

BANKS' EQUITY HOLDINGS AND THEIR IMPACT ON SECURITY ISSUES

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Abstract

In this paper we study the effect of banks' equity holdings on the probability of firms being listed on the stock market as well as on issuing negotiated debt. We argue that banks take an equity position either to expropriate the current shareholders or strategically to open the possibility of future business opportunities once firms are listed on the stock market. The first reason hinders security issues while the second stimulates them. We have shown that when banks' stakes are low, the expropriating argument applies, while the strategic one does so for large stakes. We have proved our contentions making use of a sample composed of 5160 firms from 59 different countries for the period 2000-2004.

Keywords: Banks, Security issues, Monitoring, Expropriation.

JEL classification: G21, G32.

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1. Introduction

Although banks' equity holdings are restricted in countries like the U.S., in Continental Europe and Japan it is quite common for banks to take a significant equity position in firms (Allen and Gale, 2001). The literature has provided different reasons for justifying the role of banks as blockholders. First, there is an expropriating motive as banks may complement their debtholder role with the shareholder one and force the firm to take actions in the directions of their own interests. This will damage firms' performance (Berlin, *et al*, 1996). Second, other authors (Hellmann *at al.*, 2004), argue that banks strategically buy stakes in firms as an option for enjoying future rents once they are generated, generally once the partially-owned firms are listed in the stock market. When this happens and firms grow more vigorously, banks may benefit from their earlier relationship with the partially-owned firms as future lenders and/or security underwriters. Yasuda (2007) for Japan, and Yasuda (2005) for the U.S. have found that banks' equity holdings particularly combined with bank loans have a positive impact on a firm's underwriting choice given that they are positively interpreted by the financial markets. Then, lending banks may strategically maintain equity holding as an entrance to the bond underwriting market.

These competing views suggest opposite effects on the probability of a firm partially owned by banks being listed on stock markets. According to the expropriating view, a negative relationship is expected. Undoubtedly, the expropriating possibilities will be diminished once firms face close scrutiny from financial markets. However, according to the strategic view, the presence of banks as shareholders may stimulate the floating of firms and their subsequent debt issues.

In this article, we posit that there is a tension between both views and that the banks' stake is the pivotal parameter that determines which one is the most relevant in explaining

the effect of banks' equity holdings on the probability of issuing securities. Low-medium stake may suggest expropriating reasons², while the informativeness of large stake may suggest a more strategic motive. Banks' equity holding may be interpreted positively by financial markets as a signal of commitment. In addition, this may indicate that banks want to participate in future security issues because this opens the possibility to create new credit relationships. Along these lines, Krishnan (2006) shows that banks are 19% more likely to lend again to a client firm after underwriting their debt issue. Additionally, when the banks' stake is quite high, they may still have power that is strong enough to exert influence on their partially-owned firms even under the close scrutiny of financial markets. This suggests a non-linear (U-shape) relationship between the banks' stake and the probability of issuing securities.

This non-linearity contention may also explain the lack of consensus in the literature connecting banks' equity holdings and debt issues. Miarka and Tröge (2005) use a sample of Japanese firms to prove the existence of a positive relationship between the presence of banks in the stake of firms and the probability of these firms issuing public debt. This author explains such a result relying on the existence of a monitoring effect on behalf of banks that favors debt issues by delegating the monitoring tasks of investors in the shareholder bank. The negative connection connecting banks' stake and debt issues is found once we put together two results: First, the positive connection between banks' stake and banks' debt (Kroszner and Strahan, 2001a b). Second, the negative relationship between bank debt and the access to public bond market (Cantillo and Wright, 2000).

In a dynamic context, our strategic argument justifying banks' equity holdings as a way to open new business opportunities linked to security issues also has another consequence: banks should increase their stake once firms are listed in the stock market.

² However, other views challenge this perspective. Mahrt-Smith (2005) shows that the presence of banks as shareholders, if their stake is low, may reduce the problem of rent extraction that a firm faces with a single creditor which has an information monopoly (Rajan, 1992).

This is so because banks need more power to have an influence on listed firm's financing decisions when they are closely scrutinized by investors in financial markets. If banks want their strategic investment to pay dividends and ensure future debt underwritings as well as lending relationships with these recently-listed firms, they need to prove their underwriting capacity (Krishnan, 2006). An increase in their stake will undoubtedly achieve such a goal.

The novelty of the paper is that it addresses the effect of banks' stake in the issue of different types of securities (debt as well as equity) in an international setting, and it provides an explanation of different effects found in the literature based on the interaction between a strategic motive and an expropriating one. Our sample is extracted from the OSIRIS database and is composed of 5160 firms from 59 different countries for the period 2000-2004.

The remainder of the paper is organized as follows. Section 2 develops the theoretical underpinnings. In Section 3, some descriptive analysis is shown. Section 4 displays the econometric study. In Section 5, an analysis of robustness is carried out. The paper ends with some final remarks.

2. Theoretical underpinnings

The access of firms to capital markets is limited due to the existence of high floating costs as well as the presence of information asymmetries that hinder the buying decisions of external investors (Loughran *et al*, 1994). One of the well-known mechanisms for overcoming such problems is the use of an institution with a reputation supporting the floating of firms (an underwriter). Banks are natural candidates to play this role given that their own survival depends on maintaining their reputation with external investors as good advisers (Slovin and Young, 1990). Additionally, banks may be interested in charging

low fees for achieving such a role as a way to open the possibility of future underwritings. Yasuda (2007) studies this problem in the underwriting of debt issues and he shows that a bank's equity holding combined with bank lending leads to fee discount in bond underwriting. Banks may discount the possible future credit opportunities in such lower fees (Krishnan, 2006) as listed firms will grow at a more rapid pace in comparison with unlisted ones. Concerning the information asymmetry problem, even if banks do not act as underwriters, the presence of banks in a firm's ownership structure may also reduce information asymmetries. External investors interpret banks' equity holdings positively given that banks, as conservative institutions, tend to invest in firms that are basically sound (Allen and Gale, 2001). Along these lines, Kutsuna *et al.* (2007) shows that for Japan main banks may help the IPO's of their partially-owned firms, particularly in the case of small IPO's.

