TWO ESSAYS IN INTERNATIONAL BANKING AND FINANCE:

(1) CROSS-BORDER BANK MERGERS AND ACQUISITIONS,

(2) SMALL AND MEDIUM ENTERPRISE FINANCING IN

TRANSITION ECONOMIES

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TWO ESSAYS IN INTERNATIONAL BANKING AND FINANCE: (1) CROSS-BORDER BANK MERGERS AND ACQUISITIONS, (2) SMALL AND MEDIUM ENTERPRISE FINANCING IN TRANSITION ECONOMIES

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DISSERTATION ABSTRACT

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This dissertation consists of two essays in international finance and banking. The first essay attempts to evaluate factors that promote or impede cross-border bank mergers and acquisitions using logistic regressions. The effects of bank specific features, from both target and acquiring banks' perspectives, are estimated. The effects of bank regulations are estimated, from both target and acquiring countries' perspectives. Three comprehensive and informative dataset are combined to become a unique dataset to study banks' cross-border merger and acquisition activities. The banking sector regulatory variables included are expected to make this study the first to empirically and comprehensively analyze the interrelationship between bank

regulations and cross-border bank mergers and acquisitions. The second essay examines small and medium enterprises' financing status in transition economies using different empirical specifications. Firstly, factors relevant to SMEs' financing obstacles are analyzed. These factors are further analyzed to see if they influence firms' financing patterns differently. Then this analysis is focused on which specific firm level features and bank regulatory practices are relevant to SMEs' access to short term versus long term bank loans as well as to what extent these factors influencing the structure of loans to small business. This study is the first to explore the impacts of specific bank regulatory practices on small business lendings in transition economies. The feature that data used in this study are distributed across three periods makes this study special compared to other studies using purely cross section data in that some differences over time can be captured.

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CHAPTER 1. CROSS-BORDER BANK MERGERS AND ACQUISITIONS

1. INTRODUCTION

Cross-border mergers and acquisitions[1] have evolved as the major mode of banks' foreign direct investments since the 1980s (see, Gilroya and Lukas, 2005; Neto, Brandao and Cerqueira, 2008), when the second merger and acquisition wave in banking sector peaked.

1.1 Merger and Acquisition Waves

As Brakman, Garretsen and Marrewijk (2005) argued, one important fact as to the development of merger and acquisition activity over time is that they come in waves. Starting with the first merger and acquisition wave back in the 1870s, there have been five large industrial merger and acquisition waves (see Andrade, Mitchell, and Stafford, 2001； Brakman, Garretsen, and Marrewijk, 2005; Gorton, Kahl, and Rosen 2005; Harford, 2005). The second wave began in the early 1920s, and was followed by the third wave in the 1960s. In the first three merger and acquisition waves, firms were mainly seeking economies of scale, in that mergers and acquisitions were implemented within borders. The fourth wave, which began in the 1970s, was different from the previous three in that the transactions are characterized by speculatively leveraged mergers and acquisitions. The fifth wave began in the 1990s and ended as society was about to step into 21st century, with accompanying collapse of the technology stock bubble.

As they are generally classified, there have been 3 large merger and acquisition waves in the banking sector. The first wave initiated from 1890s and peaked in 1920s.

It was characterized by within-border bank mergers and acquisition activities resulting in monopolistic megabanks. The second wave started in the 1950s and peaked in the 1980s. This wave mainly occurred among banks in the US, Japan and the UK. Banks from these three countries sought to hold shares in each other. The third wave continued through the whole of the 1990s and reached its peak in 1998. This wave is recognized to be the most influential one not in terms of deal numbers or deal values but in the number of banks from emerging countries that became important participants; a surge in cross-border bank mergers and acquisitions was found.

Recalling the waves occurred in history, whether those in the banking industry or in other industries, the following general conclusions can be reached. First, every surge in merger and acquisition activities emerged from steady economic growth periods, and was terminated by financial crises or economic downturns. Second, the frequency of waves is increasing, and the pause between waves is becoming shorter. The recent subprime mortgage crisis, which originated in the United States and has already spread to other countries, and which is still sweeping across financial sectors and is also hurting real economies, certainly has dampened and will continue to dampen merger and acquisition activities in the short run. However, the recovery of the economy from downturn, based on the past, is expected to facilitate a new round, the so-called fourth merger and acquisition wave in the banking sector, with the expected surge in multinational banks and the resulting intensification of banking sector consolidation inspiring studies on related subjects.

1.2 Regulation of Bank Mergers and Acquisitions

Regulation has a greater impact on merger and acquisition activities in the banking sector than in other sectors, mainly as a result of more stringent regulatory restrictions on banks than on other firms (see, Focarelli and Pozzolo, 2001).

"The unprecedented surge of domestic bank merger and acquisition activities over the last two decades may have occurred largely because of countries' progressive deregulation in the banking sector, which was characterized by an abolition of geographic restrictions and the demolition of the demarcation line between different types of financial services" (see Hagendorff, Collins, and Keasey, 2007). In fact, this is very likely. Every bank merger and acquisition wave in history was accompanied by some regulatory reliefs. In Japan, the Bank Mergers Act of 1896 legally allowed banks' merger and acquisition activities. In Italy, the Banking Act of 1933 permitted the formation of bank holding companies. In England, the Financial Services Act of 1986 resulted in the elimination of restrictions on banks' operating in nontraditional commercial bank business, promoting vertical mergers of banks with nonbank financial firms. In the United States, the Riegle-Neal Act of 1993 eliminated restrictions on interstate banking; the Gramm-Leach-Bliley Act of 1999 permitted commercial banks to engage in security, insurance and other financial business, which indicated the end of restrictions on banks pursuing nonbank financial activities in developed countries (see Barth, Brumbaugh, and Wilcox, 2000).

Over recent decades, banks' cross-border mergers and acquisitions have also seen a sharp increase. Without question, intensification of economic cross-border consolidation, or globalization, is the foremost engine which is launching international banking. A search for additional revenues resulting from international comparative advantages has motivated companies to expand abroad. Banks thereby follow their customers into foreign markets via merging with or acquiring an existent firm, or through establishing a new firm. In combination with globalization, the intensified banking sector deregulation (see Barth, Nolle, and Rice, 2000), the progressive privatization of government owned assets, as well as the financial sector

restructuring, all contribute to substantial growth in banks' cross-border mergers and acquisitions.

The primary concern of bank regulation is stabilizing the domestic banking system. Frequent bank merger and acquisition activities within borders cause greater concentration. If a more concentrated system is more stable as some studies have demonstrated (see Beck, Demirguc-Kunt, and Levine, 2006; Berger, Klapper, and Ariss, 2008), bank regulation should foster concentration. However, if a more concentrated banking structure enhances bank fragility (see Matutes and Vives, 2000; Boyd, De Nicolo, and Jalal, 2007), bank regulation should instead prevent concentration. It appears that bank regulators tend to advocate positive concentration and stability relationships, with respect to the deregulation progress in the banking sector. However, things are not that simple. Just as Beck, Demirguc-Kunt, and Levine (2008) stated, some regulatory practices associated with more competition and less concentration also are directly related to the banking system's stability. Furthermore, some regulatory policies on the one hand may promote competition, but on the other also facilitate concentration. For example, eliminating restrictions on banks' engagement in innovative financial activities brings in more competition but also fosters financial conglomerates.

1.3 Basel II

Regarding cross-border bank mergers and acquisitions, things become even more complicated. Through cross-border merger and acquisition activities, banks have not only expanded their operation networks all over the world, but have also raised the concentration of the international banking system to an all-time high. International banking industry consolidation induced by cross-border mergers and acquisitions enables banks to compete fairly in an international playing field. However, global

banking capital may gradually accumulate into multinational financial conglomerates, prohibiting new entrants and obstructing competition.

This imposes new difficulties on international bank regulations. It is too complicated as well as unreasonable to regulate multinational megabanks or financial conglomerates solely by domestic regulators considering the unprecedented risk overlap and profit sharing among different banking systems. How do countries with different regulatory practices coordinate to maintain international banking system stability? Probably the most important activity for when the Basel committee proposes the Basel accords is to address this problem, or as it were, to foster more harmonized international regulatory practices.

The most updated Basel accords, i.e., Basel II, launched by end of the year 2006, which seek to build a fairer and competitive international regulatory playing field among different countries and to better stabilize the international banking system, are receiving contradictory responses. One opinion is that, Basel II is an exceptionally complicated regulatory proposal which is too expensive to implement (see Barth, Caprio, and Levine, 2008). In fact, Basel II may actually create unfair regulatory practices for different countries, unlike the fairer practices as proposed, since countries of different backgrounds are forced to accept regulatory schemes that may only be applicable to several developed banking systems. Furthermore, harmonization may actually suppress regulatory innovations in different banking systems.

What roles will Basel II play in the expected fourth cross-border bank merger and acquisition wave after the recent financial crisis? Will it really boost bank merger and acquisition activities cross-border as intuitively expected? Or will it cause the opposite? In this paper, indices computed using data from past regulatory practices in different countries are used as proxies for Basel II pillars, which are minimum capital

regulations, supervisory oversight and market discipline, to predict the impact that Basel II may impose on cross-border bank merger and acquisition activities.

2. BROAD LITERATURE OVERVIEW

Extensive literature exists on mergers and acquisitions in the manufacturing industry, both theoretically and empirically. The literature on mergers and acquisitions in the banking sector is relatively narrow[2]. More stringent regulatory restrictions over the banking sector which complicate banks' merger and acquisition activities relative to other firms (see, Focarelli and Pozzolo, 2001). Studies on cross-border mergers and acquisitions in the banking sector are even rarer. Information and regulation asymmetry cross-country impedes international banking (see Buch and DeLong, 2004; Berger, 2007).

Besides the surge in banks' cross-border merger and acquisition activities as noted above, the literature on the determinants of cross-border mergers and acquisitions in the banking sector and their impact on bank performance, financial development, and stability, as well as on real economic growth, will be highlighted in various sections below.

2.1 Motivations of Banks' Mergers and Acquisitions

Studies of the motivations for banks' mergers and acquisitions using bank level data investigate improvements on bank performance generated from mergers and acquisitions. This literature refers to studies on the motivations of manufacturing firms' mergers and acquisitions. Improvements on bank performance are further subdivided into operating performance improvements as well as shareholder value enhancements. By contrast, this study focuses on banks' motivations for mergers and acquisitions by examining their changed operating performances. According to the

literature, banks' merger and acquisition activities will induce cost reductions and perhaps efficiency gains via economies of scale and scope; these cost reductions and efficiency gains will be reflected in the banks' financial ratios (see Cornett and De, 1991; Gropper, 1991; Houston and Ryngaert, 1994; Clark, 1996; DeYoung and Nolle, 1996; Peristiani, 1997; Berger, Demsetz, and Strahan, 1999; Milbourn, Boot, and Thakor, 1999; Huizinga, Nelissenan, and Vennet, 2001; Amel, Barnes, Panetta, and Salleo, 2004; Cornett, McNutt, and Tehranian 2006)[3]. Variations in banks' financial ratios will, therefore, expose banks' motivations for mergers and acquisitions.

2.2 Information Costs and Regulatory Barriers

Most of the studies on cross-border mergers and acquisitions in the banking sector using country data or mixed country and bank data form altogether a tiny body of literature. These studies are more recent and much rarer than studies using bank level data and limited to examine only banks' domestic merger and acquisition activities. Country level studies mainly focus on studying those country level factors that impede bank cross-border mergers and acquisitions, such as information costs and regulatory barriers. One way is to group countries into pairs and analyze bilateral data (see Buch, 2003; Galindo, Micco, and Serra, 2003; Buch and DeLong, 2004; Blank and Buch, 2007; Horen, 2007; Claessens and Horen, 2007). This methodology tends to utilize a gravity type model that is commonly used in bilateral trade studies. The other method is to use aggregate level data measuring country characteristics (see Buch, 2000; Dopico and Wilcox, 2002; Berger, 2007; Schoenmaker and Laecke, 2007). This study uses countries' aggregate level data, especially banking sector regulatory data, combined with bank level data measuring individual banks' performances, to explore the determinants of banks' cross-border merger and acquisition activities.

2.3 Micro Level and Macro Level Factors

There are rare studies using both country and bank data together in a single study (see, Focarelli and Pozzolo, 2001; Focarelli and Pozzolo, 2006; Lanine and Vennet, 2007; Pasiouras, Tanna and Gaganis, 2007; Kohler, 2008; Hernando, Nieto and Wall, 2009). This may be largely attributed to insufficient data availability. When analyzing banks' cross-border merger and acquisition behaviors, country data are indispensable. Bank level data alone cannot well explain why a bank would expand beyond the borders to acquire a foreign bank instead of acquiring a domestic bank or why a bank is more attractive to foreign acquirers instead of being acquired by domestic banks. Buch and DeLong (2004) suggest that studying merger decisions including both bank specific and country specific variables would be interesting. It would allow for an analysis of the relative importance of macro-specific versus bank-specific factors in international merger decisions. The present study is different from those mentioned above in that the researcher uses a unique and comprehensive banking sector regulation database to address the impact of banking sector regulations on cross-border bank mergers and acquisitions.

3. TESTABLE HYPOTHESIS

The primary motivations for banks to consolidate are to increase revenue and decrease costs, and to ultimately maximize profits. In this sense, the general economic theory of consolidation has laid out a basic theoretical framework for studying the motivations for bank mergers and acquisitions. Additionally, with respect to individual bank features and specific country characteristics, the determinants will appear to be diverse.

3.1 Economies of Scale and Scope

Economies of scale are the situations in which firms obtain average cost reductions when expanding their scale of operation in certain instances. Economies of scale are, therefore, the cost reduction and perhaps efficiency gains firms achieve when expanding their operation along a given output. This theory explains why firms would tend to merge horizontally with other firms[4]. Economies of scope occur when firms obtain cost reductions by expanding the types of products and services they offer. In this way, firms' efficiency increases by responding to the demand side changes they face. This effect well complements the effect of economies of scale. Together, these factors help explain why firms tend to merge or acquire other firms vertically and horizontally.

