also examine mean excess returns over different event windows such as (-5, +5), (-2, +2) as well as (-20, +20). The result holds robust.

²⁹ Kang and Kim (2008) find 9 percent abnormal returns in their out-of-state partial equity acquisition and Allen and Phillips (2000) find 6.9 percent in their full sample of minority block acquisition.

day period (-10, +10) centered at the announcement date, economically much smaller than the target firm. Since the average purchasing firm is much larger than the target firm (the median acquirer is about 13 times the target firm), the combined return is also economically much smaller than the target return, but most of these returns are still statistically significant. This result for the purchasing firm is different from what Allen and Phillips (2000) find in their sample of 402 minority block purchases in the U.S. firms during 1980s. They find a mere 0.02 percent for the combined returns.³⁰ The average premium paid for these blocks over the target stock price 1 week prior to the acquisition is 8 percent.³¹ Following the existing studies, I will focus discussion below on returns of target firms.

For the subgroup analysis, I find significantly higher target returns when they operate in high R&D industries, are financially constrained, are from strong law countries, and sell equity stakes to acquirers in the upper quartile of prior stock returns.³² Whether the target firm has high insider ownership or whether the acquiring firm is foreign does not affect target announcement returns. These univariate comparisons are consistent with the predictions of the contracting motive and the financing motive but opposite to the predictions of the governance motive and the timing motive. That target firms experience more value gains when acquirers have high prior stock returns suggests that prior returns of purchasing corporations are a proxy of their growth opportunities rather than overvalued capital. Furthermore, public acquirers with higher prior stock returns pay significantly less, opposite to the prediction that acquirers overpay target firms with overvalued stocks. I find no evidence that the value gains of financially constrained targets or targets in high R&D industries are driven by overpaid stakes. Finally, the premium paid for partial equity stakes in weak law countries and cross-border deals is almost 6 to 10 percent higher than that in strong law countries and domestic deals. That blocks

³⁰ The difference could be due to: (1) firm size, as target firms in my sample are much larger than other studies or (2) event study methodology, as I use market-adjusted returns rather than employ the traditional event study methodology using a market model because of the cross-country nature.

³¹ The median premium paid is 3 percent, smaller than the 8 percent median premium of block acquisitions documented by Allen and Phillips (2000). And in 40 percent of the cases, stakes are sold at a discount to the market value. Hertz and Smith (1993) argue that private equity placement should be sold at a discount due to illiquidity of large blocks and search costs incurred by block purchasers.

³² I report results for the financing motive using only the high HP index 2 dummy from now on. But all other proxies except the no public debt dummy yield qualitatively similar results.

are traded at a higher premium in weak law countries suggests that corporate blockholders are willing to pay a higher price for equity blocks that allow them to extract private benefits of control (see Dyck and Zingales (2004) for a cross-country comparison of block premiums).

5.2 Multivariate Analysis

To gain more insights into the determinants of excess returns of target firms at the announcement, I examine factors that could influence target returns in a multivariate setting. I estimate regression models using target cumulative excess returns during (-10, +10) centered at the announcement. The independent variables include a high R&D dummy, a high HP index 2 dummy, a high closely-held shares dummy, a cross-border dummy, a high ASDI dummy and finally a high acquirer prior stock return dummy. The definitions and statistics of these variables are summarized in section 3. All specifications control for firm size, GDP per capita and stock market capitalization per GDP. Year fixed effects are included with heteroscedasticity-robust standard errors. Table VI summarizes the results. Column (1) through column (6) examines various theoretic motives using the full sample. Column (7) through column (9) includes all key variables using various sub-samples: non-U.S. sample, the sample of deals with block size smaller than 20 percent and the post-1998 sample.

The multivariate results in Table VI are consistent with the univariate results in Table V. There is strong evidence for the financing motive. Coefficients on the financial constraint dummy are always statistically significant and economically large. After I control for high R&D industries, insider ownership, cross-border deals, target country's legal protection and acquirers' high prior stock returns, financially constrained targets always earn a significant 3.6 percent higher return.

For the contracting motive, the high R&D dummy becomes not significant once I control for other factors. For the governance motive, the coefficients on high insider ownership dummy and the cross-border deal dummy are not significant. The low ASDI dummy is significantly negative, suggesting that outside investors benefit less from corporate blockholders in weak law countries. For the market timing motive, target firms earn higher returns when acquirers experience higher prior

stock returns, which suggests that these acquirers bring more benefit rather than simply trying to capitalize on their overvalued stocks.

The regression results for various alternative samples are similar to those of the full sample. These alternative samples are chosen to mitigate concerns that my sample of partial equity stakes is not representative of the world or that the large equity stake leads to changes in control. In particular, I examine the sample of deals with block size smaller than 20 percent for two reasons. First, it is unlikely that control has changed hands with lower than 20 percent ownership. Secondly, for all countries which require the bidder to implement a mandatory tender offer for the remaining shares, 20 percent is the lowest threshold for the size of the block (for example Dyck and Zingales (2004) document 30 percent in U.K. City Code on Takeovers and Mergers). The automatic trigger in tender offer affects the terms of the deal pricing as well as target firm's stock returns. Therefore, it is important to check that results are not affected by mandatory tender offer rules.

I omit detailed discussions for each motive because the results in all of the sub-sample analysis are consistent with those in the full-sample. The financing motive finds strong support in the sub-samples. On average, financially constrained targets experience 2.7 percent to 3.2 percent higher returns than non-constrained. There is no evidence for the contracting motive, the governance motive and the timing motive.

5.3 Acquirer Information Advantage

If target firms sell equity stakes to outside corporations to raise cheaper capital, corporate acquirers must have information that other shareholders or debtholders do not have. In this subsection, I test whether any acquirer information advantage leads to higher announcement returns for target firms. The acquirer's information advantage about the target firm's investment opportunities is expected to be higher if the acquirer possesses operating expertise in the target industry. Alternatively if the acquirer is a business partner with the target firm, it may have information that outsiders do not have. Thus I construct three measures of acquirer's information advantage. The first measure is a

dummy variable indicating the presence of joint ventures or alliances between the target and the acquirer. About ten percent of target firms have joint ventures or alliances with the acquirer firm. This measure will likely underestimate the extent of the interaction between the target firm and the acquirer since many of business relationships exist in the form of customer-supplier (see Fee et al. (2006)). The second measure is a dummy variable indicating whether target firms operate in the same industries as the acquirer (using the two-digit SIC code). About 30 percent of target firms operate in the same industry. However, this measure will not measure how vertically integrated two industries are. To incorporate vertical integration, I construct the third measure based on the U.S. input-output account and define related industries as the ones between which the total requirement coefficients are in the upper quartile of all industries. Based on this measure, 70 percent of target firms operate in related industries as acquirers.

To construct the dummy indicating the presence of joint ventures or alliances, I rely on the SDC Joint Venture/Alliance (JVAs) Database to detect the presence of any form of partnership between the target and the purchasing corporation. These partnerships are in many different forms including joint ventures, agreements and alliances. A joint venture (JV) creates a separate legal entity where the firms involved invest assets or hold equity interests in the venture. Agreements and alliances are explicit contracts to supply products or services, manufacture products, market or distribute products, license the rights to product or distribute of product, conduct research and development activities, and share existing technologies or methods.

Table VII summarizes the results. Column (1) through column (3) incorporates the acquirer information advantage dummy one at a time. Column (4) through column (6) includes all other control variables, including a high R&D industry dummy, a high HP index 2 dummy, a high closely-held shares dummy, a cross-border dummy, a low ASDI index dummy, and a high prior acquirer stock returns dummy.

I find that the presence of joint ventures or alliances is significantly positively related to target announcement returns but the joint venture or alliance dummy loses its significance when other

controls are included. Both the same industry dummy and the related industry dummy are significantly positive even after including other controls. On average, the target firm experiences 2.2 (1.6) percent higher announcement returns if the acquirer operates in the same (related) industry. Therefore, acquirers with more information are likely to have a higher certification effect for the target firm's investment opportunities. Inferences for other variables are qualitatively similar to the findings before.

5.4 Robustness Checks

This subsection further tests whether the contracting motive and the governance motive explain the announcement returns. For the contracting motive, I construct alternative proxies of high R&D industries and use various subsamples. For the governance motive, I examine the cross-border sample to exploit differences in the legal protection between the target and acquirer country.

Previous studies have found that target firms in high R&D industries that are acquired by their business partners experience high returns (see Allen and Phillips (2000) and Fee et al. (2006)), consistent with the contracting motive. In the above subsections, I have found that firms in high R&D industries are *not* more likely to be targets in partial equity acquisitions and do not experience significantly higher announcement returns. In the panel A of Table VIII, I first examine whether a different high R&D proxy for the contracting environment led to a different result than what has been found by existing studies that focus on the U.S. firms. I construct an alternative dummy variable to proxy for high R&D industries as those in the upper quartile of R&D expenditures divided by total net assets among all four digit SIC industries on Compustat. I find that the dummy for high R&D industry becomes insignificant once I include other controls. Then in columns (2) and (4), I include a dummy variable indicating whether the target firm and the purchasing corporation have joint ventures or alliances (JVAs) in the two year periods centered at the announcement date, using the SDC Joint

Venture/Alliances Database.³³ The contracting motive predicts that target firms that have a product market relation with the purchasing corporation and operate in high contracting cost environment (proxied by R&D expenses) benefit the most from corporate equity blocks. The dummy variable indicating the JV/Alliance presence is positive but not significant once other controls are included. In column (5), I examine whether excluding financial acquirers changes results. And I find no such evidence. As a final effort for the contracting motive, I examine a sample of deals that involve only U.S. firms as targets. In the U.S. sample, the dummy variables indicating a high R&D industry and joint ventures or alliances are both significant even after I include other controls, which is consistent with the previous U.S. studies (Allen and Phillips (2000)). This result is consistent with the finding in Table 1 that U.S. targets are more likely in high R&D industries compared to the rest of the world. It is important to emphasize that the financial constraint dummy is always significantly positive regardless of the specification and sample I use.

