# Tunneling and Propping: Evidence from Rights and Bonus Issues by Turkish Business Group Firms

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## Abstract

Turkish firms affiliated with a business group are legally independent and organized with the form of pyramidal ownership structure. Some of these forms own a bank as a major source of financing for firms in the pyramid. Groups are controlled by a small group of shareholders, in many cases a family at the top of the pyramid. Business groups have been conjectured as substitution for some functions of missing institutions by creating internal capital markets. Recent literature provides evidence that internal capital markets may be used to tunnel [Bertrand et al. (Journal of Finance, 2002); Baek et al. (Journal of Finance, 2006) and Cheung et al. (Journal of Financial Economics, 2006)] and to prop [Friedman et al. (Journal of Comparative Economics, 2003)] the firm by controlling shareholders. We provide empirical evidence for both tunneling and propping by examining financing decisions of affiliated firms versus non-affiliated firms in the form of several types of equity issues and balance sheet information, and particularly focusing on changes in equity, debt and total assets in the 1991-2003 period. With very few exceptions, the price of a right issue offered in Turkish capital market is equal to book value of a share. We argue that right issues as well as debt can be used to prop up the firm that is in trouble, while bonus issues and dividend payments can be used for tunneling. We provide indicative evidence that, in the period of moderate negative shock (1991-1999), affiliated firms with a bank in the group are most likely to issue new equity at form of both rights and bonus issues together. This evidence is consistent with the model of Friedman et al. (2003) stating that "entrepreneurs inject private cash today in order to preserve their options to expropriate and to obtain legitimate share of profits tomorrow". The evidence from the severe negative shock period (2000-2003) also supports this argument. In this period, we find that affiliated firms with a bank in the group are most likely to issue only bonus issues and have a higher payout ratio, which indicate tunneling of funds without propping by ultimate owners. For further test of tunneling and propping, we examine stock market reactions to the announcements of joint venture, acquisitions and minority stake increase transactions by affiliated firms in 2000-2005 period. The results show that affiliated firms announced joint venture transactions experience significantly higher returns than the other two types of transactions. We interpret this result as the evidence of propping argument. Join ventures allow controlling shareholders to keep their control on management and to raise new funds for their investments for the benefit of minority shareholders.



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## 1. Introduction

Business groups abound in many emerging economies. According to some recent publications, business groups in several countries dominate economic activity [La Porta et al. (1999); Amsden, (2001); Claessens et al., (2000)]. Business groups consist of legally independent firms that may be interrelated by cross-shareholding and/or social ties, and are mostly ultimately owned by a small group of shareholders, in many cases a family. A Pyramidal type of ownership structure allows families or large shareholders being at the top of pyramid to control almost all firms in the group with a decreasing percentage of shares through the bottom of the pyramid. This aspect has been widely accepted for why business groups exist[1]. We observe the similar type of structure in Turkish capital market. More interestingly, the structure of Turkish Business Groups is very close to Japanese Keiretsu or Korean Chaebol, and some groups include a bank to serve as a main bank of financial institutions and of non-financial corporations in the group[2].

Khanna and Rivkin (2001) indicate that business groups are so important especially in emerging economies due to market imperfections and missing markets. One market imperfection that has been pointed out in particular in the literature is that of underdeveloped financial markets. This may lead to financing constraints for individual firms, inhibiting their growth potential. Group firms have an important role in overcoming the market imperfections that arise from the institutional voids of the developing economies. If financial markets are imperfect, creating a business group may help to allocate the resources more efficiently among of the business group members. Business groups thus create internal capital markets that substitute for non-existing or poorly

[1] Almeida and Wolfenzen (2005) accept this theory as traditional and provide a model for the rationale of existing business groups.

[2] Orbay and Yurtoglu (2006, 350-353) provide a detail presentation of corporate governance and business group structures in Turkey. Therefore, we recommend readers to utilize this source instead of giving a short description here.

performing formal financial markets. Therefore, internal capital markets help firms smooth their financing needs and growth fluctuations by redistributing available resources within the group[3]. Moreover, a group-affiliated bank can provide a natural mechanism for capital transfers. Having a group-affiliated bank may support the usability of internal capital markets through relaxing the pressures that restrict fund transfer.

Internal capital markets may also be used to expropriate minority shareholders. According to this view internal capital markets are used by controlling shareholders reallocate funds from firms in which their ownership share is small, to firms in which they hold a large share. This phenomenon is called tunneling and has been extensively studied during recent years [Johnson et al., (2000), Claessens et al., (2002), Bertrand et al., (2002), Bae et al., (2002), Baek et al. (2006) and Cheung et al. (2006)]. This research shows that tunneling is widely used.

In contrast to tunneling, internal capital markets may also be used to save firms from failure, especially during moderate negative economic shocks. Funds are then transferred from profitable firms to those who are in distress, because future cash flows from this latter firm are considered to be valuable. In a similar view, large shareholders bring their private resources to the firm, which also provide benefits for minority shareholders. This phenomenon is called propping [Friedman et al., (2003)]. According to the theory of propping by Friedman et al., if negative shock is too large, extreme case of tunneling occurs. Propping has also been studied recently, but on a less extensive scale.

[3] Khanna and Palepu (2000) show that the scale and scope of groups enable business groups to create greater value relative to more focused, unaffiliated firms, by imitating the market institutions. Hence, highly diversified business groups are found to be particularly well suited to the institutional context in most developing countries. Claessens et al. (2006) provide evidence that group affiliation of mature, slower-growing, and financially constrained firms increases the value of firms. Orbay and Yurtoglu (2006) find that business group membership improves the investment performance and relative market valuation of companies.

We analyze the nature of new share issues with the forms of right and bonus issues as well as other financing alternatives in Turkish business group firms with the comparison to non-group firms to provide direct empirical evidence for the model of tunneling and propping developed by Friedman et al. (2003). Turkish business group firms can be accepted a perfect laboratory to test their model. Turkish capital market has weak legal investor protection system [La Porta et al. (1998)], ownership structure of firms is highly concentrated, private benefit of control is also very high [Dyck and Zingales (2004)], firms rely on debt and internally generated funds for major source of their financing (see table 2 and 3) and finally, right and bonus issues are dominant sources for issuing new equity.

A differentiation feature of Turkish groups is to have a group affiliated bank operating within the group umbrella. Turkish banking system allows all commercial banks to operate in all financial markets. Having a group-affiliated bank may support the usability of internal capital markets through relaxing the pressures that restrict fund transfer. Since Turkish capital market is close to a bank-based system, a group affiliated bank may also reduce the information asymmetries and enable risk sharing among affiliated firms. Therefore, we classify affiliated firms with a bank in the group separately and conduct each analysis for this group.

Turkish firms can issue new equity with two forms; cash and bonus issues: 1) Cash issues are offered in exchange for cash through two issuing process; restricted and rights. Firms are very reluctant to issue restricted shares, which are offered to new shareholders, because market risk premium is not acceptable level due to asymmetric information and very high interest rates of government securities. Right issues are subscribing rights, in which new shares are sold to existing shareholders with the nominal price in almost all cases. This type of issue reduces asymmetric information

problems [Fama and French (2005)] as well as the possibility of loosing control of large shareholders of firms especially in a group. 2) Bonus issues are distributed to existing shareholders without any payments. Business group firms have an important advantage for bonus issues since this process is not taxable.

We argue that right issues are very good representative of propping. Complex cross-shareholder structure among business group firms allow group firms to transfer cash among each other by using right issues. By executing bonus issues, tunneling will be possible with a legal way, that is, internal generated profits are tunneled. When large shareholders need cash, they can easily sell these stocks in exchange. We discuss this issue further in the section 4. Cash dividends may have special role in this argument. When earnings are not distributed as dividends and instead reinvested by the firm, they are under control of large shareholders. Since internal funds are very important source of financing for Turkish firms, firms will not distribute dividends when they need funds. On the other hand dividends paid by one firm to another (intercorporate dividends) are not subject to taxation in Turkish tax law before 2006. This creates a low cost capital transfer for pyramidal business groups. If this argument is true, then higher dividend payments would be consistent with the theory of propping. Gopalan et al. (2004) show that business groups in weak legal environment use cash dividends to provide funds for other firms' investments in the group. Another point for dividend payout is related with the difference between voting and cash flow rights of large shareholders. Orbay and Yurtoglu (2006, 351) document that mean value of this difference is not larger than 10% percent for Turkish firms. In this situation, a major proportion of dividends would go to controlling shareholders. Thus, higher dividend payout along with bonus issues would be evidence for severe tunneling. Our results provide evidence for both tunneling and propping in the contents of Turkish business groups.