Apart from the reduction in information asymmetries and the underwriting fees, banks may stimulate the entrance of new investors by reducing the agency problems within these firms, mainly those between shareholders and debtholders. This is so because banks generally play this double role (Kroszner and Strahan, 2001a b) and they have power which is strong enough to overcome these conflicts. Remarkably, banks' power goes well beyond their stake given that they act as delegated monitors (Diamond, 1984) on behalf of other shareholders. This makes banks "natural" leaders for other shareholders that can force a firm's decisions in a direction that does not damage the interests of either the shareholders or the debtholders. Gonzalez (2006) shows that markets react positively to the entrance of banks in a firm's ownership structure mainly if it is accompanied with an increase in debt. Puri (1996) argues that external investors discount the beneficial effect of banks' equity holding as they are more willing to pay higher prices for bank-

backed security issues. Under this point of view, the presence of banks in a firm's ownership structure facilitates security issues.

Apart from that, banks may be interested in acquiring stake in firms that may be eventually listed for pure strategic reasons, particularly if these are growth firms (Hellman *et al.*, 2004). This is so because the presence of a bank in a firm's ownership structure gives this institution an advantage in being chosen as lender and/or underwriter in future security issues once a firm is listed on the stock market (Krishnan, 2006). In such a situation, banks may extract benefits from the future lending and/or underwriting business that these firms may generate once they are listed.

Hence, relying on the aforementioned reduction in fees, in information asymmetries as well as in agency costs and given the strategic possibilities of banks' equity holdings, we can state as a first hypothesis to be contrasted:

H1: The presence of banks in a firm's ownership structure has a positive effect on its probability of being listed on the stock market.

A second dimension that should be explored in order to fully characterize the effect of banks' equity holdings on security issues is the amount of the stake. This is so because there is a set of contradictory results connecting banks' equity holding and firm performance. This may indicate the existence of a non-linear relationship between banks' equity holdings and the performance of their partially-owned firms that may have an impact on the firm's probability of issuing securities given the relevance of past financial performance in the success of such issues. On the positive side, Cable (1985) and Gorton and Schmid (2000) show that firms with a high proportion of banks' equity perform better. On the negative side, Berlin *et al.* (1996) show that banks' stakes in borrower firms may be harmful for financial performance as well as for other stakeholders' interests when the stake is not too large. This is so because blockholders' banks have incentives for

expropriating their partially-owned firms if their stake is not very large given that they only internalize the proportion of the expropriating costs proportional to their stake. Hence, it seems that for stakes up to a certain level, banks have expropriating impulses that may damage a firm's performance and will affect security issues.

Additionally, there is the issue of whether these institutions have power high enough to force firms' decisions in the direction of their own interests even if their stakes are not very large. This is so due to different reasons. First, banks may hold the representation of some minority shareholders with whom they are closely linked through their voting rights (Berglöf, 1990; Rajan and Zingales, 2003). Second, blockholder banks are generally also lenders (Kroszner and Strahan, 2001a b), which gives them more power to expropriate firms (*e.g.* forcing a firm to borrow money from banks at higher than market rates)³. Third, banks use stock pyramids to concentrate their voting power (Gorton and Winton, 2003). All these arguments justify banks' impulses for expropriation even when their stake is not very large.

Undoubtedly, the pressure from financial markets would hinder banks' expropriation impulses. Then, *blockholder* banks with expropriating intentions will try to avoid the *IPO's* of their partially-owned firms.

However, for large stake values, banks internalize a large proportion of the expropriating costs and will have less incentive to define such policy. This explains the positive effect of banks' equity holdings on performance for large stakes. In such a situation, banks may strategically take a position in firms as a way to open the door for future financing opportunities, once firms are listed on the stock market. Moreover, given their significant stake, banks will be able to exercise a relevant influence on the firm even under pressure from financial markets. Particularly, they will have preferential access to

³ Note that they may refuse to renew loans when firms most need them (Gorton and Winton, 2003).

the lending market if they have proved their underwriting capacity (Krishnan, 2006), for example, supporting the firm's IPO.

In summary, we argue that there is tension between the banks' impulses to expropriate today and the strategic investment to have access for business in the future, once firms are listed on the stock market. For low-medium values of banks' stake, the expropriating reason is the dominant one and banks try to hinder IPO's (the negative effect on performance). For large values of the stake, the strategic reason of banks which opt for future financing opportunities once these firms are listed is the dominant one and owner banks stimulate IPOs (positive effect on performance).

Thus, the theoretical model we have in mind is as follows:

[INSERT FIGURE 1 ABOUT HERE]

Finally, in terms of the characteristics of the firm, we can distinguish between growth and non-growth firms. This latter in contrast to the former are listed when they are larger and at a later stage of development (Gompers, 2004). This offers banks greater business opportunities in the future once they are floated on the stock market given that more mature firms generally have more collateral and demand more services from banks. This leads to proposing as a second hypothesis:

H2: An increase in a bank's stake reduces the probability of a firm of being listed up to a certain level. Beyond that level an increase in a bank's equity holding also raises that probability. Moreover, this is particularly evident for non-growth firms.

As we have mentioned, once firms are listed on the stock market, this opens up the possibility for these firms to issue new securities, mainly negotiated debt. Banks are aware of these new business opportunities as underwriters when they decide to buy equity holdings in firms that are potential candidates for being listed on the stock market. Then,

we expect that the effect of banks' equity holdings on future debt issues will be interrelated with the decisions concerning the IPO's.

Miarka and Tröge (2005) find that firms closely-related to banks are more likely to issue bonds. They justify such a result in terms of the delegation of monitoring activities from financial markets to banks, which reduces financing costs and stimulates such issues. Yasuda (2007) shows for a sample of Japanese firms that banks which are only equity holders and that do not have a role as lenders, charge a fee premium on debt issues. This prevents such issues. However, this result is reversed when owner banks are also lenders, which is the normal situation (Kroszner and Strahan, 2001a b). Finally, as previously mentioned, Krishnan (2006) emphasizes the underwriting capacity of a bank as a signal that firms may use to give bank future lending activities. In particular, this author shows that in firms with higher credit quality, the probability of borrowing from the same bank increases by about 21% if the bank has underwriting capacity, even if the bank does not get the underwriting business. Banks as owners may stimulate debt issues as a way to prove that they have underwriting capacity and gain future lending business. In summary, our third hypothesis connecting banks' equity holdings and debt issues reads as follows:

H3: The presence of banks in a firm's ownership structure has a positive effect on its probability of issuing public debt.

In addition, consistent with the arguments connecting banks' stake with an IPO, which is a particular type of a security issue, we argue that banks' equity holdings may also have an effect on debt issues after an IPO. This is so because debt issues may hinder banks' expropriating possibilities linked to the credit channel as firms have less need to use such channel for raising funds. As we have previously related expropriating impulses, relying mainly on the credit channel, to low-medium banks' stake, we expect that debt

issues will be lower in this case given that bank debt and public debt are substitute mechanisms for firm's financing (Cantillo and Wright, 2000).