Panel B of Table VIII reports results for the cross-border sample only to exploit differences in the legal protection between the target and the acquirer. Recent cross-border M&A studies have found that firms in weak law countries are more likely to be targeted by firms in strong law countries and their valuation increases when acquired by firms from strong law countries (see Rossi and Volpin (2004), Bris et al. (2007), and Bris and Cabolis (2007)). If the governance motive holds and cross-border M&As can help target firms to rent good governance from the acquirer country, then target firms acquired by those from better law countries will experience higher announcement returns. However, if countries with the same legal origins have similar legal structures in relation to governance activities and this similarity reduces information asymmetries that foreign investors face in the host country, then target firms acquired by those that are from similar legal and law protection countries will experience higher announcement returns (see Kang and Kim (2008a)).

³³ For the U.S., seven percent of my sample firms have JVs in the two year period and ten percent in the six year period. For the non-U.S. sample, five percent of my sample firms do in the two year period and seven percent in the six year period. The regression results are similar whether I use two, four or six year window.

I examine both possibilities in relation to the governance motive in the context of cross-border minority block acquisitions. First, I construct two variables that allow for asymmetric effects between acquirers from stronger law countries and those from weaker law. They are respectively “Increase in protection” and “Decrease in protection”. They are equal to the difference in country-level corporate governance index between the acquirer and the target if the acquirer’s governance index is greater (smaller) than the target and 0 otherwise. Second, I calculate the absolute difference in country-level governance index between the acquirer and the target. I use four country specific corporate governance indices as proxies for the legal protection from La Porta et al. (1998) and Djankov et al. (2006), respectively shareholder protection, creditor protection, anti-self dealing index and common law dummy.

The results in Panel B show that the level of legal protection in target country positively relates to announcement returns. Consistent with the full sample, targets in strong law countries experience higher returns, opposite to the predictions of the governance motive. Furthermore, there is no evidence that acquirer’s legal protection or the similarity in the legal protection between the target and the acquirer affects announcement returns. The financial constraint dummy is significantly positive in all regression models.

Overall, I find strong support for the financing motive. Financially constrained targets experience higher announcement returns. Moreover, target firms benefit the most when the purchasing corporation has superior information about the investment opportunities of the target firm through partnership. The evidence for the contracting motive, the governance motive and the market timing motive is weak or mixed at best.

6 New Issuances

This section further tests the financing motive by examining equity issuance activities of target firms. If target firms are financial constrained because they face severe information problems in the capital market, then positive stock price reactions of block acquisitions in the above section could

reflect resolution of asymmetric information about target firm value.³⁴ Larger target stock price increases when acquired by firms from related industries or by business partners provides further evidence that an informed party could convey more positive information compared to an uninformed one. With the resolution of asymmetric information, target firms are likely to raise capital subsequently and increase the amount of their capital issuances.

New issues are obtained from Securities Data Corporation (SDC). SDC contains the dates of issues, the market in which the security was issued and the proceeds from each issue. I collect both equity and debt issuances by all target firms between 1990 and 2007. I then compare the acquisition announcement date with the issue date to determine the number of prior and subsequent equity (debt) offerings and their proceeds. To avoid double counting, I lump multiple tranches or simultaneous offerings in multiple markets as one issue.

Panel A of Table IX summarizes the volume of equity offerings concurrent with and in the two years subsequent to the minority block acquisition.³⁵ These data show that there is a high incidence of equity offerings subsequent to the acquisition. For the entire sample of 6,631 minority block acquisitions, 1,815 firms issued subsequent equity on 3,112 separate occasions within 2 years after announcement. These equity issuances raised \$187 billion in total, which is 17 percent of total market capitalization of all issuing firms. Twenty-seven percent of target firms subsequently raised equity, of which the average firm raised 1.7 times. To gauge the quantity of these issues, I use two benchmarks. First, I compare them to the period prior to the acquisition for the same firm. During the two years prior to the acquisition, the entire sample of issuing firms has only 550 offerings and raised \$38 billion, about 17 percent of the total amount raised subsequent to the acquisition. Second, I compare the target firm with a size-matched industry peer.³⁶ During the two-year period subsequent to

³⁴ Hertz and Smith (1993) examine private equity placement and find positive stock price reactions.

³⁵ For ease of discussion, I consider all equity issued at and after the acquisition date to be subsequent issues. About 25 percent of all subsequent new equity issuances are coincident with the partial equity acquisition.

³⁶ The industry peer for each sample firm is constructed using the firm closest in size to the target firm within the same four-digit SIC industry. If five firms are not available with matching four-digit SIC, I use three-digit, two-

the acquisition announcement, only 1,139 industry peers issued subsequent equity and raised \$112 billion in total. The target firms raised 70 percent more capital than their industry-size matched peers.

I also compare the percentage of target firms issuing subsequent equity and median proceeds to market capitalization across subgroups of target firms. Univariate analysis shows that ex-ante financially constrained targets are significantly more likely to issue equity and raise larger amount of equity than those unconstrained firms. There is also a significant difference in equity issuances across countries with different levels of investor protection. Target firms from strong law countries are much more likely to issue equity and raise larger amount of equity in the two years subsequent to the acquisition compared to those in weak law countries. This finding is consistent with those of existing studies in the law and finance literature (see La Porta et al. (1997)).

Panel B of Table IX summarizes the volume of debt offerings. These data show a lower incidence but higher amount of proceeds from debt offerings than equity. For the entire sample of 6,631 minority block acquisitions, 651 firms issued subsequent debt and raised \$250 billion in total within 2 years after announcement. Unlike equity offerings, there is no significant difference in debt issuances between ex-ante financially constrained targets and those unconstrained firms. There is also no significant difference in debt issuances across countries with different levels of investor protection. In unreported tables, I find that target firms with debt issues prior to the acquisition are six times more likely to issue debt subsequent to the acquisition than those with no prior debt issues. This evidence suggests that firms that have issued debt before are likely to continue issuing debt.

To check the robustness of the capital issuances, I use cash flow statements to construct net debt issuances and net equity issuances from WorldScope in the period (-2, +2) centered at the acquisition year.³⁷ I find that patterns of new issues based on cash flow statements are consistent with

digit and one-digit in turn to find matching firms until at least five firms excluding the target firm are present in the target industry.

³⁷ There are advantages and disadvantages of using cash flow statements of Worldscope. The advantage of the cash flow data is that net external financing include all forms of financing, such as bank loans. There are two disadvantages. First, it is difficult to control for the cross-country differences in accounting practices. Second, the aggregate data include amounts received from the conversion (exchanges) of debentures or preferred stocks,

SDC data. Prior to the acquisition, the mean net equity issues are five to seven percent of firm total assets. Subsequent to the acquisition, the mean net equity issues are 14 to 15 percent of firm total assets. Net debt issues have also increased, but with a smaller magnitude, from two to three percent before the acquisition and four to six percent after the acquisition.

Table X examines the determinants of subsequent equity issuances. Column (1) through column (6) estimates a logit model on the probability that a target firm in the minority block acquisition will issue new equity in the subsequent two years of minority block acquisitions. Column (7) through (12) estimates a Tobit model using the total proceeds from new equity issuances within two years of minority block acquisitions scaled by market capitalization. All specifications control for firm size, GDP per capita, and stock market capitalization to GDP. Year fixed effects are included with heteroskedasticity-robust standard errors. Marginal effects are reported.

I find evidence consistent with the financing motive. The probability of equity issuance increases seven percent when the target firm has high HP index 2. Furthermore, financially constrained targets raise significantly more equity subsequent to the block acquisition. There is again no evidence for the contracting and the market timing motive. The amount of proceeds raised subsequent to the partial equity stakes does not depend on whether the firm operates in high R&D industry, has high insider ownership, acquired by foreign corporations or by public corporations with high prior stock returns.

The larger increase in new equity issuance compared to new debt issuance can also be consistent with the governance motive. However, multivariate tests show that firm in weak law countries, i.e. those that presumably improve governance the most, are 14 percent less likely to issue equity. Since it could also be that target firms in weak law countries have already had good governance in place through exchange-listed ADRs, I examine whether target firms in weak countries

shares issued for acquisitions and proceeds from stock options, which are not necessarily related to the corporate block acquisitions.

differ in their subsequent equity issuances between those with exchange-listed ADRs and those without.³⁸ I do not find any significant differences in their equity issuances.

Overall, target firms raise substantial equity and debt capital in the immediate 2 years subsequent to the corporate block acquisition. Those ex-ante financially constrained target firms are most likely to raise new equity and when they do, they raise large quantities of new equity. Therefore relieving financial constraints is likely one of the most important motivations behind the large volume of minority block purchases by corporations. There is also evidence that target firms in weak law countries are less likely to issue new equity and to raise smaller amount, opposite to the prediction of the governance motive.

7 The Longer-Run Impact of Corporate Blockholders on Target Firms

In this section, I provide further evidence on the motives of block acquisitions by examining changes in operating performance, sales and investment expenditures of target firms. To discriminate among various theories proposed in section 2, I design tests based on identifying, ex ante, the transactions most likely to be associated with each theoretical motive. For example, the contracting motive predicts that equity stakes in the target firm will encourage more relationship-specific investment and longer and more stable product market relation. Therefore target firms, especially those concerned with contracting costs ex-ante (e.g. those operating in high R&D industries), are likely to experience higher increases in their investment, sales and operating performance.