The rest of this paper is as follows. In section 2, we present a brief review of the related literature. Explanations for the sample, sample period and characteristics of firms are given in section 3. Empirical results are presented in section 4, and we conclude in section 5.

## 2. Tunneling and Propping in the Literature

Internal capital markets created by pyramidal ownership structures of business groups may lead expropriation of minority shareholders because controlling shareholders may tunnel funds. A Pyramid is very important form to separate ownership and control through a chain of ownership relations and arise to separate cash flow rights from voting rights. Earlier studies use this feature of business groups and indirectly measure tunneling by looking at the relationship between firm value and the difference between control and cash flow rights. Claessens et al. (2002) for East Asian countries and Lins (2003) for emerging countries find that increasing the difference between control and cash flow rights decreases firm value. Bertrand et al. (2002) provide evidence of tunneling for Indian pyramidal ownership structures. By examining which firms within pyramid respond to other firms' shock, they find that firms at top of pyramid are affected from shock more than firms at bottom of pyramid. This evidence implies that ultimate owners divert resources from bottom to top of pyramid.

Johnson et. al. (2000) argued that controlling shareholder could tunnel minority shareholder through legal transactions including contracts favoring the controlling shareholder. Later studies try to provide more direct evidence for tunneling. For Korean firms, Bae et al. (2002) find that while minority shareholders of a chaebol affiliated firm loose with declining stock returns with an acquisition of this firm, the controlling shareholder of that firm benefit because the acquisitions increases the value of other firms. Baek et al. (2006) also provide evidence of tunneling for Korean firms with examining private securities offerings by chaebol firms. They find that chaebol-affiliated issuers

experience a higher announcement return when they sell private securities at premium to other member firms in the same group, while member acquirers' return is lower. Cheung et al. (2006) examine several types of connected party transactions in Honk Kong. They find significant negative market reactions and lower long-term market performance for transactions that result in expropriation such as assets acquisitions and sales, equity sales, and cash payments to connected parties. Their results also indicate that investors are aware and revalue of firms when tunneling actually occurs.

Pyramidal ownership structures of business groups provide also benefit to minority shareholders because group membership allows funds to be transferred among firms and/or ultimate owners inject their private sources when a group firm is in need of financing. Friedman et al. (2003) suggest that higher debt level of firms in countries with weak legal corporate governments is an important indication of propping. They develop a model to show this suggestion and state that "entrepreneurs inject private cash today in order to preserve their options to expropriate and to obtain legitimate share of profits tomorrow". According to their theory, if firms are in trouble, but not on the way to go out of business, there is high possibility of propping. When shock is very large, severe tunneling occurs. They provide empirical evidence for propping with results of higher debt financing of pyramid ownership structures in Asian countries and of smaller stock price declines during the Asian financial crisis of 1997-1998.

Recent studies focus on strategic futures of Chinese stock market and China's emerging corporate control market to provide direct evidence of propping. Bai et al. (2005) show that how much to prop up depends on how much the controlling shareholders can tunnel in the future by examining special treatments provided to firms in financial trouble. They find that fewer than 10% of firms without special treatments changed their largest shareholders while this percentage is over 50% for firms with special treatments during the

period from 1998 to 2000. More importantly, later firms on average outperform market by 31.8% during the period from 3 months before their treatment designations to 24 months after. They claim that this extra value is the price that larger shareholders are willing to pay in order to control of firms and conclude that this extra value is also the magnitude of the propping. Two very recent studies; Jian and Wong (2006) and Peng et al. (2006), use related party transactions in China to provide the direct evidence of propping. Jian and Wong examine listed firms' earnings around delisting and share issuance earnings targets to see whether insiders or controlling owners use related party sales to inflate earnings of these firms for a direct evidence of propping during the 1998-2002 period. They find that these types of propping are mainly conducted by local-government-owned firms. They also show that propping is associated with tunneling that occurs by poor subsequent firm performance. Peng et al. (2006) examine connected transactions in China during the 1998-2004 period. They find negative market reaction to connected transactions announcements for firms in sound financial conditions, which is the evidence of tunneling, and positive market reaction to connected transactions announcements for firms in risk of delisting, which is the evidence of propping.

## 3. Sample

We use balance financial data and specific source for the new equity issues provided by the web site of Istanbul Stock Exchange. Financial and public utility firms are excluded from the data set. We have split up firms into affiliated and non-affiliated firms. We determine the affiliated and unaffiliated firms by using the ownership structures derived from the balance sheet notes. A firm is determined as an affiliated firm if the existence of a holding company as the major owner. Many business groups in emerging markets are organized around a holding company and a bank serving as the main

financial source of the business group, which also creates well-organized internal capital markets. Therefore, we also examine the financing decisions of affiliated firms with the presence of a bank in the group.

We use the 1991-2003 period for our analysis. We divide this sample period into two subperiods; 1991-1999 and 2000-2003. Chronic macroeconomic instability and persistent high inflation in the Turkish economy invariably created anomalies in the financial markets. The one occurred during January-March 1994 appeared as severe currency value devaluation, but it did not affect the whole economy very deeply for a longer period of time. During the 1991-1999 period, the Turkish economy experienced high inflation and high internal government debt, which caused economic and political upheavals. Even though these two factors affected the nominal interest rates to be high in this period, the government succeeded to keep nominal interest rates stable despite of a high inflation rate. We determine that this period as moderate negative shock period and expect to observe both propping and tunneling among business group firms.

The second subperiod is the 2000-2003 period. The importance of this subperiod can be explained with following developments: The Turkish government announced its 17th stabilization program in December 1999 when the perceived political risk of maintaining status quo was much higher as compared to previous periods. In its stabilization program, the government was proposing a comprehensive and far-reaching economic program which addressed Turkey's many economic ills and diligently followed the reform agenda at the outset. A set of tight fiscal and monetary policies, the privatization drive, and a scheduled devaluation path (crawling peg) for the Turkish Lira helped to bring interest rates and inflation to the lowest levels in years. However, during the second half of the 2000, initial momentum was lost. The decelerating reforms heightened the concerns about the viability of the disinflation program and increased the

market's sensitivity to bad news. The concerns further escaladed after the collapse of ten private banks. Turkish economy experienced a massive currency crisis when its crawling peg regime collapsed on February 21st, 2001. The currency crisis quickly spiraled into a systemic financial meltdown and Turkish economy contracted by 10% in 2001. The prolonged recession dragged until the economy recovered in 2003. As a summary, the economy in the 2000-2003 period is in a full tailspin; and therefore, we determine this period as a large negative shock period and expect that ultimate owners in business group firms are likely to tunnel rather than to prop.

Since sample period covers over a long period of years and there have been high inflation rate and significant fluctuations in macro economic variables in this period, we have deflated all the data by the appropriate GDP deflators as having the year 2000 as the base year. Thus, all values show changes in real terms.

Table 1 provides an overview of sample. Panel A reports the number of firms for total sample, new equity issuers at the form both cash (rights and no-rights) and bonus, and non-issuers. This panel also includes the percentages of firms in the specific classifications. When we examine the percentage of firms issued new equity, we see that there is an increasing trend in the beginning of the sample period and a decreasing trend during later years through to the end of the sample period. The percentage of affiliated firms issued new equity is higher than that of non-affiliated firms, and among the affiliated firms, firms with a bank in the group have higher percentage.

Panel B of Table 1 presents several growth characteristics, debt levels and payout ratios of total sample firms classified as affiliated and non affiliated firms, and also new equity issuers and non issuers. Issuers and non-issuers are also classified as affiliated, non-affiliated and affiliated with a group bank. We test the difference in mean and median values of characteristics between the pairs of classified firms. The values are reported for

total sample period and also for the two subperiods, 1991-1999 and 2000-20003 periods. In this table, values are real and the average of values from the each year in a specific period. Main findings in this table are as follows: Mean and median values of the average real growth of sales and operating profits are negative for every type of firms in the whole sample period. However, typical firms show positive growth (mean values are less negative) in the first subperiod, which is consistent with our argument for this period that implies moderate negative shock. Even though affiliated firms (especially the ones having a bank in their group membership) experience higher growth in sales and profits, the test statistics do not show up as significant, which is likely to be caused by the limited number of observations when we have sub-classifications. Negative growth is more pronounced in the second subperiod, and affiliated firms have higher negative mean and median values than non-affilated firms do. However, we again luck of statistical significance differences between pairs. Growth in market value provides similar pattern with growth in sales and profit, but we have statistically significant results in this case. In the 1991-1999 period, market value of affiliated firms and among those with an affiliation to a bank show higher growth than non-affiliated firms do, which would be an indirect and simple indication of both propping and tunneling since this difference is not statistically significant. However, growth in market value for affiliated firms and affiliated firms with a bank in the group (especially for those issued new equity) is negative and significantly lower than that for non-affiliated firms in the second subperiod. We interpret this result as an indirect and simple evidence of propping in the period with severe negative shock.

