Equity Issues and Debt Restructuring: Evidence from an Emerging Market

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Abstract

This paper examines whether new equities in an emerging economy are issued more to finance *new* investment opportunities or to recapitalize *existing* assets in place. Using a sample of 3,184 follow-on primary common stock issues offered by Korean publicly-traded firms between 2000 and 2013, we find that more than a third of the total proceeds are issued to creditors in direct exchange for debt. We also find that equity issuers are in severe financial distress prior to the issue, and more likely to experience a subsequent change in control. The proceeds are used more to replace existing debt than to increase R&D. These findings suggest that one important function of new equities in emerging markets may be to recapitalize existing assets through debt restructuring or control transfers than to finance growth options.

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1. Introduction

A traditional debate in financial economics has been whether a bank-based system, as in Germany or Japan, generates different economic outcomes compared to a market-based system, as in U.S. or U.K. But ever since the pioneering works of LLSV (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 1997, 1998), a country's legal system or the level of investor protection has been considered more important than the distinction between market-based and bank-based systems in explaining financial market development. For example, Demirguc-Kunt and Maksimovic (2002) find that firm's access to external capital is not affected by the type of financial system that is independent of legal system.

One important distinction between the bank- and market-based system that has often been neglected in the literature, however, is the way in which existing debt in a distressed firm may be restructured. Specifically, the two systems are substantially different in how banks may make concessions by taking equity positions in financially distressed firms. In a market-based system, banks rarely take equity positions in a distressed firm for both theoretical and regulatory reasons.[1] Theoretically, the very existence of public bondholders - an important class of debt claimants in market-based economies - creates a conflict of interest between banks (with secure debt) and bondholders (with unsecured debt) which makes any form of private renegotiation difficult.[2] From a regulatory perspective, commercial banks in U.S. are in general not allowed to hold equities in industrial firms, which may limit the ability of banks to concede their debt claims in distressed firms (Gilson, 1994).

In contrast, equities issued in direct exchange for cancelling out existing debt, or 'debt-equity-swaps', are far more common in Europe and other non-U.S. countries (Clowry, 2010, Keifer, 2003). These issues typically occur in the process of debt restructuring of distressed

[1] Franks and Torous (1994) document that equities only account for 1.8% of the total payment received by banks in private debt renegotiations in U.S.

[2] See Diamond (1993), Gertner and Scharfstein (1991), and Senbet and Seward (1995). James (1995) provides a formal model where bank's incentives to take equity critically depends on the degree of public debt outstanding.

firms, e.g. during out-of-court reorganization or workout process to reduce leverage and replenish impaired capital. In emerging markets, commercial banks have been the primary source of financing (Allen and Gale, 2000). Since corporate debt in these economies are typically concentrated in a few commercial banks with much less reliance on public debt, it would be easier to renegotiate the terms of debt when financial distress occurs (Gilson, John, and Lang, 1990), and debt-equity-swap by a bank may naturally arise as a potential solution to resolve distress.

When a debt-equity-swap creates a large block-holding by the bank, there is an effective transfer of control from the existing shareholders to the bank. In addition to direct debt-equity-swaps by the creditor banks, there is an alternative channel of takeovers of distressed firms mediated through new equity issues in non-U.S. countries, especially in emerging markets.[3] Firms in emerging markets are typically managed by controlling shareholders (La Porta, Lopez-de-Silanes, Shleifer, 1999). They are extremely averse to issuing equity that could potentially dilute their proportional ownership and ultimately lead to a loss of control (Cronqvist and Nilsson, 2005). As such, they initially finance most of their assets by issuing debt rather than equity (Stulz, 1988), where the latter is only issued as a last resort under severe financial distress (Högfeldt and Oborenko, 2005). Since entrenched controlling shareholders are not willing to relinquish control until they are forced to in extreme distress, equities issued in these circumstances - especially to a 3rd party - may reflect an involuntary control transfer to the latter (Kim, 2012).

The theoretical and institutional backgrounds outlined above suggests that equity issues in emerging markets may be more related with debt restructuring or control transfers of distressed firms rather than traditional motivations to issue equity, i.e. to take advantage of

3 We use the terms control transfers, changes in control, and takeovers interchangeably in this paper. Since most emerging market firms are run by controlling shareholders, takeovers typically occur through a block transaction, where the block held by the incumbent controlling shareholder is transferred over to a new controlling shareholder.

new investment opportunities, or to time the market. In this paper, we measure the extent to which equities are issued to restructure existing debt or facilitate control transfers of distressed firms based on a comprehensive set of data in Korea, an emerging market with high reliance on bank financing and concentrated ownership structure.

Korea is widely known for its high level of private benefits, particularly the expropriation of minority shareholders or *tunneling* that are often upheld by the legal authorities.[4] Under poor level of investor protection and high level of private benefits, controlling shareholders may well regard external equity as a last financing source to be issued only under a severe distress. In addition, Korean firms have traditionally relied on commercial banks to finance most of their investments. Many commercial banks in Korea serve the role of a *de facto* 'main' bank, a similar role played by those in Japan and Germany. However, unlike those in Japan and Germany, Korean banks can only hold equity in industrial firms as part of a debt restructuring process, very similar to U.S. commercial banks.[5] Since the banking regulations between the U.S. and Korea are largely similar with respect to equity holdings, any differences in banks' behavior in taking equity positions cannot be attributed to differences in regulatory environment.

We first start out by documenting the relative proportion of equity issues that are likely motivated to restructure debt. We find that more than a third of the total proceeds raised through all follow-on equity issues by Korean public firms consists of debt-equity swaps. This implies that equities issued as a part of banks' concession in debt restructuring is not an exception, but rather an essential component of overall equity issue activity in our sample.

Next, to test whether equities are only issued as a last resort under severe distress, we compare the characteristics of issuers and non-issuers in both univariate and multivariate

[4] Nenova (2003) ,Bae, Kang, and Kim (2002), and Baek, Kang, and Lee (2006) among many others.
[5] Banking Act of Republic of Korea, Article 37 (Restrictions, etc. on Investment in other Companies, etc.), and Chapter 24, Title 12 of the United States Code (The Banking Act of 1933).

framework. We find that close to 30% of all equity issuing public firms exhibit cumulative losses in excess of half of total paid-in-capital. Our measure of distress, proxied by capital erosion, is highly correlated with equity issues, especially private placements, including debt-equity swaps. One of the most striking results is that we find no significant difference between issuers and non-issuers in terms of past stock returns. This finding is in strict contrast to those reported in extant previous literature that U.S. equity issuers exhibit substantial price run ups prior to the issue. These findings imply that Korean firms are on average under severe financial distress prior to an equity issue, and suggests that market timing is less likely to be a primary motive for Korean equity issuers.

One way to restructure existing debt, other than a direct swap between existing debt and new equity, is to issue equity in exchange for cash, and use the proceeds to retire debt. To test whether equities are issued more to exploit new investment opportunities or to restructure debt, we next examine the *ex post* uses of funds raised through new equity issues following Kim and Weisbach (2008). Specifically, we test whether firms use the proceeds more to increase investments (capital expenditure, R&D) or to reduce debt. In strict contrast to Kim and Weisbach (2008), we find that Korean equity issuer do not or spend much less on R&D or capital expenditures. Rather, the proceeds are used more to replace existing debt, especially following a private placement.

In our next set of analyses, we examine how market reacts to the announcements of equity issues. If there is a value to equity issues and subsequent debt restructuring, market would react positively.[6] We find that taken as a whole, market reactions to equity issues are indeed generally positive. This finding contrasts with the negative market reactions around SEO announcements reported in numerous studies (e.g. Asquith and Mullins (1986), Mikkelson and Partch (1986) among many others). Rather, the finding suggests that equities

[6] We would like to thank an anonymous referee for pointing this out.

issued in the process of debt restructuring or recapitalization may create value for shareholders. In fact, the largest positive market reactions follow private placements, especially those made to investors outside the business group.[7] These findings also suggest that capital markets in emerging economies are not necessarily inefficient in allocating capital. That is, although stock market may not be the primary source of financing *new* investment opportunities in emerging economies, they are nevertheless able to recapitalize *existing* assets in place so that distressed firms may remain as a going concern and continue production.

The results so far raise a puzzle as to who would invest in newly issued equities of these highly marginal firms. One possibility is that new issues are offered at a deep discount to provide incentives to participating investors.[8] To examine whether these new investors earn a positive return, we next calculate buy-and-hold returns for subscribers and compare them with the returns to existing shareholders. We find that for most issue types, except for debt-equity swaps, new investors earn a positive buy-and-hold return up to 8 months after the issue while existing investors experience a negative return up to a year. This suggests that new investors in these private placements are able to negotiate a favorable price in return for investing in a financially distressed firm, which explains at least partially why they may invest in such marginal firms. On the other hand, creditors in debt-equity-swaps realize a large and persistent negative return on their converted equity precisely due to relatively high offer price. We provide a variety of possible explanations for such an extreme level of concession provided by the banks.

Finally, we examine whether equity issues are more likely to be followed by a transfer of control. If a distressed firm issues a substantial amount of equity to a third party through a

[7] Previous literature on private placements generally report a positive market reaction and attribute this to either monitoring (Wruck, 1989) or certification (Hertzel and Smith, 1993) provided by the new investors.

[8] A recent study by Schwert and Weisbach (2017) document that private investments in public equities (PIPEs) in U.S. are issued at a substantial discount by marginal firms, and investors in these securities earn abnormal returns precisely due to the discounted offer price.

private placement thereby creating a new controlling block of ownership, then an equity issue, a capital infusion, and a control transfer may effectively occur all at the same time. Even if there are multiple investors in the initial issue, the issuer may subsequently be taken over if the distress is not effectively resolved. We find that more than a third of all issuers experience a change in control within two years of the issue, which is three times as large as those for non-issuers. For arms' length private placements and debt-equity swaps, the probability of a control change amounts up to almost a half. This suggests that new equity issues also function as an important channel of takeovers of distressed firms in our sample.

Overall, above findings suggest that Korean public firms issue equity more to recapitalize existing assets in place either through a direct debt-equity swap or by using the cash proceeds to retire existing debt, rather than to finance new investment opportunities or to take advantage of any misvaluation. Our findings are also broadly consistent with a recent study by DeAngelo, DeAngelo, and Stulz (2010) who argue that near-term cash need is the primary motivation for SEOs even in U.S. More generally, these findings imply that the major function of equity instruments issued by public firms in emerging markets may be to effectively mediate restructuring of distressed firms. That is, emerging stock markets may facilitate a continued operation of the assets that are already in place by recapitalizing them and finding them new owners.