7.1 Univariate Analysis

I measure operating performance by changes in operating cash flows.³⁹ Investment is measured as the sum of capital expenditures, R&D expenses and net assets from acquisitions.⁴⁰

³⁸ Exchange-listed ADRs subjects a non-US firm to a number of provisions of US securities law, and requires the firm to conform to US GAAP. A number of studies have shown that non-US firms cross-list in the United States to increase protection of their minority shareholders (see Doidge et al. (2004) and Reese and Weisbach (2002)).

³⁹ Operating cash flow is calculated as earnings before interest, taxes, depreciation and amortization (EBITDA).

Changes in operating performance, sales and investment expenditures are scaled by average book value of assets during the three year period around the purchase year.⁴¹ I include both R&D expenses and net assets from acquisitions in investment expenditures. The statistics are group means adjusted by a sample of size-matched firms in the same industry of the target firm.⁴² Industry portfolios for each sample firm are constructed using five firms matched by industry (using four-digit SIC code) that are closest to the target firm in total assets excluding the target firm. If five firms are not available with matching four-digit SIC, I use three-digit, two-digit and one-digit, in turn, to find matching firms until at least five firms excluding the target firm are present in the target industry.

Table X finds positive and significant increases in operating cash flows for the full sample through the third year following block purchases by corporations.⁴³ Financially constrained targets experienced 4.4 percent increase in their operating cash flows, about 3.4 percent higher than unconstrained firms. Target firms in high R&D industries experienced 1.7 percent increase in their operating cash flows, though not significantly different from those in low R&D industries. There is no significant difference in operating cash flows between firms with high insider ownership and those with low insider ownership, between firms acquired by foreign corporations and those by domestic corporations, between firms in strong law countries and those in weak law countries and between firms acquired by corporations with high prior returns and others.

The patterns for sales growth reinforce the findings for operating cash flows. Overall, an average target firm experienced 16 percent increases in its sales through the third year following block purchases by corporations. Firms in high R&D industries experience higher increases in their sales but insignificantly different from those in low R&D industries. Financially constrained targets experience 37 percent increases in their sales through the third year whereas sales of unconstrained targets only increased 8 percent. These differences are both economically large and statistically significant.

⁴⁰ Whenever R&D expenses or net assets from acquisitions are missing, they are set to zero.

⁴¹ All variables are winsorized at 1 percent and 99 percent level to mitigate outliers.

⁴² Group medians yield similar results with smaller economic magnitudes.

⁴³ Note that without industry adjustment, the increases in operating performance and investment expenditures are larger.

For changes in investment expenditures, I find that investment spending for an average target firm increased 6 percent through the third year over and above its industry peers. Again, financially constrained targets experience 14 percent increases in their investment expenditures, almost 11 percent higher than unconstrained targets. For other groupings, I find insignificant differences across groups except for the low ASDI index dummy. Firms in weak law countries experienced two percent increase in their investment expenditures, almost five percent lower than those in strong law countries.

7.2 Multivariate Cross-sectional Evidence

To gain more insights into changes in operating performance and investment expenditures, I examine determinants of these changes in a multivariate setting. I estimate the regression models using (-1, +3) industry-adjusted changes in operating cash flows, sales growth and investment expenditures calculated above. The independent variables are the same as those in the univariate analysis. All specifications control for firm size, GDP per capita, and stock market capitalization to GDP. Year fixed effects are included with heteroscedasticity robust standard errors.

Table XII summarizes the regression specifications for industry-adjusted changes in operating cash flows, sales and investment expenditures. For changes in operating cash flows scaled by total assets, financially constrained firms are four percent higher than those unconstrained firms. It is equivalent to a 50 percent increase in an average firm's operating profitability. I obtain similarly significant results when examining changes in sales and investment expenditures. Turning to the other motives, except for the low ASDI dummy, no other variable is significant. The multivariate results confirm the findings in the univariate analysis. Whether the target firm is financially constrained is the most significant determinant of its changes in investment spending, sales and operating cash flows following corporate block purchases.

When I include an alternative high R&D dummy and the JV/alliance dummy (not reported), results are qualitatively similar. I also examine the non-U.S. sample, the sample excluding financial institutions as acquirers, the sample excluding acquisitions prior to 1998. The coefficient on financial constraint variable is always positive and reliably significant. Coefficients on other variables remain

insignificant determinants of investment spending, sales, and operating performance changes in target firms following corporate block purchases.

Overall, operating cash flows, sales and investment expenditures increase for target firms, and there is strong evidence that financially constrained targets benefit the most from corporate block holdings. I find economically large and statistically significant differences between financially constrained targets and unconstrained ones in their subsequent increases in operating cash flows, sales and investment. When I examine whether financially constrained firms underperform their industry peers prior to the acquisition (not reported), I find that they have better operating performance than their industry peers and importantly do not under-invest. As for other motives such as contracting, governance and market timing, I find little supporting evidence in analyzing operating cash flows, sales and investment.

8 Conclusion

I study minority block acquisition in a large panel of 18,939 firms in 43 countries. I seek to answer three questions: Why do firms sell equity stakes to other corporations, and why do corporations purchase partial equity stakes in other firms? Do cross-country differences in law and regulation influence the motives and the consequences of corporate block acquisitions?

Contrary to the U.S. evidence that most minority block purchases can be explained by high contracting costs in product market relationships, I find that the relief of financial constraints is a primary motive for the sale of equity stakes. Targets of minority block transactions are mostly financially constrained firms with high growth opportunities. Compared to unconstrained targets, financially constrained target firms experience higher announcement returns. Subsequent to the acquisition, target firms issue significantly more new equity and debt than comparable firms that were not part of a minority block transaction. The relief of financial constraints allows targets to increase their operating cash flows, sales and investment expenditures.

Corporations purchase partial equity stakes because they may be attracted by the high growth opportunities of the target firms. Furthermore, I find evidence that many corporate blockholders have expertise in the targets' industry. When firms have expertise, I document more pronounced effects. For example, target firms experience higher announcement returns when acquired by firms operating in related industries, if they have formed joint ventures, or if they are partners in an alliance.

I propose and test alternative hypotheses for the motives of minority block purchases. I find no consistent evidence for a contracting motive, a governance motive and a market timing motive.

This study leaves some issues unresolved. First, the result that target firms do not tend to operate in high R&D industries and do not earn abnormally high returns when operating in high R&D industries is intriguing (see Allen and Phillips (2000) and Fee et al. (2006) for the U.S. evidence). Even after I control for the product market relationship using the existence of joint venture and alliances between the target firm and the purchasing firm, the high R&D dummy is still insignificant. Though for the U.S. subsample, the high R&D dummy is significant. Future work could shed light on why the motives of corporate block acquisitions differ between the U.S. and the rest of the world. Second, I fail to find evidence for a governance motive when I measure governance at the country level, but corporate blockholders could improve governance of targets at the firm level. For the large international sample I use, there is unfortunately no reliable data source to identify governance activities that corporate blockholders may undertake (such as managerial turnover (e.g., Kang and Kim (2007) or obtaining directorships). Future work with richer data on firm governance activities could lead to additional results related to the governance motive.

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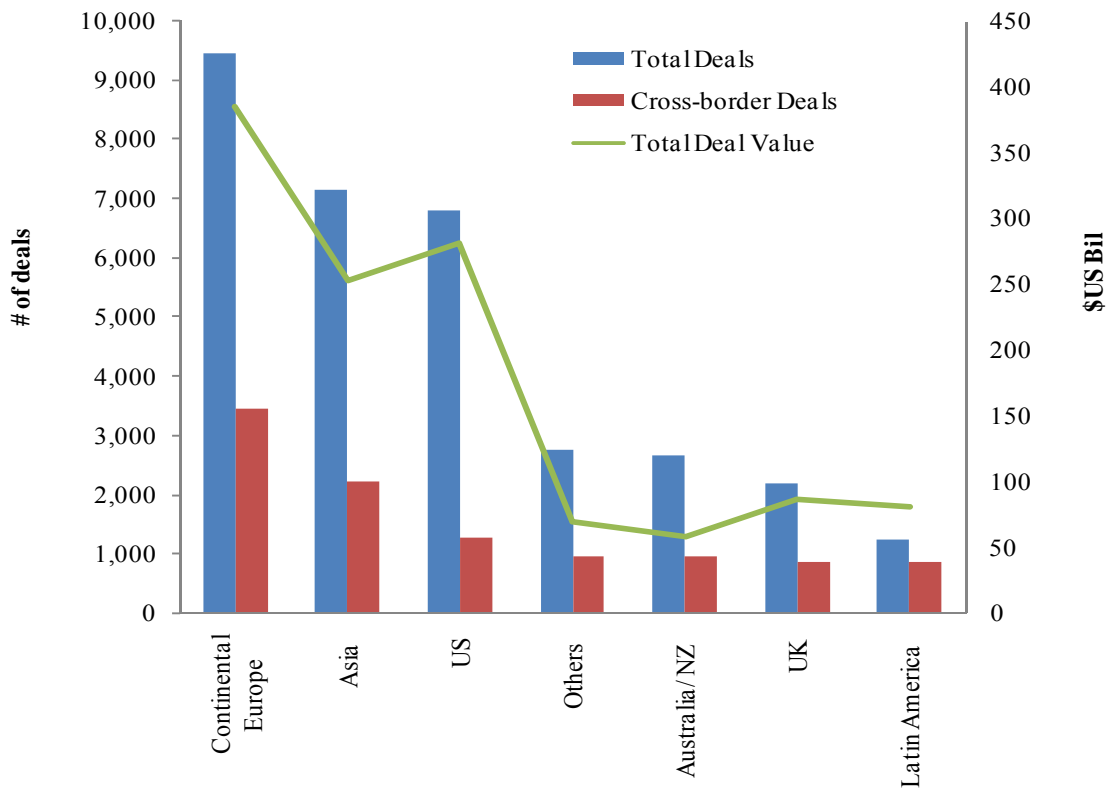


Fig. 1. A comparison of total corporate block acquisitions across region. This figure presents the number of partial acquisition deals, that of cross-border partial acquisition deals, and the total dollar value of all deals. Information on partial acquisition deals comes from Thomson Financial's Security Data Corporation (SDC) Platinum Mergers and Acquisitions (M&A) database. Deals that lack information on percentage of ownership acquired or have information that is inconsistent with the percentage held before and after by more than one percentage point are excluded. Deals in which the target and the acquirer have the same ultimate parent or the acquirer firm already has more than 20 percent equity in the target firm are excluded. Acquisitions with less than five percent blocks are also excluded. Finally, acquisitions involving either target or bidder or both from outside of La Porta et al. (1998) 49 countries are deleted.