Many studies on financial sector consolidation have found that scale and scope efficiency do exist after financial firms consolidate. Berger, Demsetz, and Strahan (1999) conducted detailed reviews of the broad literature on this topic. For example, Gropper (1991), Clark (1996), Hughes, and Mester (1998); Cummins, Tennyson, and Weiss (1999); and Milbourn, Boot, and Thakor (1999) all found evidence supporting scale and scope efficiency. More recent verification comes from the literature, for example, Hannan and Pilloff (2006); Matousek (2008); and Hernando, Nieto, and Wall (2009).

Some recent studies dispute this literature. For example, Amel, Barnes, Panetta, and Salleo (2004), who based their studies on the main sectors of the financial industry in the major industrialized countries over the last twenty years, found that consolidation in the financial sector results in some efficiency as a consequence of economies of scale but found no evidence that mergers yield economies of scope or gains in managerial efficiency. Bernardo and Stefania (2006) derived scale, scope and

X-efficiency indicators from three different specifications of cost functions: Fourier flexible form, Translog, and Box-Cox. Using these methods, they failed to find evidence to support efficiency gains using European and US commercial bank data over the period of 1995 through 1998.

Consistent with theories of economies of scale and scope, large banks engage not only in traditional banking business but also in other innovative banking activities, e.g., security, insurance and real estate, and more bank and commerce interactions, through which acquiring firms can noticeably enlarge their scales and diversify the scope of their business, are expected to be more attractive to foreign acquirers. Therefore, the first testable hypothesis generated here is: 1) large banks operating in countries with fewer regulatory restrictions in innovative bank activities and bank ownership in commerce are more attractive to foreign acquirers.

3.2 X-efficiency Hypothesis

X-efficiency theory was first proposed by Leibenstein (1966). X-efficiency is achieved when a firm produces maximum output given the resources it employs. The author states that X-inefficiency exists and persists in a market condition of imperfect competition. This theory indicates that if firms of different efficiency levels merge this would create considerable returns for both banks. Bertrand and Zitouna (2008), although using French manufacturing firm-level data rather than banking data, found that mergers and acquisitions clearly raise the productivity of target firms. They suggested that firms probably redistribute efficiency gains at the upstream or downstream production stage. Furthermore, they found that efficiency gains are stronger for cross-border mergers and acquisitions. Matousek (2008) found foreign banks on average to be more efficient than domestic banks. The efficiency of even small foreign owned banks is greater than that of large domestic banks.

If this theory is correct, efficient firms should tend to acquire relatively inefficient firms. Thus, the second testable hypothesis is: 2) efficient banks are more likely to become cross-border acquirers; conversely, inefficient banks are more likely to become cross-border targets.

3.3 Market Power Hypothesis

Financial service firms can maximize returns by increasing their market powers in setting prices on the services they provide. This is a very important motivation for banks to go abroad. The motivation for profit maximization induces banks to seek more market opportunities. When the domestic markets become saturated, banks would, if possible, enter foreign countries to seize market shares. The increase of market shares would increase the market power of banks in setting prices. The so-called market power hypothesis is based upon the same observations (see Lanine and Vennet, 2007; Kohler, 2008). Under the market power hypothesis, firms tend to target foreign banks that possess large market shares in their home countries, irrespective of their degree of efficiency. Large banks with large market shares in domestic countries also have incentives to expand abroad. They do not want to put all their eggs in one basket. Large banks with large market shares in one country are at greater risk in that when the domestic market is in a downturn, large banks suffer more profit cuts or losses than do smaller banks. Risk diversification motivates large banks to go abroad.

The third hypothesis is: 3) large banks with large market shares tend to go abroad to acquire other firms in order to diversify risks; large banks with large market shares also are more likely to be acquired, through which action acquiring firms can obtain remarkable market shares.

3.4 Deregulation Reduces Cross-border Barriers

According to Focarelli and Pozzolo (2001), cross-border mergers and acquisitions are less frequent in the banking sector than in other sectors because of more stringent regulatory restrictions in banking sector which complicate banks' cross-border mergers and acquisitions relative to other firms. Buch and DeLong (2004) also found results that regulatory barriers are important in affecting banks' merger decisions. Berger (2007) pointed out major explicit and implicit regulation barriers against international banking. Explicit barriers include regulations limiting foreign bank entry or restricting activities or expansion of foreign banks which have already entered. Implicit barriers mean differences in regulatory practices or legal systems between countries.

In sum, regulation barriers are particularly notable for cross-border bank mergers and acquisitions. Direct bank restrictions on foreign bank entry, and bank activities, bank ownership raise the difficulty of cross-border bank merger and acquisition activities or, even worse, prohibit banks' cross-border merger and acquisition activities. As well, banks' cross-border merger and acquisition activities involve two different regulatory systems, one at home and one abroad. Foreign banks have cost disadvantages when complying with two different sets of regulatory practices, which impose additional costs on them and, furthermore, reduce the amount of cost overlapping. The result is a decrease in foreign banks' potential to benefit from economies of scale and scope.

The fourth hypothesis is: 4) banks from countries which have already implemented more intense deregulation on the banking sector, for example, less stringent restrictions on bank activities and ownership, and that have bank regulation practices which are more harmonized with the global banking system, for example,

more consistent with the Basel capital accords, and which rely more on capital regulation or official supervision instead of on direct control over banks, are more attractive to foreign acquirers.

With respect to acquiring banks, theory suggests ambiguous conclusions. Increased deregulation of the domestic banking sector facilitates banks in exploiting additional benefits in the domestic market according to economies of scope and scale, which reduces domestic banks' incentive to expand abroad. Less intensified deregulation is expected to lower the probability of exploiting extra benefits in the domestic market, conversely motivating banks to expand into foreign markets. However, regulatory burdens also increase the difficulty of domestic banks' expansion abroad, lowering the probability of banks' cross-border merger and acquisition activities. Which effect dominates should be empirically tested.

4. DATA SOURCES

The data for this study mainly come from three data sources: 1) three surveys undertaken for the World Bank project "Bank Regulation and Supervision"; 2) BankScope; and 3) Dealogic M&A Analytics. These three datasets are merged in this study to create a unique dataset of cross-border bank mergers and acquisitions. Since there was no unique identification for each bank across the datasets, merging them was accomplished by using bank name and when the names were not exactly unique, then bank asset and other bank specific information was used to be sure correct data was assigned to each and every bank name.

4.1 World Bank Surveys under Project "Bank Regulation and Supervision"

The country specific bank regulation variables come from three surveys under the World Bank project "Bank Regulation and Supervision" (See, Barth, Caprio and

Levine, 2001; Barth, Caprio and Levine, 2004; Barth, Caprio and Levine, 2006). The first survey was initiated in the late 1990s by Barth, Caprio and Levinein order to compile and analyze a comprehensive dataset on how countries regulate and supervise their banks. The initial survey was completed between 1998 and 2000, with responses from bank regulatory and supervisory authorities in 118 countries all over the world. The dataset was updated the first time between 2001 and 2003 and increased the number of countries to 153. The second and most recent update was between 2005 and 2007 and included 143 countries. This dataset is by now the most comprehensive cross-country database on commercial bank regulation and supervision, which covers various aspects of banking activities, including entry requirements, ownership restrictions, capital requirements, activity restrictions, external auditing requirements, deposit insurance scheme characteristics, loan classification and provisioning requirements, accounting/disclosure requirements, troubled bank resolution actions, and, uniquely, the "quality" of supervisory personnel and their actions. Most of the data from surveys I, II, and III characterize regulatory and supervisory practices for the years 1999, 2002, and 2005, respectively. For a detailed description of the data collecting process and survey questions, refer to Barth, Caprio and Levine (2001). All three datasets are now available on World Bank website. The details on the grouping of the individual questions and computing of the aggregate bank regulation and supervisory indices used in this study are provided in Barth, Caprio and Levine (2006).

4.2 BankScope

"BankScope is a database providing information on 28,000 public and private banks around the world. It combines data from many sources. Each bank report contains a detailed consolidated or unconsolidated balance sheet and income

statement totaling up to 200 data items and 36 existing ratios for each bank" (see BankScope online webpage). In addition to the existing ratios, new ratios can also be created according to individual search and analysis interests. The BankScope database is a unique collection of micro-level banking information for different countries. It is now used by many leading financial institutions, including central banks, for cross-country studies and policymaking (see, Demirguc-Kunt and Detragiache, 1998). According to Bhattacharya (2003), BankScope is an undoubtedly valuable database. Barring a few minor discrepancies, the values reported in the database are consistent with those reported in the primary sources. The discrepancies could be due to the maintenance of a uniform accounting convention in a cross-country database such as BankScope.

4.3 Dealogic M&A Analytics

"Dealogic M&A Analytics provides a comprehensive view of merger and acquisition activities worldwide, covering a wide array of transactions including public offers; open market purchases; stock swaps; buy-outs; privatizations; recapitalizations; share buy-backs; and acquisitions. Each transaction provides information on target and acquirer, deal value, advisers, financials, and multiples along with a detailed deal commentary. M&A Analytics provides a host of analytical tools to help analyze transactions, regions and industries efficiently." (See Dealogic M&A Analytics online webpage)

5. VARIABLE SELECTION

Two groups of variables are primarily used in the empirical analysis. One group is bank level data from BankScope, which are direct financial statement items or indirectly computed financial ratios. The other group is bank regulatory variables

computed from three World Bank surveys. Definitions and sources of all the variables are presented in Table 1.

5.1 Dependent Variables

The dependent variable is binary, which equals 1 if a bank is a cross-border target or acquirer in an observed year and equals 0 if a bank is not a cross-border target or acquirer in an observed year. This variable is computed using information from Dealogic M&A Analytics and BankScope.

Transactions were used from Dealogic that fall into the following groups: a) both acquirers and targets are banks; b) all acquirers are banks and targets are either banks or nonbanks; c) all targets are banks and acquirers are banks or nonbanks. In addition, classifications are based on both acquirers and targets being from the same country and acquirers and targets being from different countries. Since in this study, the pull and push of cross-border deals are the main concerns, which are those factors that pull firms to go abroad to acquire foreign banks and push banks to cross the border to acquire foreign firms, only data on cross-border deals in which targets are banks and acquirers are banks or nonbank firms and cross-border deals in which acquirers are banks and targets are banks or nonbank firms are used. BankScope provides financial statement information for all sample banks. Banks that were cross-border targets or acquirers during the observed period are eliminated from the control group. Table 2 reports all the sample banks' distribution across countries.

5.2 Bank-Specific Variables

Berger, Demsetz and Strahan (1999) suggest that researchers should be careful to select correct ratios to measure banks' operating performance since a different selection of ratios would lead to quite different results. In order to test the X-efficiency hypothesis, CTIR is used as a measure for banks' cost utilization and

account for banks' profitability using ROA and NIM.

CTIR is the cost to income ratio. It is the ratio of overhead to the sum of net interest revenues and other operating income. This ratio measures the costs of running the bank, and thus can be used as a proxy for a bank's operating performance. A higher ratio indicates greater cost inefficiency. ROA is the return on assets. It is the ratio of net income to assets. This ratio is usually used to measure the profitability and operational performance of banks as it looks at the returns generated from the assets financed by the bank. The higher the ratio, the more profit efficient the bank is. NIM is the net interest margin ratio. It is the ratio of interest incomes minus interest expenses and divided by average earning assets. A higher ratio indicates that funding the bank is cheaper and the bank is more profitable.

Including three ratios not only can test for X-efficiency hypothesis, but also can test which specific business scopes motivate banks to expand abroad or make banks more attractive to foreign acquirers. That is, the profitability of banks is decomposed into profitability from traditional banking activities, such as taking deposits and granting loans, as well as innovative financial activities, such as fees and trading activities. By controlling for cost and interest income, ROA actually accounts for revenues from fees and trading activities.[5]

ROA only accounts for banks' profitability but does not account for banks' profitability foundation that is the capital structure of banks, from which banks generate profits. The leverage ratio is important because it indicates the sustainability of a bank's profitability. Thus banks' equity to total asset ratio E_TA is also included. This ratio measures the permanent capital adequacy of the bank. It is usually used as a proxy for risk profile of the bank. The higher the ratio, the less risky the bank is.

Variable logTA is also included, which is the logarithm of bank's total assets. It is

usually used as a proxy for bank size. LogTA is used here to test for economies of scale hypothesis, which is expected to be a strong hypothesis.

5.3 Bank Regulatory Variables

To test for the economies of scope hypothesis, it would be best if more detailed bank level information for a bank's business scope and income structure is available. However, this kind of information is missing. But one of the advantages of this study is that it uses banking sector regulatory variables. It is reasonable to believe that banks' activities will be greatly influenced by the countries' regulatory restrictions as to what extent banks are allowed to engage in such activities. To account for the probability of banks' participation in innovative financial activities and other commercial activities, OVER3AR and BONF are included.

OVER3AR is an aggregate index measuring the overall restriction on banks' activities in security, insurance and real estate. The higher the value, the more restricted the banks' activities are in these three areas. BONF is an indicator variable measuring to what extent banks authorized to own voting shares in nonfinancial firms. It ranges from 1 to 4. No restriction at all is indicated by 1 and 4 indicates full prohibition.