We contribute to the literature in the following important ways. First, we propose that equity issues may be an important channel of debt restructuring in emerging markets where potential conflict between banks and public bondholders is much less relevant. As suggested by Drucker and Puri (2007), banks as equity holders has been an under-researched area, presumably due to the lack of such incidences in U.S. Our study suggests that it may not be the regulation on bank's equity holdings *per se* that we do not observe much debt-equity-swaps in U.S. Rather, potential conflict between public bondholders and secured creditors

may be the primary reason why we do not observe much debt-equity-swaps nor banks' equity holdings in U.S.

Literature on equity issues and takeovers so far have implicitly assumed that these two decisions are independent from each other. Our second contribution is to highlight the possibility that decisions to issue equity and to transfer over control may not be completely independent in emerging markets. These two decisions may be jointly determined in distressed firms to resolve the distress and remain as a going concern. We also contribute to the extant SEO literature on post-issue stock performance. While we confirm the findings in the previous literature, we also document that our issuers exhibit poor stock performance even before the issue.

The remainder of the paper is organized as follows; Section 2 reviews the relevant literature. Section 3 describes our data and sample. Section 4 presents the main empirical findings. Section 5 provides a brief conclusion.

2. Related Literature

Our study builds on two distinct streams of literature; those on financial distress or more specifically debt restructuring, and those on equity issues, especially private placements. Traditionally, the two streams of studies have been somewhat disconnected since theoretical studies on financial distress did not consider new equity infusion as a potential solution to resolve distress (Senbet and Seward, 1995). This disconnection mainly follows the traditional 'debt overhang' argument where investors would not provide additional equity since any future gain would accrue to the existing (senior) creditors standing in line (Myers, 1977). As such, discussion of distress resolution mechanism has been centered around debt restructuring, asset sales, or formal bankruptcy procedures, e.g. Chapter 7 or Chapter 11 in U.S.

Literature on debt restructuring have mostly focused on how potential conflict between

banks (or senior, secured creditors) and public debt holders (or junior, unsecured creditors) may affect the renegotiation outcome, if possible at all. This tendency precisely reflects the institutional features in U.S., a representative market-based system, where public bondholders play a crucial role in debt market. For example, Gilson, John, and Lang (1990) show that private negotiation of debt restructuring is more likely when the firm relies more on bank debt. Diamond (1993) and Gertner and Scharfstein (1991) provide formal models where potential conflict of interest between lenders of different seniority might affect senior lenders' willingness to concede.[9] If senior lenders are not willing to concede, then bank's concession to take equity position would also be less likely. But, in emerging markets where commercial banks are the dominant source of external capital so that conflict between them and public bondholders is trivial, if any, debt-equity swap by banks may naturally emerge as a feasible solution to distress.

Existing studies on equity issues have mostly focused on *public* offering of equity for *cash* (Eckbo, Masulis, and Norli, 2007), often referred to as SEOs or seasoned equity offerings. Nevertheless, there is a growing literature on private placements of equity, which suggests that these issuers may have different characteristics than a typical SEO issuer. Specifically, many studies point out that they may have no choice but to resort to a private placement since they cannot access the public equity market due to severe information asymmetry or depressed earnings.

For example, Hertzel and Smith (1993) and Wu (2004) argue that firms with higher asymmetric information are more likely to issue equity through private placements. Similarly, Chen, Dai, and Schatberg (2009) show that firms with high information asymmetry and weak operating performance are more likely to choose private investment in public equity (PIPE). Schwert and Weisbach (2017) examine a sample of PIPEs and find that issuers exhibit

[9] Senbet and Seward (1995) provide a comprehensive survey on financial distress and debt restructuring.

negative earnings and investors earn a positive return by obtaining securities at a deep discount. These studies raise a question on the disconnection between equity issues and financial distress and suggest that the two may well be linked specifically when equities are issued through private placements.[10]

One notable study that considers debt-equity swap as a potential solution to financial distress is James (1995). He provides formal conditions under which banks are willing to exchange existing debt for newly issued equity. As suggested in the previous models of debt restructuring, existence of public bondholders is also a key deterrent in banks' willingness to concede and take equity positions in his model. Empirically, he examines a sample of debt restructurings in U.S. and finds that debt-equity swaps by banks are more likely when there is no public debt outstanding.

Our study extends these two streams of literature by arguing that there may be a clearer link between the two, especially in emerging markets. We suggest that new equity issues by distressed public firms may be an important channel through which debt restructuring and control transfers are materialized. In economies where family firms with dominant controlling shareholders finance most of their external capital from commercial banks, resolution of distress may be postponed until the very last minute, at which an equity issue may occur in conjunction with a debt-equity swap by the creditor bank or a new capital infusion by a new controlling shareholder..

3. Data and Sample

Our primary source of equity issue data is Korea Investor’s Network for Disclosure System (KIND), operated by the Korea Exchange (KRX). We manually collect the data on

[10] Franks and Sanzhar (2006) argue that equity issues by distressed firms are not uncommon even in U.K., although they do not distinguish between public and private issues.

follow-on primary common stock offerings by public firms from individual disclosures. We do not consider sale of old shares or secondary shares by existing shareholders, since our focus is on how new equity issues may be used to finance new investment opportunities or recapitalize existing assets in place.[11] KIND provides detailed information on primary equity issues including the announcement date, the amount of proceeds, the offer price, the number of shares to be offered, and who would receive the shares in a private placement. We also identify family firms manually from the annual reports available through KIND.[12] Accounting variables are obtained from TS-2000, a dataset compiled by the Korea Listed Companies Association. For daily stock returns, we use the data from KIS-Value, one of the largest local financial data vendors.

From the initial issuer sample, we first filter out all financial firms and then exclude those issuers that do not have any of the following information available; number of shares offered, the offer price, accounting information, or ownership structure. We also remove duplicate issues with the same disclosure date and issue disclosures without actual subsequent issue.[13] Our final publicly-traded issuer sample consists of 3,184 follow-on primary common stock issues offered between January 2000 and December 2013 by non-financial firms listed on the Korea Exchange, including both KOSPI market, the main bourse, and KOSDAQ (Korea Securities Dealers Automated Quotation) market.[14]

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[11] Sale of secondary shares in follow-on offerings is extremely rare in Korea mostly because there is no regulatory restriction on the amount of shares that insiders of a publicly traded firm can sell in the open market during a given period. In U.S., SEC Rule 144 limits the maximum number of shares that can be sold by insiders within any 3 months window to (1) 1% of shares outstanding or (2) average weekly trading volume during the past 4 weeks, whichever is greater.

[12] The identification of family firms is based on the identity of the largest shareholder. Firms whose largest shareholder is an individual, or whose ultimate controlling shareholder along the control chain is an individual are classified as family firms.

[13] If a firm has more than one issue within two calendar days, we sum up the amount and count them as one issue, following Kim and Weisbach (2008). This procedure affects 2.4% of the sample.

[14] We set the beginning of our sample period as such for two reasons. First, the regulatory authorities imposed very strict guidelines on corporate debt ratios immediately following the 1997 financial crisis, which was strongly enforced up until 1999. Second, restrictions on new equity issues (e.g. pricing of the new issues) were further liberalized in 2000.

4. Empirical Results

4.1. Descriptive statistics: equity issue types in Korea

We first categorize each issue in our public firm sample into the following three categories: general public offerings, rights offerings, or private placements. Unlike stand-alone firms in U.S., many publicly-traded firms in Korea typically belong to a business group. Thus, a private placement does not necessarily lead to outside financing but perhaps reflects an internal capital market transaction among member firms.[15] Moreover, since most of the creditors in Korean firms are commercial banks rather than dispersed public bondholders, potential conflict of interest between debt holders of different seniority could be less severe, and banks may well concede to accept new equities in exchange for cancelling out existing debt. To appropriately reflect these institutional features, we further classify private placements into the following three groups based on who receives the new issues; (1) those issued to affiliated firms within the same business group or family members of the controlling shareholders or other executives, (2) those issued to 3rd parties outside the business group[16], and (3) those issued to creditor banks through debt-equity swaps (D/E swap, hereafter). If there are multiple subscriber types in a private placement, the issue is classified as the type with the largest proceeds.

Korea has maintained a long-standing policy of separation of commercial banking and industrial firms similar to the tradition in U.S. Although many Korean banks serve the role of a *de facto* 'main' bank as in Japan or Germany, the system is quite distinct from either the Japanese *keiretsu* system where main creditors are often members of the same business group or the German universal banking system where there is virtually no restriction on equity

[15] Baek, Kang, and Lee (2006) provide a detailed description of how private placements are issued in Korea, while Choi and Suh (2016) show that proceeds from equity issues by business groups may be used to purchase equity stakes in other member firms.

[16] Private placements made to 3rd parties can be broadly classified as a form of PIPE (private investment in public equity).

investment between commercial banks and the industrial sector. Thus, Korean banks are strictly independent from any family-controlled business group, and debt-equity swaps reflect genuine arm's length transactions.[17]

Table 1 presents the relative proportions of each equity issue type. Panel A shows the number of equity issues that belong in each of the five categories, and Panel B presents the amount of proceeds (in KRW billion) for each year during our sample period. Overall, equity issues exhibit an increase in the early 2000s and peak in 2007 in terms of numbers, while total proceeds significantly drop during 2004 and 2005.

Panel A indicates that private placements are the most common among the various issue types, accounting for 57.4% of all new equity issues. This is broadly consistent with Gomes and Phillips (2008) who report that more than half of all security issues in U.S., including debt and convertibles, are done through private placements. Within private placements, those issued outside the business group is the largest (28.8%), while those issued within the same business group account for 14.6%. The proportion of public offerings is 14.5%, while rights offerings make up 28.1% of all issues. This breakdown is quite different from those reported in McLean, Zhang, and Zhao (2011) who find that public offerings are the most frequently observed type around the world.

It is worth noting that among the relatively small number of public offerings, a substantial portion of them are not cash offers but stock-for-stock offers. They are typically issued following a spin-off by one spun-off firm to the shareholders of the other spun-off firm in the process of creating an inter-corporate ownership structure. As such, the proceeds raised in these cases do not reflect incoming cash but shares of affiliated firms.[18] In fact, the proceeds from these non-cash generating public offers, which cannot be spent on new

[17] According to the current regulations, any single entity whose main business is non-financial cannot hold more than 9% of any commercial bank shares in Korea (Banking Act of Republic of Korea, Article 16-2).
[18] Kim and Wang (2017) provide a detailed account of these two-step transactions where a spin-off is followed by a stock-for-stock tender offer.

investment opportunities by construction, account for 55% of all public offers in our sample.

The results from Panel B are largely similar to those reported in Panel A, except that D/E swaps now account for the largest proportion of all types, amounting up to 33.9% of total proceeds. The fact that more than a third of all equities are issued in exchange for cancelling out existing debt provides an initial piece of evidence that debt restructuring may be an important motivation behind equity issues in Korea.