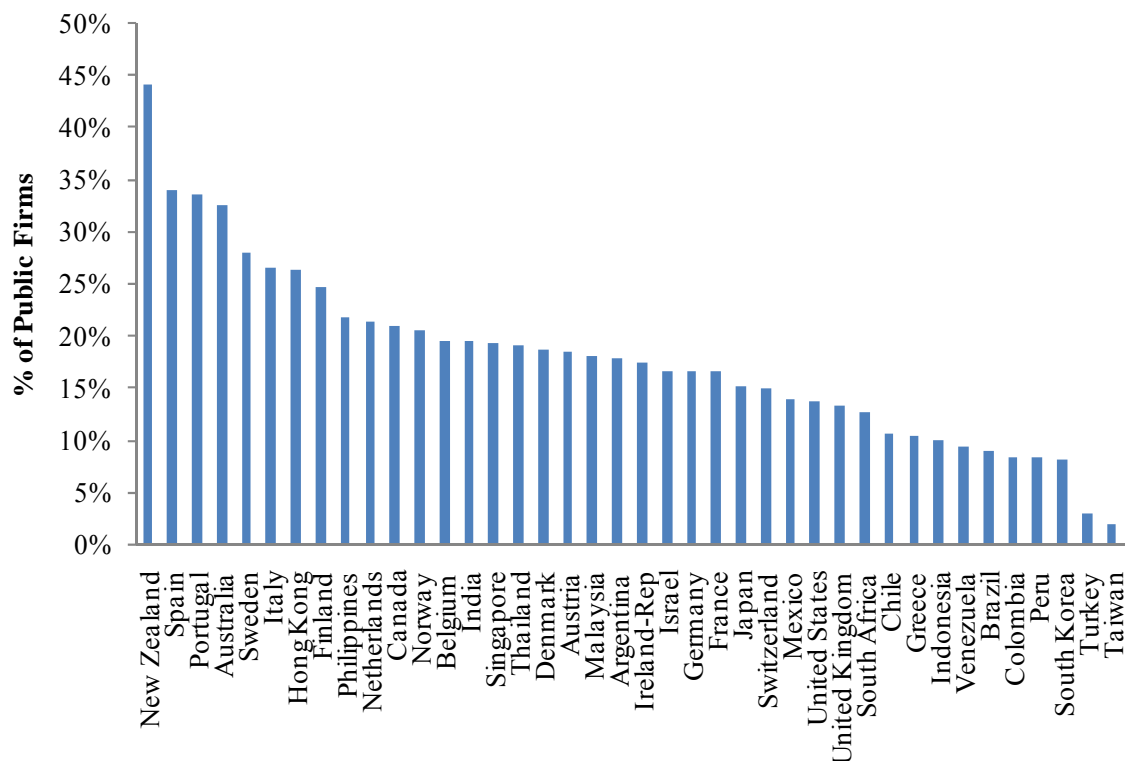


Fig. 2. A cross-country comparison of corporate block acquisition intensities. This figure presents the percentage of public firms that have become targets in corporate block acquisitions. Information on partial acquisition deals comes from Thomson Financial’s Security Data Corporation (SDC) Platinum Mergers and Acquisitions (M&A) database. Information on the number of publicly traded firms for each country comes from WorldScope database. Financials and utilities are dropped.

Table I Minority block acquisitions by target country

Minority block acquisitions by target country 1990-2005. I obtain initial sample of block acquisitions from Thomson Financial's Security Data Corporation (SDC) Platinum Mergers and Acquisitions (M&A) database. I exclude deals that are mergers, acquisitions of majority control, LBOs, spin-offs, recapitalizations, self-tender, exchange offers, repurchases, acquisitions of remaining interest, and privatizations. Deals that lack information on percentage of ownership acquired or have the information inconsistent with the percentage held before and after by more than one percentage point are excluded. I also exclude all deals in which the target and the acquirer has the same ultimate parent or the acquirer firm already had more than 20 percent equity in the target firm. Acquisitions with less than 5 percent blocks are also excluded. Finally, acquisitions involving either target or bidder or both from outside of La Porta et al. (1998) 49 countries are deleted. Anti-self dealing index and civil law dummy are from Djankov et al. (2006). Total value of transactions is based on 2005 dollars. Sub-samples include public targets, cross-border deals, financial acquirers (such as buyout firm, Venture Capital Company, merchant bank, commercial bank, etc.), related industry (when the total requirement coefficients between target and acquirer industries are in the upper quartile of all industries in the U.S. input-out accounts), and targets in high R&D industries. High R&D industries are defined as those in the upper quartile of R&D expenditures divided by total net assets among all four-digit SIC industries on Compustat. For cross-border deals occurred after 1998 within European Union, they are classified as domestic.

Target Nation	Total Firms	Total Deals	Total Value of Transactions (\$mil)	Sub-sample			Country Characteristics			
				Public Target	Cross-border	Financial Acquirer	Related Industry	High R&D Industry	Anti-self Dealing	Civil Law Dummy
Continental Europe										
Austria	152	174	1,578	46	51	34	45	132	0.21	1
Belgium	147	183	12,279	63	64	57	42	141	0.54	1
Denmark	144	162	1,291	58	47	42	36	100	0.46	1
Finland	220	279	6,100	96	82	41	87	210	0.46	1
France	909	1,137	56,738	378	341	286	262	800	0.38	1
Germany	991	1,176	40,954	297	315	290	299	914	0.28	1
Greece	170	188	673	56	15	18	59	134	0.22	1
Ireland-Rep	116	142	1,753	45	62	51	20	101	0.79	0
Italy	642	769	32,240	167	217	217	196	517	0.42	1
Netherlands	283	344	19,430	116	110	101	83	254	0.2	1
Norway	224	285	6,892	127	115	31	105	203	0.42	1
Portugal	130	171	3,881	77	38	36	42	125	0.44	1
Spain	745	980	33,611	211	248	370	217	596	0.37	1
Sweden	324	411	18,074	232	149	116	83	296	0.33	1
Switzerland	178	203	9,096	62	107	49	58	163	0.27	1
Turkey	55	65	1,356	19	35	12	21	43	0.43	1
Total	5,430	6,669	245,948	2,050	1,996	1,751	1,655	4,729	0.39	0.94
Australia/New Zealand										
Australia	1,172	1,692	31,135	1,174	610	271	452	1,197	0.76	0
New Zealand	199	303	3,805	175	156	79	50	207	0.95	0
Total	1,371	1,995	34,939	1,349	766	350	502	1,404	0.85	0
UK	1,360	1,639	56,163	767	666	359	410	1,326	0.95	0
US	4,207	5,498	225,048	3,618	1,099	873	1,055	3,871	0.65	0

Table I Minority block acquisitions by target country

Target Nation	Total Firms	Total Deals	Total Value of Transactions (\$mil)	Sub-sample					Country Characteristics	
				Public Target	Cross-border	Financial Acquirer	Related Industry	High R&D Industry	Anti-Self Dealing	Civil Law Dummy
Asia										
Hong Kong	464	600	18,269	355	218	61	477	160	0.96	0
India	539	653	9,790	391	258	182	433	178	0.58	0
Indonesia	121	143	10,922	53	98	14	93	15	0.65	1
Japan	1,508	2,074	61,720	1,038	263	272	1,564	520	0.5	1
Malaysia	392	487	11,486	237	100	27	344	50	0.95	0
Pakistan	11	11	34	2	11	.	9	2	0.41	0
Philippines	124	164	4,972	64	101	21	124	18	0.22	1
Singapore	348	457	8,148	215	186	69	345	80	1	0
South Korea	269	329	16,188	149	108	47	243	97	0.47	1
Sri Lanka	21	28	89	17	11	.	18	1	0.39	0
Taiwan	111	121	3,642	35	63	7	93	57	0.56	1
Thailand	289	347	6,406	125	137	63	232	37	0.81	0
Total	4,197	5,414	151,666	2,681	1,554	763	3,975	1,215	0.63	0.42
Latin America										
Argentina	155	197	11,112	38	139	30	157	7	0.34	1
Brazil	244	283	19,389	91	175	60	216	29	0.27	1
Chile	75	96	3,877	30	65	5	68	3	0.63	1
Colombia	35	38	866	11	30	6	30	3	0.57	1
Mexico	140	160	11,217	54	111	17	128	11	0.17	1
Peru	22	24	1,409	10	21	3	20	2	0.45	1
Total	671	798	47,870	234	541	121	619	55	0.41	1
Others										
Canada	1,183	1,528	31,148	1,135	491	335	1,016	259	0.64	0
Egypt	29	32	408	3	17	3	21	4	0.2	1
Israel	170	200	5,037	87	98	37	157	98	0.73	0
South Africa	294	340	11,948	119	102	51	253	55	0.81	0
Venezuela	27	30	316	4	25	4	25	1	0.09	1
Total	1,703	2,130	48,857	1,348	733	430	1,472	417	0.5	0.4
World Total	18,939	24,143	810,490	12,047	7,355	4,647	17,396	5,420	0.51	0.65

