

Do Bad Targets Become Worse Targets? Evidence from Sequential Transfers of Control Blocks

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Abstract

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Keywords: Takeover, Financial distress, Equity issuance, Private benefits, Agency problem

JEL Classifications: G34

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1. Introduction

It is fairly well established in the literature by now that the way firms are owned and controlled around the world is quite heterogeneous. Firms in better investor protection environments, e.g., the U.S., are likely to be under dispersed ownership, while those that are not are generally under concentrated ownership tightly held by a controlling family (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1997, 1998; La Porta, Lopez-de-Silanes, and Shleifer, 1999). Such differences in investor protection and ownership structure suggest further implications for the way in which firms are taken over.

In the U.S., the vast majority of takeovers are implemented through formal mergers, which implies a 100% acquisition of the target shares. For example, in Celgene's takeover by Bristol-Myers Squibb and First Data's takeover by Fiserv, the two largest deals in 2019 according to Bloomberg, the targets were merged into the acquirer and became a single legal entity. Even tender offers, where the acquirers may initially obtain less than 100%, often end up in a merger, sometimes involving a squeeze-out. In contrast, transfers of existing controlling blocks held by the incumbent family are much more common outside the U.S. Burkart, Gromb, and Panunzi (1998, 2000) note that buyers under moral hazard would acquire as few shares as necessary to gain effective control, and as such would prefer a negotiated trade of the existing controlling block to a tender offer. Kim (2012) provides empirical evidence consistent with this assertion based on a large international sample.

Although there are numerous studies on U.S.-type takeovers, both in terms of theory and empirics, we still know very little about the economic implications of non-U.S.-type takeovers, or more specifically, control block transfers outside the U.S. There are a few interesting characteristics of these control block transfers that make them unique and distinct from conventional mergers in the U.S.

First, controlling blocks generally remain intact even after multiple takeovers. This is

in stark contrast to U.S.-type takeovers, where the target is merged into the buyer, causing any block to cease existing. This characteristic of U.S. takeovers makes it technically impossible to examine the target post-takeover because it no longer exists. This institutional feature has led most U.S. studies to focus on the pre-takeover characteristics of the target. However, for block transfers, the controlling block simply changes hands between the old and new controlling shareholders. As such, we can track the identity of not only the first buyer but also all subsequent buyers. This allows us to examine the dynamics of the target firm's characteristics as their previous controlling shareholders are sequentially replaced by new ones multiple times.

Second, since the target firms remain as separate legal entities, they may issue new shares and create a new controlling block for the acquirer during the process of control transfer. New equity capital injected into the target immediately increases its cash reserves, whereas the transfer of existing secondary shares does not. Therefore, the choice of equity types used in control transfers may further illuminate the potential motivations behind these takeovers. In the U.S., we typically do not observe new equity issues by the target firm because the target ceases to exist following the takeover. Note that this new equity issuance by the 'target' to the new controlling shareholder in exchange for cash is completely different from—or rather the opposite of—the conventional takeovers in the U.S., where 'acquirers' issue new equity to all target shareholders in exchange for the target's existing shares.

Third, not only does the target remain a separate legal entity, but it also continues to trade in the public equity market alongside the acquirer's stock. A typical example is Kia Motors, which was acquired by Hyundai Motors in 1998. Hyundai Motors, the third-largest public company in Korea as of 2019, continues to hold 34% of Kia's shares, which are still publicly traded. This situation makes the target shareholders vulnerable to potential value-decreasing transactions due to potential conflict of interest between the shareholders of the

acquiring firm and acquired firm, Unlike in mergers where formal shareholders' approval is required, control transfers do not require such approval. In fact, the decision to sell the control block is made by the controlling shareholder of the target, not by the target's board.

We take advantage of these three distinct characteristics of control transfers in non-U.S. economies to answer the following fundamental research questions. First, we ask which target characteristics may trigger the initial and subsequent takeovers. Existing studies on international corporate ownership suggest that controlling families in non-U.S. economies tend to enjoy high levels of private benefits (Dyck and Zingales, 2004; Nenova, 2003). Consequently, they avoid issuing equity and the accompanying dilution that would undermine their control influence (Högfeldt and Oborenko, 2005; Cronqvist and Nilsson, 2005). Extending this argument, we expect that controlling families are unwilling to sell their controlling blocks or issue new equity even at a premium.

For example, if they enjoy a high level of subjective private benefits or amenity benefits (e.g., carrying on family names), they will rarely sell their controlling block. This assertion is supported by Rossi and Volpin (2004), who report that the volume of M&A in Korean public firms is only 4.81%, much lower than the world average of 23.54%.

However, when these firms are in severe financial distress, creditors and/or the stock exchange may require a sale of the controlling block to a third party as a condition for further credit provision or retaining publicly traded status. In such cases, controlling shareholders of distressed firms may be forced to sell their existing block and/or issue new shares to a third party by their creditors or stock exchange regulators. This implies that if we do observe a control block transfer, the target is likely under financial distress. When target firms are subsidiaries of another parent firm, as is often the case in business groups, not only the target's but also the parent's financial distress may lead to the sale of the target's controlling stake.

If financial distress in the target indeed leads to its takeover, the new controlling block

may not only consist of the existing shares but also include new equity issued by the target. That is, the degree of distress in the target may predict the types of equities being transferred in control transactions. New equity capital injected into the target can be directly used to mitigate financial distress, which may be a prerequisite for additional credit provision or maintaining public status.¹ Old controlling shareholders may also indirectly benefit from the new capital if it translates into increases in the ultimate firm value. As such, they may actually prefer a massive dilution—where they end up holding a much smaller stake than before—over liquidation, where they end up holding nothing.

If new equities are issued to facilitate control transfers, an auxiliary prediction is that control transfers of distressed firms may be mediated through creditors, i.e., financial institutions. Kim, Ko, and Wang (2019) show that roughly one-third of new equities issued by public firms in Korea are actually debt-for-equity swaps issued to creditor banks. These creditor banks become the new controlling shareholders of distressed firms until they sell these new controlling blocks to a third party, typically through a formal bidding process.

We are ultimately interested in whether these control transfers are value increasing or decreasing. Conventional wisdom suggests that the block may be transferred to either a more efficient manager, validating the disciplinary role of the market for corporate control, or to one who diverts more than the incumbent. As suggested by Burkart, Gromb, and Panunzi (2000), and Byun, Kim, Lee, and Park (2019), however, the incentive to divert becomes more pronounced when the size of the controlling block is small. This implies that the extraction of private benefits may dominate the disciplinary effect in control block transactions. To the best of our knowledge, no previous studies have examined the value implications of multiple control

¹ In the U.S., financially distressed firms often resort to DIP (Debtor-in-Possession) financing for working capital during Chapter 11 where such new loans are given priority over existing loans. In other jurisdictions, such financing is not readily available for distressed firms, where new equities are issued by the distressed firms instead (Kim, Ko, and Wang, 2019).

changes of a single target over time.

In this study, we utilize a large sample of control block transactions in Korea to test a series of empirical predictions outlined above. Specifically, we examine whether (1) financial distress leads to the initial as well as subsequent takeovers, (2) new equities are issued by the target during the control transfer process, (3) creditor banks effectively mediate control transfers between outgoing and incoming controlling shareholders, potentially with a lag, and (4) the value of the target firm changes as they go through multiple sequential control transfers over time.

The takeover market in Korea is a canonical example of the one considered in Burkart et al. (2000)'s model. Their model assumes firms with more than 50% of shares held by dispersed shareholders while the remaining minority stake is held by a leading shareholder. Virtually all public firms in Korea fall into this category. Moreover, in their equilibrium, firms choose a negotiated block trade over a tender offer precisely because the former can be done with smaller shareholding and thus allows more private benefits. Consistent with their prediction, virtually all takeovers in Korea are done through negotiated block transfers, and tender offers, especially the hostile ones, are almost never observed even when they are legally allowed. Since the target continues to remain a publicly traded entity even after the control transfer, we can examine their post-takeover characteristics, including any occurrences of subsequent takeovers by the newer buyers.

Traditionally, the Korean government played an important role in allocating resources across the whole economy, but its direct influence on the corporate sector has largely been mitigated since the 1997 Asian Financial Crisis and subsequent reforms. However, the government still maintains a strong regulatory influence on the financial sector, through which it can indirectly influence the corporate sector. Since political incentives are more aligned with bailing out larger firms than smaller firms, we also expect to observe relatively more new equity

issues and creditor-mediated control transfers in larger targets.

Based on a large sample of takeovers in Korea between 2004 and 2017, we examine whether control block transactions, a dominant form of takeovers outside the U.S., effectively relieve the financial distress of the target and potentially improve operational efficiency. We first document that targets are often taken over multiple times. For example, close to half of our sample targets are taken over at least twice during the sample period. We also find that a third of our takeover targets issue new equity to the acquirer in exchange for new capital infusion, and that more than half of these new equities are issued in takeovers mediated by financial institutions. These findings provide initial evidence that takeovers in our sample may be driven by the financial distress of the target.

We then formally test whether various measures of financial distress predict the likelihood of being taken over after controlling for other firm-specific characteristics. We find that five out of six measures are statistically significantly correlated with the likelihood of being taken over. We also find that more severe distress in the target predicts new equity issues by the target, even after controlling for various firm characteristics. When the seller, i.e., the outgoing controlling shareholder, is also a firm, we find some evidence that the financial distress of the seller also predicts the sale of the controlling block in the target.

The next set of empirical analyses examines whether takeovers relieve the target's financial distress. In a difference-in-difference framework, we find that the target's financial distress is not relieved but rather exacerbated subsequent to a takeover, compared to a matched sample of non-targets, even after a series of multiple transfers. Overall, these findings suggest that control block transfers in Korea are initiated by the target's financial distress to relieve the situation, but despite efforts such as new equity issues, including debt-equity swaps, distress is seldom relieved. Our findings suggest that conventional wisdom on the market for corporate control as a governance mechanism may not hold in non-U.S. takeovers where controlling

blocks simply change hands.

We further explore the mechanisms driving the acquisition of distressed targets and their subsequent deterioration in financial performance. While the efficiency hypothesis suggests that corporate takeovers should maximize value, the literature offers various explanations for unprofitable acquisitions, including hubris, empire-building, agency problems, bidder overconfidence, fluctuations in growth opportunities, variations in merger synergies over time, and so forth². In the specific context of distressed targets, higher announcement returns to acquirers, as documented by Meier and Servaes (2019), indicate potential value-maximizing motives, suggesting that these acquisitions might be driven by fire-sale opportunities. Motivated by this well-established literature, we examine what could potentially drive non-U.S. firms to acquire control blocks of distressed targets, using our Korean sample.

The aspiration of corporate managers to elevate their business group ranking, mostly based on size, often incentivizes aggressive expansion through acquisitions in Korea. This motivation can lead to overpaying for large targets relative to the acquirer's size, which could ultimately result in severe financial distress. Empirical analysis supports the notion that acquisitions of large targets compared to the acquirer tend to exacerbate financial distress, underscoring the role of business group ranking aspirations, and more broadly, empire-building motives in these takeover decisions.

Another factor contributing to the acquisition of distressed targets is the acquirers' potential lack of skill in selecting appropriate targets. While prior successful acquisitions might suggest learning and improved target selection, our findings indicate no significant difference in post-takeover performance between experienced and inexperienced acquirers. This suggests

² See, for example, Roll (1986), Loderer and Martin (1990), Jensen (2005), Klasa and Stegemoller (2007), Masulis, Wang, and Xie (2007), Billett and Qian (2008), Ahern (2010), Karolyi, Liao, and Loureiro (2015), Dessaint, Eckbo, and Golubov (2021), among many others.

that the deterioration in financial performance is not merely due to a lack of acquirer skills but may also be linked to other corporate motives, such as empire-building. Despite the suboptimal outcomes observed, there remains the possibility that some takeovers are *ex ante* optimal decisions, particularly when considering potential benefits from fire sales or improved external funding opportunities for higher-ranked business groups. However, these potential benefits are often outweighed by the costs of managing distressed targets, as evidenced by event studies (though with a limited sample), showing mixed results for acquiring firms' stock performance around takeover announcements.

This nuanced understanding of the takeover dynamics in the Korean context provides critical insights into the strategic motives and implications of acquiring distressed targets, emphasizing the complexity and multifaceted nature of corporate takeovers in such unique institutional environments.

The remainder of the paper is organized as follows: Section 2 describes the data and sample. Section 3 presents the main empirical analysis. Section 4 reports post-takeover dynamics in financial distress. Section 5 discusses possible mechanisms. Section 6 further examines how target size affects takeover types. Section 7 provides a brief conclusion.