Note that the relative proportion of D/E swaps increases to 80% in year 2001, which is around the calendar time deadline preset by the government which enforced a very strong recapitalization initiative for Korean firms in the aftermath of 1997 Asian Financial Crisis to reduce their leverage ratio down to a benchmark level of 66%. The proportion of D/E swap drops substantially during the mid-sample period but quickly recovers subsequent to the Global Financial Crisis in 2008.

When we add the proceeds from non-cash generating public offers to those from D/E swaps, they account for 43% of the total amount raised through equity issues during our sample period. This implies that close to a half of all new equities are issued in exchange for another security. Among these exchange offers, 80% of them were issued to replace existing debt (D/E swaps), while the remaining 20% were issued as a means of payment for acquiring shares of an affiliated firm. Alternatively, once we exclude non-cash generating public offers from all public offers, proceeds raised from conventional SEOs (i.e. *cash* generating *public* offers) account for only 7% of all proceeds raised through equity issues in Korea. These numbers are broadly consistent with our main hypothesis that primary motivation behind equity issues in Korea may be to recapitalize existing assets in place rather than to finance new investment and take advantage of the growth opportunities.

Table 2 summarizes the magnitude of each new issue in both relative and absolute terms. Specifically, we report the mean and median values of issued new shares relative to total

shares outstanding both before and after the issue. We also report the distribution of the total amount of proceeds for each of the offer types. Overall, mean (median) size of the newly issued shares amounts up to 22.3% (16.7%) of total shares after the issue. These numbers are comparable to the numbers reported in Gomes and Phillips (2008) for U.S. equity offerings.[19]

However, there are some noticeable variations across different offer types. For example, for rights offerings, mean and median proportions are largely similar. In contrast, mean offer size for private placements outside the business group and D/E swaps are much larger compared to the medians implying a severely skewed distribution. This also indicates that many of these issues are large enough to transfer full control to the subscriber - either an outside 3rd party or a creditor bank, which implies a simultaneous occurrence of an equity issue and a control transfer.

Average total proceeds per issue is KRW 30 billion (roughly USD 30 million) while the median is KRW 6 billion. The median proceeds are quite similar to the global median of USD 8.5 million for SEOs reported in Kim and Weisbach (2008). Across each offer type, mean proceeds raised through D/E swaps exhibit the largest amount at KRW 74 billion. The next largest type is public offerings with average proceeds of KRW 33 billion. However, the median proceeds for public offerings are smaller than that of any other type, which suggests that public offerings in our sample could be quite heterogeneous.

In summary, the results of this subsection document that more than a third of all proceeds raised through new equity issues consists of banks' concession to accept equity in the process of debt restructuring. Another 9% of the proceeds are from stock-for-stock public offers, which by construction cannot be used to finance new investment opportunities. Rights offerings and public offerings have smaller proportions than private placements in terms of

[19] In their sample of public and private equity issues made in U.S. between 1995 and 2003, the mean and median amount raised relative to firm value are 22% and 15% for public offers, and 15% and 9% for private offers.

both total proceeds and the number of issues. These results broadly suggest that new equity issues in Korea may be to recapitalize existing assets in place by restructuring debt and facilitating control transfers rather than to finance new investments to exploit growth options.

4.2. Determinants of equity issue types

(1) Firm characteristics: univariate analysis

Table 3 presents average firm characteristics for each issue type in the sample. When there are multiple issue types for a firm within each fiscal year, we assign the issue type with the largest proceeds as the issue type for that year so that each observation corresponds to a specific firm-year. We also report the average characteristics for firm-years with no follow-on primary issues.[20] The third column reports the *t*-statistics of mean differences between the two groups.

The characteristics we consider are largely taken from both traditional and more recent theories on capital structure and security issues. As our key variable of interest, we also consider two different conservative proxies for financial distress, taken from the debt-equity swap model in James (1995). In this model, banks are more likely to exchange existing debt for new equity precisely when their loan is impaired. Following this prediction, we first consider '*Distress*50' which takes value of one if a firm's cumulative losses exceed half of paid-in-capital in a given fiscal year and zero otherwise. The second one, '*Distress*100' takes value of one if a firm's cumulative losses completely wipe out all paid-in-capital (i.e. result in a negative book equity) and zero otherwise.[21]

Overall, the results from Table 3 indicate that equity issuers exhibit higher leverage and market to book and are more likely to be in financial distress but less likely to be controlled

[20] Non-issuing firm-years include those firms that never issued any new common stocks during the sample period.

[21] Franks and Sanzhar (2006) also resort to negative book equity as a measure of distress.

by families. One of the most interesting findings from Table 3 is that average past stock returns for the issuers, both the raw return and the market-adjusted abnormal return, are actually smaller than those for non-issuers, although the difference is not statistically significant. This is strikingly different from the empirical regularities reported in extant literature using U.S. data where firms are most likely to issue equity following a stock price run up.[22] In fact, average past returns for public offerings and private placements are all negative.[23]

Another piece of striking evidence is that 6.6% of the issuing firm-years exhibit negative book equity, which is more than 5 times as large as those for non-issuers. Once we relax the degree of capital erosion to 50% of paid-in-capital, 28% of all issuing firm-years fall into this category. According to Korean stock exchange regulations, a mandatory delisting occurs if more than 50% of paid-in-capital is impaired for two consecutive fiscal years. An immediate delisting occurs if a firm reports a negative book equity (100% erosion of paid-in-capital), but the firm can file an appeal accompanied by recapitalization plans, which effectively delays the delisting procedure. Such regulations could further provide additional incentives to restructure existing debt and remain as a public firm.

We also report some additional characteristics of issuing firms at the bottom of Table 3. The average number of days between two consecutive issues is roughly two years and the average number of issues per firm is 3.6. These numbers contrast with those reported in Hovakimian and Hutton (2010) where the corresponding numbers for U.S. issuers are roughly 4 years and 1.9 issues on average. This implies that the frequency or timing of equity issues for Korean firms is roughly twice as many and fast as in U.S. firms.

In summary, equity issuers in the Korean stock market do not exhibit higher past stock

[22] See Hovakimian, Opler and Titman (2001) among many others. They report two year past returns of 0.78 for equity issuers and 0.29 for non issuers.

[23] In an unreported result, we examine firms with multiple issues following Hovakimian and Hutton (2010) and find that price *drop* rather than a run-up better predicts a subsequent issue in Korea.

returns compared to non-issuers. Rather, they are much more likely to be in severe financial distress with at least partial capital erosion. These results strongly suggest that new equities may be issued by highly marginal firms as a last financing source to restructure existing debt and possibly avoid being delisted from the stock exchange.

(2) Determinants of the issue type: multinomial logit

In this subsection, we extend the analysis in the previous subsection and examine firms' decision to choose a specific type of equity issue. We use a multinomial logit model to test whether firm characteristics have different influence on firms' decisions to choose different issue types. The model allows for six possible outcomes: The firm may choose not to issue any equity which is the baseline case. Or they can issue through rights offerings, public offerings, private placements within the business group, private placement outside the business group, or do a debt-equity swap.

Table 4 reports the estimates of multinomial logit regressions. Since 'no issue' is used as the baseline, the coefficients in each column can be interpreted as the impact on the probability of choosing a particular type of equity offering relative to not issuing new shares at all. We use *Distress*50 and *Distress*100 as measures of severe financial distress in Panels A and B, respectively. Both panels include year and industry fixed effects.

The results from Panel A of Table 4 first indicate that some firm characteristics have similar effect on the likelihood of an equity issue, regardless of the offer type. For example, highly levered firms and firms with low cash holdings are significantly more likely to issue equity in four out of five issue types.

However, for the remainder of firm characteristics, their effect on issue decision is quite heterogeneous across the issue types. In fact, some of the variables have opposite signs across different issue types. For example, firm size is significantly negatively correlated with most

offer types, except for D/E swaps where it is positively correlated. This suggests that D/E swaps, which effectively provide a bailout program for distresses firms, mostly occur in large firms. The negative correlations between size and other issue types are also broadly consistent with the lifecycle hypothesis as suggested in DeAngelo, DeAngelo, and Stulz (2010).

Our key focus in this analysis is to examine how distress may be correlated with an equity issue. We distinguish between family firms and non-family firms to further understand potential differences in their incentives in reacting to a distress. We first note that without any distress, family firms are significantly less likely to issue any form of private placements, consistent with Cronqvist and Nilsson (2005). However, when family firms are under distress, they are highly more likely to issue equity, especially private placements. The likelihood of an issue when a family firm is under distress increases marginally even for rights offerings. Among all issue types, the probability of an issue under distress is the highest for D/E swaps for both family firms and non-family firms. We observe a similar pattern for past abnormal returns. Specifically, D/E swaps and private placements within business groups follow periods of poor stock performance. These results suggest that distress is highly correlated with equity issues in our sample, especially private placements including debt-equity swaps.

We also examine the factors that determine public offerings, since this issue type has received the most attention in the extant previous literature using U.S. data. To our surprise, only a small number of explanatory variables are successful in explaining decision to choose public offerings. This suggests that standard theories of capital structure or security issues may have limited implications in the Korean market.

The results from Panel B of Table 4 where we use complete capital erosion or negative book equity (*Distress*100) as the key measure of financial distress are largely similar to those reported in Panel A of Table 4. For example, family firms are more likely to issue private

placements within their business group or do a debt-equity swap under complete capital erosion. In addition, the negative relationship between past abnormal returns and various equity issue types are even more pronounced.

One difference between the two panels is that in Panel B, non-family firms are no longer likely to issue equity under severe financial distress. This implies that non-family firms do not make aggressive efforts to replenish equity capital, while family firms make strong efforts to attract additional capital investment from affiliated firms or seek recapitalization from their creditors, which otherwise would lead to a mandatory delisting,. Another difference is that private placements outside the business group are no longer likely to occur when a firm faces a negative book equity, implying a difficulty in locating external investors.

In summary, private placements which account for vast majority of all issues in terms of both numbers and proceeds are being issued by firms with low past stock returns that are in financial distress. Such tendency to issue equity through private placements under severe distress is much more pronounced for family firms than non-family firms. This suggests that a key motivation behind equity offerings by public firms in Korea may be to inject new capital in distressed firms rather than to finance new investment opportunities. The multinomial logit analysis also provides a warning against lumping all issue types into a single category, since each issue type may reflect different motivations.

(3) *Ex post* uses of funds raised through equity issues

If firms are primarily motivated to issue equity to finance new investment opportunities, then we expect to observe *ex post* increases in investments following equity issues. On the other hand, if the major intention is to recapitalize and pay back existing debt, then we are more likely to find reductions in liabilities. In economies where inter-corporate equity

ownerships are prevalent, newly raised outside capital could also be used to increase equity ownership in other (affiliated) firms. An examination of *ex post* uses of funds raised through equity issues would thus allow us to further distinguish between different motivations to issue equity. In order to estimate the uses of the capital raised from equity issues, we employ the method developed in Kim and Weisbach (2008).