Consistent with the arguments of Hypothesis 2, the previous logic works up to a certain threshold stake beyond which the internalization of the expropriating costs hinders such impulses. In that case, large banks' stake will signal a strong commitment with a firm and external investors will be more willing to buy negotiated debt under good terms for the firm, as they delegate the monitoring tasks in the bank (Miarka and Tröge, 2005). This should stimulate debt issues.

Finally, once we distinguish between growth and non-growth firms, as we mentioned for an IPO, we expect that the effect should be clearer in non-growth firms. This is so because these firms have easier access to corporate debt markets and their debt issues tend to be more important than growth firms. Moreover, these latter firms have mainly intangible assets which will not meet the tangible collateral requirements linked to debt (Bradley *et al.*, 1984). Hence, banks with large stakes will mainly stimulate debt issues of such firms. Hence, our fourth hypothesis reads as follows:

H4: Banks' equity holding has a negative effect on debt issues below some threshold level. Above that level the effect is positive. This result is particularly clear for non-growth firms.

Finally, once firms are listed on the stock market, we expect that banks will increase their stake. This is consistent with the strategic motive justifying the entrance of banks in a firm's ownership structure which stimulates security issues. The increase in their equity holdings is the way that banks may use for maintaining their influence in the firm in order to capture future financing opportunities while facing pressure from financial markets. Krishnan (2006) shows the importance of banks having an underwriting capacity in order to have access to a future lending relationship with the firm. Undoubtedly, the increase in

a bank's stake is a clear signal of the underwriting possibilities. Also, the increase in such a stake should give rise to future debt issues and the subsequent bank underwriting fees according to our previous Hypothesis. Thus, our last hypothesis reads as follows:

H5: There is an increase in a bank's stake once a firm is listed on the stock market.

3. Database and descriptive analysis

3.1. The Data

We carry out our empirical analysis making use of a sample of international firms for the period 2000-2004. This sample is extracted from OSIRIS database, which is compiled by Bureau Van Dijk and provides annual information on balance sheets, income statements and other complementary information such as a firm's ownership. It covers companies of all sizes and all economic sectors. We have focused on non-financial firms that give information on their ownership. This database has been filtered.⁴ The final outcome is an unbalanced panel data of 7086 observations with 5160 firms from 59 different countries for the period 2000-2004. By country the largest proportion corresponds to the US (46%), Canada (18%), Japan (9.9%), the UK (5.3%), France (2%), Germany (2%) and Italy (1%).

3.2. Descriptive Evidence

In this section we show the statistics of the main variables (Table 1) and we compare these statistics in two scenarios, one before being listed and the other after the IPO. Also, we conduct t-test comparing the situation before a debt issue with the situation after such issue.

⁴ We have ruled out those firms with negative values in positive-defined accounts (sales, debt, intangibles). Also, we have eliminated from our sample those firms where the sum total of the stakes of the controlling blockholders is larger than 100%.

[INSERT TABLE 1 ABOUT HERE]

Table 1 shows that 76% of firms are listed, where in 27% of the cases the IPO of these firms has occurred in the period analyzed. Also, given that 26.6% of the firms in our sample are partially-owned by banks, we can state that there is enough information for studying the connection between banks' equity holding and the probability of an IPO. Concerning debt issues, the proportion is 3.5% of observations.

The comparison of the mean variables distinguishing between listed and non-listed firms as well as between firms that have issued debt with those that do not, leads to the following results. First, the presence of banks in a firm's ownership structure is significantly more likely in listed firms (28.19%) rather than in non-listed (21.68%). This also holds for firms issuing debt (45.4%) in comparison to those that do not (26%). Banks' stake is also significantly larger in listed firms (8.8%) rather than in non-listed (7.59%). This conforms to Hypothesis 5 that argues that banks need more power (stake) in order to be able to exercise their influence in firms after an IPO and to have access to future financing opportunities. In addition, the proportion of bank loans is slightly lower in firms issuing debt, which is consistent with the existence of financing alternatives for firms issuing securities that may damage bank lending as a mechanism for providing funds. Finally, listed firms as well as firms issuing debt are larger and are more leveraged.

4. Econometric estimations

4.1. Methodology

We propose two equations to investigate the effect of a bank's equity holdings on a firm's security issues, as well as the effect of these issues on bank's stake.

The first equation estimates the probability of an IPO ($IPO=1$) in one case and of a debt issue ($Debt_Issue=1$) in the other, in terms of different variables of ownership structure and financial structure. We estimate such probabilities using a Probit model.

The specific determinants of the probability of an IPO or of a debt issue are the following: Banks' stake holdings ($Bank_Stake$) as well as the square of that variable ($Bank_Stake^2$) in order to test the existence of a non-linearity relationship between such stake and the probability of issuing securities. Additionally, we have defined a dummy variable that captures the presence of a bank in a firm's ownership structure, $Dbank$, which is equal to 1 when a firm is partially-owned by a bank; otherwise its value is zero. Concerning the role of banks as debtholders, this is captured by the variable $Bank_Loan$ which is the amount of bank loans. The remaining controls are familiar in this literature (Kutsuna, *et al.*, 2007). In particular, we use a firm's overall asset on a log scale ($Size$) as a way to control for size effects. Furthermore, we introduce a variable of the firm's maturity (Age) that is expected to affect a firm's likelihood of being listed on the stock market. Younger firms are less-known by external investors and the problems of information asymmetries that hinder security issues firms are more acute for such firms. The variable of *Intangibility*, defined as the ratio of intangible assets to total assets, is a control for a firm's growth possibilities (Rajan and Zingales, 2005). Additionally, this variable may affect debt issues given the tangible collateral requirements linked to debt financing (Bradley *et al.*, 1984). We also incorporate a variable of financial structure ($Gearing$) which is a firm's gearing defined as the ratio of non-current liabilities plus

loans to shareholders funds. This variable is complemented with the liquidity ratio (*Liquidity_Ratio*), which is defined as Cash and equivalent plus short term investments plus accounts receivable divided by current liabilities. Finally, we also introduce a set of temporal dummies ($Dummy_T$) for the five years of the sample, 9 sectorial dummies -1-digit SIC classification- ($Dummy_S$) and country dummies ($Dummy_C$) that are classified according to the legal origin of their code. We follow La Porta et al. (1998) and we distinguish three types of countries (i) British common-law countries, (ii) French civil-law countries and (iii) German civil-law countries. Thus, the specification we carry out is as follows:

$$IPO_{it} = \alpha + \alpha_1 DBank_{it} + \alpha_2 Bank_Stake_{it} + \alpha_3 Bank_Stake_{it}^2 + \alpha_4 Bank_Loan_{it} + \alpha_5 Size_{it} + \alpha_6 Age_{it} + \alpha_7 Intangibility_{it} + \alpha_8 Gearing_{it} + \alpha_9 Liquidity_Ratio_{it} + \sum_{s=1}^9 \alpha_{9+s} Dummy_{Sit} + \sum_{T=1}^4 \alpha_{18+T} Dummy_{Tt} + \sum_{T=1}^2 \alpha_{22+T} Dummy_{Cit} + \eta_i + \varepsilon_{it} \quad [1]$$

Where ε_{it} is the error term and has a normal distribution with zero mean and a σ^2 variance. Variable η_i accounts for the unobservable heterogeneity.