Investigation of book value of debt levels shows that affiliated firms have higher leverage than non-affiliated firms in both subperiods, but the difference is only statistically significant in the second period. However, the source of this higher debt level is affiliated firms without a bank in the group. This is consistent with our argument that having a

group-affiliated bank may support the usability of internal capital markets through relaxing the pressures that restrict fund transfer, affiliated firms with. Since affiliated firms without a bank may not utilize internal capital markets well, they need to bring funds from outside of the group. For the last variable, dividend payout ratio, we observe that affiliated firms with a bank have significantly higher payout ratio than non-affiliated firms in only the second subperiod.

Univariate results from Panel B of Table 1 provide simple presentation of consistency of our arguments based on the periods and tunneling/propping. We will continue to provide more direct evidence for the phenomenon in the next section.

[Table 1 here]

**4. Empirical Results**

Table 2 examines financing alternatives of affiliated and non-affiliated firms for growth in assets. We believe that this analysis is very useful in assessing in general the role of financing alternatives in the firm's growth. We also investigate the compositions of debt. The results show that affiliated firms grow in real terms (3.94%) more than non affiliate firms do (-0.52%) in the 1991-1999 period. Growth rate is much higher for affiliated firms with a bank (4.24%). Growth in debts is the major contributor for this growth for especially affiliated firms without a bank. However, equity values of affiliated firms with a bank increase[4]. Negative growth in assets and debts for all types of firms in the 2000-2003 period show that firms have to pay their debt back or do not find new debt in this period.

Investigation of compositions of debt shows that over 75% of debt contains short-term debts. Moreover, firms use borrowings from shareholders and subsidiaries as

[4] We will examine the sources of this raising new equity further with the results we present in Table 3.

much as long or short term financial debts. Accounts payable type of trade debts has the least proportion in leverage.

[Table 2 here]

Table 3 reports average proportions of types of new issue shares in increasing equity and also proportions of firms that use alternatives equity issues at the time when they issue new equity. Turkish firms can issue new equity with two forms; cash and bonus issues: 1) Cash issues are offered in exchange for cash through two issuing process; restricted and rights. 2) Bonus issues: Two main processes are available for this type of new equity issues in Turkish capital market. In the first process, new shares are issued by using internal funds, especially the revaluation funds. Revaluation fund occurs for the adjustment of the book value of fixed assets and their accumulated depreciation for inflation, and the excess value is written into an equity account. It is a legal right that corporations can transfer the balance of this account to paid-in-capital by issuing bonus stock to existing shareholders. The second process of bonus issues is the form of stock dividend. Corporations pay dividend by issuing new stocks out of the retained earnings and distributable profit. Finally, firms issue new equity if they involve with merger activities. The Results in Table 3 shows that firms uses cash and bonus issues mostly together in the 1991-1999 period, and mostly only bonus issues in the 2000-2003 period.

[Table 3 here]

The next, we run several multivariate analyses to address issues we have already raised. Table 4 reports results form fixed effect regression analyses where the dependent variable is leverage in Panel A, and dividend payout ration ion Panel B. Independent variables are common variables to determine the level of financing alternatives in the literature. We use dummy variables to differentiate the effects of group affiliation and also affiliation with a group bank. The results show that neither group affiliation nor a

bank in the group creates a higher leverage. However, we find that dividend payout ratio of affiliated firms with a bank in the group is statistically higher than non-affiliated firms.

[Table 4 here]

Table 5 presents the results from logit regression analysis for the determinants of characteristics of new equity issuers. We find that, in the 1991-1999 period, affiliated firms with a bank in the group are most likely to issue new equity at form of both rights and bonus issues together. This finding is consistent with the model of Friedman et al. (2003) stating that "entrepreneurs inject private cash today in order to preserve their options to expropriate and to obtain legitimate share of profits tomorrow". The evidence from the 2000-2003 period show that affiliated firms with a bank in the group are most likely to issue only bonus issues, which indicate tunneling of funds without propping by ultimate owners.

[Table 5 here]

To provide evidence for that propping and tunneling affect firm market value to show that minority shareholders can get benefit from propping, but suffer from tunneling, we run fixed effect regression analysis on market value growth. We control change in liabilities, profit and growth in sales. In addition to group dummies to separate the effect of group affiliation, we also include an interaction dummy between group membership and issuing new equity. The results show that either group membership or affiliation with a bank in the group create growth in market value with new equity issues in the 1991-1999 period. In the second subperiod when is tunneling is likely to occur, we find that interaction does not create any value, but group membership of affiliation with a bank cause a negative growth in market value of firms.

[Table 6 here]

To provide further evidence to show that bonus issues might be a good representative for tunneling, we examine liquidity of traded stocks in the month that firms issue new equity. The results are presented in table 7.

[Table 7 here]

Finally we examine stock market reactions to the announcements of joint venture, acquisitions and minority stake increase transactions by affiliated firms in 2000-2005 period. The acquisitions information is gathered from Zephyr database and adjusted daily stock returns are collected from Datastream. The results in Table 8 show that affiliated firms announced joint venture transactions experience significantly higher returns than the other two types of transactions. We interpret this result as the evidence of propping argument. Join ventures allow controlling shareholders to keep their control on management and to raise new funds for their investments for the benefit of minority shareholders.

[Table 8 here]

**5. Conclusion**

In this study, our aim is to be able to provide direct evidence for propping and tunneling arguments in the international corporate governance literature. We analyze the nature of new share issues with the forms of right and bonus issues as well as other financing alternatives in Turkish business group firms with the comparison to non-group firms in the 1991-2003 period. Since some of Turkish business groups include a bank, and a group-affiliated bank can provide a natural mechanism for capital transfers, we also investigate the position of affiliated firms with a bank in the group. Our results provide evidence for both tunneling and propping in the contents of Turkish business groups.

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**Table 1: Descriptive Statistics**

**Panel A: Number and Percentage of Firms:** This table provides an overview of the sample. First column (N) shows the number of firms and the second column (%) shows the percentage of firms in the related group of firms. Issuers are those that increase their common equity by issuing either cash or bonus issues in a particular year. Not Issuers are those that do not have any changes in their common equity. A firm is determined as an affiliated firm if the existence of a holding company as the major owner. If a business group includes a bank, firms in this group are classified as Affiliated firms with a Bank in the group (Aff. – Bank).