To account for barriers protecting objective target countries from foreign acquiring firms, NFOB and GOVBANK are also included. NFOB accounts for extent to which foreign firms are able to acquire a domestic bank. NFOB is an indicator variable measuring the extent nonfinancial firms can own voting shares in banks. It ranges from 1 to 4. One (1) indicates no restriction and 4 indicate full prohibition. If a bank comes from a country that has a NFOB of 4, there is no possibility of a foreign firm acquiring the bank. GOVBANK is the government ownership of banks. It measures the percent of government-owned bank assets out of the country's total bank

assets. GOVBANK measures endogenetic barriers in the sense that government bank ownership is usually used as a proxy for countries' privatization process in the banking sector. The higher the government bank ownership, the less privatized the banking system is and the more difficult it is to acquire a domestic bank. NFOB and GOVBANK variables for the acquiring countries are also included. However, their effects on cross-border bank mergers and acquisitions are expected to be opposite to those of target countries. Restrictions on nonfinancial firms owning banks suppress reverse takeover of acquiring banks. Restrictions on forming financial conglomerates also ease competition from domestic markets against acquiring banks. Both facilitate banks' engaging in cross-border merger and acquisition activities. A less privatized domestic banking system indicates fewer market opportunities, also motivating domestic banks to expand into foreign markets.

This research also includes two measures as proxy for two pillars of Basel II, which are CRINDEX and OSPWER. CRINDEX is the capital regulatory index measuring both the amount of capital and verifiable sources of capital that a bank is required to possess. It ranges from 3 to 10; a higher value indicates greater stringency. OSPOWER is the official supervisory power index. It measures the extent to which supervisory authorities have the power to take actions to correct problems. It ranges from 4 to 14; a higher value indicates greater power. These two variables are used to control for the harmonization of domestic regulatory practices in banking sector with global banking system.

BCASSET is banking sector concentration in assets. It is measured as a percent of the largest five banks' assets compared to the country's total banking assets. This variable is included to broadly account for the degree of competition with the banking sector.

FORBANK is foreign bank ownership. It measures the percent of foreign-owned banking assets of a country's total banking assets. This variable should be used cautiously. On the one hand, this variable can be used as a proxy for the openness of a country's banking sector. But on the other hand, it is also an outcome of banks' cross-border merger and acquisition activities. To measure if a bank is foreign-owned, one can look at whether more than 50% of the bank's assets are possessed by one or more parties from foreign countries. A country's banking sector can become highly foreign-owned, if the frequency of foreign firms composing more than 50% of a domestic bank via cross-border mergers or acquisitions is high.

5.4 Control Variables

Variable LLAGGDPPC is included to account for countries' market potentials. LLAGGDPPC is the logarithm of real GDP per capita lagged one year. A lagged variable is used since there is evidence that using GDP per capita directly with other bank regulatory variables causes endogeneity problem, since a country's per capita GDP is related to regulatory features included or not included in the model (see, Barth, Caprio and Levine, 2006). It is evident that countries of relatively smaller real GDP per capita are characterized by regulatory practices that are more restricted in bank activities and ownerships, have higher government bank ownership, and have a higher banking sector concentration (see Table 3). The OPEN variable measures countries' openness in the real economy. It is calculated as the sum of a county's imports and exports divided by its GDP. Variable INF stands for inflation rate. This variable measures countries' macroeconomic stability. All three macroeconomic variables are obtained from World Development Indicator (WDI).

The STMKTCAP variable measures the development of countries' security market. It is computed as stock market capitalization to GDP ratio. Market share

variables are also included to measure individual bank's market power in the domestic market. MSHARE1 measures the share of a bank's assets in a country's aggregate banking assets; MSHARE2 measures the share of a bank's deposits and other short term funding in a country's financial system deposits; MSHARE3 measures the share of a bank's loans in the country's private credit from banks and other financial institutions. The stock market capitalization ratio and market share ratios are calculated by authors using data from IFS and BankScope.

This dissertation also includes the ZSCORE variable to account for countries' banking sectors' stability. A bank's Z-score is computed as a sum of ROA plus E_TA divided by the standard deviation of ROA (see, Beck, Demirguc-Kunt and Levine, 1999; Laeven and Levine, 2008).

6. EMPIRICAL ANALYSIS

Both pull and push factors that stimulate cross-border bank mergers and acquisitions are analyzed. In particular, two concerns are addressed. First, what bank, industry or country specific factors that characterize target banks pull foreign acquirers to enter domestic countries via mergers and acquisitions? Second, what bank, industry or country specific factors that characterize acquiring banks push them to go abroad via mergers and acquisitions?

Since the dependent variable is binary, which equals 1 or 0, a binary choice model is used. There are several different methodologies to estimate model parameters with binary choices. In this paper, a binomial logit model is estimated (see, McFadden, 1973), which models the probability of being chosen (Y=1) against not being chosen (Y=0). The determinants that affect probability of cross-border bank mergers and acquisitions are sketched by two sets of regression equations:

$$P(Y=1)=\alpha+\beta_1 BANK\_TAR_{+}\beta_2 REG\_TAR_{+}\beta_3 ECON\_TAR \quad 1)$$

$$P(Y=1)=\alpha+\beta_1 BANK\_ACQ_{+}\beta_2 REG\_ACQ_{+}\beta_3 ECON\_ACQ \quad 2)$$

Where 1=target bank in equation 1) and 1=acquiring bank in equation 2). BANK is a vector of bank characteristic variables for target bank and acquiring bank respectively. REG is a vector of bank regulatory variables for target country and acquiring country. A vector of country specific macroeconomic variables is also controlled.

6.1 Pull Factors

Binomial regressions on pull factors estimate the effects of target bank specific factors and target country specific bank regulatory factors on the probability that banks are acquired by foreign firms versus the probability that banks are not acquired by foreign firms. Several specifications of equation 1) are estimated. Summary statistics of variables used in pull regressions including full samples are reported in Table 4. Bivariate correlations between variables are reported in Table 5. Table 6 presents regression results.

Model 1 in Table 6 includes only bank specific features as explanatory variables. The coefficients of two bank-specific variables are statistically significant. As expected, bank size (measured by logTA) is positively correlated with the probability of a bank's being acquired cross-border, indicating that banks are more likely to be acquired by foreign firms if they are large. This is consistent with the economies of scale hypothesis, which states that the main motivation for banks' mergers and acquisitions is to expand scale. The results are in line with the extensive body of literature on this subject, for example, the findings from Hannan and Pilloff (2006) and Hernando, Nieto, and Wall (2009) all suggest the existence of economies of scale

in the acquisition process. The results from Matousek (2008) also indicate economies of scale. However, they found scale effect to decrease with bank size.

These findings are somewhat disputed. One dispute is from Koehler (2008), who found that large banks are less likely to be taken over by foreign credit institutions if merger control lacks transparency, because governments may block cross-border bank mergers to keep the largest institution in the domestic country. In this analysis, government bank ownership and official supervisory power are controlled, but this does not decrease the probability of large target banks' being acquired. Other studies such as Amel, Barnes, Panetta and Salleo (2004) and Bernardo and Stefania (2006) also disputed the findings.

Cost inefficiency (measured by cost to income ratio) is also positively correlated with the probability of banks being taken over by foreign firms. This result is consistent with the X-efficiency hypothesis. The hypothesis indicates that firms of different efficiency level that merge enhance efficiency. Consistent with the hypothesis, inefficient firms are more likely to be acquired. The results are different from those of Berger and Humphrey (1992) and Lanine and Vennet (2007). Berger and Humphrey (1992) study 57 merger cases that occurred from 1981 to 1989 with the mergeing banks possessing assets over one billion dollars and found no cost efficiencies between large bank mergers. Lanine and Vennet (2007) showed that large Western European banks tend to target relatively large and efficient Central and Eastern European banks. In their study, they found evidence to support the market power hypothesis, against the efficiency hypothesis.

However, the results are in line with the extensive body of literature, which also shows that less efficient banks are more likely to be acquired. Berger, Demsetz, and Strahan (1999) found that financial industry consolidation helps to increase profit

efficiency and diversify portfolio risks on average but that there is no evidence of cost efficiency improvement on average. However, if the participants are previously inefficient, both cost and profit efficiency improve after mergers and acquisitions. They conclude that consolidation does induce efficiency gains for institutions but more research should be carried out to verify these gains when fairlylarge institutions are included. Kohler (2008) also found less efficient banks are more likely to be acquired.

Model 2 represents the regression results adding country-specific variables describing countries' banking sector regulatory practices. Including bank regulatory variables does not result in any changes with respect to Model 1. The only significant bank-specific variables are logTA and CTIR. Five bank regulatory variables have significant coefficients in model 2.

As expected, banks allowed to interact more with commerce are more attractive to foreign acquirers. BONF, measuring restrictions on bank ownership of nonfinancial firms, has a negative coefficient. This means that more restrictions on bank ownership of nonfinancial firms lower domestic banks' probability of being targeted, which is consistent with scope economy hypothesis. Bank ownership restrictions limit domestic banks' potential profitability from engaging in commercial activities, thus hampering the possibility of a domestic bank achieving economies of scope via engaging in different business activities to create diversified profit flows.

Banking sector openness (measured by foreign bank ownership shares) is positively and highly significantly related to domestic banks' probability of being acquired. A more open banking system would be more attractive to foreign entrants.

More surprisingly, OVER3AR, measuring restrictions on banks' activities in security, insurance and real estate, has a positive coefficient. This is inconsistent with

the scope economy hypothesis, which states that banks should engage in diversified activities, not solely the deposit and loan business. Besides, literature also proves that greater restrictions on bank activities cause a more frangible and risky banking system, hampering banking system development and economy growth. These relationships are very robust even if the bank activity restriction variable interacted with other regulatory variables (see, Barth, Caprio and Levine, 2004).

BCASSET is positively related to target probability. It means that banking sectors that are more concentrated and less competitive induce more foreign entry. By comparison, Kohler (2008) found that degree of banking market concentration plays a role in domestic mergers and acquisitions but not for cross-border mergers and acquisitions. In contrast, Hernando, Nieto, and Wall (2009) found that in more concentrated markets, antitrust authorities reduce the probability of international banking by monopoly rents that can be obtained in more concentrated markets. Although antitrust authority effect is not controlled for in this study, positive correlation between bank concentration ratio and target probability may be explained by the fact that more concentrated markets are more likely to provide monopoly rents to foreign acquirers.

A government ownership share also has a positive effect. This is intuitively surprising since higher government ownership in banks indicates greater stringency and less privatization of the domestic banking system. These barriers may be regarded as increasing the difficulty of foreign entry into domestic banking systems. However, since foreign bank ownership is controlled for, this simply means the greater government bank ownership relative to private bank ownership, the more attractive the domestic banks to foreign acquirers.

Model 3 differs from Model 2 in that FORBANK from the model is dropped.

All the other variables retain their signs and magnitudes except for GOVBANK, which becomes not significant. This corresponds to the hypothesis above. The significant positive effect of government bank ownership contributes to the inclusion of foreign bank ownership in the model, although the Pearson correlation matrix (Table 5) shows no serious bivariate correlation between these two variables. Dropping FORBANK from the model improves the fitness of the model significantly, since the p-value of the HL statistics changes from 0.285 to 0.547. However, the predictive power of the model becomes weaker since pseudo R-square reduces from 0.09 to 0.06. Since the objective is to estimate determinants of cross-border bank mergers and acquisitions instead of to predict, Model 3 is considered an improvement on Model 2.

Some features of a bank regulatory and supervisory regime may be sufficiently correlated with other features of the bank regulatory and supervisory regimes (see Barth, Caprio, and Levine, 2006), that the impact of some bank regulatory variables on target probability may be significantly influenced by the other bank regulatory variables. For example, Boyd, Chang, and Smith (1998) model the effect of bank activity restriction on financial fragility in the presence of generous deposit insurance and found a negative effect. In order to identify the effects of certain bank regulatory features on the probability of a bank being targeted in the presence of other bank regulatory features, the bank activity restriction indicator is also interacted with the capital regulation index, official supervisory power index, and an indicator variable measuring if a country has an explicit deposit insurance scheme. All three interaction terms are insignificant[6]. These results are consistent with those from Barth, Caprio, and Levine (2004), who found that restricting bank activity impedes financial development and exacerbates financial fragility, even in the

presence of generous deposit insurance and weak institutional environments.

However, an interaction term between the capital regulatory index and the official supervisory power index is also included to see if there is any official supervisory effect under a condition of insufficient capital regulation, as well as if there is capital regulatory effect under conditions of weak official supervisory power. A significantly negative effect for the interaction term is found. Additionally, including an interaction term makes both indices individually positive. The results are reported as Model 4 in Table 6. One interpretation is that in keeping capital regulatory index unchanged, the effect of official supervisory power on the target probability depends on the initial level of a country's capital regulation. If the coefficient of the interaction term multiplied by the initial capital regulatory index is more negative than the negative coefficient of official supervisory index, increasing the supervisory power will decrease the probability of being acquired. However, if the former is less negative than the latter, increasing the official supervisory power will increase the bank's probability of being acquired. When the second condition prevails, the greater official supervisory power increases target probability in the presence of insufficient capital regulation. However, when capital regulation exceeds a certain instance, greater official supervision will, conversely, decrease the bank's probability of being acquired. Similar interpretations can be applied to explain the effect of capital regulation on target probability. Sufficient capital regulation will enhance a bank's probability of being acquired when official supervisory power is below a certain level. Increasing capital regulation, however, will decrease probability if the initial official supervisory power is great. Referring to cross-border bank mergers and acquisitions, the proposal is that for those countries with a weak institutional environment, characterized by weak supervisory power and insufficient

capital regulation, reinforcement of either of the regulatory instruments can make domestic banks more attractive to foreign acquirers. Whereas, for those countries who already implement strong official supervision or sufficient capital regulation, excessive official supervision or capital regulation will reduce the probability of domestic banks being acquired.

Buch and DeLong (2004) found that regulations strengthening a domestic banking system make domestic banks more attractive targets of international bank mergers by increasing transparency and enhancing supervisory power. The results differ from those of Buch and DeLong (2004) in that official supervisory power contributes positively to target probability conditioned on insufficient capital regulation.