First, we measure the changes in the following balance sheet items; total assets, inventory, and cash. And then we measure the accumulated values in the following income statement or cash flow statement items; capital expenditures, R&D, and reduction in long-term debt as well as in short-term debt.[24] We also include a new variable not considered in Kim and Weisbach (2008), namely 'investment in marketable securities', to account for the fact that many of these firms hold on to a substantial amount of equity in other (affiliated) firms.[25] We calculate the following quantities for each of the issuing years.

$$Y = \ln\left[\left(\frac{V_t - V_0}{\text{total assets}_0}\right) + 1\right]$$

for *V=total assets, inventory, or cash* (1)

$$Y = \ln\left[\left(\sum_{i=1}^{t} V_i \Big/ \text{total assets}_0\right) + 1\right]$$

for *V=capital expenditure, R&D, reduction in short-term or long-term debt, or investment in marketable securities* (2)

where V is the variable being measured, year 0 is the fiscal year-end just prior to the equity issue, and t is the number of years after year 0.

[24] R&D is the sum of research expense and ordinary development expense from income statement. Capital expenditure is the sum of 22 cash flow statement items including increases in physical assets such as buildings, machinery and intangible assets such as patents.

[25] Investment in marketable securities is the sum of long-term investment securities and controllable securities increase from cash flow statement. This variable does not distinguish between equities of affiliated firms and non-affiliated firms.

Table 5 reports the average normalized changes in each variable by issue type and the difference between non-issuers and issuers. While issuers spend more than non-issuers on many of these variables on average, a detailed examination across different types of issues suggests an interesting cross-sectional variation. For example, for firms exchanging debt for equity, total assets actually decrease, which amounts up to -20.4% in the second year after the swap. This suggests that there are corporate restructurings in the asset side e.g. divestitures in addition to debt restructuring. Cash also decreases for public offerings, indicating that much of the proceeds raised through public offerings may not reflect actual cash inflows.

Next, we examine the relationship between these normalized changes in accounting variables and the proceeds raised in equity issues. Specifically, we estimate the following specification;

$$Y = \beta_1 \ln\left[\left(\frac{primary\ equity}{total\ assets_0}\right)+1\right] + \beta_2 \ln\left[total\ assets_0\right] + \sum_{i=2000}^{2013}\theta_i\, year + \sum_{j=1}^{16}\mu_j\, industry + \varepsilon \qquad (3)$$

where Y corresponds to the normalized changes as defined in equations (1) and (2).

Table 6 presents estimate of β_1 coefficient in Equation (3) for the issuer group as a whole and also by each type of issue. The first column indicates that capital raised from equity issues are largely reflected as increases in total assets, the important components of which are cash holdings and investment in marketable securities. Although some of these results are consistent with the findings in Kim and Weisbach (2008) who show that the proceeds are positively correlated with most of the variables considered, there are quite a few distinct differences.

First, in Kim and Weisbach (2008), β_1 coefficient for the changes in total assets is very close to one in the first year following the issue, implying that the proceeds raised were reflected as increases in total assets almost one for one. However, in our regressions, estimated coefficients are much smaller. For example, the coefficient estimate is 0.53 for all

issue types, indicating that only half of the raised capital contributed to increases in assets on average. In fact, the coefficient is insignificantly different from zero for D/E swaps, which reflects that they only affect the credit side of the balance sheet and do not affect the asset side. This result suggests that much of the capital raised through new issues do not translate into increases in assets, but rather leaked out of the firm potentially to pay off debt.

Second, in Kim and Weisbach (2008), coefficient for long-term debt reductions are insignificantly different from zero.[26] In contrast, estimates in this study indicate a strong positive relationship between proceeds raised and both short-term and long-term debt reduction, which suggests that a substantial portion of the funds raised are used to retire existing debt. For example, more than a quarter of the proceeds are used to replace short-term debt by the second year following a private placement outside the business group.

Most importantly, while Kim and Weisbach (2008) report that proceeds raised are positively correlated with CAPEX and especially with R&D, we do not observe any significant increases in R&D. In their sample, 19% of the proceeds translate into R&D in the first year of equity issue, which increases to 38% by the second year. Their result clearly suggests that equities are being issued to take advantage of new investment opportunities. In strict contrast, β_1 coefficient estimates for cumulative R&D in our sample are insignificantly different from zero up to two years following the issue, implying that proceeds from equity issues are not spent on R&D at all.

When we examine each offer type separately, we still do not observe a meaningful increase in R&D in most cases. Even for CAPEX, the only issue type with a significantly positive coefficient is private placements outside the business group. For all other types, we do not observe an increase in CAPEX following an equity issue. This finding strongly suggests that equities issued by Korean public firms, regardless of the offer type, are not used

[26] They only consider long-term debt reductions, and do not examine short-term debt reductions.

to finance new investments.

One peculiar result is that by far the largest amount is spent on investment in marketable securities. This suggests that proceeds from equity issues may be used to purchase equity stakes in other firms potentially within the same business group, as suggested by Choi and Suh (2016), rather than contribute to new physical investment at the group level.

(4) Market reaction to equity issues

The analysis so far suggests that equity issues in Korea may be motivated as a part of debt restructuring or recapitalization of existing assets in place. In this section, we examine how the stock market responds to various types of equity issues to verify whether there is value to debt restructuring or recapitalization. We obtain the exact announcement dates by manually searching through KINDS. For each firm, we estimate the market-adjusted abnormal returns and cumulative abnormal returns (CAR) around the announcement date.

Previous studies show that market responds negatively to equity issues in U.S. due to information asymmetry (Asquith and Mullins, 1986; Eckbo and Masulis, 1992). However, Asquith and Mullins (1986) do not cover rights offerings nor private placements while Eckbo and Masulis (1992) analyze only rights offerings. In contrast, Wruck(1989) and Hertzel and Smith (1993) who examine private placements find that stock prices increase after the issue announcement either due to increased monitoring or certification.[27]

Table 7 reports how stock prices react to equity issue announcement in Korea. Overall, market responses to equity issues are positive during various event windows around the announcement date. Specifically, the 3-day CAR around the announcement is 2.9% on

[27] Studies on Korean stock market have generally found positive abnormal return around the announcement date (e.g. Yoon, 1999). However, they also do not distinguish between the types of offerings.

average (with a *t*-stat of 1.80) and the 7-day CAR is 3.5% (with a *t*-stat of 2.17). Once we separate each offer type, however, we note that this result is mainly driven by cash generating private placements either within or outside the business group. For rights offerings and public offerings, we observe a negative return for most event windows, consistent with the existing studies.

The positive market reaction to private placements is consistent with the results in Wruck (1989) and Hertzel and Smith(1993). When a firm under duress announces that it is going to raise capital from outside investors, market understands that new investors either certified the prospects of the issuer or will provide more monitoring in the future. Market also seems to appreciate capital injection from affiliated firms, which may reflect a group-wide bailout for a distressed member firm.

These findings provide additional support for the assertion that capital markets in emerging economies are not necessarily inefficient in allocating capital. Although emerging stock markets may not provide capital for *new* investments, they are able to inject new capital to *existing* investments so that distressed firms may replenish equity capital and continue their operations.

(5) Investment return to participating investors

One potential puzzle is that somehow these marginal firms were able to attract at least some outside investors who were willing to buy their new equities. A possible explanation is that new issues may be priced at a deep discount. Schwert and Weisbach (2017) show that PIPEs (private investment in public equities) are issued by small firms in distress and investors earn a positive abnormal profit because of the deep discount.

To examine whether new investors in our sample indeed earn a positive abnormal

return, we calculate buy-and-hold returns for subscribers of different issue types and compare them with the returns to existing shareholders. The difference between the two groups is mostly determined by the degree of discount offered for the new issue. Specifically, if the new issues are offered at a deep discount, then new investors may obtain relatively higher returns compared to existing shareholders.

Table 8 presents the result of this analysis. Panel A reports the holding period returns for new shareholders while Panel B reports those for the existing shareholders. In both panels, we measure the returns from the announcement date up to 12 months after. In Panel A, the reference price for calculating the returns is the offer price, while the corresponding price in Panel B is the closing price the day before the announcement.[28] To remove the effect of extreme returns, we truncate the sample at the top and bottom 1 percentile.[29]

When we compare the first column of Panel A (new investors) with those in Panel B (existing shareholders), we find that new investors earn a significantly positive buy-and-hold return up to 8 months after the announcement date, while existing shareholders experience a significant negative return up to a year. This pattern is largely similar to those reported in Schwert and Weisbach (2017) who compare investment returns between new PIPE investors and existing investors. For new investors, the positive return is concentrated in the first month of the announcement, which diminishes over time almost monotonically. This finding suggests that new investors are provided with a deep discount when equities are newly issued, and explains why they participated in equity offers of marginal firms.[30]

[28] If there are multiple offer prices for different investors in private placements, we use the average offer price.
[29] There are two technical issues in calculating these returns. First, whenever trading stops for a relisting of the new shares at a later date, KRX omits the change in price from the closing price of the last trading day to the opening price of the relisting day. We have manually calculated this missing part and filled them in accordingly. Second, there are quite a few cases where equity issues are accompanied by a capital reduction which effectively results in a reverse stock split. We manually collect information on these reverse splits and adjust the offer price accordingly before calculating returns.
[30] For rights offerings, new shares are issued to existing shareholders so that returns in both Panels A and B should be combined to represent overall returns to existing shareholders who subscribed to new share issues.

When we examine each issue type, the general pattern of positive return for new investors and negative return for existing investors holds for most offer types. For private placements outside the business group, which largely resembles PIPEs in U.S., the returns for new investors up to 6 months are fairly comparable to those reported in Schwert and Weisbach (2017). For example, investors in our sample earn 19.4% in the first month, while their investors earn 23.7% in three months.

For D/E swaps, however, we observe a strikingly different pattern. Specifically, creditor banks who exchanged existing debt for new equity realize a large negative return from the very first month of the swap throughout the following 12 months. We have manually double-checked this result a number of times for potential data error that may arise from not appropriately adjusting the offer price when there is a reverse-split or other distribution event, but still obtain this result even after a careful clean up. This result is a direct ramification of the conversion price which is set unfavorable to the creditor banks. The following anecdote provides the details of a typical D/E swap and how we calculate the returns.