The second equation is intended to estimate the effect of security issues on a firm's ownership structure, particularly in future banks' equity holdings (*Bank_Stake*). The equation we propose includes those dummies capturing an initial equity issue (*IPO*); debt issues (*Debt_Issue*), the role of banks as debtholders (Kroszner and Strahan, 2001a b) and the same control variables as specification [1]. Summarizing, the second specification is as follows:

$$Bank_Stake_{it+1} = \beta + \beta_1 IPO_{it} + \beta_2 Debt_Issue_{it} + \beta_3 Bank_Loan_{it} + \beta_4 Size_{it} + \beta_5 Age_{it} + \beta_6 Intangibility_{it} + \beta_7 Gearing_{it} + \beta_8 Liquidity_Ratio_{it} + \sum_{s=1}^9 \beta_{8+s} Dummy_{Sit} + \sum_{T=1}^4 \beta_{17+T} Dummy_{Tt} + \sum_{T=1}^2 \beta_{21+T} Dummy_{Cit} + \eta_i + \varepsilon_{it} \quad (2)$$

We define ε'_{it} as the error term which has a normal distribution with zero mean and a σ'^2 variance. Variable η'_i accounts for the unobservable heterogeneity.

From a methodological point of view, other features are considered. On one hand, in both estimations we allow for the existence of some unobservable heterogeneity (η_i and

η_i) potentially correlated with independent variables. To overcome this problem we use the within group estimation when the Hausman test⁵ reveals the existence of such a problem. Note that specification [1] is a non-linear model and we can only eliminate the unobservable heterogeneity using conditional logit estimation. However, given that the results using a conditional logit are not significantly different from those using a simple logit, we can infer that this type of endogeneity problem is not present in specification [1]. Then, we have estimated such specification as a cross-section using a normal probit that is more efficient than the conditional logit estimation. This is in contrast to specification [2], where the Hausman test has revealed the existence of such an endogeneity problem. In this case, the estimations are made using the within-group estimator (fixed-effects).

Finally, given that in specification [2] we test the effect of the banks' stake after a security issue, we have advanced the dependent variable in such specification by one period ($Bank_Stake_{it+1}$).

4.2. Results

The results of equation [1] are shown in Tables 2 and 3, while those of equation [2] are shown in Table 4.

Focusing on Table 2, we estimate the effect of the presence of bank stake as well as the effect of the amount of that stake on the probability of an IPO.

[INSERT TABLE 2 ABOUT HERE]

⁵ If the unobservable heterogeneity is correlated with explanatory variables, we have to perform fixed-effects estimation. But if it is not correlated with the explanatory variables, unconditional inference, such as that of the composed error method (random effects), is the most efficient alternative (Arellano and Bond, 1990). The Hausman test studies whether systematic differences exist between those coefficients of the fixed-effect estimation and those of the random-effects estimations. Particularly, the null hypothesis is that coefficients in both models have no systematic differences. If this null hypothesis is rejected, the only consistent estimator is the fixed-effects one. If not, the best alternative is to use the random-effect estimation.

Column 1 shows that the presence of a bank in a firm's ownership structure ($DBank=1$) has a positive impact on the probability of being listed. This is particularly clear in non-growth firms (Column 3) -their sales growth rate is lower than the median for the sector and the corresponding year-. This conforms to Hypothesis 1.

Control variables show that companies that are younger, and smaller with tangible assets are those that are more likely to be listed on the stock market. Concerning financial structure, leverage plays a positive role while the proportion of bank debt has a negative impact on the probability of being listed. We have argued that bank debt is the natural mechanism through which banks expropriate. Consistently, the presence of a large proportion of bank debt hinders companies from being listed. Conversely, the financing necessities (proxied by the gearing) stimulate the listing of companies as a way to obtain additional funds.

Once we study the effect of the bank's stake (Columns 4, 5 and 6) on the probability of an IPO, we obtain that the effect is negative for the linear term, while it is positive for the quadratic one. This convex relationship defines a threshold above which the positive effect outweighs the negative one. This threshold is around 50% (specifically it is 50.66%).⁶ Note that 50% defines the situation such that a bank has control of the firm even if it is listed and it is able to influence the firm's decisions in the direction of its own interests, even under the close scrutiny of financial markets. This is the kind of pattern described in Hypothesis 2. Moreover, this is particularly evident for non-growth firms (see Column 6) as stated in such hypothesis.

The analysis on debt issues is carried out in Table 3. Column 1 shows that the presence of banks in a firm's ownership structure give firms incentives for issuing debt, particularly in the case of non-growth firms. This conforms to Hypothesis 3. Remarkably,

⁶ This is computed as $-\text{Coefficient}(\text{Bank_Stake})/2 * \text{Coefficient}(\text{Bank_Stake}^2) = 0.0351794/2(0.0003472)$.

and differently from the IPO analysis, larger firms are those which are more likely to issue debt. Furthermore, given the collateral requirements of debt contracts, the proportion of intangible assets hinders such security issues (Bradley *et al.*, 1984). Finally, as in the case of the IPOs, financing necessities (proxied by the variable of *gearing*) stimulates debt issues, while the proportion of bank debt –proxy of banks’ expropriating impulses- hinders such issues.

The analysis of the effect of banks’ stake on debt issues is made in Columns 4, 5 and 6 of that Table. We have found a convex relationship between banks’ equity holdings and the probability of issuing debt, particularly for non-growth firms. This conforms to Hypothesis 4. Hence, for low-medium banks’ equity holdings, the effect is negative, while for large values (larger than 36.67%)⁷, the effect is positive. Remarkably, this threshold is lower than that found for the IPOs (around 50%). We can argue that debt issues represent a lower threat for the expropriating intentions of a bank in comparison to the IPOs. That is why banks oppose to a lesser extent such issues.