In order to test the robustness of the bank activity restriction variable, the stock market capitalization ratio in model 5 is included to account for countries' security market potential.[7] This ratio measures a country's aggregate stock market capitalization relative to its GDP. Banks from countries with less developed security markets, i.e., security markets with greater potential, are expected to be more attractive to foreign acquirers. According to Barth, Caprio, and Levine (2004), restricting banks from engaging in security activities hampers countries' financial development. Thus, it is reasonable to hypothesize that the positive bank activity restriction effect actually reflects the negative security market development effect. After controlling for the stock market capitalization ratio, the bank activity restriction effect diminishes. However, the capital regulation index and the official supervisory power index are still significantly related to target probability. This is consistent with the expectation that banking systems relying more on capital regulation and official supervision and less on direct activity control induce more foreign entry. As expected,

the estimated coefficient of stock market capitalization ratio appears to be highly negative. This also verifies the results from Focarelli and Pozzolo (2006), who found a positive correlation between foreign bank presence and less efficient use of the equity capital market due to the profits foreign entrants gain when competing with less efficient banks, and also due to the large growth potential of the destination equity market.

GDP per capita in model 6 is further included to account for the effect of real economy market potential on target probability. As mentioned in section 6, GDP per capita lagged one year is used to mitigate the endogeneity problem. GDP per capital is negatively correlated with target probability. This is consistent with the literature. According to Focarelli and Pozzolo (2006), lower per capita GDP, lower inflation, and less efficient use of credit markets indicate high growth potential of the destination country. Berger (2007) also found that developed old Europe nations have a lower foreign bank presence compared to the developing new Europe nations due to the comparative disadvantages foreign banks face after they enter old Europe nations. The comparative disadvantages for foreign banks predominate over the comparative advantages when destination nations are developed nations.

Government bank ownership is also found to become negatively correlated with target probability. The conclusion is that, after factoring out indirect government bank ownership on target probability by GDP per capita, government bank ownership has a directly negative effect on target probability. This is consistent with the expectations. Greater entry barriers to the banking sector characterized by less privatization and more government ownership reduces the probability of domestic banks being cross-border acquired.

To further test the market power hypothesis, variables are also included to

account for banks' market share in domestic markets. In particular, the ratios of each individual bank's total assets in a domestic country's total deposit money bank assets are calculated and included as a measure for banks' market share, named MSHARE1. To test for the robustness of the market share variable, three other variables measuring banks' market shares, which are named MSHARE2, MSHARE3 and MSHARE4 are also included. MSHARE2 is computed as a ratio of an individual bank's deposits and other short term funding in a domestic country's total financial system deposits. MSHARE3 is computed as a ratio of an individual bank's loans in a domestic country's total financial system credit to private sectors. MHARE4 is computed as the sum of an individual bank's deposits and loans, divided by the sum of a domestic country's total financial system deposits and private credit. The regression results are reported in Table 7. It is shown that, by controlling for each individual bank's market shares, the banking sector concentration ratio becomes not significant. This is robust even when substituting four different specifications of market shares. All market share variables are individually positively significant except for MSHARE3, which has no significant correlation with target probability. After comparing the p-values of four HL statistics, MSHARE3 regression has the smallest p-value, almost close to 0.1, i.e., almost causing the goodness of fit of the model to be rejected.

Lanine and Vennet (2007) found evidence to support the market power hypothesis and to dispute the efficiency hypothesis. The results from this study provide strong evidence supporting the efficiency hypothesis but also find evidence to support the market power hypothesis. The two effects are not tradeoffs of one another based on the results.

6.2 Robustness Tests for Pull Factors

In order to check the robustness of the empirical results, several robustness tests have been specified. First, the data is subsampled based on percentile statistics of the variables. Second, extra explanatory variables suggested by the literature are included.

Percentile statistics of the target banks (Table 8) show that about 60% of the sample target banks have a government bank ownership below 20%. As stated, high government bank ownership places an endogenetic barrier to foreign entry, i.e., some countries' domestic banks have a small probability of being cross-border acquired because of their high government ownership. These countries may also share other common features accounted for in the regressions, and this may affect the significance of some explanatory variables. It is reasonable to estimate the regressions based on the idea that the sample banks resemble those operating in other countries with similar government bank ownership.

In addition to government bank ownership, target banks' total assets and target countries' GDP per capita are also appropriate sources to subsample for the data. Both percentile statistics of target banks (Table 8) and preliminary regression results show that big banks are attractive targets of cross-border bank mergers and acquisitions. It is reasonable to believe that size may dominate other features of target banks or target countries. Based on this justification, banks are subsampled to include only banks whose assets are above 1 billion U.S. dollars. This subsample keeps about 70% of the sample target banks.

Emerging countries with high economic growth potential are primary objective markets for foreign capital inflows. Percentile statistics (Table 8) show that about 60% of the sample target banks come from emerging markets. Foreign bank presence

is relatively low in developed nations due to the comparative disadvantages of foreign banks after entering the markets. Specifically, foreign banks in developed nations are less efficient than domestic banks and not as profitable as domestic banks. This implicit barrier for cross-border bank mergers and acquisitions dominates if target banks are from developed nations. However, implicit and explicit barriers on foreign entry are different if target countries are developing nations. Developing nations place more foreign entry barriers and activity restrictions. Developing nations also are more likely to subsidize government owned banks, implicitly crowding out foreign as well as privately owned banks (see, Berger, 2007). Based on this reasoning, the banks are again subsampled to include only those from countries with per capita GDP between 1000 and 10000 U.S. dollars. Summary statistics for each subsample are reported in Tables 9, 10 and 11 respectively.

In addition to subsampling the data, variables INF and ZSCORE are also included to account for the effects of the real economy and banking system stability. INF stands for countries' inflation rate. ZSCORE[8] is a reciprocal measure of banking sector insolvency.

Results from robust tests are reported in Table 12. It shows that the bank size effect is quite robust. The cost inefficiency ratio has no effect when the subsample including only large banks with assets above $1 billion are used to run regressions. This is consistent with Berger and Humphrey (1992), who also found no cost efficiency between large bank mergers. The capital regulatory index and official supervisory index are both robust. Stock market development and real economy potential are always negatively related to target probability. Banking sector concentration is positively related to target probability in all four subsample regressions without controlling for market share variables. Coefficients of

government bank ownership are always negative except for regression on the subsample with only banks from more privatized banking systems.

6.3 Push Factors

Binomial regressions on push factors estimate the effects of the specific factors of the acquiring bank and the specific regulatory factors of the acquiring country on the probability of cross-border bank mergers and acquisitions. Tables 13 and 14 present the variables' correlation matrix and percentile statistics for the full sample. Table 15 reports variable summary statistics for banks with assets above $10 billion.

The regression models presented in Table 16 are estimated in a similar way as the models presented in Table 6. The difference is that now all the bank specific variables and country specific bank regulatory variables are measuring acquiring banks' and acquiring countries' characteristics. Note that all the banks included are large banks with total assets above 10 billion US dollars.

First, only bank specific variables are included. Two variables are significant. LogTA has an expected positive effect, which is consistent with statements in the literature that large banks are more likely to be acquirers. The ROA ratio is positively related to the acquiring probability. As mentioned in section 6, a higher ROA means banks are more profitable from nontraditional bank activities after controlling for NIM and CTIR. In contrast, the NIM ratio measures banks' profits from traditional deposit and loan activities. Banks that are more profitable from innovative activities are usually more efficient. ROA is positively related to acquiring probability, verifying the hypothesis that efficient banks are more likely to be cross-border acquirers. This result can be interpreted in two ways. First, this result verifies that more efficient banks are more capable of engaging in international banking activities due to comparative advantages. This result also indicates that seeking profits from

traditional bank activities is the main motivation of the acquiring banks' cross-border takeovers. As Focarelli and Pozzolo (2001) mentioned, if banks expand their innovative business abroad, they do not need to be present in foreign countries via cross-border mergers and acquisitions. Innovative bank services require less face-to-face contact with customers and usually are exported cross-border directly. Thus, if banks are seeking to exploit additional profits from nontraditional bank activities in foreign markets, cross-border bank mergers and acquisitions will be reduced. As a result, it should be found that the more efficient a bank is, the less likely it will engage in foreign acquisitions.

The results are consistent with those from Focarelli and Pozzolo (2001), who also found that banks with cross-border shareholdings are on average larger and more profitable.

Next, both bank specific variables and country specific bank regulatory variables are included. All the bank level variables keep their signs. Compared with the pull models in Table 6, cost inefficiency is an important determinant for target banks, and profitability from nontraditional activities is an important determinant for acquiring banks. According to the X-efficiency hypothesis, after mergers and acquisitions, the less cost efficient firm becomes more cost efficient, even as efficient as the acquiring firm. Thus, efficient firms always tend to acquire relatively inefficient firms in order to obtain X-efficiency.

In the push regression models, most bank regulatory variables are significant. BONF and OVER3AR are both negatively related to banks' acquiring probability which was not expected. These two variables both measure restrictions on banks. Higher values indicate greater restrictions. Banks headquartered in countries that are more restrictive on bank activities and ownerships have less incentive to go abroad. It

appears inconsistent with the economy of scope hypothesis. Bank restrictions reduce additional profit opportunities that can be exploited in domestic markets from innovative activities. As a result, banks should have more incentive to go abroad. However, higher restrictions on banks may indicate more burdens on completing deals, therefore reducing the probability of acquisition. A negative correlation between bank restrictions and acquiring probability implies a burden effect which dominates over the profit effect. NFOB is, as expected, positive. More restrictions on nonfinancial firms owning banks encourage banks to become cross-border acquirers.

Government bank ownership shares are positively related to the banks' probabilities of acquiring other foreign firms. Higher government bank ownership means a less privatized banking system, i.e., greater barriers in the domestic banking sector against entry and expansion. This motivates domestic banks to go abroad to seek new opportunities. BCASSET has a positive coefficient. If the acquiring bank does not belong to the top five banks, higher banking sector concentration indicates less domestic market opportunity. Seeking new profit opportunities motivates the acquiring bank to expand abroad. If the acquiring bank is a top five bank, interpretation should be two folds. Higher concentration means a larger domestic market share for the acquiring bank, resulting in less incentive to expand abroad. However, risk diversification as a motivation causes them to expand abroad. Positive sign shows that the latter effect dominates. The results from this study are different from those of Focarelli and Pozzolo (2001) in that they found both degree of market concentration and share of assets controlled by state-owned banks to not be significantly related to banks' acquiring probability. This is interpreted as sample difference. The work of Focarelli and Pozzolo (2001) is based on OECD countries, most of whom are developed nations expected to be more privatized in the banking

sector. Comparatively, the observation countries in this study include both developed and developing nations.

Variable OPEN is further included to test if acquiring banks follow their customers abroad. This variable is, as expected, positively related to acquiring probability. Banks from countries with a higher percentage of imports and exports relative to GDP, i.e., more globalized, are more likely to become cross-border acquiring banks.

In order to verify the interrelations between different bank regulatory features, the interaction terms of different bank regulatory variables are also included. The only significant interaction found is between capital regulation and bank activity restriction. They are positively interrelated. In addition, including the interaction term makes the capital regulatory variable becomes significant and negative. It is concluded that the negative effect of bank activity restrictions depends on capital regulation. If capital regulation is sufficient, restrictions on bank activities are positively related to acquiring probability. More restrictions motivate banks to go abroad. But if capital regulation is not sufficient, restrictions on bank activities help reduce banking system instability. More restrictions, conversely, decrease the probability of cross-border mergers and acquisitions.

Acquiring countries' official supervisory powers have no significant effect on cross-border acquisitions based on the results of this study. However, Buch and DeLong (2004) found that the stronger supervisory power of a domestic banking system conversely reduces banks' probability of engaging in foreign acquisitions.

Including stock market capitalization ratio, per capita GDP, and inflation rate does not change the signs and magnitudes of other variables. Except for government bank ownership, it becomes negatively signed but insignificant. This corresponds to

what was mentioned in the pull regression section. Government bank ownership effects changes after controlling for per capita GDP effect. Focarelli and Pozzolo (2001) also found that the share of assets controlled by state-owned banks has no significant effect. But their result is based on data from OECD countries.

The stock market capitalization ratio is negatively related to acquiring probability, which is consistent with Focarelli and Pozzolo (2001). Their explanation is that banks are seeking additional profit opportunities beyond those offered by traditional bank activities at home. When the domestic financial sector is sufficiently developed so that additional profit opportunities can be exploited in the home country simply by offering more innovative financial services, there is less incentive for banks to expand abroad. However, if the domestic financial sector is not sufficient to provide additional profit opportunities, banks would tend to exploit new profit opportunities by expanding abroad.

Per capita GDP is negatively related to acquiring probability. Developed nations are more likely to encourage domestic institutions to combine into international champions mainly because of the greater abilities of domestic institutions in these nations to reach the scale of a champion and also, because some developing nations are going through the process of privatization, which leaves a vacuum that could be filled by foreign organizations (see Berger, 2007). If these assumptions by developed countries prove to be justified, a positive effect from per capita GDP should be expected. However, considering that most of the sample banks in this study are based on developed nations since only large banks are included, it may be interpreted that the relatively lower per capita GDP, indicating relatively higher growth potential, enhances acquiring probability. Comparing the conclusions to Focarelli and Pozzolo (2001), they found no effect for per capita GDP. But they found negative effect for

inflation rate, while inflation is not an important factor in this study.

6.4 Robustness Tests for Push Factors

In order to test the robustness of the push regressions, banks are also subsampled to include only those with assets above 35 billion US dollars. Summary statistics for the subsample are reported in Table 17. Regression results are reported in Table 18.

Two variables become not significantly influential. Restrictions on banks owning nonfinancial firms become not important. This may result from including only huge banks, which are expected to circumvent burden readily. As a result, burden effect has a tradeoff with profit effect. Banking sector concentration is also not significantly influential. Focarelli and Pozzolo (2001) found that degree of market concentration has no significant effects for OECD countries. An insignificant concentration effect for huge banks, which are probably headquartered in more developed nations, is found. When this is compared with a positive bank concentration effect for less huge banks, it is interpreted as verification of too big to fail. Huge banks have less incentive relative to less huge banks to diversify risks, likely because government won't let them fail.