In August, 2013, Korea Development Bank (KDB), the largest creditor of Kumho Industrial, announced its plan to restructure the latter's existing debt of KRW 130 billion (roughly USD 130 million) by exchanging them into equity. Kumho Industrial was the 15th largest construction company in Korea as of 2016, and the *de facto* holding company of Kumho-Asiana group, 17th largest business group in Korea as of 2014. According to the local media, 89% of Kumho Industrial's paid-in-capital was eroded due to cumulative losses, and the debt-equity swap was initiated precisely to satisfy the regulatory requirement and avoid a mandatory delisting.[31] The media emphasized that this was also in the interests of the creditors since a delisting would affect Kumho Industrial's credit rating and adversely affect

[31] The Korea Economic Daily, August 16, 2013 (http://stock.hankyung.com/news/app/newsview.php?aid=201308161597r)

their future business opportunities. But a detailed look at the terms of the renegotiation suggests that creditors may have conceded too much. The conversion price was set at KRW 28,267 per share, while the prevailing market price the day before the announcement was only KRW 16,200 per share. One month after the announcement, the stock price fell down to KRW 14,000, which resulted in a loss of -50% for the creditors. The corresponding loss for the existing shareholders, including the controlling family, was only -13%, implying a clear wealth transfer from the creditors to shareholders.

There are a few factors, not mutually exclusive, that may explain why banks may accept such an unfavorable conversion price. First, conversion price and the number of issued shares are based on the face value of the debt to be swapped rather than its market value. Considering that market value of the debt may already be fairly low compared to the face value, the opportunity cost paid per share could be lower than the stated conversion price in the disclosure, holding the number of shares fixed. That is, creditor banks may have rationally agreed to a high nominal conversion price, taking this into account.

Second, if the fair market value of the stock is very low, as is often the case for severely distressed firms, the number of new shares issued to the creditors based on this prevailing market price may be too large given the amount of existing debt. This could potentially result in a mandatory delisting if minority shareholders' proportional ownership falls below a certain threshold.[32] To avoid this, bargaining parties may first agree on the number of shares to be issued, which satisfies the ownership dispersion criteria to remain as a public firm, and then back out the price by dividing the face value of debt by the issued number of shares. If the value of holding a publicly traded stock outweighs the cost of unfavorably high issue price, as was the case for Kumho, banks may rationally accept the terms.

[32] Korean stock exchange regulations impose a mandatory delisting with a 2 year grace period when the proportion of shares held by the minority shareholders falls below 20%.

Third, there may be another 3rd party, other than the creditor bank, that may participate in the equity offer. If the equity issue is designed to create a new controlling block to be transferred to this 3rd party who will inject new capital, she may insist that the existing creditor banks be awarded with minimal number of shares so that she will emerge as the sole, dominant controlling shareholder.[33]

Finally, creditor banks may be subject to various forms of agency problems. A key incentive of the bank managers in implementing a debt-equity swap is that they can postpone or delay the recognition of a loss related with the loan which would incur a direct negative impact on the bank's net income and the managers' compensation (Lee and Park, 2007). Such agency problem may be aggravated since many Korean banks, including the aforementioned KDB, are still under strong government influence. Peek and Rosengren (2005) report that Japanese banks tend to provide additional credit to the weakest firms and argue that such tendency reflects their 'perverse' incentive to avoid the realization of losses on their own balance sheets. Similarly, Korean banks may accept inaccurate or relatively unfavorable valuations in an effort to expedite the process. Distinguishing between these explanations is beyond the scope of the current study and we leave it to a future research.

(6) Changes in control subsequent to equity issue

Our final test investigates whether equity issues affect the probability of a subsequent control transfer. As reported in Table 2, the magnitude of new equity issues may be large enough to create a new controlling block which may effectively transfer control to a 3rd party in conjunction with the issue. If so, new equities may be issued in the process of negotiated takeovers of distressed firms. That is, new capital infusion and a change in control may occur

[33] We have identified such a case in our sample. Korea Trade Insurance Corporation, a creditor of HBE Energy, agreed to an extremely large conversion price of KRW 250,000 which is more than 400 times as large as the prevailing market price of KRW 595 (April 25, 2003). In this case, the new investor, Konia Technology, insisted such concession of creditors as a condition for injecting new capital at KRW 500 per share.

simultaneously. In emerging markets, takeovers mostly occur when a new controlling shareholders emerges either by purchasing an existing control block from an incumbent or by injecting new capital in a distressed firm in return for receiving a new block of equity.

We track down the status of the issuers up to two years after the issue and check whether there is a change in the identity of the controlling shareholder. We first start by locating all disclosures that report changes in the largest shareholder. Then, we manually check news articles and websites to carefully exclude non-arm's length transactions. Specifically, we exclude those cases where the largest shareholder changes from an individual to other family members or affiliated firms within the same business group. We also exclude changes among co-founders, which is closer to a CEO turnover than a takeover. Once we obtain a clean sample of control changes, we compare their likelihood between the issuers and non-issuers.

Table 9 presents the results of this analysis. Panel A reports the time-series comparison between the issuing firm-years and non-issuing firm years, while Panel B presents the results for each type of issuers. The results from Panel A show that the probability of a change in control is 35% for issuers. This is almost 3 times as large as the corresponding probability for non-issuers throughout the sample period. When we examine across different issue types in Panel B of Table 9, we find that almost half of the firms that issued equity privately either outside the business groups or as an exchange for existing debt experience a change in control within two years of the issue. These findings suggest that new equity issues may be an important channel through which takeovers of distressed firms are materialized in emerging markets.

We also examine whether equity issues reduce the likelihood of a delisting by replenishing eroded capital and satisfying the regulatory requirement to remain as a publicly traded entity, as was intended in the Kumho case. We only consider mandatory delistings and

do not include voluntary delistings due to exchange migration or mergers in this analysis. The results reported in Table 9 indicate that the probability of a mandatory delisting is indeed smaller in the issuer group than in the non-issuing group. From 2008 to 2011, we do not observe any mandatory delistings among issuers. The results from Panel B indicate that these patterns are observed in most of the issue types, except for D/E swaps. This suggests that distressed firms' incentive to avoid a delisting and remain as a public firm may also be a potential factor behind debt restructuring.

5. **Conclusion**

As any standard finance textbook prescribes, the most important role of a stock market is to efficiently allocate resources to firms with good investment opportunities. Consistent with this perspective, recent research generally finds a positive correlation between financial market development and real economic growth using macro-level data. We challenge and scrutinize this perspective based on micro-level analyses in an emerging market where investor protection is low and traditional reliance on commercial bank external financing is high. Specifically, we examine the extent to which primary equity market in Korea is effectively functioning as an external financing source to take advantage of new investment opportunities.

Using a comprehensive sample of 3,184 follow-on offerings made by Korean publicly-traded firms during 2000 to 2013, we examine how firms issue equity, under what conditions do firms choose to issue equity, what firms do with the capital raised, how market reacts to these announcements, what are the returns to participating investors, and how often control changes hands subsequent to the issue. We first find that a third of the proceeds raised by new equity issues are from private placements to creditor banks, i.e. debt-equity swaps. This suggests that equities issued in the process of debt restructuring is not an exception but rather

a rule.

We next explore the characteristics of firms that lead to equity issues, and find that issuing firms are generally in bad financial status. 6.6% of the issuers have negative book equity and 28% of issuers have more than half of their paid-in-capital wiped out due to accumulated losses at the time of the issue. Most importantly, past stock return, which is a strong predictor of equity issues in U.S., adversely affects the probability of most equity issue types in our sample. Such tendency to issue equity in severe distress is much more pronounced in family-controlled firms than in non-family firms.

We further examine the *ex post* uses of funds following the equity issues. In contrast to the findings in Kim and Weisbach (2008), we find that issuing firms are more likely to spend the newly raised capital in reducing the existing debt rather than spend it on R&D. Finally, we track down the status of the issuers and find that more than a third of them experience a change in controlling shareholder within two years of the issue.

Overall, our findings lead us to question the *ex ante* resource allocation function of the stock market in Korea, where investor protection is weak and bank financing is strong. New equities are being issued by distressed firms either as a direct replacement for existing debt or as a financing source to retire existing debt. Equity issues also create new controlling blocks through private placements outside the business group and in debt-equity swaps, facilitating takeovers of distressed firms. These findings collectively suggest that equity issues in Korea are more likely to refinance existing assets that are already in place, rather than to finance new investments.

Nevertheless, our finding does not necessarily deny the capital allocation function of stock market in emerging economies. Rather, it suggests that stock market may facilitate a continued operation of the assets that are already in place by recapitalizing them and finding them new owners. This function, although different from the traditional perspective, may

contribute to efficient allocation of capital, at least in the *ex post* sense.

Senbet and Seward (1995) conjecture that new equity infusions are not frequently utilized to resolve distress mostly due to potential underinvestment from 'debt overhang'. Our findings suggest that if the positive NPV mostly derives from existing assets in place which is subject to less information asymmetry and thus more readily verifiable than new investments, debt overhang may not deter new capital infusion.

To the extent that equities issued to outside 3rd parties and creditor banks may create new controlling blocks, stock market may facilitate market for corporate control in these economies at least for distressed firms. On the bright side, newly created block ownership may facilitate transfer of control by simplifying the negotiation procedure between the buyer and the seller.

On the other hand, these block of new shares may create an inter-corporate chain of ownership that could create and expand corporate pyramids as suggested by Kim (2012). Analyzing the costs and benefits of newly created block ownership in intermediating such acquisitions or control transfers could be an interesting topic for future research.

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Table 1

Summary Statistics of Follow-on Primary Equity Offerings

This table presents the summary statistics of our sample. The sample consists of 3,184 follow-on primary equity offerings made during the period from January 2000 to December 2013 by firms listed on the Korea Exchange. We include both KOSPI market, the main bourse, and KOSDAQ market, the tech bourse. We categorize each issue into general public offering, rights offering, or a private placement. We further break down private placements based on who receives the new issues; those issued to member firms of the same business group or family members of the controlling shareholders or other executives, those issued to 3rd parties outside the business group, and those issued to creditor banks through debt-equity swaps. If there are multiple subscriber types in a private placement, we assign an issue type as follows. If the disclosure clearly mentions that the issue is a debt-equity swap (D/E swap) regardless of multiple subscribers, we classify it as such. Else, if the list of the subscribers include any one of the controlling family members, managers or affiliated firms, we classify that issue as within the business group. If the list consists of only those subscribers that are clearly outside the boundary of the issuer, such issues are classified as outside the business group. Panel A reports the number of issues per year for each issue type, while panel B reports the total proceeds raised (in KRW billion).