Table II Corporate block acquisition activities by year

This table reports characteristics of minority block acquisitions from Thomson Financial's Security Data Corporation (SDC) Platinum M&A database. Only completed deals that have target information on Worldscope are included. The number of total publicly traded firms, that of targeted firms, and that of target firms with certain characteristics are reported. These characteristics include public acquirers, foreign acquirers, financial acquirers (such as buyout firm, Venture Capital Company, merchant bank, commercial bank, etc.), related industry (when the total requirement coefficients between target and acquirer industries are in the upper quartile of all industries in the U.S. input-out accounts), cash as a single payment method (transactions of unknown type are omitted from this column), private negotiation, non-U.S. targets, less than 20 percent blocks. Total is calculated as the number of unique target firms and unique worldscope firms during 1990 to 2005 sample period; i.e. when the same firm is targeted in different fiscal year, it is only counted once.

Year	Total Publicly Traded Firms in WorldScope	Targets in Minority Block Acquisitions	Public Acquirers	Cross-border Acquisitions	Financial Acquirers	Related Industry	Cash as a Single Payment	Private Negotiation	Non-US Targets	<20% Blocks
1990	11,437	294	127	79	74	203	98%	101	164	246
1991	12,294	251	97	65	31	189	96%	133	145	195
1992	13,025	233	95	64	41	155	98%	123	145	168
1993	14,172	300	123	82	53	206	97%	177	187	225
1994	15,415	379	128	99	81	250	97%	178	172	314
1995	16,537	453	131	106	100	301	99%	186	211	373
1996	18,385	553	179	110	99	352	98%	234	269	447
1997	19,817	461	191	126	75	295	95%	270	282	327
1998	20,642	427	200	144	89	302	95%	227	280	317
1999	21,736	492	258	159	106	350	96%	318	349	339
2000	22,512	485	245	172	114	332	91%	333	380	335
2001	22,311	412	214	129	80	288	93%	322	365	278
2002	22,037	383	183	97	93	253	91%	323	338	256
2003	21,784	550	224	132	158	363	99%	502	525	409
2004	21,975	479	221	128	109	311	97%	424	455	347
2005	21,895	479	245	159	113	341	96%	436	459	332
Total	32,679	5,262(6,631)	2,861	1,851	1,416	4,491	96%	4,287	4,726	4,908

Table III Characteristics of target firms prior to the minority block acquisition

This table presents characteristics of target and non-target firms taken from Datastream and WorldScope between 1989 and 2005 to match the availability of the SDCdata. Financial and utility firms are dropped. Target observations are firms on the SDC targeted in a completed minority block acquisition. Non-target observations are firms in the same country as the target observation. All observations are required to have book value of assets larger than \$1 million and positive book value of equity and sales. Return on assets is measured as the ratio of EBITDA to book value of assets. Leverage is measured as the ratio of long term debt to book value of assets. Market value of assets is calculated as calculated as (the book value of total assets - the book value of equity + the market value of equity). Market-to-book is market value of assets divided by the book value of assets. Sales growth is the one-year inflation-adjusted sales growth. Investment expenditures are the sum of capital expenditures, research and development (R&D) expenditures and net assets from acquisitions scaled by book value of total assets. ADR dummy equals to one if the firm has an ADR listing in the year under consideration. High R&D industry equals to one if the firm operates in the upper tercile industry of all industries ranked by their R&D expenses. High Whited and Wu index equals to one if the firms' Whited and Wu (2006) index is in the upper tercile of all WorldScope firms in the year under consideration. High HP index equals to one if the firm's Hadlock and Pierce (2008) size and age index is in the upper quartile of all WorldScope firms in the year under consideration. High HP index 2 equals to one if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms in the year under consideration. DKLMS low financial flexibility equals to one if the firm's DKLMS financial flexibility index equals to 0 or 1. The DKLMS financial flexibility index ranges from 0 to 3 and is constructed as a count variable by adding one point for a firm with high cash and liquid assets, one point for high dividends, and one more point for low capital expenditures. No public debt dummy equals to one for those firms that have not issued any public debt in the 5 years prior to the acquisition based on SDC new issues database. High closely-held shares is equal to one if the firm's insider ownership is in the upper tercile of all worldscope firms in that year. Low ASDI index equals to one if the firm is from a country whose anti-self dealing index is lower than the world median. The currency depreciation dummy equals to one if the country's real exchange rate increased by over 25 percent compared to the value of the exchange rate one year earlier. The low country market return dummy equals to one if the firm's country-level cumulative 12 month stock market return is lower than the world median in that year.

Variables	World Sample			Non-U.S. World Sample		
	Non-Block	Block	p(diff)	Non-Block	Block	p(diff)
<i>Firm characteristics</i>						
Book value of assets (\$mil)	885.20	764.60	<.01	784.81	836.88	
Return on assets	0.11	0.09	<.01	0.11	0.09	0.02
Book leverage	0.13	0.15	<.01	0.12	0.14	<.01
Market/book	1.72	1.69		1.56	1.56	
Sales growth	0.23	0.25	0.09	0.22	0.23	
Investment (% total assets)	0.22	0.15	0.01	0.14	0.10	<.01
ADR dummy	0.04	0.05	<.01	0.06	0.07	<.01
<i>Empirical proxies</i>						
High R&D industry dummy	0.37	0.35	0.02	0.33	0.31	0.02
Zero-dividend dummy	0.40	0.47	<.01	0.33	0.39	<.01
High Whited and Wu index	0.30	0.31	0.06	0.27	0.28	
High HP index	0.24	0.27	<.01	0.21	0.24	<.01
High HP index 2	0.22	0.29	<.01	0.18	0.25	<.01
DKLMS low flexibility	0.19	0.22	<.01	0.13	0.17	<.01
No public debt dummy	0.05	0.05		0.04	0.04	0.02
High closely-held share dummy	0.24	0.20	<.01	0.28	0.23	<.01
Low ASDI index	0.18	0.20	<.01	0.26	0.27	0.03
Low country mkt ret in prior year	0.53	0.48	<.01	0.55	0.50	<.01
Currency depreciation dummy	0.01	0.01		0.01	0.01	
Stock return in prior year	0.20	0.16	<.01	0.20	0.15	<.01
Acquirer stock return in prior year	.	0.29	.	.	0.27	.
Acquirer stock return in post year	.	0.17	.	.	0.18	.

Table IV Multivariate estimates of the probability of minority block acquisitions

This table presents marginal Effects of logit regressions examining the probability of a publicly traded firm to be the target in a minority block acquisition. The dependent variable equals to one if the firm in question is a target in a completed minority block acquisition. Independent variables include a dummy variable indicating high R&D industry if the firm operates in the upper tercile industry of all industries ranked by their R&D expenditures, one-year sales growth rate, a dummy variable indicating high insider ownership if the firm's insider ownership is in the upper tercile of all Worldscope firms, a dummy variable indicating low ASDI index if the firm is from a country whose anti-self dealing index is lower than the world median, firm cumulative 12-month stock returns, and a dummy variable indicating currency depreciation. Six financial constraint dummies are included one at a time. They are respectively a zero-dividend dummy if the firm pays no dividend in the previous year, a dummy indicating high Whited and Wu index if the firm's WW index is in the upper tercile of all WorldScope firms, a dummy indicating high HP index if the firm's Hadlock and Pierce (2008) size and age index is in the upper quartile of all WorldScope firms, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy indicating low financial flexibility if the firm's DKLMS financial flexibility index equals to 0 or 1 and a no public debt dummy if the firm did not issued any public debt in the 5 years prior to the acquisition based on SDC new issues database. GDP per capita and stock market capitalization to GDP are from the World Bank WDI Database. Firms with total assets smaller than \$1 million and negative book value of equity and sales are dropped. All specifications include year, industry and country fixed effects with heterkedasticity robust standard errors clustered by country and firms' two-digit SIC codes. Other firm controls include firm size and leverage.