7 CONCLUSION

This article aims to analyze both pull determinants and push determinants of cross-border bank mergers and acquisitions. The logistic regressions were applied to estimate two groups of models: pull regressions and push regressions. Both bank specific variables and country level bank regulatory variables were included in the regressions. The results show that both bank characteristics and country characteristics are important determinants of banks' cross-border merger and

acquisition activities. However, which effects dominate is different between target banks and acquiring banks.

Bank size is always an important factor in explaining banks' cross-border merger and acquisition activities. Large banks are more likely to take over foreign firms. Likewise, large banks also a have higher probability of being cross-border acquired. It is also shown that cost effectiveness is an important factor when evaluating target banks, while profitability from innovative activities is an important factor when evaluating acquiring banks. Target banks with lower cost efficiency are more likely to be cross-border acquired. Acquiring banks that are more profitable from innovative activities in domestic markets have more incentive to exploit new profit opportunities from traditional business by cross-border mergers and acquisitions. In addition, capital adequacy level is shown to be not a primary concern when acquiring foreign banks; neither is it an influential determinant for acquiring banks engaging in cross-border mergers and acquisitions.

As for country specific bank regulatory variables, a clear distinction between target banks and acquiring banks is found. For less huge acquiring banks, those headquartered in countries with more stringent regulatory restrictions on bank activities and ownerships, a less concentrated banking sector, and increasing banking sector privatization, these factors will lower the probability of becoming foreign acquirers. For huge acquiring banks, direct restrictions or indirect barriers on banking sectors become less influential, probably because they are capable of circumventing burdens. For huge or less huge acquiring banks, more restrictions on banks reduce their incentive to expand abroad if domestic banking systems are insufficient in capital regulations.

Comparatively, target banks operating in countries with more privatized and less restricted banking system, relying less on direct control over banks, relying more on moderate capital regulations and official supervisions, are more attractive targets to foreign acquirers. What can be concluded from the above can also be interpreted that as regulatory practices become more harmonized with the Basel accords, domestic banks become more attractive to foreign acquirers.

CHAPTER 2. SMALL AND MEDIUM ENTERPRISE FINANCING IN TRANSITION ECONOMIES

1. INTRODUCTION

Small and medium enterprises' (SMEs) access to credit is a topic receiving much attention from both policy makers and economists, not only because SMEs, compared to large firms, are more credit insufficient and more vulnerable to credit crunch during financial crises but also because SMEs are the backbone of most developed and developing economies, which foster market diversification, promote innovation, and benefit consumers, and, more importantly, provide many employment opportunities, greatly reducing the countries' unemployment rates. Development of SMEs can contribute to significant economic growth. However, financing obstacles greatly impede SMEs' further development and their contributions to aggregate economic growth.

1.1 SME Financing in Transition Economies

In this study, SMEs' access to credit in transition economies, which refer to those Central and Eastern European countries that are undergoing economic transition from centrally planned economies to capitalist market economies, is the main concern. One concern with SMEs in transition economies is greater obstacles to obtaining financing. Researchers are interested in transition economies because they consider the transition process underway here to be natural experiments of economic system transformation that seldom exist (De Haas and Naaborg, 2005).

The financial systems of transition economies has already become more complex, not solely bank dominated. Equity markets and bond markets have been becoming more important components of the financial sector. However, it is still strongly bank-based.

Bank is an important financing source for SMEs in transition economies. The transformation of the banking sectors in these areas is aimed at developing sound, market-oriented banking systems compatible with market-based economies. Specifically, the channel through which credit is allocated to real sectors should be transferred from state oriented to market directed. This objective is achieved through a wide range of reforms, including financial liberalization, restructuring and privatization of state-owned banks, the entry of new banks into the market, and the development of financial laws and regulations (see, Transition Report 2006).

After a decade or more of restructuring and development, the banking systems in transition economies have now become highly privatized. In most transition countries, banks are sound, appropriately regulated, and largely foreign owned. However, such a large percentage of foreign bank ownership has not contributed to relieving SMEs' financing obstacles in these economies as expected. In fact, SMEs' are finding it more difficult to access credit than prior to foreign entry (Rueda Maurer, 2008).

1.2 Scope of the Study

This paper is not designed to analyze firm specific institutional and regulatory effects on firms' access to credit. Rather, country specific institutional effects are analyzed as well as banking sector regulation effects on firms' access to credit. The micro-level variables point to the demand side, while the regulation variables explain the supply side. More specifically, the impact of a country's enforcement of law and regulation, effectiveness of governance, degree of democracy, and control of

corruption on the difficulty or ease a firm experiences in accessing financial credit is examined. Each country's regulatory practices on the banking sector are also compared. Specifically, the main concerns are: the impacts of restrictions on the extent to which information about banks must be released and the quality of the information; minimum capital requirements and the stringency of these requirements on capital formation; the banking sector supervisory structure, such as consolidation of the banking sector supervisory power, i.e., single versus multiple bank regulators and independence of supervisory agencies from political influence; and restrictions on to the extent to which banks can engage in innovative financial activities or own nonfinancial enterprises, the extent to which nonbank financial firms can own banks, and the extent to which nonfinancial institutions can own banks. It has, incidentally, been argued that nonfinancial institutions holding banks, such as industry loan corporations (ILC), are important sources for SMEs' financing due to their specific business objectives to fund these firms. Thus regulatory practices imposing fewer restrictions on nonfinancial firms owning banks may facilitate SMEs' access to credit. The impact of the banking sector structure, such as market concentration, measuring consolidation within the banking sector; commercial banking assets in nonbank financial institutions measuring consolidation between the banking sector and other financial sectors; as well as banking sector ownership formation, are also analyzed. Whether these factors have impacts on firms' overall financing obstacles, access to credit and cost of credit is examined. If these factors influence firms' financing patterns, i.e., if these factors affect various financing sources of banks differently, is also needs further analysis. Furthermore, those factors that affect the structure of bank loans directed toward SMEs, i.e., cost of loans, duration of loans, and obstacles to accessing long term versus short term loans, are also explored.

The ratio of bad loans to total assets is also included to account for firms' average creditworthiness and probability of paying back loans. While a higher ratio of bad loans indicates more risk of default, part of the costs accumulated by lenders, this may induce banks to adopt prudent lending behavior. This will influence the supply side of credit and increase SMEs' access to finance. However, a higher ratio of bad loans may also indicate a weak mechanism for prohibiting loan defaults, e.g., inefficient external private monitoring in banking sectors may be the cause of banks' lack of incentive to control default risks resulting in banks' loosening of credit standards. Thus high levels of bad loans may be the consequence of banks' risk shifting behaviors and excessive levels of lending (Barth, Bertus, Jiang and Phumiwasana, 2008).

Individual loan information including detailed information on both parties in the loan process is missing. However, firm specific variables as proxies for firm-bank relationships and information asymmetries are included. There are studies showing that the problem of adverse selection arising from information asymmetry is mitigated with increasing age and size. Privately owned enterprises are also more transparent than state owned enterprises. Number of years in operation is used as proxy for firm-bank relationship. Transparent versus opaque firms are also categorized by size, number of years in operation and ownership type (Beck, Demirguc-Kunt, Laeven, and Maksimovic, 2006; Hyytinen and Pajarinen, 2008; Jimenez, Salas, and Saurina, 2009).

2. THEORETICAL FRAMEWORK

To Sum up what was established in the previous literature, three trends are relevant to the number of lending relationships maintained by small and medium

enterprises. These trends are financial sector consolidation, financial sector liberalization, and financial sector regulatory reforms. In addition, transition economies' institutional and infrastructural developments are also important factors influencing small business lending in this area (Dell'Ariccia and Marquez, 2004; Beck, Demirguc-Kunt, Laeven, and Maksimovic, 2006; Berger and Udell, 2006).

2.1 Financial Consolidation

One factor affecting access to credit is credit providers' market power. There are two theories on predicting the effects of market power on access to credit, which give different conclusions (Beck, Demirguc-Kunt, and Maksimovic, 2004). One theory is structure-performance hypothesis, which states that greater market power will cause credit providers to reduce supply and raise prices. According to structure-performance hypothesis, more concentrated credit markets will reduce firms' access to credit and increase cost of credit. The other theory is information-based hypothesis, which says that information asymmetry between credit providers and borrowers will cause adverse selection and moral hazard and may change the relationship between market power and credit supply from negative to positive or nonlinear. In a market with information asymmetry, credit lenders with greater market power will be better informed and have more incentive to maintain long term relationships with credit borrowers, therefore making the lenders more effective in screening borrowers. However, a competitive market with many small lenders will result in information dispersion causing adverse selection and inefficient screening of borrowers. The result will be a shrinking of credit and an increase in costs (Dell'Ariccia and Marquez, 2004; Hauswald and Marquez, 2006; Presbitero and Zazzaro, 2009). According to the information-based hypothesis, higher credit market concentration will lead to more access to credit, especially when borrowers are younger and smaller firms, as these

are considered to be more opaque borrowers causing greater information asymmetries (Jimenez, Salas and Saurina, 2009).

Other literature on relationship between lender size and the lending technologies applied usually concludes that small credit lenders have advantages in soft information-based relationships lending to opaque and small borrowers. Large credit lenders are equipped to provide hard information-based transactions lending to transparen't and large borrowers and are at a disadvantage in relationship lending. However, “large banks also deploy a number of transaction-based technologies that are specifically targeted toward opaque small businesses”, including asset-based lending, leasing, and, in recent years, small business credit scoring. (Berger and Udell, 2006; Berger, Rosen, and Udell, 2007)

Berger, Rosen, and Udell (2007) found that the likelihood of a small business obtaining credit from a bank of a given size is roughly proportional to the local market presence of banks of that size. Further, they also found that “loan rate premiums on small business loans are significantly negatively affected by a greater market presence of large banks but are not significantly affected by the size of the lending bank when the market presence of large banks is taken into account”. They conclude that if banking sector consolidation does not substantially increase local market concentration, there may be little effect on small business credit availability and a possible reduction in loan prices in some of these markets. They suggest that future researchers give some thought to including market size structure because it can substantially affect the findings.

According to Berger, Rosen, and Udell (2007), the size of a lender is not an important determinant in terms of its lending to small versus large borrowers. Rather, it is lenders’ market share that matter. The optimal market structure that benefits small

borrowers best will be one that with lower market concentration but composed of a lot of large lenders. That is, a market structure with a great presence of large lenders.

Some authors study the relationship between market structure and relationship lending versus transaction lending. Investment theory states that only lenders with larger market power have the incentive to invest resources toward acquiring expensive borrower private information and maintaining relationships with borrowers, since borrowers have limited exit options in more concentrated markets and lenders could extract a surplus in the long run. Investment theory holds that extensive bank-firm ties and small business lending are more commonly observed in more concentrated credit markets (Von Thadden, 2004; Ogura, 2007).

Strategic theory considers the strategic nature of relationship lending. It states that when encountering more intense competition from out-of-market competitors, local lenders will direct their lending towards small and opaque borrowers who rely more on relationship lending, in which case they can create comparative advantages against outside lenders. According to strategic theory, greater competition in the local credit market can strengthen bank-firm ties and increase small business lending (Dell'Ariccia and Marquez, 2004; Hauswald and Marquez, 2006; Memmel, Schmieder, and Stein, 2007; Neuberger, Pedergnana, and Rathke-Doppner, 2008).

There are studies which have found non-monotonic patterns between relationship lending and credit market structure. Some consider the non-monotonic pattern to be due to the local credit market's degree of concentration (Elsas, 2005; Degryse and Ongena, 2007). In a credit market with a low degree of concentration, investment theory prevails, and an increase in market concentration will reduce relationship lending. Conversely, in a credit market with a high degree of concentration, more concentration will steer relationship lending, which is consistent with strategic theory.

Presbitero and Zazzaro (2009) suggest that the non-monotonic relationship may be due to the type of competitors operating in the local credit market. Market concentration promotes extensive bank-firm ties when the market is dominated by large, distant banks, which specialize in arm's length financial products. Interbank competition increases relationship lending when the fraction of local, relational-oriented banks in the market is high.

2.2 Financial Liberalization

Two theories predict different impacts of foreign entry on domestic small business lending (Degryse, Havrylchyk, Jurzyk, and Kozak, 2009). According to performance hypothesis, foreign entrants are mostly more efficient compared to their domestic competitors and can overcome cross-border disadvantages such as information asymmetry, especially when the domestic country is a developing economy. If performance hypothesis prevails, foreign entrants can pass on the efficiency gains to domestic borrowers. The effects should be identical for both transparent and opaque borrowers. Therefore, a reduction in small business lending by foreign entry should be observed (Clarke, Cull, and Martinez Peria, 2006; De Haas and Van Lelyveld, 2006; De la Torre, Martinez Peria, and Schmukler, 2008; Hauswald and Bruno, 2009).

Clarke, Cull, and Martinez Peria (2006) investigated the survey data of 3000 enterprises in 35 developing and transition economies and found that the managers of enterprises in countries having a higher level of foreign bank presence perceive interest rates and access to long-term loans to be less constraining on enterprise operations and growth than do their counterparts in countries with less foreign participation. They further found that the benefits of foreign bank participation do not accrue only to large enterprises. Even small and medium enterprises benefit. De Haas

and Van Lelyveld (2006) showed that during crisis periods domestic banks contract their credit. In contrast, greenfield foreign banks play a stabilizing role by keeping their credit base stable. De Haas and Van Lelyveld also found a significant and negative relationship between home country economic growth and host country credit by foreign bank subsidiaries. De la Torre, Martinez Peria, and Schmukler (2008) found that all types of banks are catering to SMEs and larger, multiple-service banks have in fact a comparative advantage in offering a wide range of products and services on a large scale, through the use of new technologies, business models, and risk management systems. They found that banks perceive the SME segment to be highly profitable but perceive macroeconomic instability in developing countries and competition in developed countries as their main obstacles. They also found that banks in developing countries tend to be less exposed to SMEs, provide a lower share of investment loans, and charge higher fees and interest rates. They conclude that the lending environment is more important than firm size or bank ownership type in shaping bank financing to SMEs. Hauswald and Bruno (2009) found that industries more heavily dependent on external finance performed significantly better in the presence of foreign banks. They interpret the result as evidence that foreign banks lessen the financial dependence of firms thereby allowing them to grow faster. They also found that such effects tend to be more significant in developing countries and particularly beneficial during crises. However, they reach contradictory conclusions for African countries. Foreign bank presence conversely leads to economic contraction during crises for African countries.