Panel A: Number of Issues by Year and Type of Offering

Year	All	Rights Offerings		Public Offerings		Private Placements					
						Within the same Business Group		Outside the Business Group		D/E Swap	
	N	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
2000	186	95	51.1	1	0.5	7	3.8	26	14.0	57	30.6
2001	194	47	24.2	10	5.2	17	8.8	48	24.7	72	37.1
2002	208	31	14.9	9	4.3	14	6.7	39	18.8	115	55.3
2003	238	67	28.2	20	8.4	26	10.9	67	28.2	58	24.4
2004	157	56	35.7	15	9.6	23	14.6	40	25.5	23	14.6
2005	269	116	43.1	36	13.4	29	10.8	75	27.9	13	4.8
2006	238	67	28.2	28	11.8	50	21.0	82	34.5	11	4.6
2007	326	90	27.6	32	9.8	53	16.3	146	44.8	5	1.5
2008	234	59	25.2	40	17.1	30	12.8	99	42.3	6	2.6
2009	292	87	29.8	87	29.8	35	12.0	75	25.7	8	2.7
2010	239	59	24.7	48	20.1	51	21.3	67	28.0	14	5.9
2011	173	40	23.1	50	28.9	37	21.4	38	22.0	8	4.6
2012	197	41	20.8	44	22.3	40	20.3	52	26.4	20	10.2
2013	233	40	17.2	41	17.6	53	22.7	64	27.5	35	15.0
All	3,184	895	28.1	461	14.5	465	14.6	918	28.8	445	14.0

Table 1 - *continued*

Panel B: Total Proceeds Raised by Year and Type of Offering

Year	All	Rights Offerings		Public Offerings		Private Placements					
						Within the same Business Group		Outside the Business Group		D/E Swap	
	Proceeds	Proceeds	(%)	Proceeds	(%)	Proceeds	(%)	Proceeds	(%)	Proceeds	(%)
2000	7,310	1,770	24.2	374	5.1	348	4.8	1,947	26.6	2,870	39.3
2001	8,695	492	5.7	452	5.2	207	2.4	567	6.5	6,978	80.2
2002	8,441	343	4.1	1,425	16.9	228	2.7	870	10.3	5,575	66.0
2003	8,624	726	8.4	1,035	12.0	965	11.2	985	11.4	4,914	57.0
2004	2,397	734	30.6	44	1.8	695	29.0	528	22.0	396	16.5
2005	2,806	1,367	48.7	291	10.4	150	5.3	833	29.7	166	5.9
2006	4,460	1,590	35.6	1,369	30.7	411	9.2	562	12.6	528	11.8
2007	9,193	1,926	21.0	4,504	49.0	940	10.2	1,733	18.8	89	1.0
2008	7,691	1,409	18.3	649	8.4	427	5.5	5,069	65.9	138	1.8
2009	5,602	1,796	32.1	1,600	28.6	633	11.3	618	11.0	956	17.1
2010	9,827	3,181	32.4	1,380	14.0	1,521	15.5	531	5.4	3,212	32.7
2011	8,025	2,810	35.0	153	1.9	2,559	31.9	709	8.8	1,794	22.4
2012	5,252	1,360	25.9	496	9.4	932	17.7	401	7.6	2,063	39.3
2013	8,422	1,900	22.6	1,541	18.3	1,396	16.6	421	5.0	3,165	37.6
All	96,746	21,403	22.1	15,311	15.8	11,413	11.8	15,774	16.3	32,845	33.9

Table 2

Average Size of the Issue by Each Offer Type

This table presents the average size of the issue, both relative and absolute, for each of the offer types in the sample. The sample consists of 3,184 follow-on primary equity offerings made during the period from January 2000 to December 2013 by firms listed on the Korean Stock Exchange. The first (second) row presents the mean and median percentage of issued shares to total shares after (before) the offering. The third row reports the mean and median dollar amount proceeds for each issue type (in KRW billion). We categorize each issue into general public offering, rights offering, or a private placement. We further break down private placements based on who receives the new issues; those issued to member firms of the same business group or family members of the controlling shareholders or other executives, those issued to 3rd parties outside the business group, and those issued to creditor banks through debt-equity swaps. If there are multiple subscriber types in a private placement, we assign an issue type as follows. If the disclosure clearly mentions that the issue is a debt-equity swap (D/E swap) regardless of multiple subscribers, we classify it as such. Else, if the list of the subscribers include any one of the controlling family members, managers or affiliated firms, we classify that issue as within the business group. If the list consists of only those subscribers that are clearly outside the boundary of the issuer, such issues are classified as outside the business group.

	All		Rights Offerings		Public Offerings		Private Placements					
							Within the same Business Group		Outside the Business Group		D/E Swap	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Issued Shares/ Total Shares after (%)	22.3	16.7	30.0	25.6	17.7	12.0	18.9	13.1	17.6	9.9	24.7	7.5
Issued Shares/ Total Shares before (%)	76.2	20.0	72.7	34.4	32.7	13.6	44.6	15.0	68.4	11.0	177.5	8.1
Proceeds (KRW bil.)	30	6	24	10	33	2	25	5	17	3	74	11
Obs	3,184		895		461		465		918		445	

Table 3

Firm Characteristics by Each Offer Type

This table presents the average firm characteristics for each issue type in the sample. When there are multiple issue types for a firm within each fiscal year, we assign the issue type with the largest proceeds as the issue type for that year so that each observation corresponds to a specific firm-year. For comparison, we also report the average characteristics for firm-years with no follow-on primary issues. Size is the log of total assets (in KRW thousands) and Leverage is the ratio of total debt to total assets. Market to book is the market value equity over book value of equity. Cash is the sum of cash, cash equivalents and marketable securities scaled by total assets. Cash flow is the cash flow from operations divided by total assets. Past return (%) is compounded daily stock return one year prior to the issue. Past abreturn (%) is the market-adjusted abnormal return during the same period, where market index returns are obtained separately for KOSPI and KOSDAQ market, respectively. Volatility (%) is the standard deviation of daily stock returns during one year prior to the issue. Skewness is measured using daily stock returns during one year prior to the issue. Sales growth is the average of sales growth for the past three years prior to the issue. Family is a dummy variable that equals one if controlling shareholder is an individual or a family, and zero otherwise. *Distress*50 is one if cumulative losses exceed half of paid-in-capital and zero otherwise. *Distress*100 is one if book equity is negative, and zero otherwise. Single issuing firms are those with only one equity issue during the sample period and multiple issuing firms are those with more than two issues. *t*-statistics for comparison of means between non-issuers and issuers are also provided. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively. The sample period is from 2000 to 2013.

Table 3 – *continued*

Variables	No issues	Issues				Private Placements		
	A	B	A-B	Rights Offerings	Public Offerings	Within the same Business Group	Outside the Business Group	D/E Swap
	Mean	Mean	*t*-value	Mean	Mean	Mean	Mean	Mean
Size	18.562	18.052	15.30***	17.972	17.880	18.026	17.613	19.578
Leverage	0.437	0.611	-10.98***	0.536	0.525	0.589	0.547	1.133
Market to Book	1.307	2.927	-2.43**	3.853	2.469	2.434	2.997	0.786
Cash	0.144	0.124	6.92***	0.129	0.106	0.131	0.140	0.081
Cash flow	0.034	-0.039	9.83***	-0.012	-0.105	-0.060	-0.054	0.006
Past return	-0.017	-0.032	0.71	0.113	-0.142	-0.101	-0.095	-0.164
Past abreturn	-0.025	-0.039	0.71	0.102	-0.110	-0.128	-0.091	-0.204
Volatility	0.037	0.049	-37.37***	0.050	0.049	0.046	0.049	0.056
Skewness	0.465	0.438	2.67***	0.420	0.385	0.526	0.446	0.434
Sales growth	0.165	0.277	-3.03***	0.247	0.324	0.205	0.446	0.035
Family	0.917	0.831	10.31***	0.923	0.896	0.814	0.829	0.477
*Distress*50	0.065	0.280	-21.79***	0.140	0.248	0.373	0.286	0.657
*Distress*100	0.011	0.066	-10.08***	0.014	0.019	0.057	0.064	0.305
N	17,711	2,141		791	270	279	562	239
Days between consecutive issue		718.22						
Avg. number of issues per firm		3.59						
Number of single issuing firms		346						
Number of multiple issuing firms		540						

Table 4

Determinants of Equity Issue Types: Multinomial logit

This table presents the coefficients from a multinomial logit model where the baseline group is the non-issuing firm-years. The dependent variable includes five different types of follow-on equity offerings; rights offerings, public offerings, private placements made within the same business group, private placements made outside the business group, and debt-equity swaps to creditor banks. When there are multiple issue types for a firm within each fiscal year, we assign the issue type with the largest proceeds as the issue type for that year so that each observation corresponds to a specific firm-year. The independent variables are as defined in Table 3. In Panel A, we use *Distress*50, which takes value of one if cumulative losses exceed half of paid-in-capital, as a proxy for distress. In Panel B, we replace *Distress*50 with *Distress*100, which equals one if book equity is negative. *z*-statistics are reported in parentheses. *, **, and *** denote statistical significance at 10%, 5%, and 1%, respectively. The sample period is from 2000 to 2013.

Panel A: *Distress*50 as Distress Measure

	Rights Offerings	Public Offerings	Private Placements		
			Within the same Business Group	Outside the Business Group	D/E Swap
Size	-0.284***	-0.398***	-0.219***	-0.574***	0.446***
	(-7.08)	(-5.94)	(-3.78)	(-10.17)	(8.13)
Leverage	0.485***	0.223	0.425***	0.338**	0.644***
	(4.01)	(1.19)	(2.82)	(2.47)	(4.92)
Market to book	0.020***	0.017*	0.015	0.018***	-0.003
	(2.97)	(1.83)	(1.64)	(2.67)	(-0.60)
Cash	-1.363***	-2.101***	-0.184	-1.128***	-2.170**
	(-3.38)	(-3.33)	(-0.35)	(-2.62)	(-2.06)
Cash flow	-0.301	-0.537**	-0.131	0.036	1.304**
	(-1.44)	(-2.42)	(-0.50)	(0.15)	(2.02)
Past abreturn	0.364*	-0.439	-0.783***	0.086	-0.869***
	(1.81)	(-1.63)	(-2.94)	(0.42)	(-2.69)
Sales Growth	0.049*	0.059	0.014	0.091***	-0.340
	(1.84)	(1.51)	(0.25)	(4.39)	(-1.22)
Family	-0.113	-0.157	-1.011***	-0.752***	-2.178***
	(-0.63)	(-0.55)	(-4.67)	(-4.14)	(-8.44)
*Distress*50	-0.127	0.156	0.384	0.486*	2.013***
	(-0.38)	(0.36)	(1.14)	(1.80)	(7.01)
Family×*Distress*50	0.574*	0.575	1.313***	0.585**	1.431***
	(1.66)	(1.31)	(3.76)	(2.08)	(4.12)
Year dummy			Yes		
Industry dummy			Yes		
Pseudo R^2			0.1387		
Obs.			15,744		