| | 1991 | | 1992 | | 1993 | | 1994 | | 1995 | | 1996 | | 1997 | | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | | 2003 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Sample** | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| All sample | 64 | | 80 | | 87 | | 92 | | 107 | | 118 | | 132 | | 143 | | 148 | | 158 | | 165 | | 181 | | 176 | |
| Affiliated | 37 | 0.56 | 46 | 0.58 | 50 | 0.57 | 53 | 0.58 | 61 | 0.57 | 67 | 0.57 | 75 | 0.57 | 81 | 0.57 | 79 | 0.53 | 81 | 0.51 | 84 | 0.51 | 92 | 0.51 | 90 | 0.51 |
| Non Affiliated | 29 | 0.44 | 34 | 0.43 | 37 | 0.43 | 39 | 0.42 | 46 | 0.43 | 51 | 0.43 | 57 | 0.43 | 62 | 0.43 | 69 | 0.47 | 77 | 0.49 | 81 | 0.49 | 89 | 0.49 | 86 | 0.49 |
| Aff. - Bank | 24 | 0.65 | 30 | 0.65 | 32 | 0.64 | 33 | 0.62 | 37 | 0.61 | 39 | 0.58 | 42 | 0.56 | 43 | 0.53 | 43 | 0.54 | 43 | 0.53 | 44 | 0.52 | 43 | 0.47 | 43 | 0.48 |
| Aff. – No Bank | 13 | 0.35 | 16 | 0.35 | 18 | 0.36 | 20 | 0.38 | 24 | 0.39 | 28 | 0.42 | 33 | 0.44 | 38 | 0.47 | 36 | 0.46 | 38 | 0.47 | 40 | 0.48 | 48 | 0.52 | 47 | 0.52 |
| **Issuers** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All sample | 45 | 0.70 | 43 | 0.54 | 47 | 0.54 | 67 | 0.73 | 70 | 0.65 | 75 | 0.64 | 76 | 0.58 | 73 | 0.51 | 75 | 0.51 | 76 | 0.48 | 67 | 0.41 | 89 | 0.49 | 72 | 0.41 |
| Affiliated | 27 | 0.60 | 27 | 0.63 | 26 | 0.55 | 39 | 0.58 | 43 | 0.61 | 46 | 0.61 | 45 | 0.59 | 41 | 0.56 | 44 | 0.59 | 43 | 0.57 | 41 | 0.61 | 47 | 0.53 | 50 | 0.69 |
| Non Affiliated | 18 | 0.40 | 16 | 0.37 | 21 | 0.45 | 28 | 0.42 | 27 | 0.39 | 29 | 0.39 | 31 | 0.41 | 32 | 0.44 | 31 | 0.41 | 34 | 0.45 | 26 | 0.39 | 42 | 0.47 | 22 | 0.31 |
| Aff. - Bank | 19 | 0.70 | 18 | 0.67 | 17 | 0.65 | 25 | 0.64 | 26 | 0.60 | 29 | 0.63 | 31 | 0.69 | 26 | 0.63 | 30 | 0.68 | 28 | 0.65 | 26 | 0.63 | 26 | 0.55 | 31 | 0.62 |
| Aff. – No Bank | 8 | 0.30 | 9 | 0.33 | 9 | 0.35 | 14 | 0.36 | 17 | 0.40 | 17 | 0.37 | 14 | 0.31 | 15 | 0.37 | 14 | 0.32 | 15 | 0.35 | 15 | 0.37 | 21 | 0.45 | 19 | 0.38 |
| **Not Issuers** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| All sample | 19 | 0.30 | 37 | 0.46 | 40 | 0.46 | 25 | 0.27 | 37 | 0.35 | 43 | 0.36 | 56 | 0.42 | 70 | 0.49 | 73 | 0.49 | 82 | 0.52 | 98 | 0.59 | 92 | 0.51 | 104 | 0.59 |
| Affiliated | 10 | 0.53 | 19 | 0.51 | 24 | 0.60 | 14 | 0.56 | 18 | 0.49 | 21 | 0.49 | 30 | 0.54 | 40 | 0.57 | 35 | 0.48 | 38 | 0.46 | 43 | 0.44 | 45 | 0.49 | 40 | 0.38 |
| Non Affiliated | 9 | 0.47 | 18 | 0.49 | 16 | 0.40 | 11 | 0.44 | 19 | 0.51 | 22 | 0.51 | 26 | 0.46 | 30 | 0.43 | 38 | 0.52 | 43 | 0.52 | 55 | 0.56 | 47 | 0.51 | 64 | 0.62 |
| Aff. - Bank | 5 | 0.50 | 12 | 0.63 | 15 | 0.63 | 8 | 0.57 | 11 | 0.61 | 10 | 0.48 | 11 | 0.37 | 17 | 0.43 | 13 | 0.37 | 15 | 0.39 | 18 | 0.42 | 17 | 0.38 | 12 | 0.30 |
| Aff. – No Bank | 5 | 0.50 | 7 | 0.37 | 9 | 0.38 | 6 | 0.43 | 7 | 0.39 | 11 | 0.52 | 19 | 0.63 | 23 | 0.58 | 22 | 0.63 | 23 | 0.61 | 25 | 0.58 | 27 | 0.60 | 28 | 0.70 |

**Panel B: Average Characteristics of Firms:** The values (percentage) in this table are real and the average of each year's sample. Real values are calculated by deflating all data (except market value) in the sample period with the appropriate GDP deflators (2000 is the base year). Sales Growth is the average of sales growth in previous three years. Growth is calculated as percentage change of sales from year t-1 to year t. Profit Growth is growth in operating profit ($Prof_t$- $Prof_{t-1}$) / $A_t$. Market Value growth is growth in sum of market value of shareholders' equity and total debt ($MV_t$- $MV_{t-1}$) / $A_t$. Leverage is ratio of total book value of short and long-term debts to total assets. Dividend Payout is the ratio of cash dividends to net income. Significance for differences between means and medians are based on non-parametric tests, which are F test for the mean differences and Wilcoxon Rank test for the median differences. a, b and c denote significance at 1%, 5% and 10% respectively.