According to the portfolio composition hypothesis, foreign credit lenders are better equipped to lend to transparent and large borrowers based on hard information. By contrast, domestic credit lenders have a comparative advantage in lending to

opaque and small borrowers via soft information (Dell'Ariccia and Marquez, 2004; Sengupta, 2007). Consistent with portfolio composition hypothesis, foreign lenders will have less incentive to engage in small business lending (Berger and Udell, 2006; Detragiache, Tressel, and Gupta, 2006; Rueda Maurer, 2008; Degryse, Havrylchyk, Jurzyk, and Kozak, 2008). Portfolio composition hypothesis also interprets the lower interest rates charged by foreign lenders compared to domestic lenders as a difference in portfolio composition rather than in efficiency level, since foreign lenders' credit portfolios are mostly composed of large and transparent borrowers expected to generate lower opportunity costs (Degryse, Havrylchyk, Jurzyk, and Kozak, 2008).

According to Berger and Udell (2006), foreign owned institutions may have a comparative advantage in transaction lending and a disadvantage in relationship lending in part because these institutions are typically large. In developing nations, foreign institutions headquartered in developed nations may have an additional advantage in transaction lending because of access to better information technologies for collecting and assessing hard information. Foreign institutions may also face additional hurdles in relationship lending because of difficulties in processing and transmitting soft information over greater distances and through more managerial layers, and because of difficulties coping with multiple economic, cultural, language, and regulatory environments. Detragiache, Tressel, and Gupta (2006) studied how foreign bank penetration affects financial sector development in poor countries and found that while foreign banks are better at monitoring high-end customers than domestic banks, their entry hurts other customers and worsens the general welfare. They also showed that in poor countries, a stronger foreign bank presence is robustly associated with less access to credit and with slower credit growth. Rueda Maurer (2008) found that in transition countries foreign bank entry has resulted in more credit

constraints for the average firm. In transition economies only most transparent firms benefit from foreign bank entry. Degryse, Havrylchyk, Jurzyk, and Kozak (2008) found that banks of different types of ownership have a different borrower mix in their lending portfolios. Foreign banks are more willing to extend loans to transparent borrowers. At the same time domestic private banks specialize in loans to non-transparent borrowers.

2.3 Institutional Development

The most important country characteristic explaining cross-country variation in firms' financing obstacles seems to be overall institutional development (Beck and Demirguc-Kunt, 2006). Underdevelopment of the institutional environment is the reason firms stay small and growth halts. Considering failures in firms overcoming their financing obstacles, the legal and institutional environment should be seriously taken into account, especially for transition and developing economies where information asymmetry tends to be a greater concern. The existence of information asymmetries should be considered the most significant mechanism through which institutional and legal systems affect firms' access to credit in transition economies. While ill-functioning legal and institutional systems can exacerbate the informational problem, in contrast, a better legal and institutional environment helps overcome the informational disadvantages that credit lenders encounter in credit markets. Developing countries can facilitate access to financial services by strengthening institutional infrastructure (Stijn Claessens, 2006). In low income countries, better contract enforcement and information about borrowers is associated with more private sector credit. The collateral regime can play a very important role to in mitigating the negative impact of information asymmetries. Well functioning legal systems and better protection of property rights can combine to raise the use of collaterals and can

help increase credit lenders' abilities to sort borrowers. Countries with bankruptcy rules that reduce the cost for liquidating collateral should witness higher levels of lending to private sectors. Bankruptcy proceedings that are less lengthy and are cheaper can mitigate foreign entrants' risks in lending to opaque firms due to information disadvantages, thus reducing the negative incidence of foreign bank entry on opaque firms' credit access. An efficient credit guarantee system has the effect of improving the transparency of a firm's business and financial conditions (Okura, 2007; Sengupta, 2007; Haselmann, Pistor, and Vig, 2008; Rueda Maurer, 2008; Hauswald and Bruno, 2009).

The level of institutional development influences SMEs' access to credit more than that of large firms. It is the SMEs that are the most adversely affected by institutional and legal underdevelopment. This can be explained by the fact that SMEs are mostly opaque and encounter more acute information asymmetry problems compared to large firms. However, SMEs also benefit the most from better institutional development. Development in the financial and legal system, such as better protection of property rights, stronger law enforcement, and reduction in corruption all help relax the financial constraints for SMEs foremost. The most effective way of improving SMEs' access to external finance appears to be through institutional reforms addressing the weaknesses in legal and financial systems (Beck, Demirguc-Kunt, and Maksimovic, 2005; Beck, Demirg-Kunt, and Maksimovic, 2008; Mercieca, Schaeck, and Wolfe, 2009)

Many studies have found that the effects of foreign entry on small business lending are significantly influenced by the object country's institutional and legal environment. Middle or high income countries that are associated with relatively higher levels of institutional development benefit from foreign bank entry. However,

low income countries associated with low levels of legal creditor protection, corporate governance, and law enforcement suffer from foreign bank entry. Higher levels of foreign bank penetration in low income countries seem to result in less efficient financial sectors and reduced private sector credits, while a larger presence of state-owned banks is correlated with more bank deposits and lower overhead costs, even after controlling for market size and concentration (Detragiache, Gupta, and Tressel, 2005). Foreign entrants benefit more from legal change by expanding their lending volume to a greater extent than do incumbent domestic lenders (Haselmann, Pistor, and Vig, 2008). For transition economies, where credit providers are mostly foreign, there is clear evidence for the necessity of a mature regulatory and institutional environment. Many of the expected benefits of foreign bank entry may not be achieved before legal and institutional development reaches a certain threshold (Rueda Maurer, 2008; Haiss and Kichler, 2009).

Some studies have also found that market structure effect on small business lending is affected by countries' institutional environments. A high level of institutional development helps dampen the relation between concentration and financing obstacles at all levels of economic development. Financial consolidation may thus bring about an improvement in financing conditions in less developed economies. (Beck, Demirguc-Kunt, and Maksimovic, 2004; Ulrich Volz, 2004). Legal and institutions development also affect different types of external finance differently (Beck, Demirguc-Kunt, and Maksimovic, 2002) and influence the extent to which different lending technologies can be legally and profitably employed to provide credit to SMEs (Berger and Udell, 2006).

2.4 Public Interest View versus Private Interest View

There are two broad but opposing views of how to regulate banks, namely the

public interest view versus the private interest view. The public interest view, based on the hypothesis of market failure, states that governments regulate banks to facilitate the efficient functioning of banks by mitigating market failures. Government, under the public interest view, is considered to be motivated by a desire to serve the public, benefit the broader civil society, and maximize social welfare. According to the public interest view, bank regulations tend to expand output and opportunities for the many and to minimize unnecessary risks. The private interest view, also accepting the existence of market failure, considers government to be motivated by a narrow concept of self interest and a tendency to serve various interest groups. Under the private interest view, bank regulatory practices should rely more on market discipline, information disclosure, and significant oversight of the regulatory process itself (Barth, Caprio and Levine, 2006).

According to Barth, Caprio, and Levine (2006), it is information asymmetries that will cause market failures. Regardless of the reason for market failures, the public interest view takes for granted the existence of significant market failures and that government is capable of ameliorating these market failures. Since the focus of this study is small and medium enterprises that are more opaque relative to large firms and are located in transition economies where underdeveloped institutional environments further exacerbate opacity (Beck and Demirguc-Kunt, 2006; Jimenez, Salas, and Saurina, 2009), information asymmetry tends to be a greater concern in this study. Furthermore, as transition countries developed from plan-based socialist economies, government and enterprise are assumed to be closely tied in these regions. Based on these assumptions, the public interest view is expected to be dominant in this study.

3. VARIABLE SELECTION

In this section, the variables used in the empirical analysis are presented as well as the sources from which these variables are obtained or computed. Variable definitions and data sources of this study are also reported in Table 19.

3.1 BEEPS

The source for the dependent variables and firm specific explanatory variables is the EBRD-World Bank Business Environment and Enterprise Performance Surveys (BEEPS) of 1999, 2002 and 2005, where EBRD stands for European Bank for Reconstruction and Development. BEEPS is an initiative of the EBRD and the World Bank going back to 1999 to investigate the extent to which government policies and practices facilitate or impede business activity and investment in Eastern Europe and the former Soviet Union. The purpose of the BEEPS is to "analyze the quality of governance and the investment climate from a firm level perspective for the countries in the region" (Fries, Lysenko and Polanec, 2003; Rueda Maurer, 2008).

The first round of the survey was implemented in 1999 and covered 4,104 firms in 25 transition countries in Central and Eastern Europe. The second round of the survey was implemented in 2002, covering 6,153 firms in 26 transition countries of the region and also Turkey. The most recent survey in 2005 covered 9,655 enterprises in the same countries as the survey in 2002. In order to account for country specific bank regulation effects, only 18 out of 27 countries that are also covered by the three World Bank surveys on bank supervision and regulation (Barth, Caprio and Levine, 2006) are included in this study. The 18 countries included are Armenia, Bulgaria, Croatia, the Czech Republic, Estonia, FYROM[9], Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, and Turkey.

"BEEPS presents specific characteristic that makes it particularly attractive. While other databases rely on information provided by firms that submit financial data to local authorities, firms in the BEEPS sample were randomly selected from business directories and yellow pages. This feature ensures the inclusion of small and opaque firms in the sample" (see Volz, 2004; Rueda Maurer, 2008; Beck, Demirguc-Kunt and Honohan, 2009).

The bank regulatory variables and banking sector structure variables are all obtained or computed from the three World Bank Surveys under the project "Bank Regulation and Supervision[10]" (See, Barth, Caprio, and Levine, 2001; Barth, Caprio, and Levine, 2004; Barth, Caprio, and Levine, 2006).

Merging the BEEPS and BCL datasets makes this study special among studies of small and medium enterprise financing in transition economies in that the data in this study cover three periods. Compared to the previous studies using purely cross section data, this study accounts for more periods and can tell some differences over time that the other studies cannot. For example, at the initial periods of entry, foreign banks may have difficulty screening borrowers due to information asymmetry. However, over time this disadvantage may become less a problem since foreign banks become better informed about the domestic firms. In this sense, foreign bank entry may initially lead to credit constraints for SMEs, but this effect may disappear or reverse over time (Clarke, Cull, and Martinez Peria, 2006).

3.2 Dependent Variables

In this study, four sets of empirical specifications are estimated to analyze the influencing factors on SMEs' financing status. The dependent variables can be categorized into three groups, in which the first group is variables measuring SMEs' financing obstacles, the second group is variables measuring SMEs' financing

patterns, and the final group is variables measuring SMEs' credits from bank loans.

In the first groups, three index variables are used to measure SMEs' financing obstacles: namely, overall financing obstacles (financing), access to finance (access), and cost of finance (cost). They are all indices ranging from 1 to 4 measuring the firm's financing obstacles in each aspect. Higher values indicate greater obstacles. In the second group, variables measuring SMEs' different financing sources for fixed investments and working capital are included respectively. Specifically, these variables measure SMEs' percentages of external financing for fixed investments from equity markets (finequ_f), foreign banks (finfor_f), domestic banks (findom_f), governments (finsta_f), and money lenders (finmon_f), as well as SMEs' percentages of external financing for working capital from equity markets (finequ_w), foreign banks (finfor_w), domestic banks (findom_w), governments (finsta_w), and money lenders (finmon_w). These variables are all fractions ranging from 0 to 1. The third group includes two variables measuring SMEs' access to short term versus long term loans and four variables measuring loan structures. Variables stloan and ltloan are indices ranging from 1 to 4, measuring SMEs' obstacles to accessing different loans. Higher values indicate fewer obstacles. Variable duration measures in months the duration of the most recent loans obtained by firms. Variable interestrate measures the annual interest rate of the most recent loans. Collateral measures percentage of loan values required in collateral values. Approvalday measures the days taken to approve a loan after its application.

3.3 Firm Level Variables

Firm specific variables aimed at controlling for three aspects are included, which are performance, transparency, and their origin with foreign capital. Costeffi computed as a percentage of a firm's sales price exceeding operating costs can be

used to measure the firm's cost efficiency and profitability. Transparency is an indicator equal to one if a firm use International Accounting Standards and zero otherwise. Audit is also an indicator equal one if a firm use external auditors for its financial statements and zero otherwise. Size is an index measuring how many permanent employees a firm has, which equals one if the number of permanent employees are less than 50, two if that number is not less than 50 however less than 250, and three if greater than 250. Foreign is the percentage of firm's total assets that are foreign owned. Manufacturing is an industry indicator that equals one if a firm is in manufacturing industry.

3.4 Bank Regulatory Variables

The bank regulatory variables included in this study are mainly aimed at measuring four aspects of bank regulatory practices, i.e., direct regulatory restrictions on bank activities and ownerships, capital regulation, supervisory structure, and still market monitoring.

Variable overbank is included to measure to what extent banks are permitted to engage in security, insurance, and real estate activities and to own nonfinancial firms. Nfob and nbffob measure to what extent nonfinancial firms can own banks and to what extent nonbank financial firms can own banks respectively. These variables are computed so that higher values indicate more restrictions.