[INSERT TABLE 3 ABOUT HERE]

The results of estimating specification [2] are shown in Table 4. Once a firm is listed on the stock market, banks tend to increase their stock holdings particularly if they were already shareholders of the recently-listed firm (positive coefficient of the variable IPOxDBank). This conforms to Hypothesis 5. We have explained such a result because once a firm is listed owner banks desire to exert influence over listed firms in order to gain future business opportunities, whether in the underwriting market or in the traditional lending one. However, in order to implement such a strategy, banks need more power, given the pressure from financial markets. The way to increase their power is by increasing banks’ equity holdings, particularly in non-growth firms that are less risky than

⁷ This is computed as $-\text{Coefficient}(\text{Bank_Stake})/2 * \text{Coefficient}(\text{Bank_Stake}^2) = 0.0166939/2(0.0002276)$

growth ones. This idea is confirmed once we look at the control variables where *gearing*, which is a proxy of a firm's riskiness, has a negative impact on banks' equity holdings. This conforms to a behavior of banks, which as conservative institutions (Allen and Gale, 2001; Winton, 2001), avoid taking significant stakes in risky firms. Additionally, firm's leverage reinforces debtholders power in front of blockholders and banks may be less interested in taking equity positions in such firms.

[INSERT TABLE 4 ABOUT HERE]

5/ EXTENSIONS

5.1/ The lending Channel

We have stated in the theoretical section that there is tension between the expropriating motive behind a bank's equity holding *versus* the strategic one. When the former is larger than the latter, banks hinder IPOs; while the reverse is true when the strategic motive is larger than the expropriating one. Bank loan is the main channel through which banks expropriate in non-listed firms. Then, when a bank's expropriation intentions lead them to oppose IPOs (low-medium banks' stake), an increase in bank debt should be observed. However, bank lending competes with security issues as financing mechanism for listed firms. Then, we arguably expect that in those situations where banks stimulate IPOs and/or debt issues (when banks are blockholders and when their stake is large), a decrease in bank debt should be observed.

Furthermore, once we separate between growth firms and non-growth firms, we expect that the effects of banks' equity holdings on bank debt should be lower in growth firms. This is so because for these firms, once they are listed, their capital necessities are high enough so that the negative shock on the bank debt of an IPO or a debt issue should

be clearly diminished. In this respect, Hellman *et al.* (2004) shows that for banks investing in venture capital (growth firms) that their equity holdings are a way to have access to future lending activities. Moreover, the banks' own lending activities may open the possibility of future business with firms such as underwriting issues. In this vein, Drucker and Puri (2005) found that "*providing a concurrent loan increases the likelihood of receiving the current equity underwriting business, and also helps generate other business from the issuer*". Finally, Houston and James (1996) relate bank debt to growth opportunities for multiple lending firms. This should ease the reduction in bank debt after a security issue for growth firms. We analyze such point in Table 5.⁸

[INSERT TABLE 5 ABOUT HERE]

Table 5 shows that the presence of banks in a firm's ownership structure once a firm is listed has a negative effect on bank debt. In addition, this negative effect is found when banks' equity holdings are quite large, which defines a situation such that banks stimulate security issues. This reinforces the idea that banks have more difficulties in defining an expropriating strategy through loans in listed companies and/or when these companies issue securities. This is also consistent with Byrd and Mizruch's (2005) finding that the presence of non-lending banks on the board –a proxy of significant banks' stakes- reduces a firm's debt-equity ratio. Conversely, when banks' equity holdings are low, a situation that hinders security issues, the effect on bank loans is positive as banks have more leeway to expropriate firms. Finally, these effects are not observed in growth firms as we expected. Additionally, debt issues have no negative impact on bank debt. This is consistent with the strategic use of bank debt as a way to open future bank rent extraction in the debt underwriting business.

⁸ Given the possible endogeneity problem between the proportion of bank loan and the variables capturing security issues, we have lagged these latter variables by one period.

5.2/ Financing costs

Our theoretical model explains the relationship between banks' equity holdings and the probability of issuing securities in terms of tension between the current expropriation possibilities of non-listed companies versus the future bank rent extraction once these companies are listed on the stock market. The main mechanism that banks use to carry out such expropriation is charging high rates on bank loans. Then, a way to capture banks' expropriation intensity is through the variation in financing costs before and after security issues. We can expect that after an IPO or a debt issue financing costs should decrease given that the bargaining power of a firm, in front of its financial providers, increases as this firm has then additional channels for obtaining capital. However, this effect should not be observed if banks still expropriate after a security issue.

[INSERT TABLE 6 ABOUT HERE]

Table 6 shows that once a firm is listed on the stock market, there is a decrease in the financing costs.⁹ However, if we focus on firms with banks' equity holdings, this effect disappears, particularly in non-growth firms (see Columns 2 and 4). We have argued that this neutral effect is the result of compensating the reduction in the financing costs due to larger available sources of capital by listed firms with the negative effect due to banks' rent extraction. This is the reason behind the strategic motive of banks' equity holdings.

6/ Conclusions

In this article, we have studied the impact of banks' stake on a firm's security issues. Our premise is that this can be studied through the interaction of two effects. First, an *expropriating effect* that leads banks to avoid security issues because this may threaten

⁹ Given the possible endogeneity problem between a firm's financing costs and the variables that capture security issues, we have lagged these latter variables by one period.

their private benefits extraction. Second, a *strategic effect*, which may stimulate security issues as a way to gain access to new businesses in the future, such as security underwriting, once firms are listed on the stock market. We have described how the key element for distinguishing one effect from the other is the amount of the banks' stake. For low-medium stakes the expropriating argument applies, while for large stakes the strategic one is the most important. In the former case, the banks' stake is not so high that it leads to the internalization of the expropriating rents, which stimulates expropriation. In the latter situation, banks need a large stake in order to gain access to future financing opportunities of listed firms subject to close scrutiny from financial markets. Hence, our basic conjecture is the existence of a non-linear relationship between banks' equity holdings and the probability of issuing securities. For low-medium values of banks' stake, the effect is negative, while for large values, the strategic reason of banks' equity holdings favors security issues. Moreover, in a dynamic context, once firms are listed on the stock market, we expect an increase in banks' equity holding as a mechanism for banks to continue influencing their partially-owned firms' financing decisions.