| | **Total Sample** | | | | **New Share Issuers** | | | | | | **Not Issuers** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Affiliated (1)** | | **Non Affiliated (2)** | | **Affiliated (1)** | | **Non Affiliated (2)** | | **Aff. And Bank (3)** | | **Affiliated (1)** | | **Non Affiliated (2)** | | **Aff. And Bank (3)** | |
| **Sales Growth** | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Mean | Median | Mean | Median |
| 1991-2003 | -8.88 | -1.01 | -6.53 | -1.50 | -7.09 | -0.94 | -4.02 | -0.86 | -3.57 | -0.67 | -10.33 | -0.45 | -8.65 | -3.61 | -4.95 | 0.78 |
| | | (1)vs(2) | (1.97) | [2.25] | (1)vs(2) and | (2)vs(3) | (1.35) | [1.85] | (2.06) | [2.22] | (1)vs(2) and | (2)vs(3) | (1.40) | [2.12] | (0.94) | [1.61] |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1991-1999 | -1.11 | 3.59 | -3.15 | 1.72 | -2.08 | 3.53 | -0.63 | 1.94 | 0.65 | 3.47 | 1.25 | 4.65 | -5.65 | -0.58 | -0.92 | 4.13 |
| | | (1)vs(2) | (1.60) | [2.37] | (1)vs(2) and | (2)vs(3) | (1.27) | [1.89] | (2.13) | [2.11] | (1)vs(2) and | (2)vs(3) | (1.01) | [2.33] | (0.97) | [1.58] |
| 2000-2003 | -26.37 | -11.37 | -14.14 | -8.74 | -18.36 | -11.02 | -11.64 | -7.17 | -13.06 | -9.98 | -36.38 | -11.90 | -15.40 | -10.41 | -14.14 | -8.74 |
| | | (1)vs(2) | (2.80)[c] | [1.97] | (1)vs(2) and | (2)vs(3) | (1.54) | [1.78] | (1.90) | [2.45] | (1)vs(2) and | (2)vs(3) | (2.27) | [1.63] | (0.88) | [1.67] |
| **Profit Growth** | | | | | | | | | | | | | | | | |
| 1991-2003 | -1.16 | -0.24 | -1.37 | -0.70 | -1.49 | -0.59 | -0.96 | -0.18 | -1.37 | 0.22 | -0.49 | -0.20 | -1.55 | -0.44 | 0.58 | 0.70 |
| | | (1)vs(2) | (1.62) | [1.11] | (1)vs(2) and | (2)vs(3) | (1.27) | [1.44] | (1.26) | [1.49] | (1)vs(2) and | (2)vs(3) | (1.41) | [1.37] | (1.34) | [1.58] |
| 1991-1999 | 0.48 | 1.02 | -0.71 | 0.04 | -0.10 | 0.60 | -0.47 | -0.17 | -0.27 | 1.55 | 1.62 | 1.05 | -0.85 | 0.71 | 1.75 | 1.93 |
| | | (1)vs(2) | (1.80) | [1.34] | (1)vs(2) and | (2)vs(3) | (1.57) | [1.57] | (1.59) | [1.73] | (1)vs(2) and | (2)vs(3) | (1.19) | [1.54] | (1.59) | [1.69] |
| 2000-2003 | -4.83 | -3.08 | -2.87 | -2.39 | -4.60 | -3.25 | -2.07 | -0.20 | -3.84 | -2.78 | -18.42 | -6.75 | -3.12 | -3.03 | -2.87 | -2.39 |
| | | (1)vs(2) | (1.21) | [0.57] | (1)vs(2) and | (2)vs(3) | (0.57) | [1.16] | (0.52) | [0.93] | (1)vs(2) and | (2)vs(3) | (1.92) | [1.01] | (0.76) | [1.32] |
| **Mkt.V. Growth** | | | | | | | | | | | | | | | | |
| 1991-2003 | 6.56 | 7.94 | 11.83 | 11.83 | 9.96 | 5.42 | 15.60 | 14.22 | 9.01 | 3.73 | 3.24 | 5.49 | 9.30 | 10.66 | 3.10 | 6.15 |
| | | (1)vs(2) | (2.90)[c] | [2.66][c] | (1)vs(2) and | (2)vs(3) | (2.46) | [1.74] | (2.86)[c] | [2.88][c] | (1)vs(2) and | (2)vs(3) | (1.82) | [2.08] | (1.68) | [2.51] |
| 1991-1999 | 17.01 | 14.24 | 11.70 | 11.78 | 20.41 | 17.60 | 14.19 | 13.27 | 23.79 | 19.31 | 12.87 | 10.94 | 9.92 | 10.95 | 12.00 | 14.38 |
| | | (1)vs(2) | (1.95) | [1.64] | (1)vs(2) and | (2)vs(3) | (1.71) | [1.13] | (2.06) | [2.07] | (1)vs(2) and | (2)vs(3) | (1.74) | [1.58] | (1.83) | [2.40] |
| 2000-2003 | -16.97 | -6.23 | 12.13 | 11.94 | -13.55 | -21.98 | 18.79 | 16.36 | -24.25 | -31.32 | -5.24 | -3.02 | 7.91 | 10.00 | 12.13 | 11.94 |
| | | (1)vs(2) | (5.05)[b] | (4.96)[b] | (1)vs(2) and | (2)vs(3) | (4.17)[b] | (3.10)[c] | (4.66)[b] | [4.70][b] | (1)vs(2) and | (2)vs(3) | (1.99) | [3.19][c] | (1.34) | [2.75][c] |
| **Book Leverage** | | | | | | | | | | | | | | | | |
| 1991-2003 | 55.31 | 55.28 | 51.99 | 51.99 | 54.85 | 55.03 | 51.26 | 51.14 | 53.36 | 53.94 | 56.34 | 57.04 | 53.50 | 53.07 | 56.07 | 55.44 |
| | | (1)vs(2) | (1.09) | [0.94] | (1)vs(2) and | (2)vs(3) | (1.73) | [1.41] | (1.33) | [0.78] | (1)vs(2) and | (2)vs(3) | (1.53) | [1.70] | (1.69) | [1.27] |
| 1991-1999 | 53.68 | 54.46 | 50.81 | 50.72 | 53.55 | 54.85 | 49.24 | 49.57 | 53.01 | 53.85 | 54.56 | 55.63 | 53.04 | 52.68 | 51.76 | 49.84 |
| | | (1)vs(2) | (0.84) | [1.11] | (1)vs(2) and | (2)vs(3) | (1.14) | [1.03] | (0.59) | [0.42] | (1)vs(2) and | (2)vs(3) | (1.42) | [1.65] | (0.88) | [0.57] |
| 2000-2003 | 58.97 | 57.11 | 54.63 | 54.84 | 57.77 | 55.45 | 55.82 | 54.67 | 54.13 | 54.14 | 60.36 | 60.21 | 54.55 | 53.96 | 54.63 | 54.84 |
| | | (1)vs(2) | (1.66) | [0.58] | (1)vs(2) and | (2)vs(3) | (3.08)[c] | [2.24] | (2.99) | [1.56] | (1)vs(2) and | (2)vs(3) | (3.50)[c] | [2.85][c] | (1.78) | [1.80] |
| **Div. Payout** | | | | | | | | | | | | | | | | |
| 1991-2003 | 34.55 | 29.16 | 35.54 | 22.50 | 33.92 | 27.68 | 43.57 | 25.11 | 37.14 | 29.11 | 35.57 | 30.43 | 27.06 | 20.30 | 38.20 | 33.08 |
| | | (1)vs(2) | (1.76) | [0.92] | (1)vs(2) and | (2)vs(3) | (1.30) | [1.50] | (1.68) | [2.07] | (1)vs(2) and | (2)vs(3) | (2.16) | [1.33] | (2.66)[c] | [1.47] |
| 1991-1999 | 42.52 | 42.12 | 45.73 | 32.50 | 41.71 | 39.98 | 57.19 | 36.26 | 43.20 | 41.24 | 43.79 | 43.95 | 34.16 | 29.33 | 44.69 | 43.16 |
| | | (1)vs(2) | (1.65) | [0.98] | (1)vs(2) and | (2)vs(3) | (1.25) | [1.48] | (1.08) | [1.85] | (1)vs(2) and | (2)vs(3) | (2.25) | [1.71] | (1.83) | [1.47] |
| 2000-2003 | 16.63 | 0.00 | 12.61 | 0.00 | 16.40 | 0.00 | 12.94 | 0.00 | 23.51 | 1.82 | 17.08 | 0.00 | 11.09 | 0.00 | 12.61 | 0.00 |
| | | (1)vs(2) | (2.00) | [0.77] | (1)vs(2) and | (2)vs(3) | (1.40) | [1.54] | (3.03)[c] | [2.58] | (1)vs(2) and | (2)vs(3) | (1.94) | [0.49] | (4.51)[b] | [1.45] |

**Table 2: Average Financing Alternatives of Growth in Assets**

The values (percentage) in this table are real and the average of each year's sample. Real values are calculated by deflating all data in the sample period with the appropriate GDP deflators (2000 is the base year). dA/A is the growth in assets $(A_t - A_{t-1}) / A_t$, dL/A is the growth in total short and long term debts, dEq/A is the new equity issued to total assets. STD/A and LTD/A are the proportion of short term and long term debts to total debts, respectively. Debt1/A, Debt2/A, and Debt3/A are the proportions of short and long term financial, trade debts like accounts payable, and borrowings to shareholders and subsidiaries, respectively in total debts. A firm is determined as an affiliated firm if the existence of a holding company as the major owner. If a business group includes a bank, firms in this group are classified as Affiliated firms with a Bank.

| | dA/A | dL/A | dEq/A | ST D/A | LT D/A | Debt1/A | Debt2/A | Debt3/A |
|---|---|---|---|---|---|---|---|---|
| **1991-2003** | | | | | | | | |
| All sample | -0.65 | -1.10 | -0.08 | 76.59 | 23.42 | 36.16 | 26.04 | 37.80 |
| Affiliated Firms | 0.51 | 0.13 | 0.38 | 76.58 | 23.42 | 37.71 | 27.20 | 35.08 |
| Non Affiliated Firms | -2.14 | -2.66 | -0.63 | 76.55 | 23.46 | 34.22 | 24.51 | 41.27 |
| Aff. with A Bank in Group | 2.29 | 0.67 | 0.86 | 75.31 | 24.69 | 36.51 | 28.82 | 34.67 |
| Aff. without A Bank in Grp. | -1.13 | -0.03 | -0.15 | 78.25 | 21.75 | 39.99 | 24.77 | 35.24 |
| **1991-1999** | | | | | | | | |
| All sample | 1.95 | 1.07 | -0.39 | 76.58 | 23.42 | 34.48 | 25.34 | 40.19 |
| Affiliated Firms | 3.94 | 2.84 | 0.03 | 76.82 | 23.18 | 36.07 | 27.05 | 36.88 |
| Non Affiliated Firms | -0.52 | -1.17 | -0.94 | 76.27 | 23.73 | 32.35 | 23.11 | 44.54 |
| Aff. with A Bank in Group | 4.24 | 2.13 | 0.38 | 75.88 | 24.12 | 33.63 | 29.00 | 37.37 |
| Aff. without A Bank in Grp. | 3.80 | 4.03 | -0.42 | 78.30 | 21.70 | 40.05 | 23.92 | 36.04 |
| **2000-2003** | | | | | | | | |
| All sample | -6.52 | -6.00 | 0.63 | 76.60 | 23.41 | 39.95 | 27.61 | 32.44 |
| Affiliated Firms | -7.22 | -5.98 | 1.18 | 76.05 | 23.95 | 41.40 | 27.56 | 31.04 |
| Non Affiliated Firms | -5.79 | -6.02 | 0.06 | 77.17 | 22.84 | 38.43 | 27.66 | 33.91 |
| Aff. with A Bank in Group | -2.10 | -2.61 | 1.92 | 74.04 | 25.96 | 43.00 | 28.41 | 28.59 |
| Aff. without A Bank in Grp. | -12.21 | -9.16 | 0.46 | 78.12 | 21.88 | 39.86 | 26.67 | 33.47 |

**Table 3: Average proportions of types of new issue shares and firms**

This table presents the proportions of the type of new share issues to total new share issues. The last three columns report the percentage of firms used types of new issue shares. Seasoned equity issues are classified as two major types; cash issues and bonus issues. Cash issues are offered in exchange for cash through two issuing process; rights offerings and no rights (restricted) offerings. Bonus issues are distributed to existing shareholders without any payments.