To account for the supervisory structure of each banking sector, two variables are included. Mulsup equals one if there is more than one regulator for banks and equals zero if there is a unique bank regulators. Singlefsa equals one if there is only one regulator for all main financial institutions and zero if there are multiple. The indpoli variable measures the degree to which the supervisory authority is independent within the government from political influence. Higher values indicate more independence.

Variable mcar measures the minimum capital to asset ratio required for banks, and crindex measures the stringency on capital composition requirement. Higher minimum capital ratios or capital regulatory index values indicate more restrictive capital regulatory practices.

Fstrans is an aggregate index used to measure the following aspects of bank's financial statement practices: whether the income statement includes accrued or unpaid interest or principal on performing and nonperforming loans; whether banks are required to produce consolidated financial statements; and whether off-balance items and risk management procedures are disclosed to the public. This variable measures the overall transparency of bank's financial statement practices, with higher values indicating better transparency.

3.5 Banking Sector Structure Variables

Two sets of variables are included to measure banking sector structure, which are variables to measure consolidation as well as liberalization of the banking sector. Bcdepo is the percentage of the banking sector deposits that are held by the five largest banks. It indicates the market power of the top five banks, with higher values indicating more concentration. Forbank is the percentage of banking sector assets owned by banks that are 50% or more foreign owned. Higher values indicate more liberalization and privatization.

3.6 Financial and Legal Institutional Variables

Six World Bank Governance Indicators (Kaufmann, Kraay, and Mastruzzi, 2008) are included to measure different dimensions of institutional development: namely, the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media (accountability); perceptions of the likelihood that the government will be destabilized

or overthrown by unconstitutional or violent means, including political violence and terrorism (political); the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (egovernment); the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development (regulatory); the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence (law); and the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests (corruption). An institution variable is also included, which is the equally weighted index of the six dimensions, to measure overall institutional development status. Polity2 is an index obtained from Polity IV Project: Political Regime Characteristics and Transitions, 1800-2007 (Marshall and Jaggers, 2007) measuring a country's overall authority pattern, with a higher value indicating more democracy.

Variables included to measure a country's financial institution development are stock market capitalization to total GDP, private credits by deposit money banks to total GDP, liquidity liabilities to total GDP, and nonperforming loans to total banking assets.

4. EMPIRICAL MODEL

Four sets of empirical specifications are presented in this part, which are financing obstacle regression; financing pattern regression; long term versus short term loan regression; and loan structure regression.

4.1 Obstacle Analysis

To estimate the determinants of firms' growth obstacles, an ordered logit model proposed by Zavoina and McElvey (1975) is estimated, since the dependent variables are discrete with natural order.

4.1.1 Ordered Logit Model

The ordered logit model begins with a latent regression (Greene, 2003) $Y^*=X'\beta+\varepsilon$, where Y^* is unoberved. Y is related to Y^* as:

$Y=0$ if $Y^*\leq 0$,

$Y=1$ if $0<Y^*\leq u_1$,

$Y=2$ if $u_1<Y^* u_2$,

.
.
.

$Y=J-1$ if $u_{J-2}<Y^*\leq u_{J-1}$,

$Y=J$ if $u_{J-1}<Y^*$,

where $0<u_1<u_2<u_{J-2}<u_{J-1}$ are threshold variables, J groups have J-1 thresholds. Probability of Y^* is modeled as probabilities of Ys.

$P(Y=0|X)=\Phi(-X'\beta)$

$P(Y=1|X)=\Phi(u_1-X'\beta)-P(Y=0|X)$

$P(Y=2|X)=\Phi(u_2-X'\beta)-P(Y=0|X)-P(Y=1|X)$

.
.
.

$P(Y=J|X)=1-P(Y=0|X)-P(Y=1|X)\ldots-P(Y=J-1|X)$

where $\Phi(.)$ is the cumulative distribution function (cdf). For logistic distribution, $\Phi(.)=\exp(.)/[1+\exp(.)]$. In order for estimated parameters to be interpreted readily, marginal effects can be computed, which measure partial derivatives of response variable changes with respect to unit change of explanatory variables.

$\partial P(Y=0|X)/\partial X=\partial\Phi(-X'\beta)/\partial X=\Theta(-X'\beta)\beta$

$$\partial P(Y=1|X)/\partial X=\partial[\Phi(u_1-X'\beta)-\Phi(-X'\beta)]/\partial X=[\Theta(u_1-X'\beta)-\Theta(-X'\beta)]\beta$$

$$\vdots$$

$$\partial P(Y=J|X)/\partial X=-\partial\Phi(u_{J-1}-X'\beta)/\partial X=-\Theta(u_{J-1}-X'\beta)$$

where $\Theta(.)$ is the probability density function (pdf). For logistic distribution, $\Theta(.)=\exp(.)/[1+\exp(.)]^2$.

4.1.2 Financing Obstacles, Access and Costs

The obstacle regressions are estimated using ordered logit model.

$$P(Obstacle_{i,k})=F(Country_k, Firm_{i,k}) \qquad (1)$$

where $Country_{k=}$ characteristics of country k, $Firm_{i,k}$=characteristics of firm i in country k. $Obstacle_{i,k}$ is the growth obstacles of firm i, including financing, corruption, access to finance, and cost of finance.

$Obstacle_{i,k}$=1 indicating no obstacles,

$Obstacle_{i,k}$=2 indicating minor obstacles,

$Obstacle_{i,k}$=3 indicating moderate obstacles,

$Obstacle_{i,k}$=4 indicating major obstacles.

4.2 Financing Pattern Analysis

To estimate firms' financing patterns, a fractional logit model is applied, since the dependent variables are fractions ranging from zero to one.

4.2.1 Fractional Logit versus Multinomial Fractional Logit

There are several solutions. One solution is to use betafit, assuming the proportion follows a beta distribution. However, one disadvantage of betafit is that fractions are bounded between 0 and 1 but do not include either 0 or 1. The distinctive feature of the dependent variables is that they include many 0s and 1s. The fractional logit (FL) proposed by Papke and Wooldridge (1996) is a superior alternative to betafit. FL handles fractions including exactly 0 and 1. As well, FL is not like betafit,

having an implied variance assumption that the variance is largest when the average proportion is close to 0.5, which is considered to be too restrictive. However, some people also argue that when multiple proportions exist, both betafit and FL methods fail to account for implied restrictions among different proportions. That is exactly the situation that happened to the response variables, which are proportions bounded between 0 and 1 and also add up to 1. Modeling each proportion separately by either betafit or FL would account for the fractional response variable but would ignore the sum to 1 implied restriction. Dirifit is a solution to this problem, which assumes that the proportions follow a Dirichlet distribution (Aitcheson, 2003). Dirifit also has the same implied assumption about variance as betafit, and further forces covariance between different categories to be negative. The extension of a method of Papke and Wooldridge (1996) to handle multivariate proportions is proposed by Maarten L. Buis (2008) and can be implemented using statistic package Stata 9.0. The fractional multinomial logit model (FML) is an addition to dirifit due to its release from restrictive assumptions on variances and covariances.

If one tries to model $E(Y|X)=X'\beta$, $Y \in [0,1]$ by OLS, one can never guarantee that predicted Y is bounded between 0 and 1. A functional form should be specified for $E(Y|X)$ so that predicted $Y \in [0,1]$.

$$E(Y|X)=G(X'\beta),\ G(X'\beta) \in (0,1) \qquad (2)$$

Let $G(X'\beta)=\Phi(X'\beta)$, where $\Phi(.)$ is cdf, then $G(X'\beta) \in (0,1)$. For logistic distribution, $\Phi(.)=\exp(.)/[1+\exp(.)]$. Parameters in equation (2) are estimated by the Quasi Maximum Likelihood Estimator (QMLE), $\max \Sigma L_i(b)$, where $L_i(b)$ is the Bernoulli Log-Likelihood Function. $L_i(b)=Y_i \log[G(x_i b)]+(1-Yi)\log[1-G(x_i b)]$

4.2.2 Financing Channels for Fixed Investments and Working Capitals

The financing pattern regressions are estimated using a fractional logit model. $E(Pattern|Country_k, Firm_{i,k})=\Phi(Country_k, Firm_{i,k})$, where $\Phi(.)$ is cdf. For multinomial fractional logit specification, equations (3)-(7) should be estimated simultaneously.

$E(Equity|Country_k, Firm_{i,k})=\Phi(Country_k, Firm_{i,k})$, base=Other Patterns (3)

$E(Foreign|Country_k, Firm_{i,k})=\Phi(Country_k, Firm_{i,k})$, base=Other Patterns (4)

$E(Domestic|Country_k, Firm_{i,k})=\Phi(Country_k, Firm_{i,k})$, base=Other Patterns (5)

$E(Money|Country_k, Firm_{i,k})=\Phi(Country_k, Firm_{i,k})$, base=Other Patterns (6)

$E(State|Country_k, Firm_{i,k})=\Phi(Country_k, Firm_{i,k})$, base=Other Patterns (7)

Where Equity+Foreign+Domestic+Money+State+Other=1. Pattern $\in[0,1]$ indicating percentage of each financing pattern.

4.3 Loan Structure Analysis

To analysze the bank loan structure, the following specifications are presented;

$P(Stloan_{i,k})=F(Country_k, Firm_{i,k})$ (8)

$P(Ltloan_{i,k})=F(Country_k, Firm_{i,k})$ (9)

$E(Duration_{i,k})=F(Country_k, Firm_{i,k})$ (10)

$E(Interestrate_{i,k})=F(Country_k, Firm_{i,k})$ (11)

$E(Approvalday_{i,k})=F(Country_k, Firm_{i,k})$ (12)

$E(Collateral_{i,k})=F(Country_k, Firm_{i,k})$ (13)

where $Country_{k=}$ characteristics of country k, $Firm_{i,k}$=characteristics of firm i in country k. Equations (8) and (9) are estimated by ordered logit due to the dependent variables with natural orders. Equations (10)-(13) are estimated by tobit since the dependent variables are all nonnegative with lower limit equaling zero.

5. INTERPRETATION OF RESULTS

In this section, the results of the empirical analysis are presented. First, the relevance of some firm level variables, financial sector variables, and institutional variables that have been shown to be important in the previous literature, as well as some banking sector regulation variables, are examined to find out to what extent these factors influence the overall financing obstacles SMEs encounter, firms' access to credit, and cost of credit. In the second subsection, analyses are further taken to test if different factors have different impacts on different external financing sources. Moreover, to what extent structure of the bank loans, which are the major external financing source for SMEs in transition economies, is affected by different factors, is specifically analyzed.

5.1 Financing Obstacles

The specification (1) is firstly run. Summary statistics for the variables used in this subsection are reported in order in Table 20. From the information displayed in Table 20, there are more firms reporting encountering cost of finance obstacles than overall financing obstacles. Access to finance is less a concern to more of the listed firms compared with the cost of finance and overall financing obstacles. The correlation coefficients between variables are reported in Table 21. From the information on Table 21, the institutional variables are highly correlated. A country that has a higher level of development in one dimension is more likely to also have a higher level of development in another dimension. To avoid multicollinearity problems, equation (1) is estimated by including each institutional variable at a time. Table 22 reports the relevance of different factors to firms' financing obstacles.

As can be seen, the coefficients of several firm specific variables are always highly significant. The impact of size, ownership, whether a firm operates in a

manufacturing industry, and whether a firm has external auditors are all considerable.

Having external auditors mitigates a firm's financing obstacles, which is reasonable. Whether a firm has external auditors indicates an important dimension of hard information on the firm's performance, that is, financial statement information verifiability. Identifying whether a firm has external auditors for its financial statement helps determine to what extent a firm can receive external credit based on financial statement lending, which is one of most important lending technologies belonging to transaction lending (Berger and Udell, 2006). The verification of hard information contained in the firm's financial statements will make the firm more transparent and enable the firm to access greater lending from larger creditors and foreign entrants, since both larger credit lenders and foreign entrants are comparatively advantageous in providing transaction lending based on hard information (Dell'Ariccia and Marquez, 2004; Berger and Udell, 2006; Detragiache, Tressel, and Gupta, 2006; Berger, Rosen, and Udell, 2007; Sengupta, 2007; Maurer, 2008; Degryse, Havrylchyk, Jurzyk, and Kozak, 2008).

Some studies have found the existence of external auditors has a positive effect on SMEs' access to credit. Jiangli, Unal, and Yom (2008) found that in Indonesia, firms with weak lending relationships benefit by having greater credit availability if these firms are required to audit and indeed do get audited, compared with firms that voluntarily provide audits of their financial statements. But they have failed to find the same relevance for Korea, the Philippines and Thailand. Their explanation is that Indonesia has strong accounting standards and the widespread use of reputable accounting firms that promote the adoption of a financial-statement lending strategy. In contrast, countries with weaker accounting standards may not have a widely application of financial-statement lending technology. Uchida, Udell, and Watanabe

(2008) found that banking relationships were no more exclusive for small banks than large banks in Japan, unless the firm had audited financial statements. The result from this study adds to the existing literature by finding that external auditors matter for SMEs' state of financing in transition economies.

Foreign owned firms encounter fewer financial obstacles compared to domestic firms. This result is consistent with some studies in the previous literature. Using firm level data from the Ivory Coast, Harrison and McMillan (2003) found that domestic enterprises are more credit constrained than their foreign counterparts and that this is due to being crowded out by their foreign competitors since foreign firms borrow heavily from domestic capital markets. The total amount of funds available to purely domestically owned firms actually shrank with the increase in foreign investment. Harrison and McMillan show that foreign enterprises are larger and more profitable than domestic enterprises, and this may be an indirect mechanism through which foreign enterprises crowd out domestic firms, since lending to foreign firms may be a safer bet for lending institutions. Lending to local enterprises may be more costly since they have been generally considered more risky; however, banks could not compensate for the extra cost of lending to domestic firms due to interest rate ceilings. Beck, Demirguc-Kunt, Laeven, and Maksimovic (2006) also found that foreign-owned firms face lower financing obstacles using firm level data of 80 developing and developed countries from WBES.