	(1)	(2)	(3)	(4)	(5)	(6)
High R&D industry	-0.001 (-0.62)	-0.000 (-0.31)	-0.001 (-0.76)	-0.001 (-0.92)	-0.001 (-0.47)	-0.000 (-0.17)
Zero-dividend dummy	0.005 (6.17)					
High Whited and Wu index		0.002 (2.23)				
High HP index			0.001 (1.31)			
High HP index 2				0.004 (4.47)		
DKLMS low flexibility					0.003 (6.35)	
No public debt dummy						-0.003 (-1.47)
Sales growth	0.000 (1.03)	0.001 (1.44)	0.001 (1.80)	0.001 (1.54)	0.000 (0.93)	0.001 (1.58)
High closely-held share dummy	-0.007 (-8.48)	-0.007 (-8.45)	-0.006 (-7.73)	-0.006 (-7.69)	-0.007 (-8.51)	-0.007 (-8.51)
Low ASDI index	-0.149 (-5.96)	-0.146 (-6.00)	-0.158 (-5.70)	-0.155 (-5.70)	-0.145 (-6.02)	-0.148 (-6.01)
Stock return in prior year	-0.002 (-2.70)	-0.002 (-2.69)	-0.001 (-2.52)	-0.001 (-2.41)	-0.001 (-2.66)	-0.002 (-2.73)
Currency depreciation dummy	0.008 (1.46)	0.008 (1.39)	0.009 (1.53)	0.009 (1.52)	0.008 (1.36)	0.008 (1.39)
Size + Country controls	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustering by industry and country	Yes	Yes	Yes	Yes	Yes	Yes
N Obs	135441	135441	129614	129614	135441	135441
Adj R-Sq	0.046	0.045	0.043	0.044	0.046	0.045

Table V Excess stock returns to minority block acquisitions

This table presents cumulative average excess stock returns to targets, acquirers and combined targets + acquirers calculated over a 21-day (-10, +10) interval centered on the purchase announcement date. Excess stock returns are cumulative market adjusted buy-and-hold returns in percentage. Combined targets + acquirers returns are weighted using the market capitalization of each firm prior to the acquisition announcement. Premium is the block purchase price to the target firm's stock price 4 weeks before the announcement. The sample is partitioned into subgroups by key variables of each motive. These variables include a dummy variable indicating high R&D industry if the firm operates in the upper tercile industry of all industries ranked by their R&D expenditures, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating high insider ownership if the firm's insider ownership is in the upper tercile of all target firms, a dummy variable indicating cross-border if the acquirer's ultimate parents are foreign, a dummy variable indicating low ASDI index if the firm is from a country those anti-self dealing index is lower than the world median and a dummy variable indicating high acquirer prior stock returns if the acquirer's stock return is in the upper quartile of all purchasing firms. P-values for the mean differences between groups are in parentheses. ***, **, * denotes significance level at 1%, 5% and 10%, respectively.

	# of obs	Targets	Acquirers	Targets+ Acquirers	Premium
Total	6,631	8.07%***	1.20%***	2.13%***	7.98%***
Low R&D	4,079	7.50%	1.08%	2.17%	7.56%
High R&D	2,472	9.14%	1.48%	2.07%	8.76%
		(0.01)	(0.35)	(0.85)	(0.41)
Low HP index 2	5,403	7.40%	1.23%	2.07%	8.02%
High HP index 2	1,228	11.05%	1.05%	2.38%	7.84%
		(<0.01)	(0.76)	(0.68)	(0.92)
Low closely-held shares	4,958	8.58%	1.18%	1.84%	7.83%
High closely-held shares	1,035	7.74%	1.43%	3.10%	6.55%
		(0.31)	(0.65)	(0.05)	(0.54)
Domestic	4,780	8.33%	1.49%	2.68%	6.62%
Cross-border	1,851	7.42%	0.72%	1.25%	13.24%
		(0.17)	(0.07)	(<0.01)	(<0.01)
High ASDI index	5,466	8.69%	1.26%	2.40%	7.39%
Low ASDI index	1,165	5.21%	0.96%	1.34%	17.84%
		(<0.01)	(0.53)	(0.05)	(0.01)
Low acquirer stock return in prior year	6,103	7.87%	1.06%	1.93%	8.48%
High acquirer stock return in prior year	528	10.49%	1.69%	2.83%	1.74%
		(0.04)	(0.21)	(0.16)	(<0.01)

Table VI Target announcement returns: multivariate analysis

This table presents results from regressing target announcement returns on firm/deal/industry/country characteristics. The dependent variable is the cumulative (-10, +10) market adjusted announcement returns summarized in Table V. The independent variables include a dummy variable indicating high R&D industry if the firm operates in the upper tercile industry of all industries ranked by their R&D expenditures, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating high insider ownership if the firm's insider ownership is in the upper tercile of all target firms, a dummy variable indicating cross-border if the acquirer's ultimate parent is foreign, a dummy variable indicating low ASDI index if the firm is from a country whose anti-self dealing index is lower than the world median, and a dummy variable indicating high acquirer prior stock returns if the acquirer's stock return is in the upper quartile of all purchasing firms. All specifications include year fixed effects, natural log of GDP, stock market capitalization to GDP and firm size with heteroscedasticity robust standard errors. The last three columns examine three alternative samples: non-U.S. firms, deals of block size smaller than 20 percent of target firms, post-1998 sample. ***, **, * denotes significance level at 1%, 5% and 10% respectively. The sample period is from 1990 to 2005.

Variables							Non U.S.	<20% Block	Post 1998
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
High R&D industry	0.015*					0.013	0.010	0.011	0.010
	(1.81)					(1.55)	(1.03)	(1.21)	(0.83)
High HP index 2		0.037***				0.036***	0.028**	0.027**	0.032*
		(3.55)				(3.41)	(2.03)	(2.36)	(1.83)
High closely-held share dummy			-0.005			-0.002	-0.002	0.005	-0.000
			(-0.45)			(-0.19)	(-0.13)	(0.37)	(-0.02)
Cross-border			-0.002			0.000	-0.004	0.007	0.003
			(-0.24)			(0.05)	(-0.33)	(0.66)	(0.22)
High closely-held share × Cross-border			0.007			0.003	0.002	-0.004	0.004
			(0.35)			(0.18)	(0.07)	(-0.16)	(0.14)
Low ASDI index				-0.032***		-0.031***	-0.032***	-0.038***	-0.021*
				(-3.67)		(-3.46)	(-3.47)	(-3.95)	(-1.70)
High prior acquirer stock return					0.018	0.016	0.000	0.011	0.012
					(1.19)	(1.07)	(0.03)	(0.69)	(0.61)
Size + Country controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-Sq	0.015	0.018	0.014	0.016	0.014	0.021	0.019	0.019	0.012

Table VII Target Announcement Returns and Acquirer Information Advantage

This table presents results from regressing target announcement returns on firm, deal, industry, and country characteristics. The dependent variable is the cumulative (-10, +10) market adjusted announcement returns summarized in table 5. Three dummy variables indicating acquirer information advantage are included, respectively a dummy variable indicating the presence of JV/alliances between the target and the acquirer, a dummy variable indicating whether the target and acquirer operate in the same industry (3-digit SIC codes), and a dummy variable indicating related industry when the total requirement coefficients between target and acquirer industries are in the upper quartile of all industries in the U.S. input-out accounts. Other independent variables are the same as those in Table VI, including a dummy variable indicating high R&D industry if the firm operates in the upper tercile industry of all industries ranked by their R&D expenditures, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating high insider ownership if the firm's insider ownership is in the upper tercile of all target firms, a dummy variable indicating cross-border if the acquirer's ultimate parents are foreign, a dummy variable indicating low ASDI index if the firm is from a country whose anti-self dealing index is lower than the world median and a dummy variable indicating high acquirer prior stock returns if the acquirer's stock return is in the upper quartile of all purchasing firms. All specifications include year fixed effects, GDP per capita, stock market capitalization to GDP and firm size with heteroscedasticity robust standard errors. ***, **, * denotes significance level at 1%, 5% and 10% respectively. The sample period is from 1990 to 2005.

	(1)	(2)	(3)	(4)	(5)	(6)
JV/alliances	0.018* (1.70)			0.011 (1.00)		
Same industry		0.024*** (2.96)			0.022** (2.52)	
Related industry			0.014** (2.55)			0.016*** (2.67)
High HP index 2				0.032*** (3.33)	0.031*** (3.30)	0.033*** (3.46)
High R&D industry				0.011 (1.57)	0.012* (1.70)	0.013* (1.85)
High closely-held share dummy				-0.007 (-0.64)	-0.006 (-0.58)	-0.007 (-0.65)
Cross-border				-0.007 (-0.88)	-0.008 (-1.01)	-0.009 (-1.05)
High closely-held share × Cross-border				-0.000 (-0.01)	-0.001 (-0.06)	-0.001 (-0.06)
High prior acquirer stock return				0.029** (2.15)	0.026* (1.95)	0.026* (1.92)
Low ASDI index				-0.039*** (-5.41)	-0.040*** (-5.53)	-0.040*** (-5.56)
Size + Country controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-Sq	0.0101	0.0110	0.0106	0.0162	0.0172	0.0174

Table VIII Robustness checks: High R&D industry and joint venture/alliances

This table presents results from regressing target announcement returns on firm, deal, industry, and country characteristics with different sample/variables. High R&D industries are defined as those in the upper quartile of R&D expenditures divided by total net assets among all four digit SIC industries on Compustat. An interaction term between the high R&D dummy using Compustat industries and the joint venture/alliances dummy is included. The last two columns run model (4) for the sample where financial acquirers are dropped and for the sample where only U.S. target firms are included. All regressions include the following variables: a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating high insider ownership if the firm's insider ownership is in the upper tercile of all target firms, a dummy variable indicating cross-border if the acquirer's ultimate parents are foreign, a dummy variable indicating low ASDI index if the firm is from a country whose anti-self dealing index is lower than the world median and a dummy variable indicating high acquirer prior stock returns if the acquirer's stock return is in the upper quartile of all purchasing firms. All specifications include year fixed effects, GDP per capita, stock market capitalization to GDP and firm size with hetercedasticity robust standard errors. ***, **, * denotes significance level at 1%, 5% and 10% respectively. The sample period is from 1990 to 2005.