| | Cash Issues | | Bonus Issues | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Rights | No Rights | Merger | Internal Sources | Stock Dividend | Only Cash | Only Bonus | Cash and Bonus |
| **1991-2003** | | | | | | | | |
| All sample | 29.89 | 1.71 | 0.97 | 59.45 | 7.98 | 7.03 | 46.31 | 46.66 |
| Affiliated Firms | 29.12 | 1.63 | 1.28 | 59.41 | 8.56 | 6.56 | 47.38 | 46.06 |
| Non Affiliated Firms | 31.18 | 2.01 | 0.52 | 59.29 | 7.01 | 8.27 | 44.37 | 47.36 |
| Aff. with A Bank in Group | 28.76 | 0.56 | 0.98 | 58.86 | 10.85 | 4.38 | 49.46 | 46.16 |
| Aff. without A Bank | 29.27 | 3.37 | 1.70 | 60.72 | 4.94 | 10.15 | 44.60 | 45.24 |
| **1991-1999** | | | | | | | | |
| All sample | 33.60 | 1.10 | 0.50 | 57.28 | 7.52 | 4.42 | 38.42 | 57.16 |
| Affiliated Firms | 33.26 | 1.37 | 0.62 | 56.84 | 7.90 | 4.25 | 38.17 | 57.58 |
| Non Affiliated Firms | 33.96 | 0.72 | 0.38 | 58.06 | 6.88 | 4.60 | 38.74 | 56.66 |
| Aff. with A Bank in Group | 34.47 | 0.80 | 0.46 | 55.40 | 8.87 | 2.68 | 37.11 | 60.21 |
| Aff. without A Bank | 31.00 | 2.52 | 0.85 | 59.50 | 6.14 | 7.16 | 39.84 | 52.99 |
| **2000-2003** | | | | | | | | |
| All sample | 21.53 | 3.10 | 2.01 | 64.33 | 9.02 | 12.91 | 64.07 | 23.02 |
| Affiliated Firms | 19.81 | 2.21 | 2.75 | 65.19 | 10.04 | 11.74 | 68.11 | 20.15 |
| Non Affiliated Firms | 24.93 | 4.91 | 0.81 | 62.04 | 7.30 | 16.53 | 57.06 | 26.41 |
| Aff. with A Bank in Group | 15.90 | 0.00 | 2.13 | 66.65 | 15.32 | 8.21 | 77.25 | 14.54 |
| Aff. without A Bank | 25.39 | 5.30 | 3.62 | 63.45 | 2.24 | 16.88 | 55.32 | 27.80 |

**Table 4: Fixed Effect Regressions for Financing Decisions**

This tables report fixed effect regression results. All data in the sample period is deflated by the appropriate GDP deflators (2000 is the base year). Estimated coefficients are estimated with firm and time fixed effects. Standard errors reported in parenthesis are White heteroskedasticity consistent in all regressions. GrpDum takes value 1 if a firm is affiliated with a business group. GrpBank is a dummy variable to represent affiliated business group firms with a bank in the group. MtoB is the ratio of sum market value of equity and book value of debt to total assets. Tang. is the proportion of fixed assets in total assets. Profit is the operating return on assets. Log Sales is the natural logarithm of Sales. ***, ** and * denote significance at 1%, 5% and 10% respectively.

| **Variable** | **Constant** | **GrpDum** | **GrpBank** | **MtoB** | **Tang.** | **Profit** | **logSales** | **N** |
|---|---|---|---|---|---|---|---|---|
| *Dependent Variable: Leverage* | | | | | | | | |
| **1991-2003** | 0.44 | 0.01 | | -0.01 | -0.46 | -0.44 | 0.02 | 1639 |
| | (0.19)** | (0.03) | | (0.01) | (0.08)*** | (0.08)*** | (0.01)* | |
| | 0.40 | 0.03 | -0.03 | -0.01 | -0.45 | -0.44 | 0.02 | |
| | (0.20)** | (0.03) | (0.04) | (0.01) | (0.08)*** | (0.08)*** | (0.01)** | |
| **1991-1999** | 0.56 | 0.01 | | 0.05 | -0.44 | -0.27 | 0.01 | 962 |
| | (0.22)*** | (0.03) | | (0.02)*** | (0.10)*** | (0.11)*** | (0.01) | |
| | 0.53 | 0.02 | -0.03 | 0.05 | -0.43 | -0.27 | 0.01 | |
| | (0.23)** | (0.04) | (0.03) | (0.02)*** | (0.10)*** | (0.11)*** | (0.01) | |
| **1999-2003** | 0.38 | 0.02 | | -0.03 | -0.44 | -0.55 | 0.02 | 677 |
| | (0.20)* | (0.03) | | (0.01)*** | (0.09)*** | (0.10)*** | (0.01)** | |
| | 0.34 | 0.04 | -0.04 | -0.03 | -0.43 | -0.56 | 0.03 | |
| | (0.21) | (0.04) | (0.04) | (0.01)*** | (0.09)*** | (0.10)*** | (0.01)** | |
| | | | | | | | | |
| **Variable** | **Constant** | **GrpDum** | **GrpBank** | **MtoB** | **Growth** | **Profit** | **logSales** | **N** |
| *Dependent Variable: Dividend Payout Ratio* | | | | | | | | |
| **1991-2003** | 0.03 | 0.04 | | -0.03 | 0.05 | 0.84 | 0.01 | 1630 |
| | (0.17) | (0.03) | | (0.01)*** | (0.03) | (0.09)*** | (0.01) | |
| | 0.11 | 0.00 | 0.08 | -0.02 | 0.04 | 0.85 | 0.00 | |
| | (0.17) | (0.03) | (0.04)* | (0.01)** | (0.03) | (0.08)*** | (0.01) | |
| **1991-1999** | 0.17 | 0.05 | | -0.05 | 0.04 | 0.77 | 0.00 | 956 |
| | (0.23) | (0.03) | | (0.02)** | (0.05) | (0.11)*** | (0.01) | |
| | 0.21 | 0.03 | 0.04 | -0.04 | 0.04 | 0.77 | 0.00 | |
| | (0.23) | (0.04) | (0.05) | (0.02)** | (0.05) | (0.11)*** | (0.01) | |
| **1999-2003** | -0.33 | 0.03 | | 0.02 | 0.03 | 0.54 | 0.02 | 674 |
| | (0.17) | (0.03) | | (0.01) | (0.04) | (0.12)*** | (0.01)** | |
| | -0.19 | -0.03 | 0.13 | 0.02 | 0.00 | 0.57 | 0.01 | |
| | (0.17) | (0.03) | (0.05)*** | (0.01)** | (0.04) | (0.12)*** | (0.01) | |

**Table 5: Logit Regression Analysis for the Determinants of Characteristics of New Issuers**

This tables report logit regression results. All data in the sample period is deflated by the appropriate GDP deflators (2000 is the base year). GrpDum takes value 1 if a firm is affiliated with a business group. GrpBank is a dummy variable to represent affiliated business group firms with a bank in the group. MtoB is the ratio of sum market value of equity and book value of debt to total assets. Growth is the average of sales growth in previous three years. Profit is the operating return on assets. Log Sales is the natural logarithm of Sales. ***, ** and * denote significance at 1%, 5% and 10% respectively.