2. Data and Variables

2.1. Data

We manually assemble our control transfer data from KIND (Korea Investor's Network for Disclosure System), a web-based disclosure platform maintained by the Korea Exchange (KRX). Specifically, we identify all disclosures of changes in the largest shareholders from 2004 to 2017. Panel A of Table 1 summarizes the sample selection procedure, where we apply various filters to assemble our final sample.

We first drop financial targets, whose takeover procedures are highly regulated. We also exclude control transfers between related parties, which reflect non-arm's length transactions. Such takeovers are mainly triggered by either inheritance within the controlling family or business group-level reorganization into a holding company structure. If the new shareholder is not an individual, we refer to its ultimate controlling shareholder to verify the nature of the transaction.

Our definition of a takeover refers to a control transfer from a non-financial entity to another non-financial entity. As such, whenever a financial institution becomes the new largest shareholder, we do not count this as an independent observation but rather wait until a non-financial entity becomes the new largest shareholder. This implies that a series of two transactions— from a non-financial to a financial, and then from a financial to a non-financial—is counted as one takeover in our sample. We refer to these types of control transfers as “*Indirect-type*” to distinguish them from the “*Direct-type*,” where control transfer occurs directly between one non-financial entity and another non-financial entity. In “*Indirect-types*,” target characteristics are measured as of the first control transfer between a non-financial and a financial, since we are interested in characteristics that trigger being targeted. For cases where the first control transfer between a non-financial and a financial occurs prior to our sample period, we extend our sample and identify the previous controlling shareholder and the characteristics of the target as of then.

In addition, we exclude control changes that occur due to unilateral declines in the equity stakes of the previous largest shareholder, precisely because the new largest shareholder did not have an active intention to acquire control. We also exclude cases where control block transactions are withdrawn after the initial disclosure, as well as miscellaneous cases such as SPAC listings where actual control remains unchanged.

Following Mitchell and Lehn (1990), we also exclude cases in which the value of the

acquired stock is less than 5% of the market value. Cases where the new largest shareholder's ownership is less than 5% are also excluded since the acquired ownership is not large enough to reflect effective control. Finally, we exclude deals worth less than 1 billion KRW, roughly 1 million USD, to rule out the effect of very small takeovers. The takeover size is calculated by multiplying the stock price at the reporting date by the increase in the number of shares held by the new controlling shareholder.

Panel B of Table 1 reports the number of times the target was acquired during the sample period. Since most targets remain listed even after the acquisition, it is possible to observe changes in control over time. Panel B of Table 1 indicates that almost half of the targets experience at least two control changes during the sample period. This is distinctly different from the U.S., where most takeover targets are merged into the acquiring firm and thus cease to exist.

<Table 1>

Since the target remains a separately traded entity, it may issue new stocks to the acquirer in a private placement during the control transfer process. To reflect this possibility, we classify all our takeovers into two types: “*New-type*” and “*Old-type*”. *New-type* refers to cases where new shares are privately issued by the target, effectively creating a new controlling block for which acquirers pay cash to become the new largest shareholder. *Old-type* refers to the transfer of the existing control block held by the old largest shareholder to the new largest shareholder. In *Old-type*, secondary or old shares simply change hands between the outgoing and incoming controlling shareholders. Our classification is based on textual analysis of the disclosed explanation for the change in the largest shareholder. If the disclosed reason is mainly subscription of new equity issues or debt-equity-swap, we classify this takeover as the *New-type*. On the other hand, if the stated reason is mainly over-the-counter (OTC) transaction, off-hours block trading, or tender offer, we classify it as the *Old-type*.

Previous studies on methods of payment distinguish between cash and stock paid to target shareholders in exchange for *existing* shares. In our sample, these are all classified as *Old-type*, regardless of the payment method, since any new shares, if issued, are by the acquirer, not the target. In contrast, *New-type* acquisitions, where targets issue new shares, have not been examined in previous studies since most U.S. targets disappear subsequent to the acquisition. One of our main contributions is noting that our *New-type* acquisitions, in which the target issues new shares, may be used primarily in takeovers of financially distressed firms, as the proceeds from the new share issues imply a direct capital infusion, especially in jurisdictions where DIP (Debtor-in-Possession) financing is not available. The existence of *New-type* suggests that takeovers and new share issues (in exchange for cash) by the target may occur simultaneously.³ A typical example is the on-going takeover of distressed Asiana Airline, the second largest carrier in Korea, by Korean Air, the largest carrier. Korean Air will become the largest shareholder of Asiana by (1) purchasing old shares from Kumho Industrial, the parent of Asiana, and by (2) subscribing to new shares issued by Asiana. In *New-type* takeovers, the old controlling shareholders of the target typically lose control through massive dilution. In many cases, they have little choice but to accept this dilution, which is mandated by the creditor banks. In fact, dilution may turn out to be a better alternative than liquidation if the target's financial distress is resolved and its stock price ultimately recovers.

Table 2 presents the frequency and size of the four types (2 x 2) of takeover transactions. Takeovers are classified into “*Direct*” and “*Indirect*” types depending on whether a financial institution mediates the control transfer, and as *New-* and *Old-types* depending on whether the target issues new shares. Panel A of Table 2 indicates that *New-type* accounts for

³ Although new and old shares may both be present in a given takeover sample, it is either classified as New or Old based on the textual analysis of the main reason for the change in the controlling shareholder.

33.4% of takeovers by number. However, according to Panel B of Table 2, they account for 46.8% of total takeover activity by dollar value. This result suggests that *New-types* are more likely in larger deals, accounting for close to half of all takeover dollar volume.

Panel A of Table 2 also indicates that *Direct-type* accounts for 87.6% of all takeovers by number. But in terms of dollar value, as indicated in Panel B of Table 2, they account for 66.5%. This suggests that *Indirect-types*, where financial institutions are involved, are larger than *Direct-types* between two non-financial entities.

Among the four types, *New Indirect-types* are the largest, with an average (median) size of 167.6 (18.1) billion KRW. This suggests that larger deals are more likely to involve new share issues by the target and may also involve financial institutions. The large difference between average and median size also suggests that the distribution is highly skewed.

<Table 2>

Table 3 presents the distribution of ownership of the controlling shareholders before and after the takeover for each year during the sample period. We report the results separately for the *New-type* and the *Old-type*. In *New (Old)-type* control transfers, the incoming or new controlling shareholder's ownership stake is 23.7% (24.2%), of which 1.8% (2.3%) was held even prior to the control transfer. In both types, the magnitudes of the post-takeover holdings of the new controlling shareholders are largely similar. In fact, the increases in proportional ownership relative to prior holding are 22 percentage points for both types.

On the other hand, there is a larger difference in holdings of the *outgoing* controlling shareholders between *New-type* and *Old-type*. Specifically, the former controlling shareholders of *New-type* held only 13.2% of shares, while the corresponding number for *Old-type* amounts to 25.8% before the takeover. The decreases in ownership following the control transfers are also considerably different between the two types. The decrease in *Old-type* amounts to 20.7%, while the corresponding number for *New-type* is only 5.6 percentage points. This suggests that

Old-type mostly consists of existing control blocks changing hands, while decreases in ownership of the old controlling shareholder in *New-type* are driven by dilution. The lower pre-takeover ownership of the old shareholders in *New-type* relative to *Old-type*, roughly half in size, also suggests that old shareholders may have experienced dilution even before the control transfer.

<Table 3>

2.2 Variables

Our initial research question seeks to identify which characteristics of target firms trigger takeovers within our sample. Specifically, our primary interest lies in determining whether financial distress in the target firm acts as a catalyst for a takeover. Financial distress is defined as a situation in which a firm is unable to meet its debt obligations (Wruck, 1990; Gilson, 1989). Purnanandam (2008) differentiates financial distress from insolvency by describing it as “a low cash-flow state where the firm incurs losses without being insolvent.” Similarly, Opler and Titman (1994) distinguish between financial distress and default within this context.

Previous research typically utilizes financial indicators or statistical models to proxy for financial distress. These indicators include the interest coverage ratio (Bruyland and Maeseneire, 2016; Andrade and Kaplan, 1998; Bernanke and Gertler, 1995), leverage (Gilson, 1989), net profit (Ang and Nathan, 2011), and continuous deficits (Wu, 2004; Hertz and Smith, 1993). Statistical models for predicting financial distress encompass Altman’s Z-score and Ohlson’s O-score.

In our study, we employ various measures of financial distress, including three continuous variables, i.e., return on assets (*ROA*), interest coverage ratio (*Lnintcov*), and Altman et al. (1995)’s score for the probability of bankruptcy among Korean firms (*Kscore*),

as well as three dummy variables, i.e., a dummy for financial deficit (*Deficit*), a dummy for capital erosion (*Caper*), and a dummy for interest expense being not covered (*Dintcov*). Four of these variables are related to a firm's profitability: *ROA*, *Lnintcov*, *Deficit*, and *Dintcov*. *ROA* is calculated as net income scaled by the book value of total assets. *Lnintcov* represents the log value of the interest coverage ratio plus 2, while *Deficit* is a dummy variable that equals 1 if net income is negative for two consecutive years, and 0 otherwise. *Dintcov* is a dummy variable that takes the value of 1 if operating income is less than interest expenses, and 0 otherwise.

We consider another variable, *Caper*, designed to capture rather extreme levels of financial distress. When losses accumulate so that retained earnings are negative, we may consider the firm to be under severe financial distress. Specifically, we define a firm to be under capital erosion (*Caper* = 1) when paid-in-capital (book equity - retained earnings) is greater than or equal to book equity.

Additionally, we use Altman, Eom, and Kim (1995)'s *K-score*, a variant of Altman's Z-score adapted for Korea, which predicts the bankruptcy probability of Korean companies. A lower *K-score* indicates a higher risk of corporate insolvency. There are two versions of the *K-score*: *Kscore1*, which uses the market value of equity and is applicable to listed firms, and *Kscore2*, which uses the book value of equity and can also be applied to unlisted firms (see appendix for more details). A *Kscore1* below -2.00 or a *Kscore2* below -2.30 indicates severe distress potential, while *K-scores* above 0.75 are interpreted as distress-free for both scores.

We also include control variables that might affect the likelihood of a takeover or the method of acquisition, as reported in previous studies. Hasbrouck (1985) uses a logit model to predict takeovers, incorporating size (*Size*), market-to-book ratio (*Mtb*), liquidity (*Cash*), and leverage (*Lev*). Palepu (1986) includes sales growth (*Sgr*), leverage, size, market-to-book ratio, price-earnings ratio, and liquidity in his logit estimates. Schwert (2000) uses ROE, sales growth, liquidity, debt-to-equity ratio, market-to-book ratio, price-earnings ratio, and size in probit and

regression models. Akhigbe, Martin, and Whyte (2007) provide logit estimates including size, institutional ownership, market-to-book ratio, free cash flow (*Fcf*), leverage, performance, and fixed assets as target characteristics. Chung (2015) controls for asset beta (*Assetbeta*), a market-based measure of systematic risk, since bidders may consider targets' sensitivity to business cycles.

The following summarizes the relationship between various target characteristics and the likelihood of a takeover, as reported in previous research. Target firm size is negatively correlated with takeovers due to transaction costs. Firms with a low market-to-book ratio are more likely to be targeted, as they may be perceived as undervalued. For free cash flow, predictions vary. Smith and Kim (1994) argue that higher free cash flow makes a target more attractive. Alternatively, if high free cash flow reflects excessive private benefits, it may reduce the probability of a successful takeover by increasing the offer premium.

There is also debate regarding the effect of the largest shareholder ownership (*Lown*). Shleifer and Vishny (1986) propose that a takeover is more likely as the proportion of shares held by large shareholder increases, arguing that a large shareholder's decision can be pivotal in takeover offers, even for a small increase in firm value. Conversely, Stulz (1988) contends that an increase in the fraction of voting rights controlled by management decreases the likelihood of a successful tender offer. These conflicting predictions may be reconciled by noting that Shleifer and Vishny (1986) focus on outside institutional investors typical of U.S. firms, whereas Stulz (1988) considers controlling families in non-U.S. firms.

Firms with a high tangible asset ratio (*Tang*) might be attractive targets as they offer additional production capacity to bidders. Clyde (1997) shows that acquisition serves as a disciplinary mechanism under institutional ownership. Faleye (2004) finds that firms with excess cash are less likely to be takeover targets, as they can defend against unwanted bids. Chung (2015) observes that during economic downturns (expansions), firms with lower (higher)

asset betas are more likely to become targets. Lastly, we include age (*Age*) as a proxy for a firm's information asymmetry.