We have proved these theoretical contentions focusing on IPO's as well as on debt issues as particular examples of security issues. To do so, we have used a panel data sample of 5160 international firms from 59 different countries for the period 2000-2004. Also, as robustness, we have shown that bank loans increase (decrease) in those situations where banks' equity holdings hinder (favor) security issues. This is consistent with the view that bank loans are an instrument that banks may use for expropriating firms by charging large loan interest rates. Finally, and related to the strategic reason justifying banks' equity holdings, we have proved that bank-owned firms, deferring from their counterparts, do not enjoy a decrease in financial costs after an IPO.

Our paper gives some new insights into the reasons which explain the entrance of banks in a firm's ownership structure, and the consequence that this has on the financial structure of firms that are partially-owned by banks. We have emphasized the pivotal role played by the amount of bank stake in making predictions on the firms' future probabilities of issuing instruments. Given the dynamics described in banks' equity holding, firms partially-owned by banks should try to stimulate the entrance of different banks in their ownership structure as a way of minimizing their expropriating risks. In addition, once these firms are listed on the stock market, investors should pressure for reducing banks' stakes.

Our paper can also be extended in different ways. First, it may be worthwhile exploring the market reaction to debt issues contingent on different ownership characteristics and, in particular, on the presence of banks as owners as well as on the number of creditors. A second extension has to do with the type of accompanying block holders that form coalitions with banks (Boehmer, 2000). What is the effect on debtholdings when a bank buys a significant stake and the second largest shareholder is another bank or, alternatively a non-bank? For example, Yeo *et al.* (2002) find a strong positive relationship between external unrelated blockholdings and transparency of earnings reporting, which is an indication of blockholders low expropriating intentions. In that case, we posit that the presence of banks in heterogeneous ownership structures has a more positive effect on debt issues. Similarly, we may expect that the number of blockholders (large contestability) should diminish the expropriating effect and stimulate security issues. Finally, as a last extension, we may wish to explore the differences of these results contingent on the country of origin. We may expect that in the common-law countries the strategic approach to banks' equity holdings will be more likely, while in

civil-law countries the expropriating argument should be the most relevant one. The investigation of such issues will be the subject of future research.

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FIGURE 1: Scheme of the model

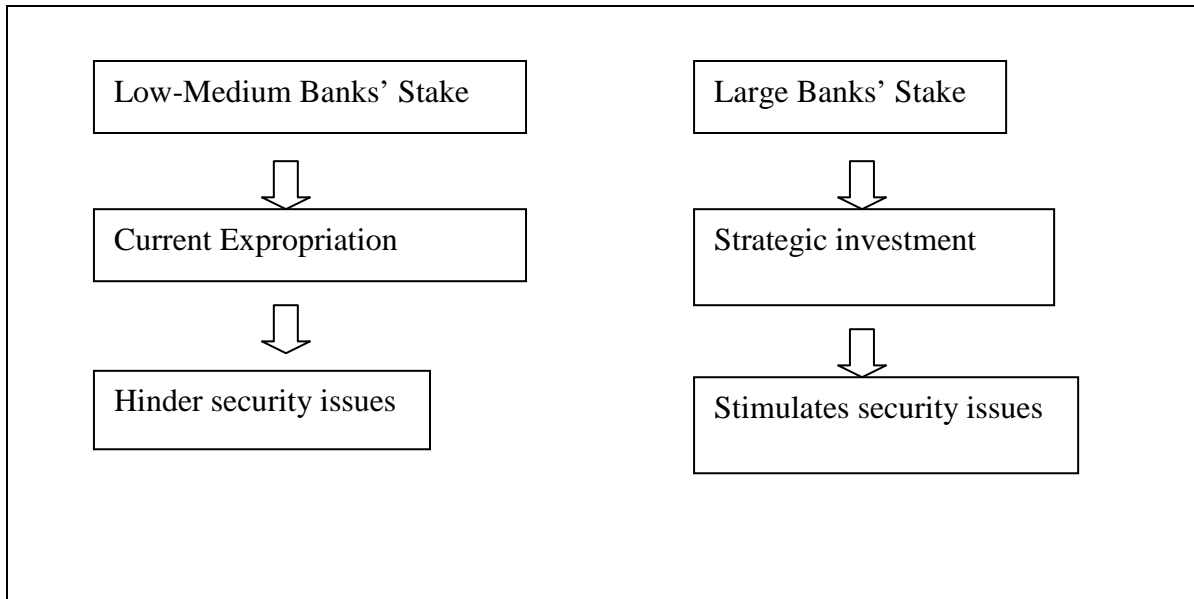


TABLE 1: Descriptives

	Observ	Mean	S.D	Listed=1	Listed=0	P-value ¹	Debt_Issue=1	Debt_Issue=0	P-value ¹
Listed	7086	0.7634	0.42500	1	0		1	0.7547	13.1602 (0.0000)
IPO	7086	0.2764	0.4472	1	0		1	0.2712	7.4759 (0.0000)
Debt_Issue	7086	0.0354	0.1847	0.0463	0	13.1602 (0.000)	1	0	
DBank	7086	0.2665	0.4421	0.2819	0.2168	7.6950 (0.000)	0.4540	0.2596	10.0058 (0.000)
Bank_Stake	7086	7.9600	11.6008	8.7835	7.5931	3.0113 (0.000)	7.9261	8.1144	0.4052 (0.6853)
Bank_Loan	7086	1.2640	10.5282	1.3739	0.9091	2.3008 (0.021)	0.6141	1.2879	1.4511 (0.147)
Financial_Cost	7086	0.0383	0.5172	0.0379	0.03971	0.1724 (0.8631)	0.0272	0.0388	0.5056 (0.613)
Size	7086	12.3969	1.9413	12.5042	12.0507	12.2479 (0.000)	13.5445	12.3548	13.9849 (0.000)
Age	7086	47.6930	47.0314	51.3991	35.7350	17.5536 (0.000)	49.0075	47.6448	0.6570 (0.511)
Intangibility	7086	0.2522	0.2773	0.2680	0.2019	10.9705 (0.000)	0.1673	0.2556	6.5604(0.000)
Gearing	7086	65.6889	111.5157	69.8904	52.0745	8.2265(0.000)	120.7583	63.6819	11.4598 (0.000)
Liquidity_Ratio	7086	1.9866	8.4622	1.9762	2.0196	0.2387(0.811)	1.2394	2.0168	1.9340 (0.053)

¹ In parentheses the p-values of the Mann-Whitney tests.