| Variable | Constant | GrpDum | GrpBank | MtoB | Growth | Profit | logSales | N |
|---|---|---|---|---|---|---|---|---|
| *Dependent Variable: New Share Issuing* | | | | | | | | |
| **1991-2003** | -2.49 | 0.32 | | -0.15 | 1.17 | -1.09 | 0.16 | 1639 |
| | (0.68)*** | (0.10)*** | | (0.05)*** | (0.23)*** | (0.39)*** | (0.04)*** | 0.05 |
| | -1.76 | -0.02 | 0.68 | -0.14 | 1.13 | -1.00 | 0.12 | 1639 |
| | (0.71)*** | (0.13) | (0.15)*** | (0.05)*** | (0.23)*** | (0.40)*** | (0.04)*** | 0.06 |
| **1991-1999** | -2.24 | -0.21 | 0.61 | -0.17 | 1.22 | -1.82 | 0.17 | 962 |
| | (0.99)** | (0.17) | (0.19)*** | (0.12) | (0.30)*** | (0.53)*** | (0.06)*** | 0.05 |
| **1999-2003** | -1.98 | 0.20 | 0.81 | 0.01 | 0.87 | -1.27 | 0.09 | 677 |
| | (1.05)* | (0.20) | (0.23)*** | (0.06) | (0.37)*** | (0.73)* | (0.06) | 0.06 |
| *Dependent Variable: Only Cash Issuers* | | | | | | | | |
| **1991-2003** | -4.64 | -0.02 | | 0.10 | 1.38 | -6.45 | 0.11 | 1639 |
| | (1.56)*** | (0.27) | | (0.10) | (0.52)*** | (1.07)*** | (0.09) | 0.03 |
| | -5.88 | 0.34 | -0.84 | 0.09 | 1.52 | -6.81 | 0.19 | 1639 |
| | (1.69)*** | (0.30) | (0.39)** | (0.10) | (0.53)*** | (1.10)*** | (0.10)* | 0.03 |
| **1991-1999** | -9.88 | 0.30 | -1.74 | 0.44 | 1.99 | -7.43 | 0.41 | 962 |
| | (3.14)*** | (0.45) | (0.64)*** | (0.20)** | (0.91)** | (1.69)*** | (0.19)** | 0.04 |
| **1999-2003** | -2.48 | 0.32 | -0.24 | -0.09 | 0.97 | -6.04 | 0.00 | 677 |
| | (2.19) | (0.42) | (0.51) | (0.15) | (0.71) | (1.64)*** | (0.13) | 0.02 |
| *Dependent Variable: Only Bonus Issuers* | | | | | | | | |
| **1991-2003** | -6.33 | 0.22 | | 0.10 | 0.20 | -1.04 | 0.30 | 1639 |
| | (0.79)*** | (0.12)* | | (0.05)** | (0.25) | (0.45)** | (0.05)*** | 0.04 |
| | -5.71 | -0.06 | 0.51 | 0.12 | 0.15 | -0.95 | 0.26 | 1639 |
| | (0.81)*** | (0.15) | (0.16)*** | (0.05)** | (0.25) | (0.45)** | (0.05)*** | 0.04 |
| **1991-1999** | -6.20 | -0.13 | 0.14 | 0.27 | -0.08 | -1.75 | 0.30 | 962 |
| | (1.15)*** | (0.21) | (0.22) | (0.12)** | (0.32) | (0.61)*** | (0.07)*** | 0.04 |
| **1999-2003** | -4.93 | 0.01 | 1.05 | 0.03 | 0.33 | 1.29 | 0.21 | 677 |
| | (1.20)*** | (0.23) | (0.25)*** | (0.07) | (0.42) | (0.80) | (0.07)*** | 0.09 |

| *Dependent Variable: Cash and Bonus Issuers* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **1991-2003** | 1.42 | 0.20 | | -0.66 | 1.30 | 0.75 | -0.12 | 1639 |
| | (0.85)* | (0.13) | | (0.10)*** | (0.29)*** | (0.47) | (0.05)** | 0.07 |
| | 1.90 | -0.05 | 0.44 | -0.64 | 1.28 | 0.80 | -0.15 | 1639 |
| | (0.86)** | (0.16) | (0.17)*** | (0.10)*** | (0.29)*** | (0.47)* | (0.05)*** | 0.07 |
| **1991-1999** | 1.26 | -0.17 | 0.66 | -1.10 | 1.38 | 0.10 | -0.08 | 962 |
| | (1.04) | (0.19) | (0.20)*** | (0.21)*** | (0.35)*** | (0.56) | (0.06) | 0.07 |
| **1999-2003** | 0.90 | 0.28 | -0.28 | -0.06 | 1.08 | -2.55 | -0.16 | 677 |
| | (1.60) | (0.30) | (0.37) | (0.10) | (0.56)** | (1.20)** | (0.09)* | 0.02 |

**Table 6: Fixed Effect Regressions for Determinants of Growth in Market value**

This tables report fixed effect regression results. All data in the sample period is deflated by the appropriate GDP deflators (2000 is the base year). Estimated coefficients are estimated with firm and time fixed effects. Standard errors reported in parenthesis are White heteroskedasticity consistent in all regressions. GrpDum takes value 1 if a firm is affiliated with a business group. GrpBank is a dummy variable to represent affiliated business group firms with a bank in the group. Interaction is a dummy variable that takes value 1 if an affiliated firm is also a issuer or if an affiliated firm with a bank in the group is also issuer. MtoB is the ratio of sum market value of equity and book value of debt to total assets. Profit is the operating return on assets. Log Sales is the natural logarithm of Sales. ***, ** and * denote significance at 1%, 5% and 10% respectively.

| Variable | Constant | GrpDum | GrpBank | Interaction | dL | dEA | SG | N |
|---|---|---|---|---|---|---|---|---|
| **1991-2003** | 0.20 | -0.12 | | | 1.04 | 0.82 | -0.02 | 1639 |
| | (0.02)*** | (0.03)*** | | | (0.15)*** | (0.18)*** | (0.02) | |
| | 0.20 | -0.11 | -0.01 | | 1.04 | 0.82 | -0.02 | |
| | (0.02)*** | (0.04)*** | (0.03) | | (0.15)*** | (0.18)*** | (0.02) | |
| | 0.20 | -0.17 | | 0.09 | 1.04 | 0.82 | -0.02 | |
| | (0.02)*** | (0.04)*** | | (0.04)** | (0.15)*** | (0.18)*** | (0.02) | |
| | 0.16 | | -0.14 | 0.08 | 1.03 | 0.83 | -0.01 | |
| | (0.02)*** | | (0.04) | (0.05)* | (0.15)*** | (0.19)*** | (0.02) | |
| **1991-1999** | 0.17 | 0.00 | | | 1.11 | 0.23 | -0.12 | 962 |
| | (0.02)*** | (0.03) | | | (0.15)*** | (0.13)* | (0.08) | |
| | 0.17 | -0.05 | 0.08 | | 1.12 | 0.23 | -0.12 | |
| | (0.02)*** | (0.03)** | (0.04)** | | (0.15)*** | (0.13)* | (0.08) | |
| | 0.01 | -0.04 | | 0.07 | 0.89 | 0.46 | 0.04 | |
| | (0.01)* | (0.01)*** | | (0.01)*** | (0.02)*** | (0.09)*** | (0.03) | |
| | 0.16 | | -0.08 | 0.19 | 1.11 | 0.24 | -0.13 | |
| | (0.01)*** | | (0.03)*** | (0.06)*** | (0.15)*** | (0.13)* | (0.08)* | |
| **1999-2003** | 0.22 | -0.27 | | | 0.83 | 1.59 | -0.02 | 677 |
| | (0.05)*** | (0.07)*** | | | (0.15)*** | (0.34)*** | (0.02) | |
| | 0.22 | -0.16 | -0.22 | | 0.86 | 1.61 | -0.01 | |
| | (0.05)*** | (0.08)** | (0.08)*** | | (0.15)*** | (0.34)*** | (0.02) | |
| | 0.22 | -0.27 | | 0.00 | 0.83 | 1.59 | -0.02 | |
| | (0.05)** | (0.09)*** | | (0.12) | (0.15)*** | (0.34)*** | (0.02) | |
| | 0.17 | | -0.25 | -0.13 | 0.88 | 1.63 | -0.01 | |
| | (0.04) | | (0.10)** | (0.17) | (0.16)*** | (0.33)*** | (0.02) | |

**Table 7: Average amount of stocks (M) and contracts (S) traded and Percentage Changes in Stocks and Contracts**

This table reports average amount of traded stocks (Av.M) and contracts (Av.S) and percentage change in amount of traded stocks (M%) and contracts (S%). Av.M and Av.S are calculated the ratio of the total amount of traded stocks or contracts of a firm in the month when this firms issues new equity to total amount of stocks traded in the particular year. M% and S% are the percentage change in amount of traded stocks and contracts of a firm in the month when this firms issues new equity from the previous month. A firm is determined as an affiliated firm if the existence of a holding company as the major owner. If a business group includes a bank, firms in this group are classified as Affiliated firms with a Bank in the group. . Significance of means is based on t test. Significance for differences between means and medians are based on non-parametric tests, which are F test for the mean differences and Wilcoxon Rank test for the median differences. ***, ** and * denote significance at 1%, 5% and 10% respectively.