3. Empirical Analysis

3.1 Descriptive Statistics

We first present the summary statistics of the target characteristics by the types of takeovers. Panel A of Table 4 shows that the average values of distress indicators, namely *Deficit*, *Caper*, and *Dintcov*, are all above 0.5. This indicates that more than half of the targets in our sample are financially distressed.

We also report the corresponding characteristics for non-targeted firm-years, including firms that have never been targets during the sample period. The univariate comparison reveals that targets are more likely to be in financial distress than non-targets. On average, targets exhibit negative profitability (*ROA*) and have an average *Kscore1* significantly below -2.00 , whereas non-targets demonstrate positive profitability and an average *Kscore1* well above 0.75.

In addition, targets have significantly higher leverage, cash holdings, and asset betas compared to non-targets. Conversely, targets are characterized by lower age, size, sales growth, largest shareholder ownership, foreign ownership, free cash flows, and tangible assets over total assets. These findings align with expectations based on prior research, with the exception of the market-to-book ratio.

Substantial differences in characteristics are observed across different types of takeovers as well. For instance, the average financial distress is greater in *New-type* takeovers compared to *Old-type*. Specifically, the *Deficit*, *Caper*, and *Dintcov* values for *New-type* takeovers are 0.73, 0.83, and 0.85, respectively, indicating that 70%-80% of the targets are in

financial distress. In contrast, 40%-60% of *Old-type* targets are in financial distress.

Panel B of Table 4 presents the target characteristics based on the number of times a target has been taken over. The first column labeled ‘0’ reflects non-targets, while the last column labeled ‘4 or more’ reflects targets that have been taken over at least four times. Target characteristics for each column are measured immediately before the last takeover within that column. For instance, characteristics for column ‘3’ are measured immediately before the third takeover.

We confirm that almost 50% of takeover targets are acquired more than once, as reported in Table 1. Our primary interest is whether financial distress in the target is mitigated through multiple takeovers. The results from Panel B of Table 4 indicate that, contrary to expectations, financial distress in the target exacerbates with successive takeovers. As the number of takeovers increases, *ROA* and *Kscore1* consistently decrease, while *Deficit*, *Caper*, and *Dintcov* consistently increase.

<Table 4>

One of our research questions is whether distress in the parent firm may be driving the sale of a subsidiary. We report the composition of sellers and their characteristics in Table 5. We classify all sellers into three categories; firms that are subject to mandatory filings (also known as *externally audited firms*), firms that are not subject to mandatory filings (i.e., non-externally audited firms), and individuals.⁴

For firms subject to external audits, totaling 369 cases, we are able to obtain their financial information, even for private firms. We then exclude firms in the financial industry

⁴ Korean regulations require all private firms whose total assets exceed a certain threshold (currently KRW 10 billion or roughly USD 10 million) to be externally audited by accounting firms and have their financial statements filed at regulatory authorities. We were not able to identify the type of seller for 11 cases, which is less than 1% of the total sample.

or those with less than 10% controlling shareholder ownership before the sale. Those firms with missing financial information are also dropped. This process yields 242 non-financial sellers with valid financial data.

Panel B reports the characteristics of the sellers as well as those for a comparison group of non-sellers. Non-sellers are non-financial parent firms of listed firms with at least 10% ownership that have not sold shares in their subsidiary during the sample period.

We find that sellers are more financially distressed than non-sellers. Specifically, sellers exhibit negative values of *ROA* and *Kscore2*. Among them, 32% have two consecutive years of deficits, 44% are experiencing capital erosion, and 56% cannot cover interest costs with their operating income. In contrast, the average *ROA* and *Kscore2* of non-sellers are both positive, and their level of financial distress, as indicated by other metrics, is significantly lower than that of sellers. Sellers have higher leverage and cash holdings but lower free cash flows and tangibility than non-sellers. These findings suggest that financial distress in the parent firm may also be a factor contributing to the sale of a subsidiary.

<Table 5>

3.2 Determinants of Being Taken Over Multiple Times

In this section, we investigate the factors influencing the frequency of being targeted. Our primary model is an ordered logit regression where the target's distress is a key predictor. The dependent variable, defined as “*Order*” in Panel B of Table 4, represents the number of times a firm is targeted (never, first, second, third, fourth, or more, in sequential order). Explanatory variables include proxies for financial distress and other factors known to influence the likelihood of being targeted, as discussed in Section 2.2. An increase in an explanatory variable by one unit changes the log-odds of being targeted a higher number of times by the size of its coefficient, holding other variables constant.

Since financial distress variables are highly correlated among themselves, we include them one at a time in separate specifications. We also include 2-digit industry fixed effects to control for unobserved heterogeneity at the industry level and year fixed effects to control for unobserved market-wide shocks in each year. We also cluster standard errors at the 2-digit industry level to address concerns over potential biases from correlated residuals within an industry.

<Table 6>

Table 6 presents the results of the ordered logit regressions. We find that financial distress significantly impacts the likelihood and frequency of being targeted, even after controlling for other variables. Notably, the number of times a firm is targeted increases with the severity of its financial distress. Specifically, lower *ROA* and higher *Kscore1* are associated with increased log-odds of being targeted more frequently. Distressed firms (identified by *Deficit* = 1, *Caper* = 1, or *Dintcov* = 1) are more likely to be targeted multiple times compared to non-distressed firms.

The results for other control variables are largely consistent with those reported in the previous literature. Firms whose asset betas are larger are more likely to be targeted, suggesting that bidders prefer targets with values that fluctuate more during business cycles. Smaller firms and those with higher leverage are also more frequently targeted. Additionally, a lower ownership share by the largest shareholder tends to increase the number of times a firm is targeted, consistent with Stultz's (1988) argument that incumbent shareholders' pursuit of private benefits deters targeting.

Overall, these results suggest that firms experiencing severe financial distress face more frequent changes in corporate control. They also imply that financial distress is not mitigated but rather exacerbated through multiple takeovers.

3.3 Determinants of Takeover Types

In this section, we employ multinomial logit analysis to investigate the impact of financial distress on the types of takeovers. The baseline group consists of non-targeted firm-years, against which we compare *New-type* and *Old-type* targets. The explanatory variables used are consistent with those in the ordered logit model presented in the preceding section. We also incorporate 2-digit industry fixed effects and year fixed effects, utilizing industry-clustered standard errors as outlined in Table 6.

<Table 7>

Table 7 presents the estimates from the multinomial regressions. As non-target firms serve as the baseline, the coefficients reflect the impact on the probability of a firm being chosen for a specific type of takeover relative to not being taken over. The findings indicate that as financial distress intensifies, the likelihood of both types of takeovers increases. However, the coefficient magnitude is greater for *New-type* takeovers than for *Old-type* takeovers. This suggests that firms experiencing severe financial distress are more likely to be acquired through *New-type* takeovers than *Old-type* takeovers.

We conduct an additional chi-square test to determine whether the coefficients for distress variables significantly differ between the two types of takeovers. The results, reported in the last two rows of Table 7, show that the coefficients are significantly different, except for *Lnintcov*. Specifically, the coefficients for *ROA* and *Kscore1* differ significantly at the 95% confidence level, and those for *Deficit*, *Caper*, and *Dintcov* differ at the 99% confidence level. These findings suggest that severe financial distress diminishes the bargaining power of incumbent shareholders, potentially forcing them to accept dilution resulting from new share issues to incoming controlling shareholders. It is noteworthy that *New-type* takeovers are

generally less favorable to incumbent shareholders compared to *Old-type* takeovers, as the former does not involve the sale of the existing control block, depriving shareholders of compensation for the control transfer.

Among the other variables examined, the size of potential targets influences both types of takeovers, with smaller firms being more likely to be acquired through *Old-type* takeovers. Additionally, while the largest shareholder's ownership affects both types of takeovers, firms with lower ownership are more likely to be acquired through *New-type* takeovers, consistent with the univariate results reported in Table 3. Interestingly, the proportion of property, plants, and equipment predominantly contributes to the likelihood of an *Old-type* takeover. Specifically, a higher proportion of property, plants, and equipment enhances the negotiating power of incumbent shareholders, enabling them to sell their existing control block.

3.4 Determinants of Being a Seller

In this section, we examine the determinants influencing the likelihood of a subsidiary being sold. Our primary focus is on assessing whether the seller's financial distress significantly impacts the probability of a takeover. This analysis is confined to externally audited sellers with financial data available through mandatory filings. Financial firms and firms with less than 10% controlling shareholder ownership are excluded from this analysis.

The dependent variable is a binary indicator, taking the value of one if the firm is a seller and zero if it is a non-seller, as defined in the previous subsection. The explanatory variables include the parent company's financial distress, size, leverage, cash holdings, age, sales growth, free cash flow, and tangible asset ratio. We employ *Kscore2* in this analysis, which is applicable to both listed and unlisted companies, as some parent firms are unlisted. The other financial distress measures, consistent with those used in previous analyses, reflect the financial distress of the selling parent rather than the target subsidiary. Additionally, we

incorporate 2-digit industry fixed effects and year fixed effects, and employ industry-clustered standard errors, as in the previous tables.

<Table 8>

Table 8 displays the results of the logit analysis. Generally, higher financial distress in the parent increases the likelihood of selling the subsidiary. Specifically, the coefficients of the continuous financial distress variables are all negative, indicating that the parent's financial distress drives the sale of the subsidiary. However, the effects of *Lnintcov* and *Kscore2* on the probability of being a seller are not statistically significant, whereas the coefficient for *ROA* is significant. The coefficients of the binary financial distress variables are positive and statistically significant. Overall, these findings suggest that parent firms, due to their financial distress, are unable to maintain control, leading to the sale of the subsidiary.

4. The Effects of Takeovers on Financial Performance

We next examine how financial distress may change after being taken over, controlling for other potentially relevant factors in Panel A of Table 9. One possibility behind multiple takeovers of distressed targets is that those that recover from financial distress after being acquired are no longer taken over. To test this possibility, we categorize targets into those that are taken over only once and those that are taken over multiple times. For the latter group, we further distinguished between the last takeover and earlier takeovers (as shown in Panel B of Table 9). In addition, we categorize targets into two groups based on the ownership level of the new controlling shareholder (i.e., above-median vs. below-median) to assess whether larger ownership stakes by acquiring shareholders lead to better financial performance (Panel C of Table 9).

We estimate models predicting financial distress similar to those used in Erel, Chang,

and Weisbach (2015). Specifically, we estimate the following specification:

$$Y_{i,t} = \alpha + \beta After_t + \gamma Controls_{i,t} + FE + \varepsilon_{i,t} \quad (1)$$

where *AFTER* is a dummy variable equal to one for the post-takeover years. The dependent variables include financial distress proxies such as *ROA*, *Lnintcov*, and *Kscores*. Control variables mirror those used in the ordered logit model from the previous section. We also include 2-digit Industry fixed effects and year fixed effects, and cluster standard errors at the industry level. For discreet dependent variables such as *Deficit*, *Caper*, and *Dintcov*, we report the result from corresponding logit models. Our dataset spans five years around the takeover, excluding firm-year observations of the takeover year.

<Table 9>

The results reported in Panel A of Table 9 indicate an exacerbation of financial distress post-takeover. The coefficients of *AFTER* are all significantly negative for continuous financial distress proxies and significantly positive for dummy variables, except for *Dintcov*. These findings contrast sharply with those of Erel, Chang, and Weisbach (2015), who document that acquisitions alleviate financial frictions of target firms in a way that improves the financial efficiency of the acquired subsidiary.

In Panels B and C of Table 9, we report only the coefficients for *AFTER* for brevity. The results from Panel B indicate that single-targets and last-targets in multiple takeovers experience less financial distress compared to earlier targets in multiple takeovers, suggesting that sequential takeovers may cease once the target recovers from distress.

The results from Panel C of Table 9 suggest that post-takeover distress is more severe when the new controlling shareholder's ownership is low, implying that financial performance post-takeover might be influenced by the degree of agency problems of the new controlling

shareholder. This is consistent with Byun, Kim, Lee, and Park (2019), who find that the probability of post-takeover fraud among Korean firms is higher when the acquired control block is smaller.