TABLE 2: Determinants of an IPO

Dependent Variable	IPO (All firms)	IPO (Growth firms)	IPO (Non-Growth)	IPO (All firms)	IPO (Growth firms)	IPO (Non-Growth)
DBank	0.3429*** (7.7700)	0.2609* (1.7000)	0.3701*** (7.8000)	0.4020*** (6.7200)	0.3600* (1.6100)	0.4324*** (6.7300)
Bank_Stake				-0.0352*** (-4.8700)	-0.0154 (-0.6800)	-0.0374*** (-4.7400)
Bank_Stake ²				0.0003*** (2.9700)	0.0000 (0.1400)	0.0004*** (3.0700)
Bank_Loan	-0.0748*** (-3.5700)	-0.0558 (-0.9700)	-0.0799*** (-3.5400)	-0.0575*** (-2.2700)	-0.0008 (-0.0100)	-0.0685*** (-2.5600)
Size	-0.1174*** (-9.2800)	-0.1096*** (-2.9300)	-0.1166*** (-8.4000)	-0.1101*** (-7.1200)	-0.1071*** (-2.3000)	-0.1121*** (-6.5700)
Age	-0.0011** (-1.9800)	-0.0020 (-1.2500)	-0.0006 (-0.9800)	-0.0005 (-0.7400)	-0.0015 (-0.7900)	0.0001 (0.1500)
Intangibility	-0.4811*** (-5.9300)	0.2445 (1.1400)	-0.5679*** (-6.2800)	-0.4129*** (-4.2500)	0.4033 (1.5400)	-0.5123*** (-4.7200)
Gearing	0.0004** (1.9300)	0.0007 (1.0000)	0.0004** (1.8600)	0.0005** (2.1100)	0.0011 (1.3600)	0.0005** (1.9300)
Liquidity_Ratio	0.0096 (1.0500)	0.0331 (1.3200)	0.0075 (0.7400)	0.0222** (2.1800)	0.0535* (1.6400)	0.0202** (1.8200)
Intercept	3.7970*** (19.8700)	3.2592*** (5.8000)	3.8348*** (18.2800)	3.6697*** (15.9500)	3.2110*** (4.7200)	3.7511*** (14.7500)
Fitness of the model	3551.29 (0.0000)	385.03 (0.0000)	3244.60 (0.0000)	2951.50 (0.0000)	356.60 (0.0000)	2675.21 (0.0000)
R ² (%)	39.85	40.33	41.65	40.76	46.80	42.23
Observations.	7086	795	6291	7086	795	6291

***p-value 0.01, ** p-value 0.05, *p-value 0.10. In parentheses the t-statistics. Likelihood ratio as Fitness of the model test.
All the variables are defined in the text.

TABLE 3: Determinants of Debt Issues

Dependent Variable	Debt_Issue (All firms)	Debt_Issue (growth firms)	Debt_Issue (Non-growth)	Debt_Issue (All firms)	Debt_Issue (growth firms)	Debt_Issue (Non-growth)
DBank	0.1986*** (3.2900)	0.2233 (1.1000)	0.1921*** (2.9800)	0.1499** (1.8200)	0.2777 (0.8800)	0.1431* (1.6300)
Bank_Stake				-0.0167** (-1.8200)	0.0007 (0.0200)	-0.0211** (-2.0900)
Bank_Stake ²				0.0002** (1.8200)	-0.0004 (-0.4800)	0.0003*** (2.4700)
Bank_Loan	-0.3450*** (-6.8400)	-0.3128** (-2.0800)	-0.3612*** (-6.5900)	-0.2203*** (-4.2300)	-0.2533 (-1.3500)	-0.2344*** (-4.1700)
Size	0.1665*** (9.3800)	0.2426*** (4.1900)	0.1609*** (8.5000)	0.1798*** (8.4400)	0.1938*** (2.7000)	0.1789*** (7.8800)
Age	-0.0012* (-1.6400)	-0.0041* (-1.6000)	-0.0010 (-1.2600)	-0.0005 (-0.5400)	-0.0049* (-1.6300)	-0.0003 (-0.2800)
Intangibility	-0.6286*** (-4.7000)	-0.2774 (-0.7500)	-0.6738*** (-4.5800)	-0.4881*** (-3.1200)	-0.3929 (-0.8800)	-0.4952*** (-2.8900)
Gearing	0.0017*** (7.5200)	0.0021*** (2.8000)	0.0017*** (6.8000)	0.0015*** (5.9800)	0.0028*** (3.0000)	0.0015*** (5.4500)
Liquidity_Ratio	-0.0589*** (-2.3600)	0.0640* (1.6300)	-0.1156*** (-3.3800)	-0.0895*** (-2.7800)	0.0395 (0.7000)	-0.1298*** (-3.3100)
Intercept	-3.5158*** (-11.9500)	-4.8105*** (-5.3800)	-3.3368*** (-10.4700)	-4.0175*** (-11.1900)	-4.5053*** (-3.9700)	-3.6079*** (-9.6700)
Fitness of the model	365.02 (0.0000)	57.18 (0.0000)	327.78 (0.0000)	260.94 (0.0000)	43.87 (0.0000)	239.00 (0.000)
R ² (%)	8.24	8.53	8.54	11.40	18.70	11.87
Observations	7086	795	6291	7086	795	6291

***p-value 0.01, ** p-value 0.05, *p-value 0.10. In parentheses the t-statistics. Likelihood ratio as Fitness of the model test.
All the variables are defined in the text.

TABLE 4: Evolution of Banks' Equity Holdings

Dependent Variable	Bank_Stage (t+1)	Bank_Stage (t+1)	Bank_Stage (t+1) (Growth firms)	Bank_Stage (t+1) (Non-growth firms)
IPO	7.5120*** (3.7000)	6.5253*** (3.2000)	-0.7401 (-0.7500)	-3.1821 (-0.6400)
IPOxDBank		3.7741*** (2.8500)	-4.2389 (-1.4100)	3.0256** (1.9200)
Debt_Issue	1.4238 (0.7800)	1.5619 (0.8300)	0.2834 (0.2600)	1.6018 (0.5700)
Debt_IssuexDBank		-2.5116 (-0.3800)	-2.5681 (-1.0000)	-2.2552 (-0.3100)
Bank_Loan	0.2517 (0.4600)	0.1793 (0.3300)	0.1652 (0.3600)	0.6763 (0.8400)
Size	3.7220*** (2.6100)	3.8168*** (2.7100)	1.3033 (1.3200)	4.7596*** (2.7700)
Age	9.2796*** (4.5700)	8.6834*** (4.3100)	-0.5835 (-0.7600)	-0.9960 (-0.2000)
Intangibility	0.0775 (0.0200)	0.0903 (0.0200)	-1.4976 (-0.5900)	-1.4606 (-0.3000)
Gearing	-0.0140*** (-3.2900)	-0.0137*** (-3.2700)	-0.0149*** (-3.4400)	-0.0176*** (-3.4500)
Liquidity_Ratio	-0.0010 (0.0000)	0.0186 (0.0600)	0.0821 (0.4800)	-0.2113 (-0.3500)
Intercept	-579.3761*** (-4.9300)	-546.1568** (-4.6800)	13.2819 (0.4000)	4.1951 (0.0100)
Fitness of the model	3.31 (0.0000)	3.46 (0.0000)	2.36 (0.0005)	1.88 (0.0141)
Hausman Test	40.30 (0.0030)	35.41 (0.0254)	113.64 (0.0000)	37.68 (0.0140)
Effects	Fixed	Fixed	Fixed	Fixed
R ² (%)	19.80	22.33	7.79	17.15
Observations	7086	7086	795	6291