| | **Total Sample** | | | | | | **Only Bonus Issuers** | | | | | | **Both Bonus and Cash Issuers** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Affiliated (1)** | | **Non-Affil. (2)** | | **Aff. – Bank (3)** | | **Affiliated (1)** | | **Non-Affil. (2)** | | **Aff. – Bank (3)** | | **Affiliated (1)** | | **Non-Affil. (2)** | | **Aff. – Bank (3)** | |
| **1991-2003** | | | | | | | | | | | | | | | | | | |
| **Av.M** | 9.0 | 6.1 | 9.5 | 6.7 | 8.2 | 5.9 | 8.7 | 6.1 | 9.5 | 6.8 | 8.0 | 5.8 | 9.2 | 6.1 | 9.5 | 6.6 | 8.5 | 6.0 |
| | | | (0.76) | [2.90]$^{c}$ | (3.95)$^{b}$ | [4.67]$^{b}$ | | | (0.92) | [1.75] | (3.28)$^{c}$ | [4.49]$^{b}$ | | | (0.10) | [0.81] | (1.03) | [1.16] |
| **M%** | 213 | 34 | 244 | 63 | 179 | 23 | 155 | 24 | 186 | 65 | 92 | 13 | 275 | 57 | 288 | 62 | 286 | 33 |
| | | | (0.30) | [2.83]$^{c}$ | (1.00) | [10.06]$^{a}$ | | | (0.29) | [4.79]$^{b}$ | (3.28)$^{c}$ | [7.95]$^{a}$ | | | (0.02) | [0.02] | (0.00) | [1.55] |
| **Av.S** | 9.1 | 7.8 | 9.4 | 8.0 | 8.7 | 7.3 | 9.1 | 7.9 | 10.1 | 9.1 | 8.6 | 7.5 | 9.1 | 7.6 | 8.9 | 7.4 | 8.7 | 7.2 |
| | | | (0.74) | [0.29] | (3.22)$^{c}$ | [3.39]$^{c}$ | | | (3.74)$^{c}$ | [2.36] | (7.28)$^{a}$ | [4.49]$^{b}$ | | | (0.11) | [0.01] | (0.07) | [0.39] |
| **S%** | 51.7 | 17.9 | 72.1 | 24.1 | 44.1 | 12.1 | 31.5 | 11.0 | 50.3 | 24.0 | 22.4 | 4.9 | 73.2 | 32.6 | 88.7 | 24.1 | 70.6 | 22.9 |
| | | | (2.92)$^{c}$ | [0.43] | (4.02)$^{b}$ | [1.97] | | | (3.95)$^{b}$ | (3.09)$^{c}$ | (8.48)$^{a}$ | [4.52]$^{b}$ | | | (0.55) | [0.21] | (0.49) | [0.01] |
| **1991-1999** | | | | | | | | | | | | | | | | | | |
| **Av.M** | 7.7 | 5.4 | 9.5 | 6.7 | 7.2 | 5.0 | 7.6 | 5.3 | 10.0 | 7.6 | 6.6 | 4.9 | 7.8 | 5.4 | 9.3 | 6.1 | 7.6 | 5.4 |
| | | | (6.67)$^{a}$ | [4.38]$^{b}$ | (9.67)$^{a}$ | [5.36]$^{a}$ | | | (5.72)$^{a}$ | [7.51]$^{a}$ | (10.9)$^{a}$ | [8.67]$^{a}$ | | | (2.22) | [0.85] | (2.32) | [0.33] |
| **M%** | 200 | 28 | 239 | 62 | 215 | 23 | 127 | 18 | 144 | 73 | 116 | 16 | 254 | 36 | 296 | 58 | 289 | 26 |
| | | | (0.26) | [4.05]$^{b}$ | (0.07) | [6.89]$^{a}$ | | | (0.07) | [4.81]$^{b}$ | (0.15) | [5.47]$^{b}$ | | | (0.12) | [0.12] | (0.00) | [2.18] |
| **Av.S** | 8.2 | 6.7 | 9.3 | 7.8 | 7.8 | 6.5 | 8.1 | 6.8 | 10.2 | 9.3 | 7.4 | 6.4 | 8.3 | 6.7 | 8.8 | 7.4 | 8.1 | 6.7 |
| | | | (5.06)$^{b}$ | [6.91]$^{a}$ | (7.94)$^{a}$ | [7.34]$^{a}$ | | | (8.16)$^{a}$ | [4.73]$^{b}$ | (14.0)$^{a}$ | [6.94]$^{a}$ | | | (0.62) | [3.41]$^{b}$ | (0.83) | [1.18] |
| **S%** | 48.6 | 16.2 | 77.7 | 28.8 | 46.4 | 11.0 | 22.0 | 11.0 | 50.0 | 30.3 | 15.8 | 10.5 | 68.4 | 23.9 | 94.5 | 26.8 | 69.4 | 14.0 |
| | | | (3.07)$^{c}$ | [1.24] | (2.46) | [2.67]$^{c}$ | | | (6.44)$^{a}$ | [3.64]$^{b}$ | (8.68)$^{a}$ | [2.94]$^{c}$ | | | (0.95) | [0.01] | (0.60) | [0.20] |
| **2000-2003** | | | | | | | | | | | | | | | | | | |
| **Av.M** | 11.2 | 8.3 | 9.3 | 6.8 | 10.1 | 7.2 | 10.0 | 7.3 | 8.6 | 6.5 | 9.4 | 7.1 | 13.7 | 10.7 | 10.1 | 7.1 | 12.5 | 8.9 |
| | | | (2.86)$^{c}$ | [5.06]$^{b}$ | (0.46) | [1.70] | | | (1.22) | [3.23]$^{c}$ | (0.38) | [0.63] | | | (2.94)$^{c}$ | [3.16]$^{c}$ | (0.91) | [1.51] |
| **M%** | 237 | 51 | 254 | 67 | 114 | 25 | 187 | 31 | 244 | 57 | 68 | 12 | 341 | 118 | 266 | 79 | 273 | 97 |
| | | | (0.05) | [0.18] | (4.90)$^{b}$ | [3.18]$^{b}$ | | | (0.32) | [0.67] | (5.97)$^{a}$ | [5.31]$^{b}$ | | | (0.42) | [1.22] | (0.00) | [0.11] |
| **Av.S** | 10.8 | 9.9 | 9.7 | 8.1 | 10.3 | 9.6 | 10.2 | 8.6 | 10.0 | 8.6 | 9.8 | 8.4 | 11.9 | 11.2 | 9.3 | 7.7 | 11.7 | 11.2 |
| | | | (2.66)$^{c}$ | [5.06]$^{b}$ | (0.68) | [1.06] | | | (0.03) | [0.03] | (0.06) | [0.34] | | | (5.76)$^{a}$ | [8.79]$^{a}$ | (3.18)$^{c}$ | [4.89]$^{b}$ |
| **S%** | 57.5 | 24.5 | 60.8 | 18.5 | 39.8 | 13.4 | 42.6 | 11.6 | 50.7 | 18.5 | 29.1 | 1.0 | 88.8 | 65.9 | 72.8 | 15.4 | 76.4 | 61.6 |
| | | | (0.06) | [0.11] | (2.17) | [0.17] | | | (0.25) | [0.24] | (1.85) | [0.86] | | | (0.39) | [2.25] | (0.01) | [1.74] |

**Table 8: Three- Day Adjusted Cumulative Abnormal Returns**

This table reports CARs of acquirers for 3 days surrounding the announcement date (i.e., -1,0,+1) for three type of acquisitions and test statistics. The CAR for each acquisition is calculated by summing the difference between the acquirer's stock return and the return of the Datastream Turkish stock market index. A firm is determined as an affiliated firm if the existence of a holding company as the major owner. Significance of means is based on t test. Significance for differences between means and medians are based on non-parametric tests, which are F test for the mean differences and Wilcoxon Rank test for the median differences. ***, ** and * denote significance at 1%, 5% and 10% respectively.

| | Total | Non Affil. (2) | Affiliated (3) | Joint Venture (4) | Acquisi-tions (5) | Minority Stake (6) | Difference (4) - (5) | Difference (4) - (6) | Difference (5) - (6) |
|---|---|---|---|---|---|---|---|---|---|
| **CAR (-1,+1)** | | | | | | | | | |
| **Mean** | 0.010 | -0.027 | 0.013* | 0.034** | 0.009 | 0.007 | (1.40) | (1.69) | (0.02) |
| **Median** | -0.001 | -0.027 | 0.000 | 0.019 | -0.007 | 0.000 | [2.84]* | [3.00]** | [0.78] |
| | 80 | 6 | 74 | 13 | 36 | 25 | | | |