To further assess the causal effect of takeover on financial distress, we construct a matched sample of non-target firms with similar characteristics to the targets but not acquired during the sample period. Specifically, we use propensity score matching to select a control firm with similar characteristics to the target in the year before the takeover. Matching is performed in two stages: first, we use a logit model to obtain a propensity score based on firm characteristics, then match targets and non-targets without replacement within the same industry (KSIC 2-digit) by identifying the ones with the closest propensity scores and using the Caliper method to improve matching quality by placing an upper limit on the propensity score distance (Caliper = 0.05). Variables used for matching include firm size, sales growth rate (growth opportunity), leverage (capital structure), age (information asymmetry), and cash holdings (liquidity). All targets and their matched control firms are publicly traded.

Appendix 2 presents a balance test result verifying the success of the target and non-target matching. For the matched sample, we estimate the following difference-in-differences specification:

$$Y_{i,t} = \alpha + \beta_1 Target_{i,t}(Seller_{i,t}) + \beta_2 After_t + \beta_3 Target_{i,t}(Seller_{i,t}) * After_t \quad (2) \\ + \gamma Controls_{i,t} + FE + \varepsilon_{i,t}$$

where *Target (Seller)* is a dummy variable equal to one if the firm is a target (seller). *AFTER* is a dummy variable equal to one for the post-takeover years. The dependent variables are financial distress proxies such as *ROA*, *Lnintcov*, and *Kscores*. Control variables are the same as in the ordered logit model in the previous section. We also include 2-digit industry fixed effects and year fixed effects, and cluster standard errors at the industry level. For discreet

dependent variables, i.e., *Deficit*, *Caper*, and *Dintcov*, we report the estimation result from corresponding logit models. Our dataset spans five years around the takeover, excluding firm-year observations of the takeover year.

<Table 10>

The results from Panel A of Table 10 indicate that financial performance of targets in general further deteriorates following a takeover while no changes are observed among matched control firms during the same period. Specifically, when the dependent variable is a continuous financial distress proxy, the coefficients for *Target*After* are all significantly negative, and for dummy dependent variables, the coefficients are significantly positive, except for *Dintcov*. Again, these results are inconsistent with the findings of Erel, Jang, and Weisbach (2015) that acquisitions mitigate financial frictions of target firms.

The results from Panel B of Table 10, on the other hands, indicate that financial performance of the seller does not change significantly following the sale of the subsidiary. This suggests that subsidiary sales neither particularly help nor harm the financial health of parent companies in distress.

5. Mechanisms

If acquisitions of a distressed target lead to further distress of the target, why would the acquirer take over the target in the first place? In this section, we examine possible mechanisms that can help explain why distressed targets are acquired in the first place, although the distress gets even worse following the takeovers.

While the efficiency hypothesis suggests value-maximizing corporate takeovers, previous research offers several explanations for unprofitable acquisitions observed in data. These include hubris, empire building, and agency problems (Roll, 1986; Jensen, 2005;

Masulis, Wang, and Xie, 2007; Billett and Qian, 2008; Karolyi, Liao, and Loureiro, 2015), bidder overconfidence stemming from prior successful acquisitions (Loderer and Martin, 1990; Ahern, 2010), fluctuations in an acquirer's growth opportunities (Klasa and Stegemoller, 2007), and variations in merger synergies over time (Dessaint, Eckbo, and Golubov, 2021), among others. On the other hand, a learning hypothesis suggests that the declining returns over successive acquisitions are not a consequence of suboptimal corporate behaviors (Aktas, de Bodt, and Roll, 2009, 2011, 2013). Macias, Rau, and Stouraitis (2023) find the returns to frequent serial acquirers to be non-decreasing once being adjusted for market anticipation.

In the context of acquiring distressed targets, Meier and Servaes (2019) document higher announcement returns to acquirers of distressed targets than those of regular targets, which is consistent with acquirers benefiting from fire sale of the distressed targets. This evidence suggests a value-maximizing rationale behind the acquisitions of distressed targets.

Combining these results in the literature with a unique institutional characteristic in Korea, i.e., the competition among family business groups, we focus on racing to top the business group ranking as a mechanism of our finding that multiple acquisitions of a distress target lead to its further distress.

5.1 Aspiration for Climbing the *Chaebol* Ranking

In Korea, rankings among business groups, also known as *chaebol*, matter across many dimensions.⁵ Highly ranked business groups earn more media attention, attract more investments and talents, and secure external financing more easily. Chairmen of highly ranked business groups even get a higher priority in protocols during important national events, such

⁵ The official ranking of Korean large business groups is released annually by the Korea Fair Trade Commission (KFTC).

as presidential meetings with corporate leaders.⁶ Hence, corporate managers have incentives to increase the size of their business groups by acquiring more firms, sometimes, however, at the expense of other shareholders.⁷

For example, Park Sam-Koo, former chairman of Kumho-Asiana Group, aggressively expanded the group's scale after his inauguration. In 2006, he acquired Daewoo Engineering & Construction for 6.4 trillion won (4.65 billion USD, approximately), and in 2008, he acquired Korea Express for 4.1 trillion won, elevating the group to the 7th rank in the business group ranking. However, during the acquisition of Daewoo Engineering & Construction, he offered more than 2 trillion won (1.45 billion USD) above the market's expected price, and to cover this, he had to borrow a substantial amount of 3.5 trillion won from financial institutions. Moreover, following the acquisition, the global financial crisis of 2008 led to a prolonged downturn in the construction market, causing the stock price to plummet. Unable to repay the borrowed funds from the financial sector, the group decided in June 2009 to resell its stake in Daewoo Engineering & Construction, effectively beginning the process of abandonment. To make matters worse, delays in the sale of Daewoo Engineering & Construction led to other affiliates, including Kumho Industrial and Kumho Tire, entering corporate restructuring programs at the end of 2009. Kumho Petrochemical and Asiana Airlines also applied for autonomous agreements, a type of restructuring, resulting in a liquidity crisis for the entire group.

If our finding that acquisitions of distressed targets lead to further distress of the targets is driven by this aspiration for climbing the business group ranking, we expect that our results on the post-takeover performance in Section 4 (those in Table 10, in particular) would be more

⁶ In Korea, chairman usually refers to the top family controlling shareholder of the business group, not the chair of the board of directors.

⁷ It is often covered by media how Korean business groups indeed engage in competing over the business group ranking. See, for instance, the article at <https://www.newspim.com/news/view/20221206000644> (in Korean).

pronounced among the takeovers in which the target size is larger compared to the acquirer size. In the U.S. where most of the large M&As are financed by stock (issued by the acquirer), virtually none of our sample control transactions are financed by stock, but rather by cash, which would create cash shortage for smaller acquirers targeting large targets.

To test this prediction, we first define a deal-level variable *target-to-acquirer relative size* as the target's pre-takeover total assets minus the acquirer's pre-takeover total assets, scaled by the acquirer's pre-takeover total assets. We define a target as a *Big Target* if its target-to-acquirer relative size is greater than the sample median of this variable. Then we interact the *After* dummy in Equation (1) with the *Big Target* dummy and estimate the resulting fixed-effect panel regression model for our financial distress proxies, i.e., *ROA*, *Lnintcov*, *Kscores*, *Deficit*, *Caper*, and *Dintcov*.

Table 11 reports the results. The coefficient estimates on the interaction term *Big Target*After* are negative and statistically significant for profitability/solvency proxies (*ROA*, *Lnintcov*, *Kscores*) and positive and statistically significant for the distress dummy variables (*Deficit*, *Caper*, *Dintcov*). They are also economically significant when compared with the sample means of the outcome variables. These results suggest that targets' deteriorated post-takeover distress documented in Section 4 is more pronounced when the relative size of the target to the acquirer is larger, i.e., when the acquirer buys a big target compared to its own size. This, in turn, suggests that our earlier findings are driven by corporate managers' aspiration to climb up the ranking of business groups in Korea.

<Table 11>

5.2 Lack of Skills to Pick a Right Target

Another possibility of why distressed targets are acquired and how they become even more distressed later is that acquirers may lack skills to choose a good target. Prior studies (e.g.,

Hayward, 2002; Aktas, De Bodt, and Roll, 2009; Ahern, 2010; Macias, Rau, and Stouraitis, 2023) suggest that serial acquirers learn from successive acquisitions, thereby improving target identification and selection process, valuation skills, takeover process, bidding accuracy, etc. If this is the case, the deterioration of financial distress of the targets documented in the current study would be mitigated when acquirers are experienced in making acquisitions.

To test this hypothesis, we define an acquirer as ‘*experienced*’ (*Exp. Acquirer*) if it has ever acquired a target in the past.⁸ Similar to the test specification used in the previous section (i.e., Section 5.1), we interact this binary variable with the *After* dummy in Equation (1) and estimate the fixed-effect panel regression model for our distress outcome variables, i.e., *ROA*, *Lnintcov*, *Kscores*, *Deficit*, *Caper*, and *Dintcov*.

The results reported in Table 12 show no statistically significant coefficient estimates for the interaction term *Exp. Acquirer*After*. This indicates that there is no cross-sectional difference in post-takeover performance of distressed targets depending on whether the acquirer has any experience of takeover in the past or not. Therefore, the results documented in this section are inconsistent with the selection skill hypothesis and suggest that our earlier findings are not merely the evidence of acquirers lacking necessary skills to pick right targets.

<Table 12>

5.3 Optimal Takeover Decision

While the overall findings in the current study are pointing to suboptimal corporate behaviors around the acquisitions of distressed targets, we cannot fully reject the possibility that acquirers make *ex ante* optimal takeover decisions. Distressed targets tend to be sold in

⁸ This definition is different from “serial acquirers” in the literature, which are normally defined as those who satisfy a certain threshold in their past acquisition activities (e.g., Fuller, Netter, and Stegemoller, 2002; Klasa and Stegemoller, 2007; Golubov, Yawson, and Zhang, 2015; Karolyi, Liao, and Loureiro, 2015; Arian and Stulz, 2016).

fire sales, which benefits buyers (Meier and Servaes, 2019). It may then be the case that the benefits from fire sales are larger than costs related to further distress of the targets later on. Alternatively, the rank-up motivation discussed in Section 5.1 may be value-increasing if benefits from a higher ranking that better helps acquiring firms secure more external funds and attract more talents are large enough to offset costs of acquiring and managing distressed targets.

Assessing the optimality of a corporate policy is challenging. One popular way to do this is the event study which, in the context of corporate takeovers, examines the stock returns around the announcements of M&A deals. Unfortunately, there are some difficulties in conducting an event study using Korean M&A data. Chaebol groups report changes related to their subsidiaries to the Korea Fair Trade Commission (KFTC). However, these reports are made retroactively, rendering the report dates unsuitable for event studies. Non-chaebol firms do not have a separate reporting requirement to the KFTC; only changes in shareholders are disclosed retroactively. Consequently, we collect announcement dates by identifying their first appearance in media sources. Unfortunately, this approach yields only a limited number of announcement dates. Additionally, many cases involve acquirers that are non-listed private companies, further complicating the process. After manually collecting announcement dates through news searches, we obtain a small sample comprising 132 targets and 63 acquirers.

With this limitation in mind, we conduct an event study for the limited sample of identifiable takeover announcements. We follow the market-model event study approach by Mitchell and Lehn (1990) and compute firm i 's abnormal return on date t as

$$ar_{it} = r_{it} - \hat{\alpha}_i - \hat{\beta}_i r_{mt}$$

where r_{it} is the daily stock return and r_{mt} is the daily return on KOSPI index on date t . $\hat{\alpha}_i$ and $\hat{\beta}_i$ are estimated based on the market model using time-series data from the period 170 through 21 trading days prior to the takeover announcement. Then we calculate cumulative abnormal

returns (CARs) over varying event windows and take the average across all target and acquiring firms, separately. We also compute the average CARs for subsamples of *New-type*, *Old-type*, *Direct-type*, and *Indirect-type* target and acquiring firms, respectively.

The resulting average CARs are reported in Appendix 3. The positive and statistically significant average CARs for target firms suggest that the shareholders of distressed targets benefit from the takeovers. Unlike findings by Meier and Servaes (2019), distressed targets in Korea do not seem to suffer losses due to fire sales. Furthermore, the magnitude of the positive market reaction to targets around takeover announcements is larger for distressed targets issuing new equities to the acquirers (*New-type*), which reflects the market's hope for improvement of financial distress by new capital injections.