Panel A: Contracting

	(1)	(2)	(3)	(4)	No Financial Acquirer	U.S. Sample
					(5)	(6)
High R&D industry (Compustat)	0.017** (2.24)	0.017** (2.08)	0.012 (1.52)	0.013 (1.47)	0.016 (1.62)	0.035*** (3.56)
JV/alliances		0.032* (1.82)		0.025 (1.35)	0.011 (0.64)	0.096*** (5.40)
High R&D × JV/alliances		-0.010 (-0.36)		-0.013 (-0.45)	-0.008 (-0.27)	-0.085*** (-2.91)
High HP index 2			0.032*** (3.34)	0.032*** (3.35)	0.029*** (2.77)	0.038*** (3.61)
High closely-held share dummy			-0.008 (-0.78)	-0.008 (-0.81)	-0.002 (-0.16)	-0.012 (-0.99)
Cross-border			-0.008 (-0.96)	-0.009 (-1.10)	0.002 (0.21)	-0.042*** (-4.30)
Low ASDI index			-0.039*** (-5.53)	-0.039*** (-5.43)	-0.033*** (-3.72)	0.000 (0.00)
High prior acquirer stock return			0.029** (2.19)	0.028** (2.11)	0.032** (2.16)	0.054*** (3.63)
Size + Country controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-Sq	0.0106	0.0112	0.0161	0.0165	0.0144	0.0393

Panel B: Cross-border Sample

		<u>ASDI</u>	<u>Shareholder Protection</u>	<u>Creditor Protection</u>	<u>Common Law Dummy</u>			
Target law	0.123*** (3.88)	0.093*** (4.03)	0.000 (0.77)	0.000 (0.81)	0.016** (2.12)	0.005 (1.05)	0.051*** (3.45)	0.043*** (3.47)
(Acquirer-Target Law) ₊	0.064 (1.51)		0.000 (0.08)		0.017** (2.39)		0.018 (1.04)	
(Acquirer-Target Law) ₋	0.012 (0.31)		0.000 (0.07)		0.004 (0.52)		-0.000 (-0.02)	
Acquirer-Target Law		0.021 (0.65)		-0.000 (-0.01)		0.008 (1.43)		0.008 (0.61)
High R&D industry	0.007 (0.54)	0.006 (0.42)	0.002 (0.18)	0.002 (0.18)	0.003 (0.26)	0.003 (0.21)	0.004 (0.29)	0.003 (0.26)
High HP index 2	0.034* (1.85)	0.035* (1.90)	0.039** (2.13)	0.039** (2.13)	0.039** (2.12)	0.042** (2.29)	0.032* (1.76)	0.032* (1.75)
High closely-held share dummy	-0.012 (-0.88)	-0.013 (-0.92)	-0.009 (-0.64)	-0.009 (-0.64)	-0.011 (-0.80)	-0.012 (-0.85)	-0.006 (-0.43)	-0.006 (-0.44)
High prior acquirer stock return	0.020 (0.86)	0.021 (0.90)	0.022 (0.94)	0.022 (0.94)	0.018 (0.79)	0.020 (0.86)	0.020 (0.88)	0.020 (0.86)
Size + Country controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj R-Sq	0.0296	0.0284	0.0213	0.0213	0.0259	0.0229	0.0274	0.0271

Table IX Equity and debt offerings accompanying minority block acquisitions

This table summarizes new equity and debt issue activities simultaneously with and in the two years subsequent to minority block acquisitions using Thomson Financial's SDC Platinum New Issues database. The announcement date of the acquisition is compared with the issue date to determine the number of subsequent offerings. Equity (debt) issuances with multiple tranches or having simultaneous offerings are lumped together to avoid double counting. Statistics reported are respectively the number (percentage) of target firms issuing equity or debt, total (average) number of issues by target firms raising new equity or debt, total (average) proceeds from all equity or debt issues and total proceeds as a percentage of the target firm's market value at the time of acquisition (all proceeds by target firms as a percentage of all target firm's market value). These statistics are further grouped by a dummy variable indicating whether the target operates in high R&D industries, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating whether the target firm has high insider ownership, whether the acquisition is cross-border, whether the target firm is in countries with low ASDI index and whether the acquirer has high stock returns prior to the acquisition. Panel A summarize equity offerings and Panel B reports debt offerings.

Panel A Equity offerings:

	Number (Percentage) of Firms Issuing Equity ^a	Total (Average) Number of New Issues	Total (Average) Proceeds of Targets \$US Mil	Median (Average) Proceeds (% MCAP)
Total	1,815 ^b [27%]	3,112 [1.7]	187,304 ^c [60.2]	27% [18%]
Low R&D	1,113 [27%]	1,981 [1.8]	107,751 [54.4]	30% [17%]
High R&D	682 [28%]	1,089 [1.6]	77,176 [70.9]	25% [19%]
Low HP index 2	1,402 [26%]	2,276 [1.6]	172,109 [75.6]	26% [18%]
High HP index 2	413 [34%]	836 [2.0]	15,194 [18.2]	31% [24%]
Low closely-held Shares	1,362 [27%]	2,379 [1.7]	134,637 [56.6]	27% [18%]
High closely-held Shares	283 [27%]	450 [1.6]	35,148 [78.1]	27% [16%]
Domestic	1,304 [27%]	2,227 [1.7]	110,449 [49.6]	29% [19%]
Cross-border	511 [28%]	885 [1.7]	76,854 [86.8]	25% [17%]
High ASDI index	1,617 [30%]	2,866 [1.8]	132,795 [46.3]	28% [22%]
Low ASDI index	198 [17%]	246 [1.2]	54,509 [221.6]	21% [13%]
Low acquirer stock return in prior year	1,651 [27%]	2,859 [1.7]	162,156 [56.7]	27% [18%]
High acquirer stock return in prior year	164 [31%]	253 [1.5]	25,148 [99.4]	27% [20%]

^a All target firms: 6,631

^b Among issuing firms, 550 issued new equity in the two years prior to the announcement. Among 6,631 industry size-matched firms, 1,139 [17%] issued new equity.

^c Issuing firms raised \$US 38,317 million in the two years prior to the announcement. Industry size-matched firms raised \$US 112,089 million in the two year window. The median difference between target firms and industry sized matched firms is statistically significant.

Panel B Debt offerings:

	Number (Percentage) of Firms Issuing Debt	Total (Average) Number of New Issues	Total (Average) Proceeds of Targets \$US Mil	Median (Average) Proceeds (% MCAP)
Total	651 [10%]	1,286 [2.0]	249,617 [194.1]	24% [23%]
Low R&D	443 [11%]	837 [1.9]	152,250 [181.9]	25% [25%]
High R&D	203 [8%]	443 [2.2]	96,836 [218.6]	22% [20%]
Low HP index 2	557 [10%]	1,164 [2.1]	237,399 [204.0]	22% [22%]
High HP index 2	94 [8%]	122 [1.3]	12,217 [100.1]	41% [49%]
Low closely-held Shares	498 [10%]	1,039 [2.1]	211,882 [203.9]	26% [23%]
High closely-held Shares	99 [10%]	134 [1.4]	20,376 [152.1]	23% [18%]
Domestic	482 [10%]	866 [1.8]	164,716 [190.2]	27% [22%]
Cross-border	169 [9%]	420 [2.5]	84,900 [202.1]	22% [23%]
High ASDI index	546 [10%]	990 [1.8]	146,743 [148.2]	29% [26%]
Low ASDI index	105 [9%]	296 [2.8]	102,874 [347.5]	16% [19%]
Low acquirer stock return in prior year	599 [10%]	1,193 [2.0]	226,877 [190.2]	25% [23%]
High acquirer stock return in prior year	52 [10%]	93 [1.8]	22,740 [244.5]	16% [18%]

Table X Determinants of new equity issuances subsequent to the minority block acquisition

Multivariate estimates of new equity issuances. The first six columns use logit models to examine the probability that a target firm in the minority block acquisition will issue new equity either simultaneously with or in the subsequent two years of the acquisition. The last six columns use Tobit models to investigate the determinants of proceeds from target firm's new equity issues (scaled by their market capitalization) in the subsequent two years of the acquisition. Independent variables include a dummy variable indicating high R&D industry if the firm operates in the upper tercile industry of all industries ranked by their R&D expenditures, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating high insider ownership if the firm's insider ownership is higher than the world median, a dummy variable indicating deals of cross-border nature, a dummy variable indicating low ASDI index if the firm is from a country whose anti-self dealing index is lower than the world median and a dummy variable indicating high acquirer stock return if the purchasing firm's stock return in the year prior to the acquisition is in the upper quartile of all acquiring firms. All specifications include year fixed effects, GDP per capita, stock market capitalization to GDP and firm size with heteroskedasticity robust standard errors clustered by firms' two-digit SIC codes. Marginal effects are reported.