Table 4 -*continued*

Panel B: *Distress*100 as Distress Measure

	Rights Offerings	Public Offerings	Private Placements			
			Within the same Business Group	Outside the Business Group	D/E	Swap
Size	-0.313***	-0.463***	-0.333***	-0.670***		0.351***
	(-7.87)	(-7.06)	(-5.73)	(-11.97)		(6.69)
Leverage	1.092***	0.876***	0.966***	0.736***		1.109***
	(7.16)	(4.11)	(5.39)	(3.77)		(7.06)
Market to book	0.022***	0.016	0.020***	0.021***		0.012
	(3.04)	(1.39)	(2.51)	(2.86)		(0.52)
Cash	-1.113***	-1.975***	-0.301	-1.231***		-3.194***
	(-2.75)	(-3.14)	(-0.57)	(-2.82)		(-3.01)
Cash flow	-0.616***	-0.832***	-0.487**	-0.192		1.292**
	(-2.86)	(-3.63)	(-2.00)	(-0.82)		(2.00)
Past abreturn	0.264	-0.633**	-1.266***	-0.135		-1.634***
	(1.41)	(-2.42)	(-4.86)	(-0.66)		(-5.12)
Sales Growth	0.046*	0.057	0.011	0.093***		-0.540
	(1.70)	(1.41)	(0.19)	(4.53)		(-1.38)
Family	-0.040	-0.074	-0.746***	-0.661***		-2.361***
	(-0.26)	(-0.34)	(-4.26)	(-4.56)		(-12.47)
*Distress*100	-3.885**	-3.390**	-3.003**	-0.551		-0.140
	(-2.26)	(-2.32)	(-2.42)	(-1.00)		(-0.33)
Family×*Distress*100	2.453	2.252	3.370***	0.627		3.042***
	(1.40)	(1.49)	(2.71)	(1.07)		(6.64)
Year dummy			Yes			
Industry dummy			Yes			
Pseudo R^2			0.1268			
Obs.			15,744			

Table 5

Average Normalized Increases in Assets and Expenditures Following Primary Equity Issues by Offer Types

This table reports the mean increases in assets and expenditures following a primary equity issue. Increases in assets or balance sheet items (total assets, inventory, cash) is defined as $\ln[((V_t-V_0)/total\ asset_0)+1]$, and increases in expenditures or income statement items or cash flow statement items (CAPEX, R&D, reduction in short- and long-term debt, investment in marketable securities) is defined as $\ln[(\Sigma V_i/total\ asset_0)+1]$, where 0 denotes the fiscal year end just prior to the primary equity issue. t denotes the number of years after year 0. *t*-statistics for comparison of means between no issues and issues are also provided. *, **, and *** denote that the value is statistically significant at the 10%, 5%, and 1% levels, respectively. The sample period is from 2000 to 2013.

V		No Issues (A)		Issues (B)		(A)-(B)	Rights Offerings	Public Offerings	Private Placements		
									Within the same Business Group	Outside the Business Group	D/E Swap
	t	N	Mean	N	Mean	*t*-value	Mean	Mean	Mean	Mean	Mean
ΔTotal asset	1	17,848	0.0539	2,178	0.0814	-3.99***	0.1522	0.0318	0.0292	0.1403	-0.1618
	2	17,303	0.1125	2,137	0.1274	-1.61	0.2224	0.0679	0.0748	0.1899	-0.2042
ΔInventory	1	17,848	0.0061	2,178	0.0009	3.67***	0.0124	-0.0049	-0.0135	0.0020	-0.0156
	2	17,303	0.0124	2,137	0.0053	3.49***	0.0182	0.0005	-0.0071	0.0060	-0.0189
ΔCash	1	17,848	0.0013	2,178	0.0198	-8.60***	0.0262	-0.0005	0.0154	0.0293	0.0051
	2	17,303	0.0066	2,137	0.0236	-6.64***	0.0218	0.0106	0.0124	0.0419	0.0149
ΣShort-term debt	1	17,848	0.1889	2,178	0.2084	-3.21***	0.2408	0.2079	0.2192	0.1998	0.1132
reduction	2	17,303	0.3353	2,137	0.3592	-2.61***	0.4146	0.3575	0.3852	0.3390	0.1920
ΣLong-term debt	1	17,848	0.0246	2,178	0.0480	-12.76***	0.0356	0.0506	0.0549	0.0590	0.0525
reduction	2	17,303	0.0501	2,137	0.0987	-16.29***	0.0737	0.0954	0.1111	0.1294	0.1002
ΣCAPEX	1	17,848	0.0290	2,178	0.0381	-4.29***	0.0510	0.0347	0.0224	0.0394	0.0158
	2	17,303	0.0485	2,137	0.0709	-5.57***	0.0911	0.0633	0.0487	0.0735	0.0320
ΣR&D	1	17,848	0.0099	2,178	0.0104	-0.75	0.0120	0.0077	0.0080	0.0144	0.0021
	2	17,303	0.0203	2,137	0.0230	-2.28***	0.0245	0.0151	0.0200	0.0333	0.0063
ΣInvestment in	1	17,848	0.0452	2,178	0.0917	-15.69***	0.0839	0.1010	0.0912	0.1339	0.0130
marketable securities	2	17,303	0.0883	2,137	0.1687	-18.30***	0.1639	0.1678	0.1679	0.2381	0.0259

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Table 6

The Effect on Subsequent Increases in Assets and Expenditures following Primary Equity Issues

This table reports the coefficients from the following OLS regressions where the dependent variable for balance sheet items (total assets, inventory, cash) is $Y = \ln[((V_t - V_0)/total\ asset_0)+1]$, and those for expenditures (CAPEX, R&D, reduction in short- and long-term debt, investment in marketable securities) is $Y = \ln[(\Sigma V_i/total\ asset_0)+1]$. , where 0 denotes the fiscal year end just prior to the primary equity issue. t denotes the number of years after year 0. Independent variables are capital raised from primary equity issues which is normalized by total assets, and natural log of total assets. All regressions include year and industry dummies. Coefficients for ln[(*primary capital*/ *total assets*)+1] are reported the table while coefficients for ln[*total assets*] and fixed effects are omitted for the sake of brevity. *, **, and *** denote that the value is statistically significant at the 10%, 5%, and 1% levels, respectively. *t*-statistics are reported in parentheses. The sample period is from 2000 to 2013.

$$Y = \beta_1 \ln\left[\left(\frac{primary\ capital}{total\ assets_0}\right)+1\right] + \beta_2 \ln[total\ assets_0] + \sum_{i=2000}^{2013} \theta_i\, year + \sum_{j=1}^{16} \mu_j\, industry + \varepsilon$$

Table 6 -*continued*

V	t	N	Issues		Rights Offerings		Public Offerings		Private Placements					
									Within the same Business Group		Outside the Business Group		D/E Swap	
			β_1	R^2	β_1	R^2	β_1	R^2	β_1	R^2	β_1	R^2	β_1	R^2
ΔTotal asset	1	2,178	0.533***	0.23	0.462***	0.30	0.686***	0.32	0.660***	0.26	0.825***	0.39	-0.079	0.29
			(15.88)		(7.68)		(7.45)		(6.56)		(12.08)		(-0.99)	
	2	2,137	0.629***	0.26	0.702***	0.37	0.522***	0.27	0.677***	0.27	1.045***	0.39	-0.129	0.33
			(14.22)		(9.21)		(4.46)		(4.78)		(11.33)		(-1.23)	
ΔInventory	1	2,178	-0.011*	0.04	0.004	0.10	-0.008	0.16	0.001	0.09	-0.023*	0.07	-0.013	0.16
			(-1.70)		(0.33)		(-0.56)		(0.04)		(-1.75)		(-0.88)	
	2	2,137	0.016*	0.04	0.032	0.07	-0.009	0.15	-0.002	0.09	0.054***	0.05	-0.038*	0.21
			(1.65)		(1.63)		(-0.37)		(0.09)		(2.68)		(-1.84)	
ΔCash	1	2,178	0.123***	0.11	0.151***	0.16	0.113***	0.17	0.241***	0.22	0.106***	0.13	0.046***	0.11
			(11.53)		(7.38)		(4.21)		(6.61)		(4.52)		(2.87)	
	2	2,137	0.166***	0.13	0.163***	0.16	0.191***	0.20	0.144***	0.15	0.264***	0.21	0.000	0.14
			(13.02)		(7.45)		(6.14)		(3.97)		(8.18)		(0.02)	
ΣShort-term debt reduction	1	2,178	0.067***	0.40	0.063	0.48	-0.021	0.45	0.009	0.51	0.217***	0.41	0.049	0.35
			(3.07)		(1.37)		(-0.35)		(0.16)		(5.00)		(1.04)	
	2	2,137	0.087***	0.50	0.063	0.56	0.100	0.59	0.082	0.57	0.261***	0.49	0.048	0.50
			(2.75)		(0.93)		(1.27)		(0.92)		(4.31)		(0.84)	
ΣLong-term debt reduction	1	2,178	0.038***	0.25	0.025**	0.26	0.006	0.31	0.025	0.32	0.057***	0.29	0.040*	0.44
			(4.97)		(2.04)		(0.25)		(1.10)		(3.28)		(1.81)	
	2	2,137	0.067***	0.32	0.073***	0.30	0.009	0.43	0.110***	0.38	0.071**	0.39	0.017	0.51
			(5.20)		(3.16)		(0.28)		(2.84)		(2.39)		(0.59)	
ΣCAPEX	1	2,178	0.028***	0.19	0.011	0.13	-0.001	0.17	-0.006	0.20	0.104***	0.10	-0.010	0.45
			(3.29)		(0.2)		(-0.02)		(-0.2)		(3.69)		(-0.6)	
	2	2,137	0.073***	0.23	-0.005	0.27	-0.005	0.27	-0.013	0.18	0.121***	0.12	-0.013***	0.49
			(4.85)		(-0.16)		(-0.11)		(-0.16)		(2.71)		(-0.47)	
ΣR&D	1	2,178	-0.003	0.08	-0.001	0.16	0.016**	0.16	-0.003	0.17	-0.010	0.08	0.0005	0.09
			(-0.98)		(-0.24)		(2.03)		(-0.37)		(-1.06)		(-0.16)	
	2	2,137	-0.002	0.14	0.006	0.18	0.028**	0.19	0.002	0.19	-0.016	0.17	-0.001	0.15
			(-0.36)		(0.54)		(2.31)		(0.13)		(-1.13)		(-0.14)	
ΣInvestment in marketable securities	1	2,178	0.316***	0.40	0.214***	0.36	0.446***	0.57	0.314***	0.45	0.525***	0.54	0.026**	0.31
			(21.89)		(8.26)		(11.96)		(7.81)		(15.74)		(2.47)	
	2	2,137	0.440***	0.50	0.475***	0.50	0.466***	0.58	0.375***	0.57	0.694***	0.61	0.047***	0.31
			(21.53)		(11.99)		(9.49)		(7.19)		(14.92)		(3.16)	

Table 7

Market Reaction to Equity Issue Announcements

This table reports the average market-adjusted cumulative abnormal returns (CAR) around the equity issue announcement. We report the announcement returns for the following event windows; a 2-day return from day -1 to 0, a 3-day return from day -1 to +1, a 7-day return from -3 to +3, and an 11-day return from -5 to +5. The *t* values are in the parentheses for mean test and *p* values are in the bracket for median test. *, **, and *** denote that the estimate is statistically significant at the 10%, 5%, and 1% levels, respectively, based on cross-sectional standard errors during the event time. The sample period is from 2000 to 2013.