On the other hand, the insignificant average CARs for acquiring firms indicate that distressed target takeovers are neither value-increasing, nor value-destroying. It may suggest that acquiring firms in Korea do not benefit much from fire sales of distressed targets, which is, again, different from what Meier and Servaes (2019) document using the U.S. data. Yet, it also suggests that the market finds it suboptimal for acquiring firms to buy distressed targets, because, otherwise, we would expect positive announcement CARs for acquirers. One thing worth noting here is that the average CARs are marginally negative (i.e., statistically significant at the 10% level) for acquiring firms who do not inject new capital into the target firms as the latter do not issue new equity shares (i.e., *Old-type*). This may suggest that the market takes it as a signal that acquiring firms do not have a strong will to resolve the targets' financial distress, which then will put acquiring shareholders in an even harder situation to sell the targets at a better price. This result is somewhat consistent with our earlier findings in Panel C of Table 9 which show that deteriorated post-takeover distress is severer among targets without new equity issuances.

The event study results should be interpreted with caution as it is executed with a very

limited sample of takeover announcements. That being said, at least the sample of takeovers used in this analysis shows evidence inconsistent with the optimality hypothesis.

Overall, the results in this section are consistent with the empire-building hypothesis of corporate takeovers. That being said, we acknowledge that there could be many plausible alternative mechanisms that we cannot fully rule out.

6. Further Discussions

In this section, we further examine whether the size of a distressed target influences the type of takeovers. The prevalent "too big to fail" argument suggests that large distressed targets are more likely to receive bailouts. In Korea, financial regulators often collaborate with the government to manage large firms in financial distress for political and social reasons. Consequently, we anticipate that the *New, Indirect-type* of takeover, where new shares are issued to recapitalize the target and financial institutions play a crucial role, will be more common among large targets.

To test this hypothesis, we conduct a multinomial logit analysis. We classify all takeovers in our sample into four types: *Old-Direct (OD)*, *Old-Indirect (OI)*, *New-Direct (ND)*, and *New-Indirect (NI)*. The *Old-Direct (OD)* type takeovers serve as the baseline group. The explanatory variables are consistent with those used in the ordered logit model from the previous section. Additionally, we include two-digit industry fixed effects, year fixed effects, and use industry-clustered standard errors.

<Table 13>

Table 13 presents the estimates from the multinomial regressions. With *OD-type* targets as the baseline, the coefficients reflect the probability of a specific type of takeover relative to the *OD-type*. Our analysis focuses on the interaction term between financial distress

variables and firm size. The coefficients of the interaction term for *NI-type* takeovers are statistically significant across three specifications, indicating that large firms experiencing severe financial distress are more likely to undergo *New, Indirect* takeovers. In such takeovers, the acquirer injects new capital into the target firm, which then becomes a partial subsidiary, rather than paying the target's shareholders. Additionally, in many *Indirect-type* takeovers, creditor banks may remain the largest shareholders if no non-financial bidder emerges. Large firms are often not liquidated due to concerns about potential externalities, such as negative impacts on employment and suppliers. Therefore, the *NI-type* may serve as a potential bailout mechanism for large firms under severe financial distress.

7. Conclusions

Despite the extensive literature on U.S.-type corporate takeovers, i.e., mergers, studies specifically addressing takeovers through the transfer of control between controlling shareholders are scarce. This study investigates a comprehensive sample of control transfers in Korea to identify the potential determinants and consequences of these control transfers.

Our first finding is that one of the most important determinants of a takeover in Korea is financial distress in the target. Firms in distress are targeted not only once, but multiple times by different acquirers at various points in time. This pattern indicates that takeovers rarely occur under normal circumstances, likely due to the substantial private benefits enjoyed by controlling shareholders in Korea, who make every effort to retain their controlling stake and remain in control. However, when a firm encounters financial difficulties, the associated private benefits for controlling shareholders may diminish, reducing the appeal of their controlling stake and making the firm a potential takeover target.

At the same time, the target firm requires external capital to address its financial distress, especially when DIP (Debtor-in-Possession) financing is not available, which explains

the prevalence of *New-type* takeovers as a solution for companies in severe financial distress. Additionally, parent firms may sell their subsidiaries when they themselves are in distress, suggesting that the financial distress of either the target or the seller can be a motive for a takeover.

Unfortunately, takeovers driven by the financial distress of targets do not significantly mitigate the distress. Instead, their financial distress tends to further deteriorate following a takeover. Our analysis based on cross-sectional variations in acquirer-target size difference and acquirers' past takeover experience as well as an event study methodology suggests that this may reflect bidders' empire building motivations, or business group ranking aspirations more specifically, rather than value maximization or the lack of skills to pick the best targets.

The contributions of this study are threefold: First, we identify the financial distress of a target or its controlling shareholders as a crucial motive for corporate takeovers in Korea, a factor that may also be significant in other emerging markets with concentrated ownership and high private benefits. Second, we introduce the concept of *New-type* takeovers, where control transfer and capital raising occur simultaneously, highlighting that equity issues in Korea often occur through distressed targets in takeovers, and these phenomena cannot be analyzed independently. Finally, we challenge the validity of the market for corporate control as a governance mechanism, as our findings indicate that such takeovers not only fail to alleviate financial distress but also exacerbate it.

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<Appendix 1> Definition of the Variables

Name	Descriptions
<i>Dependent variables</i>	
Target	A dummy variable with a value of 1 if the firm is a target, and 0 otherwise
Type	A variable with a value of 1 if the firm is a target of a <i>New-type</i> takeover, 2 if it is that of an <i>Old-type</i> takeover, and 3 if it is not a target
<i>Distress variables</i>	
ROA	Net income scaled by the book value of total assets
Lnintcov	Log value of 2 plus operating income divided by interest expense
Kscore	Altman et al (1995) introduced the following model to predict the probability of bankruptcy in the Korean companies:
	$Kscore1 = -17.862 + 1.472*(X1) + 3.041*(X2) + 14.839*(X3) + 1.516*(X4)$
	$Kscore2 = -18.696 + 1.501*(X1) + 2.706(X2) + 19.760 (X3) + 1.146 (X4')$
	X1: log(Total assets)
	X2: log(Sales/Total assets)
Deficit	X3: Retained earnings/Total assets
	X4(KS2): Market value of equity/Total liabilities
	X4'(KS2): Book value of equity/ Total liabilities
Deficit	A dummy variable with a value of 1 if net income is negative for two consecutive years, or 0 otherwise
Caper	A dummy variable with a 1 if capital erosion occurs, or 0 otherwise. Capital erosion is considered to occur when the paid-in-capital (the total book equity-retained earnings) is greater than or equal to the total book equity.
Dintcov	A dummy variable with an value of 1 if operating income is less than interest expense or 0 otherwise
<i>Control variables</i>	
Assetbeta	Unlevered beta, estimated value using three-year average stock beta and Hamada equation
Size	Log of total assets
Lev	Total liabilities/Total assets
Cash	Cash and cash equivalents/Total assets
Age	Number of years from the established year
Sgr	Sales growth rate
Lown	The largest shareholder ownership
Fown	The foreign investor ownership
Mtb	Market value of equity/Book value of equity
Fcf	Operating cash flow/Total assets
Tang	Tangible assets/Total assets

<Appendix 2> Balance Tests

This table determines whether the observed characteristics are significantly different between the treated group and the control group used in Table 10. Propensity score matching is used to construct a control group similar to that of acquirer and target based on the year before the takeover. We use the observed characteristics from the previous year to calculate a propensity score such as firm size (log of total assets), sales growth rate (growth opportunity), leverage (capital structure), and cash holdings (liquidity), and match firms in the same industry (KSIC 2-digit) with Caliper=0.05 without replacement. If the acquirer is a publicly traded firm, it has performed matching with the publicly traded firm. Inversely, if the acquirer is a privately held firm, it has performed matching with the privately held firm. On the other hand, all targets in the sample are publicly traded, and their matched controls are also publicly traded. Panel A compares the characteristics of non-acquirers and acquirers after matching. Panel B compares the characteristics of non-targets and targets after matching.

Panel A. Target and non-target controls					
	Target (N=1,098)	Non-target (N=1,098)	Diff	t Value	Pr > t
Size	17.77	17.72	0.05	-0.97	0.33
Sales growth	13.09	14.45	-1.36	0.50	0.62
Leverage	0.54	0.53	0.00	-0.14	0.89
Age	21.91	21.70	0.21	-0.38	0.70
Cash	0.09	0.09	0.00	-0.01	0.99
Panel B. Seller and non-seller controls					
	Seller (N=234)	Non-seller (N=234)	Diff	t Value	Pr > t
Size	18.40	18.38	0.03	-0.19	0.85
Sales growth	0.27	0.44	-0.17	0.62	0.54
Leverage	0.54	0.52	0.02	-0.58	0.56
Age	23.18	23.59	-0.41	0.27	0.78
Cash	0.06	0.06	0.00	-0.17	0.87

<Appendix 3> Value Consequences of Takeovers

This table reports the average cumulative abnormal returns (CARs) of targets and acquirers, in Panels A and B, respectively, around takeover announcement dates. Following the market-model event study approach by Mitchell and Lehn (1990), the abnormal return is defined as

$$ar_{it} = r_{it} - \hat{\alpha}_i - \hat{\beta}_i r_{mt},$$

where r_{it} is the daily stock return of firm i (target or acquirer) on date t and r_{mt} is the daily return on KOSPI index on date t . $\hat{\alpha}_i$ and $\hat{\beta}_i$ are estimated using the market model from the period 170 through 21 trading days prior to the takeover announcement. We use four different event windows to compute CARs : from one day before to one day after, from five days before to one day after, from five days before to forty days after, and from twenty days before to forty days after. Along with those for the entire sample of takeovers, we report the estimated average CARs and t -statistics (in parentheses) separately for *New-type*, *Old-type*, *Direct-type*, and *Indirect-type* takeovers, where *New-type* refers to control transfers where new shares are issued by the target to form a new controlling block to be held by the acquirer, *Old-type* refers to transfers of existing control block of shares, *Direct-type* refers to transfers between two non-financial firms, and *Indirect-type* refers to cases where a financial institution is involved as (temporary) largest shareholder between outgoing and incoming largest shareholders.

Panel A. Abnormal return of the targets									
Event window	[-1, +1]			[-5,+1]		[-5, +40]		[-20, +40]	
	N	CAR	t -stats	CAR	t -stats	CAR	t -stats	CAR	t -stats
Entire sample	132	7.4	(4.3)	12.7	(4.9)	19.8	(2.5)	27.5	(3.2)
New-type	69	9.2	(3.2)	15.1	(3.9)	30.0	(2.3)	39.5	(2.8)
Old-type	63	5.4	(2.9)	9.9	(3.0)	8.5	(1.0)	14.3	(1.6)
Direct-type	82	8.8	(3.9)	15.7	(4.6)	32.9	(3.4)	41.0	(4.2)
Indirect-type	50	5.0	(1.9)	7.6	(2.1)	-1.7	(0.1)	5.3	(0.3)

Panel B. Abnormal return of the acquirers									
Event window	[-1, +1]			[-5,+1]		[-5, +40]		[-20, +40]	
	N	CAR	t -stats	CAR	t -stats	CAR	t -stats	CAR	t -stats
Entire sample	63	-1.1	(0.8)	-0.5	(0.3)	-6.2	(0.9)	-10.3	(1.2)
New-type	38	0.5	(0.3)	1.7	(0.7)	-0.9	(0.1)	-7.5	(0.6)
Old-type	25	-3.7	(1.6)	-4.0	(1.6)	-15.1	(1.7)	-15.1	(1.5)
Direct-type	32	-2.1	(1.0)	-0.2	(0.1)	-4.8	(0.6)	-6.1	(0.6)
Indirect-type	31	0.0	(0.0)	-0.7	(0.3)	-7.7	(0.7)	-14.6	(1.0)

<Table 1> Sample Selection Procedure

This table describes the sample selection procedure of control transfers of firms listed on Korea Exchange (KRX), including both KOSPI market and KOSDAQ market, between October 2004 and December 2017. We start from all disclosures of changes in the largest shareholder. Panel A outlines filters applied and the number of observations excluded at each stage. The size or amount of takeover is calculated by multiplying the stock price at the reporting date and incremental number of shares held by the new controlling shareholder. The first three columns of Panel B present the distribution of the frequency of being targeted and the unique number of firms that corresponds to each frequency. The last three columns of Panel B present the sequence of (multiple) takeovers for a given target and the number of takeovers that corresponds to each sequence.