***p-value 0.01, ** p-value 0.05, *p-value 0.10. In parentheses the t-statistics. Likelihood ratio Test as Fitness of the model test.
All the variables are defined in the text.

TABLE 5: Evolution of Banks' Loans

Dependent Variable	Bank Loan	Bank Loan	Bank Loan (Growth firms)	Bank Loan (Non-growth firms)
IPO(t-1)	-0.0202 (-0.4000)	0.0029 (0.0600)	0.0763 (0.7900)	-0.0018 (-0.0300)
IPOxDBank (t-1)		-0.2277** (-2.0500)	-1.0330*** (-3.2700)	0.0453 (0.4000)
Debt_Issue (t-1)	-0.0305 (-0.1600)	-0.0495 (-0.2500)	-0.3029 (-1.3500)	0.0015 (0.0100)
Debt_IssuexDBank (t-1)		0.2427 (0.4200)	1.3316 (1.3200)	-0.0476 (-0.1600)
Bank_Stage	0.0214*** (3.1200)	0.0205** (2.9800)	-0.0014 (-0.1500)	0.0208*** (3.2600)
Bank_Stage ²	-0.0002** (-2.1500)	-0.0002** (-2.0400)	-0.0001 (-0.5900)	-0.0002*** (-2.4500)
Bank_Loan (t-1)	-0.1170*** (-4.4300)	-0.1157*** (-4.3800)	0.5676*** (20.4200)	-0.0058 (-0.2200)
Size	0.1341 (1.4000)	0.1362 (1.4200)	0.0276 (1.1000)	0.3157*** (3.1600)
Age	-0.0903*** (-3.6300)	-0.0874*** (-3.5000)	0.0012 (1.1600)	-0.0931*** (-3.9800)
Intangibility	-0.0869 (-0.3900)	-0.0992 (-0.4500)	0.0529 (0.3600)	0.0637 (0.2700)
Gearing	0.0021** (6.0000)	0.0021*** (6.0000)	0.0017*** (4.1400)	0.0016*** (4.8700)
Liquidity_Ratio	0.1139*** (6.8200)	0.1138*** (6.8300)	0.0374** (2.0100)	0.0665*** (3.8400)
Intercept	3.0361** (2.1000)	2.8645** (1.9700)	-0.0063 (-0.0200)	0.9089 (0.5900)
Fitness of the model	7.04 (0.0000)	6.64 (0.0000)	556.30 (0.0000)	4.24 (0.0000)
Hausman Test	1244.90 (0.0000)	1241.28 (0.0000)	27.95 (0.900)	872.82 (0.0000)
Effects	Fixed	Fixed	Random	Fixed
R ² (%)	14.93	15.34	49.36	12.90
Observations	7086	7086	795	6291

***p-value 0.01, ** p-value 0.05, *p-value 0.10. In parentheses the t-statistics. We use the F-test as Fitness of the model test in the fixed-effect estimations and the Wald test for the random-effect estimations. All the variables are defined in the text.

TABLE 6: Effects on Financing Costs

Dependent Variable	Financing_Cost	Financing_Cost (Bank_Stage>0)	Financing_Cost (Bank_Stage>0 & Growth firms)	Financing_Cost (Bank_Stage>0 & Non-growth firms)
IPO(t-1)	-0.0255*** (-4.0200)	-0.0141 (-0.5600)	-0.0172* (-1.6700)	0.0030 (1.0000)
Debt_Issue (t-1)	0.0075 (0.3500)	-0.0141 (-0.1200)	0.0167 (0.8200)	0.0107 (1.4300)
Bank_Stage	0.0005 (0.6400)	0.0015 (0.3800)	0.0010 (1.1600)	0.0000 (0.0300)
Bank_Stage ²	0.0000 (-0.4400)	0.0000 (0.0800)	0.0000 (-1.2500)	0.0000 (-0.1000)
Bank_Loan (t-1)	0.0030 (1.0000)	-0.0170* (-1.5900)	0.0019 (0.5600)	0.0114*** (7.1200)
Size	-0.0224* (-1.7100)	-0.0795* (-1.6100)	-0.0123*** (-3.7400)	-0.0102 (-1.1100)
Age	-0.0019 (-0.6100)	0.0039 (0.3800)	0.0002 (1.2700)	-0.0027** (-2.0200)
Intangibility	-0.0041 (-0.1300)	-0.3361 (-2.2300)	0.0169 (0.9700)	0.0234 (1.1700)
Gearing	0.0000 (-0.2400)	-0.0001 (-0.6800)	0.0000 (0.9400)	0.0000 (-1.3600)
Liquidity_Ratio	-0.0109*** (-3.9700)	-0.0736*** (-8.7700)	-0.0013 (-0.6000)	0.0012 (0.5000)
Intercept	0.4228*** (2.2800)	1.1455 (1.8200)	0.2162*** (3.9000)	0.2670*** (2.5200)
Fitness of the model	2.36 (0.0000)	6.34 (0.0000)	1.54 (0.0558)	4.60 (0.0000)
Hausman Test	278.08 (0.0000)	110.94 (0.0000)	4.75 (0.5767)	864.21 (0.0000)
Effects	Fixed	Fixed	Random	Fixed
R ² (%)	6.31	60.62	10.98	52.25
Observations	7086	1888	211	1677

***p-value 0.01, ** p-value 0.05, *p-value 0.10. In parentheses the t-statistics. We use the F-test as Fitness of the model test in the fixed-effect estimations and the Wald test for the random-effect estimations. All the variables are defined in the text.