	All		Rights Offerings		Public Offerings		Private Placements					
							Within the same Business Group		Outside the Business Group		D/E Swap	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Car(-1,1)	2.897*	-0.428	-4.895***	-5.747***	-3.532***	-3.889***	5.575***	2.094***	7.003***	4.029***	14.281	-0.201
	(1.80)	[0.652]	(-11.79)	[0.000]	(-6.48)	[0.000]	(9.31)	[0.000]	(14.61)	[0.000]	(1.23)	[0.398]
Car(-1,0)	2.326***	0.519***	-0.720**	-1.080***	0.111	-0.569	3.887***	1.507***	5.552***	3.082***	2.496	-0.221
	(6.88)	[0.000]	(-2.38)	[0.000]	(0.27)	[0.157]	(8.27)	[0.000]	(15.41)	[0.000]	(1.17)	[0.785]
Car(-3,3)	3.540**	-1.312	-6.080***	-7.042***	-2.619***	-5.113***	6.788***	2.322***	9.664***	3.934***	13.553	-1.322
	(2.17)	[0.172]	(-10.16)	[0.000]	(-3.22)	[0.000]	(6.47)	[0.000]	(12.57)	[0.000]	(1.16)	[0.451]
Car(-5,5)	4.311***	-1.121	-5.761***	-7.215***	-1.275	-4.002***	7.071***	2.136***	11.346***	5.260***	13.254	-1.999*
	(2.61)	[0.911]	(-8.11)	[0.000]	(-1.21)	[0.000]	(5.82)	[0.000]	(12.42)	[0.000]	(1.14)	[0.0742]

Table 8

Investment Return to Participating Investors

This table reports the holding period returns (%) for the existing shareholders and new shareholders following an equity issue. Panel A reports the holding period returns for new shareholders from the announcement date up to 12 months after the announcement, while Panel B reports the corresponding returns for existing shareholders during the same period. In Panel A, the reference price for calculating returns is the offer price while the corresponding price in Panel B is the closing price the day before the announcement. If there are multiple offer prices for different investors (in private placements), we use the average offer price. The *t* values are in the parentheses. *, **, and *** denote that the estimate is statistically significant at the 10%, 5%, and 1% levels, respectively. The sample period is from 2000 to 2013.

Panel A. Holding Period Return (HPR) for New Shareholders

	All	Rights Offerings	Public Offerings	Private Placements		
				Within the same Business Group	Outside the Business Group	D/E Swap
~1M	19.046***	55.664***	10.593***	10.185***	19.424***	-46.872***
	(19.10)	(36.46)	(8.30)	(5.65)	(10.91)	(-15.13)
~2M	15.435***	50.451***	7.895***	7.518***	16.764***	-47.959***
	(14.04)	(31.21)	(4.95)	(3.36)	(7.79)	(-14.38)
~3M	12.030***	43.118***	7.159***	6.241***	11.645***	-43.597***
	(10.70)	(27.10)	(3.61)	(2.62)	(5.52)	(-10.85)
~4M	10.197***	40.438***	8.897***	4.846**	8.652***	-46.930***
	(8.76)	(23.20)	(3.73)	(1.98)	(3.91)	(-13.09)
~5M	9.227***	39.995***	5.497**	4.230	7.985***	-45.668***
	(7.53)	(20.58)	(2.46)	(1.52)	(3.30)	(-12.22)
~6M	7.725***	38.745***	3.637	4.441	4.696**	-47.075***
	(6.18)	(18.49)	(1.52)	(1.54)	(2.03)	(-13.02)
~7M	6.143***	36.648***	4.714*	2.907	2.296	-49.556***
	(4.76)	(17.00)	(1.73)	(0.94)	(0.98)	(-13.68)
~8M	3.919***	36.702***	1.378	2.186	-2.420	-50.027***
	(2.94)	(15.11)	(0.49)	(0.68)	(-1.05)	(-13.66)
~9M	2.442*	34.373***	-0.277	1.349	-3.519	-51.993***
	(1.79)	(13.63)	(-0.09)	(0.41)	(-1.48)	(-15.06)
~10M	1.637	35.166***	-1.340	-0.855	-6.171***	-51.823***
	(1.18)	(13.48)	(-0.45)	(-0.26)	(-2.62)	(-15.03)
~11M	0.901	33.300***	0.490	0.434	-7.554***	-53.129***
	(0.63)	(12.29)	(0.15)	(0.12)	(-3.20)	(-15.55)
~12M	1.002	32.496***	1.701	-0.806	-7.091***	-51.803***
	(0.68)	(11.60)	(0.49)	(-0.22)	(-2.80)	(-14.30)

Table 8 - *continued*

Panel B. Holding Period Return (HPR) for Existing Shareholders

	All	Rights Offerings	Public Offerings	Private Placements		
				Within the same Business Group	Outside the Business Group	D/E Swap
~1M	-0.163	-2.090**	-8.744***	2.541**	7.030***	-4.031***
	(-0.31)	(-1.98)	(-8.37)	(2.12)	(6.11)	(-3.10)
~2M	-2.554***	-4.503***	-9.917***	2.092	4.346***	-10.001***
	(-3.51)	(-3.31)	(-6.57)	(1.16)	(2.76)	(-5.81)
~3M	-5.620***	-8.365***	-11.776***	0.187	-0.152	-11.563***
	(-7.11)	(-6.33)	(-6.61)	(0.09)	(-0.09)	(-5.38)
~4M	-7.309***	-9.434***	-11.555***	-1.790	-2.852	-14.781***
	(-8.40)	(-6.51)	(-5.40)	(-0.86)	(-1.55)	(-6.77)
~5M	-8.620***	-10.301***	-13.885***	-4.966**	-3.924*	-14.218***
	(-9.09)	(-6.92)	(-6.67)	(-2.05)	(-1.89)	(-5.45)
~6M	-9.904***	-10.755***	-15.324***	-5.321**	-5.853***	-16.610***
	(-10.00)	(-6.55)	(-6.50)	(-2.07)	(-2.80)	(-6.55)
~7M	-10.773***	-11.693***	-14.178***	-6.496**	-6.880***	-18.940***
	(-9.91)	(-6.74)	(-4.85)	(-2.29)	(-2.99)	(-7.27)
~8M	-12.488***	-11.555***	-17.223***	-7.221**	-10.276***	-19.877***
	(-10.83)	(-5.69)	(-5.83)	(-2.29)	(-4.55)	(-6.64)
~9M	-14.309***	-13.154***	-17.003***	-9.577***	-12.750***	-22.294***
	(-11.87)	(-6.14)	(-5.35)	(-2.85)	(-5.47)	(-7.38)
~10M	-15.172***	-13.340***	-16.679***	-9.822***	-15.254***	-23.170***
	(-12.16)	(-5.96)	(-4.50)	(-2.75)	(-6.64)	(-7.82)
~11M	-15.991***	-15.335***	-14.787***	-10.159***	-16.510***	-22.769***
	(-12.45)	(-7.15)	(-3.45)	(-2.67)	(-7.11)	(-7.07)
~12M	-15.648***	-14.735***	-15.066***	-11.242***	-17.421***	-19.316***
	(-11.05)	(-6.04)	(-3.26)	(-2.82)	(-7.35)	(-4.71)

Table 9

Delisting or Changes in Controlling Shareholders following Primary Equity Issues

This table presents the numbers and percentages of firms which are delisted or whose controlling shareholders are replaced during two years subsequent to the primary equity issues. In Panel A, we report the difference between issuers and non-issuers over time. In Panel B, we report the difference between non-issuers and various types of issuers over the whole sample period. *t*-statistics for comparison between non-issuers and issuers, and between non-issuers and each type of issuers are provided. *, **, and *** denote that the difference is statistically significant at the 10%, 5%, and 1% levels, respectively. The sample period is from 2000 to 2013.

Panel A: Issuers vs. Non-Issuers over Time

Year	Sample	Issues					No Issues				
		All	Delisted		Change in Control		All	Delisted		Change in Control	
		A	B	B/A(%)	C	C/A(%)	D	E	E/D(%)	F	F/D(%)
2000	936	139	7	5.04	43	30.9	7,97	38	4.77	119	14.93
2001	1,100	127	11	8.66	58	45.7	9,73	54	5.55	152	15.62
2002	1,237	124	11	8.87	53	42.7	1,113	66	5.93	165	14.82
2003	1,374	151	6	3.97	63	41.7	1,223	97	7.93	189	15.45
2004	1,406	108	7	6.48	51	47.2	1,298	56	4.31	244	18.80
2005	1,419	185	1	0.54	73	39.5	1,234	27	2.19	247	20.02
2006	1,490	164	3	1.83	63	38.4	1,326	33	2.49	264	19.91
2007	1,548	218	8	3.67	73	33.5	1,330	91	6.84	220	16.54
2008	1,604	156	0	0.00	60	38.5	1,448	162	11.19	168	11.60
2009	1,573	192	0	0.00	63	32.8	1,381	134	9.70	114	8.25
2010	1,553	173	0	0.00	44	25.4	1,380	101	7.32	82	5.94
2011	1,573	132	0	0.00	30	22.7	1,441	78	5.41	86	5.97
2012	1,605	147	6	4.08	38	25.9	1,458	45	3.09	87	5.97
2013	1,608	163	16	9.82	52	31.9	1,445	28	1.94	113	7.82
All	20,026	2,179	76	3.49	764	35.06	17,847	1,010	5.66	2,250	12.61

Table 9 - *continued*

Panel B: Non-Issuers vs. Various Types of Issuers

						Private Placements		
		No Issues	Issues	Right Offerings	Public Offerings	Within the Business Group	Outside the Business Group	D/E Swap
	All	17,847	2,179	801	272	286	565	255
	N	1,010	76	11	6	14	18	27
Delisted in 2 years	(%)	5.66	3.49	1.37	2.21	4.90	3.19	10.59
	t-stat		4.23***	5.22***	2.46**	0.56	2.52***	-3.36***
	N	2,250	764	182	97	91	271	123
Change in Control in 2 years	(%)	15.13	35.06	22.72	35.66	31.82	47.96	48.24
	t-stat		-28.22***	-8.33***	-11.28***	-9.64***	-24.46***	-16.87***