Panel A. Takeover Sample					
Total disclosures of changes in the largest shareholder					4,029
(1) Target is a financial firm					113
(2) Deals between related parties					1,038
(3) Deals between financial firms in Indirect-type takeovers					449
(4) Previous controlling shareholders unilaterally reduce their shares					209
(5) In case the contract is canceled after disclosure, financial statements are missing and miscellaneous such as SPAC listing					252
(6) If the amount purchased is less than 5% of market value					491
(7) If the ownership of controlling shareholder after the takeover is less than 5%					60
(8) If the amount purchased is less than 1 billion KRW					75
Final sample					1,342
Panel B. Frequency of Takeovers					
	Number of firms	(%)		Number of takeovers	(%)
1 time	398	(54.5)	1 st	730	(54.4)
2 times	168	(23.0)	2 nd	332	(24.7)
3 times	86	(11.8)	3 rd	164	(12.2)
4 times	48	(6.6)	4 th	78	(5.8)
5 times	22	(3.0)	5 th	30	(2.2)
6 times	8	(1.1)	6 th	8	(0.7)
Total	730	(100.0)	Total	1,342	(100.0)

<Table 2> Different Types of Takeovers

This table presents the distribution of takeovers by four types (2 x 2). *New-type* refers to control transfers where new shares are issued by the target to form a new controlling block to be held by the acquirer. *Old-type* refers to transfers of existing control block of shares. *Direct-type* refers to transfers between two non-financial firms. *Indirect-type* refers to cases where a financial institution is involved as (temporary) largest shareholder between outgoing and incoming largest shareholders. Control transfer from a non-financial to a financial is not counted as a separate takeover. Panel A reports the numbers and Panel B reports the dollar amount by each type. Panel C reports the average and median dollar amounts for each type.

Panel A. Frequency of Takeovers by Type						
	Direct		Indirect		All	
	N	(%)	N	(%)	N	(%)
New	368	(27.4)	80	(6.0)	448	(33.4)
Old	808	(60.2)	86	(6.4)	894	(66.6)
All	1,176	(87.6)	166	(12.4)	1,342	(100.0)
Panel B. Total Amounts of Takeovers (Units: KRW billions, %) by Type						
	Direct		Indirect		All	
New	13,191	(23.2)	13,408	(23.6)	26,599	(46.8)
Old	24,585	(43.3)	5,593	(9.9)	30,177	(53.2)
All	37,776	(66.5)	19,000	(33.5)	56,776	(100.0)
Panel C. Average [Median] Amounts (Unit: KRW billions) by Type						
	Direct		Indirect		All	
New	35.8	[6.1]	167.6	[18.1]	59.4	[6.7]
Old	30.4	[7.4]	65.0	[11.7]	33.8	[7.5]
All	32.1	[6.9]	114.5	[12.5]	42.3	[7.3]

<Table 3> Ownership of Controlling Shareholder before and after Control Changes

This table shows the number of takeover deals between 2004 and 2017 and the average ownership of the former controlling shareholders and the new controlling shareholders before and after the takeover.

Num. of deals				Ownership (%)											
Year	Sum	New-type	Old-type	New-type						Old-type					
				Old-shareholder			New-shareholder			Old-shareholder			New-shareholder		
				Before	After	Diff	Before	After	Diff	Before	After	Diff	Before	After	Diff
2004	19	7	12	8.0	1.7	-6.3	0.1	35.3	35.2	32.5	3.1	-29.4	1.2	38.2	37.0
2005	94	26	68	12.8	6.2	-6.6	2.7	22.0	19.4	26.8	7.4	-19.5	1.6	24.9	23.2
2006	131	28	103	12.7	9.1	-3.6	1.2	20.2	19.0	25.8	6.4	-19.4	3.0	23.4	20.5
2007	210	60	150	12.7	7.0	-5.8	1.7	21.1	19.4	23.5	4.2	-19.2	2.1	20.9	18.8
2008	202	59	143	12.0	6.9	-5.1	1.3	22.4	21.1	22.0	4.7	-17.3	2.4	22.2	19.9
2009	137	54	83	12.4	7.4	-5.0	1.6	26.0	24.4	23.3	4.3	-18.9	3.4	25.7	22.3
2010	98	30	68	13.1	8.1	-5.0	1.5	24.5	23.0	26.6	5.9	-20.7	2.3	27.4	25.1
2011	48	13	35	16.6	13.0	-3.6	3.8	34.8	31.0	30.4	7.2	-23.2	3.6	25.3	21.8
2012	66	26	40	13.3	8.0	-5.3	2.3	27.8	25.5	30.0	6.2	-23.9	2.9	27.3	24.4
2013	43	17	26	19.0	9.3	-9.7	1.5	28.7	27.2	25.7	4.7	-21.1	1.4	23.8	22.3
2014	52	19	33	14.1	7.3	-6.8	2.9	25.5	22.5	34.5	4.1	-30.4	2.2	33.1	30.8
2015	79	35	44	15.9	7.7	-8.2	2.8	26.0	23.2	29.9	4.5	-25.4	0.9	27.0	26.1
2016	93	37	56	12.0	7.0	-5.0	1.7	21.2	19.5	25.0	4.5	-20.5	1.3	19.2	17.9
2017	78	29	49	12.3	8.2	-4.0	0.9	18.6	17.7	29.4	3.8	-25.5	1.4	25.2	23.8
Sum	1,338	428	910	13.2	7.6	-5.6	1.8	23.7	22.0	25.8	5.1	-20.7	2.3	24.2	22.0

<Table 4> Summary Statistics for Targets

This table presents the summary statistics of takeover targets. Panel A shows the averages of the main variables for both target firms and non-targeted firms. Panel B shows the target firm characteristics by the order of takeover transactions. Variables are lagged by one year in both panels. Detailed definitions of all variables are presented in <Appendix 1>. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A. Summary Statistics of Targets by Different Types											
	Target	Non-target	Diff		New	Old	Diff		Direct	Indirect	Diff
N	1,342	35,550			467	916			1,176	166	
ROA	-0.24	0.01	-0.24 ***		-0.40	-0.17	-0.24 ***		-0.23	-0.26	0.02
Lnintcov	1.72	2.25	-0.52 ***		0.94	2.03	-1.09 ***		1.80	1.27	0.53 **
Kscore1	-4.30	5.07	-9.37 ***		-11.97	-0.96	-11.01 ***		-4.21	-4.97	0.77
Deficit	0.51	0.14	0.37 ***		0.73	0.42	0.31 ***		0.51	0.52	0.00
Caper	0.60	0.21	0.39 ***		0.83	0.50	0.33 ***		0.59	0.67	-0.08 **
Dintcov	0.71	0.30	0.41 ***		0.85	0.64	0.21 ***		0.71	0.69	0.01
Size	17.65	18.43	-0.78 ***		0.71	0.47	0.23 ***		0.53	0.69	-0.16 ***
Lev	0.55	0.50	0.05 ***		0.08	0.09	-0.02 ***		0.09	0.08	0.00
Cash	0.09	0.08	0.01 ***		23.60	21.13	2.47 ***		21.66	23.92	-2.26 **
Age	21.94	25.13	-3.19 ***		17.62	17.65	-0.02 ***		17.57	18.22	-0.64 ***
Assetbeta	0.02	0.01	0.00 ***		0.01	0.02	-0.01 ***		0.02	0.02	0.00
Sgr	11.41	18.74	-7.33 ***		8.45	12.82	-4.37 ***		12.07	6.59	5.48
Lown	26.72	40.31	-13.58 ***		19.08	29.87	-10.79 ***		26.83	25.97	0.86
Fown	3.36	6.29	-2.94 ***		2.45	3.78	-1.33 ***		3.17	4.73	-1.56 **
Mtb	2.03	1.37	0.66 ***		2.19	1.94	0.25 **		2.12	1.39	0.72 ***
Fcf	-0.10	0.04	-0.14 ***		-0.21	-0.04	-0.17 ***		-0.10	-0.06	-0.04
Tang	0.26	0.32	-0.05 ***		0.26	0.27	-0.01		0.26	0.30	-0.04 **
Panel B. Targets by Order of Control Transfer (Mean)											
	0	1	2	3	4 or more						
N	35,550	730	332	164	116						
ROA	0.01	-0.16	-0.31	-0.36	-0.36						
Lnintcov	2.25	2.06	1.18	1.16	1.01						
Kscore1	5.07	0.11	-7.72	-10.39	-13.55						
Deficit	0.14	0.42	0.59	0.68	0.70						
Caper	0.21	0.46	0.68	0.85	0.88						
Dintcov	0.30	0.61	0.78	0.85	0.88						
Size	0.50	0.53	0.59	0.54	0.56						
Lev	0.08	0.09	0.09	0.08	0.09						
Cash	25.13	21.24	22.14	22.54	24.95						
Age	10.78	10.36	11.68	12.45	14.59						
Assetbeta	18.43	17.84	17.49	17.39	17.31						
Sgr	0.01	0.02	0.02	0.02	0.02						
Lown	18.74	10.66	15.35	7.92	9.71						
Fown	40.31	30.70	24.54	19.76	17.90						
Mtb	6.29	4.36	2.18	1.65	2.83						
Fcf	1.37	1.80	2.22	2.30	2.53						
Tang	0.04	-0.05	-0.16	-0.14	-0.17						

<Table 5> Summary Statistics for Sellers

This table reports the composition and characteristics of the sellers. Panel A presents the frequency of each type of sellers. Externally-audited firms are those whose financial statements are audited by external auditors and filed at regulatory authorities. Panel B presents the univariate comparison of firm characteristics between the sellers and the non-sellers. Non-sellers are the controlling shareholders of a non-financial listed company with at least 10% ownership and who have not transferred corporate control during the sample period. Variables are lagged by one year. Detailed definitions of all variables are presented in <Appendix 1>. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A. Composition of the Sellers			
Company			534
Non-externally-audited			165
Externally-audited			369
Individual			797
Unconfirmed			11
Total			1,342
Panel B. Characteristics of Sellers vs. Non-Sellers			
	Seller	Non-seller	Diff
N	242	4,195	
ROA	-0.08	0.04	-0.12***
Lnintcov	4.65	4.87	-0.22***
Kcore2	-1.20	10.68	-11.88***
Deficit	0.32	0.06	0.25***
Caper	0.44	0.12	0.32***
Dintcov	0.56	0.20	0.36***
Size	18.45	19.89	-1.44***
Lev	0.59	0.39	0.20***
Cash	0.06	0.04	0.01***
Age	23.75	35.16	-11.40***
Sgr	0.20	0.15	0.05
Fcf	-0.02	0.05	-0.07***
Tang	0.20	0.22	-0.02*

<Table 6> Determinants of Order of Targets

This table presents coefficient estimates of multivariate ordered logit regressions in which the dependent variable is the number of times a firm has been a takeover target up to that point. All independent variables are lagged by one year. Detailed definitions of all variables are presented in <Appendix 1>. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent variable=Order of takeover						
	(1)	(2)	(3)	(4)	(5)	(6)
ROA	-1.084*** (0.264)					
Lnintcov		-0.065 (0.049)				
Kscore1			-0.009** (0.004)			
Deficit				0.620*** (0.072)		
Caper					0.666*** (0.100)	
Dintcov						0.736*** (0.081)
Assetbeta	2.409* (1.255)	5.487** (2.329)	3.922*** (1.159)	2.559** (1.240)	2.540** (1.247)	2.986** (1.311)
Size	-0.655*** (0.066)	-0.632*** (0.078)	-0.678*** (0.072)	-0.659*** (0.0711)	-0.639*** (0.070)	-0.662*** (0.074)
Lev	1.543*** (0.308)	1.874*** (0.409)	1.620*** (0.304)	1.548*** (0.281)	1.430*** (0.286)	1.404*** (0.315)
Cash	0.888 (0.672)	0.970 (0.827)	0.880 (0.655)	0.873 (0.647)	0.954 (0.666)	0.738 (0.670)
Age	-0.005 (0.003)	-0.009** (0.004)	-0.005 (0.003)	-0.006* (0.003)	-0.00670** (0.003)	-0.005* (0.003)
Sgr	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Lown	-0.030*** (0.003)	-0.035*** (0.004)	-0.031*** (0.003)	-0.029*** (0.003)	-0.027*** (0.003)	-0.033*** (0.003)
Fown	0.007 (0.005)	0.014** (0.005)	0.007 (0.005)	0.007 (0.005)	0.007 (0.005)	0.007 (0.006)
Mtb	-0.072*** (0.024)	-0.014 (0.039)	-0.036* (0.021)	-0.051** (0.02)	-0.059*** (0.022)	-0.038 (0.025)
Fcf	-0.411* (0.242)	-1.305*** (0.494)	-0.811*** (0.274)	-0.660** (0.281)	-0.754*** (0.277)	-0.495** (0.227)
Tang	0.407** (0.206)	0.077 (0.352)	0.404** (0.203)	0.380* (0.194)	0.456** (0.193)	0.403** (0.206)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,411	22,081	27,407	27,406	27,410	26,128
Pseudo R ²	0.195	0.170	0.192	0.197	0.197	0.205