Empirical variables	Probability of issuing equity						Proceeds from issuing equity					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
High R&D industry	0.001 (0.02)					-0.002 (-0.06)	0.198 (0.17)					-0.202 (-0.21)
High HP index 2		0.057 (3.78)				0.066 (3.75)		2.736 (2.28)				3.172 (2.36)
High closely-held share dummy			-0.014 (-0.71)			-0.009 (-0.44)			-1.019 (-1.34)			-1.163 (-1.59)
Low ASDI index				-0.131 (-5.89)		-0.140 (-6.20)				-9.545 (-3.73)		-8.279 (-2.92)
High prior acquirer stock return					0.018 (1.03)	0.009 (0.46)					-1.705 (-1.38)	-1.896 (-1.44)
Size + Country controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N Obs	6551	6631	5993	6631	6631	5923	6549	6629	5991	6629	6629	5921
Pseudo R-sq	0.037	0.039	0.033	0.049	0.037	0.050	0.033	0.037	0.035	0.050	0.034	0.057

Table XI Changes in Operating Performance, Sales and Investment

Changes in operating cash flows, sales and investment expenditures during the period (-1, +3) around the acquisition announcement. Comparison portfolios for each target firm are constructed using related industry (four-digit SIC) size matched firms from WorldScope. If five matching firms are not available at the four-digit SIC level, three-digit or two-digit levels are used to obtain a minimum of five firms. Mean statistics are reported after subtracting industry median for the comparison groups. Δ operating cash flows is the industry-adjusted changes in earnings before interest, taxes, depreciation and amortization divided by average total net assets. Δ Sales is the industry adjusted changes in sales scaled by average total net assets. Δ investment expenditures is the industry adjusted capital expenditures + R&D expenditures + net assets from acquisitions divided by average net assets. To avoid survivorship bias, we require targets to have WorldScope data available in each comparison year over the interval (-1,+3). Sample statistics are reported by a dummy variable indicating whether the target operates in high R&D industries, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating whether the target firm has high insider ownership, whether the acquisition is cross-border, whether the target firm is in countries with low ASDI index and whether the acquirer has high stock returns prior to the acquisition. P-value is in parenthesis. ***, **, * denotes significance level at 1%, 5% and 10% respectively.

	Δ Operating Cash Flows	Δ Sales	Δ Investment Expenditures
Total	1.83%***	16.58%**	5.95%***
Low R&D	1.90%	17.76%	5.60%
High R&D	1.68% (0.86)	14.39% (0.49)	6.69% (0.56)
Low HP index 2	0.82%	8.44%	2.99%
High HP index 2	4.44% (0.03)	37.55% (<0.01)	13.62% (<0.01)
Low closely-held shares	1.74%	16.31%	5.49%
High closely-held shares	2.16% (0.77)	17.59% (0.84)	7.69% (0.33)
Domestic	1.92%	16.76%	6.30%
Cross-border	1.58% (0.79)	16.11% (0.90)	5.10% (0.54)
High ASDI index	1.62%	13.90%	7.18%
Low ASDI index	2.49% (0.42)	25.35% (0.03)	2.34% (<0.01)
Low acquirer stock return in prior year	1.92%	16.52%	5.99%
High acquirer stock return in prior year	0.40% (0.55)	17.54% (0.91)	5.44% (0.89)

Table XII Determinants of Changes in Operating Performance, Sales and Investment

Ordinary least square regression of industry-adjusted changes in operating cash flow (EBITDA) divided by average net assets, sales growth and changes in investment expenditures during the (-1, +3) year interval relative to corporate block equity purchases. Comparison portfolios for each target firm are constructed using related industry (four-digit SIC) size matched firms from WorldScope. If five matching firms are not available at the four-digit SIC level, three-digit or two-digit levels are used to obtain a minimum of five firms. Median statistics for the comparison groups are subtracted from the target measures. Regressors include a dummy variable indicating whether the target operates in high R&D industries, a dummy indicating high HP index 2 if the firm's Hadlock and Pierce (2008) size, age, operating cash flows and leverage index is in the upper quartile of all WorldScope firms, a dummy variable indicating whether the target firm has high insider ownership, whether the acquisition is cross-border, whether the target firm is in countries with low ASDI index and whether the acquirer has high stock returns prior to the acquisition. *, **, *** denotes significance level at 1%, 5% and 10% respectively. All regressions include year fixed effects.

Variables	<u>Δ Operating Cash Flows</u>	<u>Δ Sales</u>	<u>Δ Investment Expenditures</u>
	(1)	(2)	(3)
High R&D industry	-0.011 (-0.87)	-0.086* (-1.72)	-0.013 (-0.67)
High W&W index	0.044*** (2.67)	0.335*** (5.49)	0.105*** (4.20)
High closely-held shares	0.010 (0.52)	0.068 (0.82)	0.027 (0.99)
Cross-border	0.002 (0.14)	0.051 (0.88)	0.001 (0.03)
High closely-held shares × Cross-border	-0.014 (-0.47)	-0.178 (-1.52)	-0.003 (-0.07)
Low ASDI index	0.015 (1.35)	0.180*** (3.48)	-0.029* (-1.71)
High prior acquirer stock returns	-0.009 (-0.37)	0.026 (0.28)	-0.002 (-0.05)
Size + Country controls	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Adj R-Sq	0.019	0.033	0.039

Table A. II Mergers and acquisitions activities by target country

Majority control acquisitions by target country 1990-2005. I obtain initial sample of M&As from Thomson Financial's Security Data Corporation (SDC) Platinum Mergers and Acquisitions (M&A) database. I exclude deals that are mergers, acquisitions of majority control, LBOs, spin-offs, recapitalizations, self-tender, exchange offers, repurchases, acquisitions of remaining interest, and privatizations; deals that lack information on percentage of ownership acquired or has this information but is inconsistent with the percentage held before and after by more than one percentage point. I also exclude all deals in which the target and the acquirer has the same ultimate parent or the acquirer firm already had more than 20 percent equity in the target firm. Acquisitions with less than 5 percent blocks are also excluded. Finally, acquisitions involving either target or bidder or both from outside of La Porta et al. (1998) 49 countries are deleted. Anti-self dealing index and civil law dummy are from Djankov et al. (2006). Total value of transactions is based on 2005 dollars. Sub-samples include related industry (overlapping SIC codes at the two-digit level), financial targets (a firm is considered a financial firm if its SIC code is between 6000 and 6999, public targets, cross-border deals, and targets in high R&D industries. High R&D industries are defined as those in the upper quartile of R&D expenditures divided by total net assets among all four-digit SIC industries on Compustat.

Target Nation	Total Firms	Total Deals	Total Value of Transactions (\$mil)	Sub-sample				
				Public Target	Cross-border	Financial Target	Related Industry	High R&D Industry
Continental Europe								
Austria	892	926	22,344	25	558	74	344	137
Belgium	1,471	1,504	83,161	42	927	202	541	242
Denmark	1,698	1,732	39,396	38	785	161	628	291
Finland	2,621	2,693	33,350	34	822	255	937	375
France	8,128	8,407	307,718	288	3,478	763	3,072	1,489
Germany	9,401	10,763	327,835	217	4,601	861	3,380	2,232
Greece	355	358	12,918	29	80	39	119	36
Ireland-Rep	827	839	24,687	12	494	83	338	143
Italy	3,380	3,507	217,751	87	1,502	585	1,199	545
Netherlands	3,135	3,218	144,403	47	1,641	321	1,152	510
Norway	1,310	1,340	47,181	55	661	112	507	208
Portugal	525	534	18,254	22	276	86	199	50
Spain	3,240	3,335	115,600	35	1,415	525	1,297	305
Sweden	2,743	2,815	118,826	74	1,297	316	928	503
Switzerland	1,943	2,001	154,705	55	1,092	272	767	402
Turkey	204	212	12,732	25	101	56	72	17
Total	41,873	44,184	1,680,863	1,085	19,730	4,711	15,480	7,485
Australia/New Zealand								
Australia	6,894	7,061	228,827	227	2,126	1,217	2,491	738
New Zealand	1,226	1,253	43,940	52	656	159	425	139
Total	8,120	8,314	272,768	279	2,782	1,376	2,916	877
UK	23,031	23,558	1,227,206	285	6,597	3,448	8,639	3,183
US	87,576	89,781	10,071,523	5,521	10,805	15,942	34,661	17,932

Target Nation	Total Firms	Total Deals	Total Value of Transactions (\$mil)	Sub-sample					
				Public Target	Cross-border	Financial Target	Related Industry	High R&D Industry	
Asia									
Hong Kong	1,350	1,397	104,516	178	642	544	377	150	
India	950	961	18,807	131	360	101	376	236	
Indonesia	319	330	12,347	35	190	82	101	35	
Japan	4,665	4,742	575,405	297	445	773	1,550	760	
Malaysia	3,013	3,079	45,660	67	324	1,347	644	219	
Pakistan	27	27	3,294	2	17	7	14	1	
Philippines	297	308	15,439	39	127	107	112	30	
Singapore	1,089	1,105	29,177	58	476	335	262	156	
South Korea	580	589	72,300	64	247	83	171	150	
Sri Lanka	27	27	99	6	12	9	4	1	
Taiwan	314	318	49,213	33	160	99	93	96	
Thailand	408	419	11,810	44	176	123	115	34	
Total	13,039	13,302	938,068	954	3,176	3,610	3,819	1,868	
Latin America									
Argentina	857	886	42,229	35	567	141	320	77	
Brazil	1,345	1,382	70,215	74	868	157	530	158	
Chile	326	333	23,077	21	206	61	124	13	
Colombia	138	139	14,741	16	102	31	66	7	
Mexico	710	730	30,330	34	521	78	258	95	
Peru	142	143	3,567	25	98	21	68	2	
Total	3,518	3,613	184,161	205	2,362	489	1,366	352	
Others									
Canada	9,282	9,428	396,974	772	3,182	1,104	3,639	1,501	
Egypt	58	58	3,632	6	41	8	29	8	
Israel	349	362	17,814	44	206	33	124	188	
Jordan	16	16	184	1	5	8	8	4	
Kenya	24	24	374	1	11	7	11	1	
South Africa	1,447	1,482	58,279	144	418	262	495	208	
Uruguay	54	55	252	3	50	13	29	.	
Venezuela	147	151	6,567	12	113	38	67	15	
Zimbabwe	40	40	773	1	24	6	14	1	
Total	11,417	11,616	484,849	984	4,050	1,479	4,416	1,926	
World Total	188,574	194,368	14,859,437	9,313	49,502	31,055	71,297	33,623	