<Table 7> Determinants of Takeover Types

This table presents coefficient estimates of multinomial logit regressions in which the dependent variable has a value of 1 if the firm is a target of a *New-type* takeover, 2 if it is that of an *Old-type* takeover, and 0 if it is not a target, which is the baseline case. All independent variables are lagged by one year. Control variables are Assetbeta, Size, Lev, Cash, Age, Sgr, Lown, Fown, Mtb, Fcf, and Tang. Detailed definitions of all variables are presented in <Appendix 1>. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old
ROA	-1.378*** (0.260)	-0.759*** (0.278)										
Lnintcov			-0.085 (0.118)	-0.069* (0.039)								
Kscore1					-0.023*** (0.007)	-0.001 (0.004)						
Deficit							1.066*** (0.117)	0.414*** (0.083)				
Caper									1.186*** (0.150)	0.434*** (0.106)		
Dintcov											1.070*** (0.140)	0.633*** (0.085)
Controls	Yes		Yes		Yes		Yes		Yes		Yes	
Industry FE	Yes		Yes		Yes		Yes		Yes		Yes	
Year FE	Yes		Yes		Yes		Yes		Yes		Yes	
Observations	27,411		22,081		27,407		27,406		27,410		26,128	
Pseudo R ²	0.236		0.215		0.234		0.393		0.239		0.248	
	chi2=4.77 Prob>chi2= 0.029		chi2=0.02 Prob>chi2=0.876		chi2=8.07 Prob>chi2=0.005		chi2=30.77 Prob>chi2=0.000		chi2=37.94 Prob>chi2=0.000		chi2=13.76 Prob>chi2=0.000	

<Table 8> Determinants of Sellers

This table presents coefficient estimates of binary logit regressions in which the dependent variable is a dummy variable with a value of 1 if the firm is a seller, and 0 otherwise. All independent variables are lagged by one year. Detailed definitions of all variables are presented in <Appendix 1>. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
ROA	-2.125*** (0.802)					
Lnintcov		-0.415 (0.266)				
Kscore2			-0.020 (0.018)			
Deficit				0.851*** (0.231)		
Caper					1.173*** (0.266)	
Dintcov						0.533** (0.266)
Size	-0.572*** (0.100)	-0.654*** (0.095)	-0.572*** (0.109)	-0.588*** (0.104)	-0.577*** (0.098)	-0.610*** (0.102)
Lev	0.162 (0.491)	0.708* (0.418)	0.189 (0.751)	0.354 (0.462)	0.198 (0.469)	0.568 (0.398)
Cash	3.356*** (1.275)	3.573** (1.544)	3.255** (1.393)	3.637*** (1.343)	3.661** (1.468)	3.813*** (1.458)
Age	-0.010 (0.011)	-0.010 (0.015)	-0.010 (0.011)	-0.009 (0.011)	-0.007 (0.012)	-0.010 (0.013)
Sgr	0.069 (0.058)	0.0431 (0.059)	0.024 (0.060)	0.043 (0.062)	0.020 (0.055)	0.063 (0.054)
Fcf	-4.193*** (1.033)	-4.329*** (1.086)	-4.665*** (0.999)	-4.482*** (0.966)	-4.594*** (0.967)	-4.032*** (1.025)
Tang	0.531 (0.596)	0.420 (0.580)	0.703 (0.630)	0.591 (0.607)	0.548 (0.601)	0.551 (0.598)
Constant	8.732*** (2.029)	12.04*** (2.262)	8.877*** (2.118)	8.844*** (2.163)	8.584*** (2.029)	9.032*** (2.115)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,134	3,778	4,118	4,134	4,127	3,796
Pseudo R ²	0.28	0.28	0.27	0.28	0.29	0.28

<Table 9> Performance After Takeover

This table presents coefficient estimates of regressions in which the dependent variable in each column is a proxy for financial distress. *After* is a binary variable that has a value of one for the years after the takeover, and zeros otherwise. Detailed definitions of all variables are presented in <Appendix 1>. Panel A presents the effect of the takeover on financial distress of targets. Panel B presents the effect of the takeover on financial distress by the order of takeover. All takeovers are classified into one of three categories: once refers to cases with only a single takeover, last is the final takeover for firms that has been targeted multiple times, and mid represents all takeovers that occurred prior to the final takeover for firms that has been targeted multiple times. Panel C presents the effect of the takeover on financial distress by the ownership of new controlling shareholders. Low (High) represents transactions where the ownership of new controlling shareholder is lower (higher) than the sample median. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A. Performance after takeover						
	(1) ROA	(2) Lnintcov	(3) Kscore1	(4) Deficit	(5) Caper	(6) Dintcov
<i>AFTER</i>	-0.026*	-0.115*	-2.427***	0.381***	0.756***	-0.0369
	(0.014)	(0.0644)	(0.678)	(0.101)	(0.088)	(0.108)
Assetbeta	-0.528**	9.694***	113.8***	2.735	2.283	4.535**
	(0.225)	(2.019)	(24.61)	(1.738)	(1.922)	(2.190)
Size	0.113***	0.106*	6.340***	-0.565***	-0.784***	-0.443***
	(0.017)	(0.0563)	(0.719)	(0.0941)	(0.085)	(0.075)
Lev	-0.476***	-2.562***	-24.36***	2.436***	3.706***	2.718***
	(0.074)	(0.295)	(3.557)	(0.213)	(0.373)	(0.332)
Cash	0.006	1.401	7.377	0.514	-0.106	0.460
	(0.083)	(1.246)	(5.819)	(0.592)	(0.770)	(0.601)
Age	-0.000	-0.010**	-0.125***	0.016***	0.032***	0.004
	(0.001)	(0.004)	(0.039)	(0.005)	(0.008)	(0.006)
Sgr	0.000*	0.000	0.003*	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)
Lown	0.002**	0.009***	0.108***	-0.021***	-0.041***	-0.017***
	(0.001)	(0.002)	(0.023)	(0.003)	(0.004)	(0.003)
Fown	-0.003***	0.017***	-0.0619	-0.005	0.001	-0.012
	(0.001)	(0.005)	(0.040)	(0.009)	(0.008)	(0.010)
Mtb	-0.001	0.005	0.069**	0.001	0.069***	0.006
	(0.001)	(0.003)	(0.033)	(0.005)	(0.0262)	(0.004)
Fcf	1.170***	3.794***	32.05***	-5.479***	-6.032***	-9.875***
	(0.074)	(0.431)	(5.912)	(0.524)	(0.399)	(0.744)
Tang	-0.100	-0.873**	-3.729	1.127***	0.843***	0.858*
	(0.068)	(0.347)	(2.352)	(0.370)	(0.325)	(0.452)
Constant	-2.278***	-0.064	-106.2***	4.393**	2.440	-1.195
	(0.282)	(1.125)	(13.68)	(2.153)	(2.039)	(1.703)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,443	2,312	4,442	4,398	4,410	4,207
R ² or Pseudo R ²	0.428	0.418	0.484	0.258	0.368	0.310

<Table 9> - continued

Panel B. Coefficients of <i>AFTER</i> depending on Whether it's the Last or the Middle									
	ONCE			LAST			MID		
	Coef.	Obs.	R ²	Coef.	Obs.	R ²	Coef.	Obs.	R ²
ROA	-0.008 (0.0141)	1,325	0.468	-0.002 (0.0550)	994	0.409	-0.042 (0.0313)	2,142	0.446
Lnintcov	-0.125 (0.113)	877	0.473	-0.085 (0.190)	478	0.478	-0.093 (0.0846)	958	0.415
Kscore1	-2.486** (1.040)	1,325	0.522	-2.626* (1.338)	993	0.506	-2.827** (1.215)	2,142	0.487
Deficit	0.093 (0.140)	1,299	0.268	0.181 (0.257)	948	0.254	0.676*** (0.175)	2,091	0.257
Caper	0.730*** (0.148)	1,284	0.391	0.553** (0.236)	948	0.37	1.131*** (0.173)	2,045	0.381
Dintcov	-0.228 (0.172)	1,213	0.317	-0.277 (0.225)	908	0.353	0.063 (0.186)	1,988	0.302
Panel C. Coefficients of <i>AFTER</i> depending on the ownership of new controlling shareholder									
	LOW			HIGH					
	Coef.	Obs.	R ²	Coef.	Obs.	R ²			
ROA	-0.037* (0.021)	2,138	0.429	-0.002 (0.019)	2,289	0.449			
Lnintcov	-0.019 (0.100)	920	0.417	-0.254*** (0.090)	1,388	0.457			
Kscore1	-2.907** (1.348)	2,137	0.490	-1.884*** (0.577)	2,289	0.514			
Deficit	0.679*** (0.204)	2,120	0.264	0.152 (0.097)	2,244	0.259			
Caper	0.890*** (0.152)	2,117	0.39	0.721*** (0.107)	2,259	0.351			
Dintcov	-0.053 (0.132)	1,940	0.321	0.001 (0.108)	2,137	0.294			

<Table 10> The Effects of Takeover for Targets and Sellers

This table reports the results from difference-in-differences estimation using a matched sample of non-targets. Specifically, we report the coefficient estimates from the following equation.

$$Y_{i,t} = \alpha + \beta_1 Target_{i,t}(Seller_{i,t}) + \beta_2 After_t + \beta_3 Target_{i,t}(Seller_{i,t}) * After_t + \gamma Controls_{i,t} + FE + \varepsilon_{i,t}$$

where Y is distress variable such as *ROA*, *Lnintcov*, *Kscore1*, *Deficit*, *Caper*, *Dintcov*. *After* is a dummy variable with the value of 1 if the year is later than the takeover year. Detailed definitions of all variables are presented in <Appendix 1>. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Panel A. The Effects of Takeover for Targets						
	OLS Dep=ROA	OLS Dep=Lnintcov	OLS Dep=Kscore1	LOGIT Dep=Deficit	LOGIT Dep=Caper	LOGIT Dep=Dintcov
Treatment	-0.025 (0.015)	-0.076 (0.085)	-2.453** (1.021)	0.791*** (0.140)	1.151*** (0.186)	0.889*** (0.130)
<i>AFTER</i>	-0.003 (0.006)	0.086 (0.066)	1.442*** (0.500)	-0.120 (0.134)	0.109 (0.088)	-0.032 (0.083)
Treatment * <i>AFTER</i>	-0.029* (0.016)	-0.215** (0.096)	-4.149*** (0.515)	0.417** (0.166)	0.587*** (0.134)	-0.017 (0.130)
Assetbeta	-0.503*** (0.173)	7.271*** (1.685)	148.2*** (48.10)	3.955*** (1.353)	2.702** (1.344)	5.821*** (1.886)
Size	0.080*** (0.014)	0.095*** (0.034)	4.522*** (0.659)	-0.476*** (0.075)	-0.683*** (0.070)	-0.396*** (0.054)
Lev	-0.400*** (0.054)	-3.374*** (0.300)	-23.87*** (3.819)	3.006*** (0.214)	4.105*** (0.379)	3.396*** (0.233)
Cash	0.031 (0.047)	2.085** (0.946)	6.242* (3.291)	0.172 (0.579)	-0.409 (0.665)	0.207 (0.444)
Age	-0.001 (0.000)	-0.007*** (0.002)	-0.162*** (0.024)	0.017*** (0.004)	0.023*** (0.007)	0.005 (0.005)
Sgr	0.000 (0.000)	0.000 (0.000)	0.002 (0.001)	-0.000 (0.000)	0.000 (0.000)	-0.000 (0.001)
Lown	0.001*** (0.000)	0.006** (0.002)	0.067*** (0.013)	-0.022*** (0.004)	-0.041*** (0.003)	-0.017*** (0.003)
Fown	-0.002** (0.001)	0.022*** (0.005)	-0.031 (0.046)	-0.015* (0.009)	-0.005 (0.008)	-0.018** (0.009)
Mtb	-0.001** (0.001)	0.007 (0.004)	0.081** (0.039)	-0.001 (0.004)	0.096 (0.062)	0.014 (0.015)
Fcf	1.077*** (0.072)	3.544*** (0.299)	28.99*** (4.708)	-5.660*** (0.417)	-5.281*** (0.394)	-9.348*** (0.582)
Tang	-0.020 (0.039)	-0.955*** (0.237)	-3.659** (1.441)	0.735** (0.317)	0.192 (0.400)	0.871*** (0.338)
Constant	-1.456*** (0.225)	2.693*** (0.734)	-64.18*** (11.40)	6.275*** (1.363)	10.91*** (1.251)	6.982*** (0.897)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6,451	4,169	6,449	6,404	6,426	6,138
R ² or Pseudo R ²	0.411	0.436	0.415	0.313	0.412	0.339

<Table 10> - continued

Panel B. The Effects of Takeover for Sellers						
	OLS	OLS	OLS	LOGIT	LOGIT	LOGIT
	Dep=ROA	Dep=Lnintcov	Dep=Kscore2	Dep=Deficit	Dep=Caper	Dep=Dintcov
Treatment	-0.060*** (0.011)	-0.310*** (0.088)	-3.724*** (0.913)	0.610** (0.289)	0.914*** (0.255)	0.599** (0.272)
<i>AFTER</i>	-0.006 (0.007)	0.017 (0.075)	-0.962 (0.678)	-0.155 (0.206)	0.407*** (0.156)	-0.296 (0.212)
Treatment * <i>AFTER</i>	-0.026 (0.016)	-0.026 (0.083)	-2.713*** (0.844)	0.260 (0.227)	0.044 (0.188)	0.399 (0.249)
Size	0.022*** (0.005)	0.056** (0.023)	2.570*** (0.407)	-0.211** (0.087)	-0.366*** (0.103)	-0.268*** (0.067)
Lev	-0.206*** (0.031)	-0.157*** (0.049)	-22.14*** (1.508)	1.085*** (0.309)	2.419*** (0.406)	1.544*** (0.256)
Cash	0.157** (0.067)	1.197** (0.535)	4.833 (3.861)	-1.519** (0.753)	-1.592 (1.065)	-2.818*** (0.943)
Age	-0.000 (0.000)	-0.000 (0.002)	0.051* (0.028)	-0.004 (0.009)	0.005 (0.009)	0.000 (0.006)
Sgr	0.006 (0.005)	-0.012 (0.009)	-0.288 (0.262)	0.057 (0.101)	0.053 (0.075)	-0.047 (0.132)
Fcf	0.322*** (0.058)	0.383** (0.164)	12.91*** (2.771)	-4.507*** (1.238)	-3.247*** (0.893)	-6.201*** (1.983)
Tang	0.0055 (0.028)	-0.396*** (0.125)	-7.315** (2.789)	0.755 (0.593)	0.773 (0.484)	0.610 (0.439)
Constant	-0.238** (0.107)	4.803*** (0.341)	-32.35*** (7.383)	-6.955*** (1.797)	4.709*** (1.616)	3.627*** (1.404)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,577	1,399	1,567	1,513	1,535	1,410
R ² or Pseudo R ²	0.393	0.181	0.547	0.179	0.239	0.228

<Table 11> Performance After Takeover: Big vs. Small Targets

This table presents coefficient estimates of regressions in which the dependent variable in each column is a proxy for financial distress. *Big Target* is a binary variable that has a value of one if the target's *target-to-acquirer relative size* is above the sample median, where *target-to-acquirer relative size* is defined as (target's pre-takeover total assets – acquirer's pre-takeover total assets)/acquirer's pre-takeover total assets. *After* is a binary variable that has a value of one for the years after the takeover, and zeros otherwise. Detailed definitions of all variables are presented in <Appendix 1>. The results in this table present the cross-sectional difference in the effect of takeover on financial distress of targets depending on whether the takeover is accompanied by the target's issuance of new shares to the acquirer. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1) ROA	(2) Lnintcov	(3) Kscore1	(4) Deficit	(5) Caper	(6) Dintcov
<i>Big Target</i>	-0.028 (0.264)	0.285 (0.243)	-0.942 (0.625)	-0.025 (0.908)	-3.486*** (0.000)	-3.948*** (0.000)
<i>AFTER</i>	0.044** (0.017)	-0.037 (0.801)	0.657 (0.611)	-0.090 (0.636)	-1.735 (0.153)	-2.145* (0.080)
<i>Big Target</i> <i>*AFTER</i>	-0.045* (0.067)	-0.491** (0.029)	-4.184** (0.031)	0.482* (0.060)	2.360* (0.050)	2.099* (0.099)
Assetbeta	-0.192 (0.222)	6.097*** (0.001)	97.434** (0.010)	1.921 (0.414)	0.603 (0.805)	4.154 (0.137)
Size	0.062*** (0.000)	0.171 (0.276)	5.179*** (0.000)	-0.709*** (0.000)	-0.690*** (0.000)	-0.592*** (0.000)
Lev	-0.250*** (0.000)	-3.286*** (0.000)	-24.694*** (0.000)	2.531*** (0.000)	4.721*** (0.000)	3.142*** (0.000)
Cash	-0.108 (0.240)	-0.733 (0.563)	-12.147 (0.324)	0.726 (0.544)	1.583 (0.396)	2.107 (0.103)
Age	-0.001** (0.026)	-0.018* (0.064)	-0.222*** (0.001)	0.032*** (0.000)	0.038*** (0.000)	0.008 (0.429)
Sgr	0.000** (0.035)	-0.000 (0.868)	0.002 (0.604)	-0.003** (0.030)	-0.001 (0.180)	-0.005*** (0.002)
Lown	0.002*** (0.000)	0.004 (0.362)	0.060 (0.187)	-0.031*** (0.000)	-0.037*** (0.000)	-0.020** (0.011)
Fown	-0.002 (0.196)	0.031* (0.061)	-0.003 (0.958)	-0.031 (0.179)	-0.021* (0.069)	-0.027** (0.044)
Mtb	-0.008** (0.044)	0.065 (0.133)	0.226* (0.084)	0.022 (0.377)	0.121* (0.096)	-0.011 (0.717)
Fcf	1.031*** (0.000)	3.998*** (0.000)	33.845*** (0.000)	-5.377*** (0.000)	-5.222*** (0.000)	-11.694*** (0.000)
Tang	-0.154** (0.010)	-1.867*** (0.002)	-10.575*** (0.001)	0.913* (0.091)	1.383* (0.050)	1.687** (0.032)
Constant	-1.068*** (0.000)	0.484 (0.868)	-70.533*** (0.001)	12.740*** (0.000)	14.893*** (0.000)	14.951*** (0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,230	747	1,230	1,186	1,178	1,094
R ² or Pseudo R ²	0.584	0.464	0.476	0.320	0.368	0.373

<Table 12> Performance After Takeover: Experienced vs. Inexperienced Acquirers

This table presents coefficient estimates of regressions in which the dependent variable in each column is a proxy for financial distress. *Exp. Acquirer* is a binary variable that has a value of one if the target is acquired by an experienced acquirer, i.e., if the acquirer has done a takeover in the past. *After* is a binary variable that has a value of one for the years after the takeover, and zeros otherwise. Detailed definitions of all variables are presented in <Appendix 1>. The results in this table present the cross-sectional difference in the effect of takeover on financial distress of targets depending on whether the takeover is accompanied by the target's issuance of new shares to the acquirer. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1) ROA	(2) Lnintcov	(3) Kscore1	(4) Deficit	(5) Caper	(6) Dintcov
<i>Exp. Acquirer</i>	-0.049* (0.057)	-0.140 (0.367)	-0.800 (0.567)	-0.118 (0.726)	0.437 (0.211)	0.321 (0.225)
<i>AFTER</i>	-0.019 (0.264)	-0.233*** (0.009)	-1.900* (0.063)	0.365*** (0.006)	0.603*** (0.000)	0.103 (0.353)
<i>Exp. Acquirer</i> <i>*AFTER</i>	-0.001 (0.979)	0.184 (0.390)	-0.543 (0.822)	0.576 (0.130)	0.047 (0.901)	-0.034 (0.934)
Assetbeta	-0.098 (0.434)	8.284*** (0.000)	103.276*** (0.001)	1.783 (0.450)	1.324 (0.590)	3.755 (0.165)
Size	0.081*** (0.000)	0.115 (0.326)	5.274*** (0.000)	-0.664*** (0.000)	-0.772*** (0.000)	-0.544*** (0.000)
Lev	-0.298*** (0.000)	-2.887*** (0.000)	-24.895*** (0.000)	2.393*** (0.000)	3.793*** (0.000)	2.719*** (0.000)
Cash	-0.041 (0.581)	0.650 (0.595)	-8.818 (0.258)	0.605 (0.465)	0.466 (0.669)	1.251 (0.112)
Age	-0.001* (0.071)	-0.008 (0.127)	-0.183*** (0.000)	0.027*** (0.000)	0.026*** (0.007)	0.001 (0.932)
Sgr	0.000** (0.020)	-0.000 (0.623)	0.003 (0.171)	-0.000 (0.435)	-0.000 (0.356)	-0.001 (0.208)
Lown	0.002*** (0.000)	0.010*** (0.000)	0.068** (0.037)	-0.027*** (0.000)	-0.036*** (0.000)	-0.020*** (0.000)
Fown	-0.002 (0.184)	0.022 (0.102)	-0.047 (0.432)	-0.026* (0.088)	-0.018* (0.065)	-0.029*** (0.007)
Mtb	-0.011** (0.032)	0.082** (0.042)	0.402 (0.145)	0.009 (0.673)	0.116** (0.043)	-0.019 (0.449)
Fcf	0.960*** (0.000)	3.926*** (0.000)	33.817*** (0.000)	-5.337*** (0.000)	-6.149*** (0.000)	-10.495*** (0.000)
Tang	-0.082 (0.103)	-1.368*** (0.001)	-6.504** (0.011)	0.833** (0.036)	1.242** (0.015)	1.278** (0.029)
Constant	-1.605*** (0.000)	-0.595 (0.779)	-82.008*** (0.000)	6.925*** (0.001)	2.199 (0.340)	1.562 (0.427)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,950	1,168	1,950	1,908	1,906	1,795
R ² or Pseudo R ²	0.503	0.432	0.496	0.289	0.355	0.327

<Table 13> Determinants of Takeover Types by Size (*Old-Direct* vs. *Old-Indirect* vs. *New-Direct* vs. *New-Indirect*)

This table presents coefficient estimates of multinomial logit regressions in which the dependent variable has a value of 0 (base-line group) if the firm is the target of *Old-Direct* type takeover, 1 if the firm is the target of *Old-Indirect* type takeover, 2 if it is that of *New-Direct* type takeover, and 3 if it is that of *New-Indirect* type takeover. All independent variables are lagged by one year. Control variables are *Assetbeta*, *Size*, *Lev*, *Cash*, *Age*, *Sgr*, *Lown*, *Fown*, *Mtb*, *Fcf*, and *Tang*. Detailed definitions of all variables are presented in <Appendix 1>. Standard errors (reported in parentheses) are clustered at the 2-digit industry level. ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

	(1)			(2)			(3)			(4)			(5)			(6)		
	OI	ND	NI	OI	ND	NI	OI	ND	NI	OI	ND	NI	OI	ND	NI	OI	ND	NI
ROA	2.404	15.14***	30.27**															
	(7.705)	(5.595)	(15.10)															
ROA*Size	-0.176	-0.946***	-1.823**															
	(0.447)	(0.327)	(0.884)															
Lnintcov				-0.544	3.341***	-1.976												
				(0.856)	(1.159)	(4.317)												
Lnintcov*Size				0.0204	-0.187***	0.0975												
				(0.0450)	(0.0685)	(0.238)												
Kscore1							0.238	0.226*	0.684*									
							(0.186)	(0.135)	(0.404)									
Kscore1*Size							-0.0151	-0.0149*	-0.0417*									
							(0.0112)	(0.00811)	(0.0234)									
Deficit										0.647	-0.781	-8.152						
										(4.080)	(2.983)	(5.668)						
Deficit*Size										-0.0398	0.0788	0.523*						
										(0.232)	(0.165)	(0.294)						
Caper													3.051	-0.758	-3.241			
													(3.397)	(2.901)	(6.606)			
Caper*Size													-0.147	0.0841	0.248			
													(0.190)	(0.164)	(0.355)			
Dintcov																-2.701	-4.297	-7.851
																(4.508)	(3.677)	(6.786)
Dintcov *Size																0.142	0.269	0.432
																(0.255)	(0.209)	(0.356)
Controls		Yes			Yes			Yes			Yes			Yes			Yes	
Year FE		Yes			Yes			Yes			Yes			Yes			Yes	
Industry FE		Yes			Yes			Yes			Yes			Yes			Yes	
Observations		1,202			595			1,202			1,202			1,202			1,156	
Pseudo R ²		0.233			0.324			0.233			0.231			0.232			0.222	

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