It is also shown that foreign firms are more credit loose than domestic firms after controlling for a set of firm level features. It indicates that other firm level features may not constitute a vital mechanism through which foreign owned firms indirectly crowd domestic firms out of domestic capital markets. Rather, foreign firms may have extra funding sources from their parent countries which domestic firms do not,

making foreign firms more credit stable compared to domestic firms and, thus, less risky. There may be a natural inclination toward lending to foreign firms and the worsening of domestic firms' financing obstacles. Further, as a major source of financing for SMEs in transition economies, banking sectors tend to be extensively foreign owned in these areas. Foreign banks are expected to have a tendency to serve foreign firms due to fewer information asymmetries and to further mitigate foreign firms' financing obstacles compared to those of domestic firms. Dell'Ariccia and Marquez (2004) also found that Western banks entered emerging and transition economies by serving multinationals that were expanding into these markets.

Firms in the manufacturing industry, unlike what was predicted by the earlier literature, encounter more financing obstacles compared to firms in other industries. According to Beck, Demirguc-Kunt, Laeven, and Maksimovic (2006), firms in manufacturing tend to be larger and older in many developing and developed countries. Larger and older firms tend to encounter fewer financial obstacles because they show fewer information asymmetry problems. In this study, firm size and first year of operation are controlled and find that the manufacturing industry alone cannot mitigate financing obstacles.

Clarke, Cull and Firth, Lin, Liu, and Wong (2009) examined whether banks use different criteria in evaluating borrowers from different industries in China; they found that financial performance is related positively and significantly to access to banking finance and the size of the banking finance for manufacturing firms only but that state minority ownership has a positive and significant effect on access to banking finance and size of banking finance for service firms only. This can be explained by the fact that services firms tend to have fewer tangible assets to serve as collateral than manufacturing firms. The banks therefore put a greater emphasis on

state ownership, which can serve as a kind of implicit collateral. Martinez Peria (2006) found that foreign banks have lent significantly less than domestic banks to segments one would expect to be characterized by a relatively more severe problem of asymmetric information. However, they have also entered more consistently into the manufacturing sector, where the availability of collateral likely has reduced the importance of problems associated with an information disadvantage. This study differs from theirs in that mostly SMEs are included, whose collateral may be negligible.

Okura (2007), using the WBES data, found that manufacturing firms with the right to export in China have a higher probability of obtaining bank financing. This interpretation is that the Chinese government has invested a selected company with high performance with the right and that the right to directly export is accepted as a signal of creditworthiness acknowledged by the authorities. Therefore, it is not because firms in the manufacturing industry have more access to bank credit but, rather that, firms with export rights have more access to bank credit. Since firms in the manufacturing industry have a higher probability of obtaining export rights in China, manufacturing firms seem to have more access to bank credit. It may also be expected that manufacturing firms in transition economies have some intraneous features leading to more restrictive access to credit. In the next section, whether firms in the manufacturing industry influence their application of various financing sources differently to firms in other industries is examined to make a better understanding on manufacturing firms' financing obstacles.

Size is an important factors influencing SMEs' access to credit. Firms' financing obstacles are mitigated with increasing size.

As expected several financial structure variables are important factors

influencing firms' financing obstacles. Market power effect is significant. A more concentrated banking sector contributes to fewer financing obstacles encountered by SMEs. The result seems to verify information-based hypothesis that lenders with larger market power are more effective at screening borrowers in markets with information asymmetries, which leads to credit expansion and cost reduction. The result is consistent with some previous studies, such as Dell'Ariccia and Marquez, 2004; Hauswald and Marquez, 2006; Jimenez, Salas, and Saurina, 2009; Presbitero and Zazzaro, 2009. However, the result contradicts some studies. According to Berger, Rosen, and Udell (2007), the optimal market structure that benefits small borrowers the most will be one that with lower market concentration but composed of a lot of large lenders. However, Berger, Rosen, and Udell (2007) use US data, while this study uses BEEPS data that include low income and transition countries where information asymmetry problems tend to be more acute. The result in this study verifies the investment theory that only lenders with larger market power have an incentive to invest resources to acquire expensive borrower private information and maintain relationships with borrowers, since borrowers have limited exit options in a more concentrated market (Von Thadden, 2004; Ogura, 2007).

Higher foreign bank ownership exacerbates SMEs' financing obstacles. The results again verify the importance of informational advantages for small business lending in transition economies. The result is consistent with portfolio composition hypothesis. Foreign lenders will have less incentive to engage in small business lending that is more reliant on soft information (Berger and Udell, 2006; Detragiache, Tressel, and Gupta, 2006; Rueda Maurer, 2008; Degryse, Havrylchyk, Jurzyk, and Kozak, 2008). However, the results from this study contradict performance hypothesis that states that foreign entrants are mostly more efficient compared to their domestic

competitors and can overcome cross-border disadvantages such as information asymmetry. Foreign entrants can thus pass on the efficiency gains to transparent borrowers as well as opaque borrowers (Clarke, Cull, and Martinez Peria, 2006; De Haas and Van Lelyveld, 2006; De la Torre, Martinez Peria, and Schmukler, 2008; Hauswald and Bruno, 2009).

SMEs from more developed banking sectors encounter fewer financing obstacles when keeping other factors constant. The result is consistent with Beck, Demirguc-Kunt, Laeven, and Maksimovic (2006) in that they also found that firms in countries with higher levels of financial intermediary development report fewer financing obstacles. However, the results from this study differ from theirs in that a significant effect for stock market capitalization is not observed while they found that more liquid stock markets contribute to fewer financing obstacles facing firms. This may be due to the fact that subjects in this study are firms in transition economies, whose nonbank financial sectors are underdeveloped.

According to Firth, Lin, Liu, and Wong (2009), the determinants of the lending decisions vary across different levels of banking sector development. A firm's profitability is used as a criterion in granting loans and in determining loan size in regions with a more developed banking sector. Political connections via state minority ownership still play a significant role in getting access for bank loans for firms in regions with a less developed banking sector. The banks may consider state ownership as a kind of implicit collateral. Firth, et al's results suggest that the importance of political connections will decline over time as the banking sector becomes more developed, and financial performance becomes a more important determinant of credit allocation to the private sector, and thus more bank loans will be allocated to firms with greater profitability. Firth, Lin, Liu, and Wong (2009) based

their results on the case of China, which is also undergoing transformation from a plan-based economy to a market based economy. If the results are predictive, banks would be expected to make decisions on small business lending according to profitability instead of political connection, which may facilitate SMEs' access to bank credits.

Nonperforming loans are also observed to have a significantly negative effect on SMEs' financing situations. SMEs from countries with higher levels of non-performing loans in the banking sectors encounter greater financing obstacles. This makes sense, since a higher nonperforming loan indicates a higher default risk (Martinez Peria and MoAy, 2002). Martinez Peria and MoAy (2002) controlled for a bank's ratio of non-performing loans to total loans to capture credit risk. They found that, faced with a higher credit risk, banks are likely to charge higher rates on their loans as risk-adjusted returns. De la Torre, Martinez Peria, and Schmukler (2008) used data from a survey of 91 banks in 45 countries to characterize bank financing to small and medium enterprises around the world. They found that banks that are less exposed to small enterprises charge them higher interest rates and fees, and experience more non-performing loans from lending to them compared with large firms. De la Torre, Martinez Peria, and Schmukler concluded that banking sectors with higher ratios of nonperforming loans indicate higher default risks. Banks thus tend to charge higher rates and practice more prudential lending, especially to SMEs that have a higher probability of inducing nonperforming loans.

A significant effect of overall regulatory restrictions on bank activities and the formation of financial conglomerates on SMEs' financing obstacles can not be found. Further, unexpected results for institutional variables are found. Specifically, government effectiveness has no influence over SMEs' financing obstacle. Law

enforcement instead has a negative impact on SMEs' financing status. Better law enforcement exacerbates SMEs' financing difficulties. The same negative impacts are discovered for correction of corruption, level of democracy, and overall quality of institution development.

According to Beck, Demirguc-Kunt, and Maksimovic (2004), rich countries tend to have higher levels of institutional development, fewer restrictions on banks' activities, and fewer government-owned banks. The transition countries included in this study, which belong to the group of less developing countries, however, have low government bank ownership and high foreign bank ownership due to the privatization process of banking sectors in those areas. In order to split the implicit effects other macro variables may have as a result of institutional variables, a country's GDP in the logarithm is included to account for domestic market potential and also look at the interaction of institutional variables with the market potential variable in order to examine institutional effects on small business lending based on a country's market potential. Overall restrictions on bank activities and financial conglomerates are splited into three components: restrictions on nonfinancial firms owning banks; restrictions on nonbank financial firms owning banks; and overall restrictions on banks engaging in innovative financial activities and owning nonfinancial firms. The results are reported in Table 23.

After controlling for a country's domestic market potential, institutional variables become positively related to SMEs' financing status. More effective government, better law enforcement, intensified correction of corruption, democratic political environment, and advanced overall institutional environment all contribute to mitigating domestic SMEs' financing obstacles. The results are as predicted by major literature. When considering small business lending for transition and developing

economies where information asymmetry tends to be a greater concern, the legal and institutional environment should be seriously taken into account. A better legal and institutional environment helps overcome the informational disadvantages that credit lenders encounter in credit markets (Stijn Claessens, 2006, Okura, 2007; Sengupta, 2007; Haselmann, Pistor, and Vig, 2008; Rueda Maurer, 2008; Beck, Demirg-Kunt, and Maksimovic, 2008; Hauswald and Bruno, 2009; Mercieca, Schaeck, and Wolfe, 2009).

If countries have greater market potential, this exacerbates domestic SMEs' financing obstacles. One interpretation may be that countries with greater market potential are more attractive to foreign investment. According to Harrison and McMillan (2003), domestic enterprises are more credit constrained than their foreign counterparts, due to crowding out by their foreign competitors since foreign firms borrow heavily from domestic capital markets. The total amount of funds available to purely domestically owned firms actually shrank with the increase in foreign investments. Following their customers, more foreign banks may enter domestic markets, which further intensifies foreign bank ownership in the entry countries. For transition economies, where information asymmetry problems are more serious, many of the expected benefits of foreign bank entry may not be achieved before legal and institutional development reach a certain level (Rueda Maurer, 2008; Haiss and Kichler, 2009).

The coefficients of the interaction term between institutional variables and market potential are all significantly positive, which indicate that the institutional effects on small business lending are influenced by the country's domestic market potential. The desired effects of institutional factors are weakened by market potential impact. Whether the positive effects can dominate the negative impacts depends on if

the institutional environments are developed enough to outweigh the influence of market potential effects. This also verifies the interpretation of the negative market potential effect as reflecting that transition countries' institutional environment are too underdeveloped to capture the expected benefits from foreign bank entry and to compete with their foreign counterparts.

Regulatory practices to restrict nonbank financial firms from owning commercial banks will mitigate domestic SMEs' financing obstacles. However, restrictions on nonfinancial firms owning banks and overall restrictions on banks are not relevant.

Barth, Caprio, and Levine (2004) found that fewer restrictions on bank activities enhance the stability of the banking system since banks can diversify their income sources, but this effect is more profound for countries with more developed nonbank financial sectors. Since transition economies are the main focus, whose nonbank financial sectors are less developed, little risk diversification effect may be expected. Beck, Demirguc-Kunt, and Maksimovic (2004) also found that regulatory restrictions in the intermediation process do not have an a priori clear relation with the competitiveness of the banking system and borrowers' access to finance. However, their results also show that firms in more concentrated banking systems face fewer financing obstacles if there are few regulatory restrictions on banks' activities. Consistent with their findings, more restrictions on banks cause more of the financing obstacles encountered by SMEs should be expected in this study since the subjects are transition markets with highly concentrated banking sectors.

The financing obstacles firms encountered in gaining access to finance and cost of finance are further analyzed to see if factors that affect a firm's financing obstacles influence these two components differently. The results are reported in Tables 25 and 27 respectively.

For access to finance regression, the interaction terms of institutional variables with the market potential variable is included to find that institutional variables are, as expected, relevant and have a desirable impact on SMEs' access to credit as in the overall financing obstacle regression. The market potential variable is still negatively related to firms' access to credit and adversely weakens the desirable effects of institutional variables. Firm level variables that have a significant influence over firms' financing obstacles are still robustly significant and maintain their signs. Larger SMEs that are externally audited, foreign owned, and operating in industries other than manufacturing encounter fewer difficulties in accessing credit compared with smaller SMEs that do not have external auditors, are domestically owned, and operating in the manufacturing industry. Firms located in countries that have less foreign bank ownership and more advanced banking sectors encounter fewer obstacles to accessing financial credit compared to firms from countries with more foreign bank ownership and underdeveloped banking sectors.

What differs in the results between overall financing obstacle regressions and access to financing obstacle regressions are that a country's stock market capitalization and whether the country imposes regulatory restrictions on nonfinancial firms owning banks. However, whether countries impose regulatory restrictions on nonbank financial firms owning banks becomes irrelevant.

SMEs located in countries with higher stock market capitalization encounter fewer obstacles to accessing financial credit. This result indicates that equity market development in transition economies is an important mechanism through which SMEs can get access to credit more easily (Beck, Demirguc-Kunt, Laeven, and Maksimovic, 2006; Mercieca, Schaeck, and Wolfe, 2009). However, according to Ulrich Volz (2004) and Ralph De Haas (2006), stock markets in transition economies are still

significantly less liquid and capitalized when compared with those in more developed economies. Equity finance and the domestic issuing of bonds play only a limited role in financing local companies.

The results from cost of finance regressions are very close to the results from overall financing obstacle regressions. Those factors that significantly influence SMEs' overall financing obstacles also determine SMEs' cost of finance. Larger SMEs that are externally audited, foreign owned and operating in industries other than manufacturing obtain external financing at lower cost compared with smaller SMEs that do not have external auditors, are domestically owned, and operating in the manufacturing industry. Financing is comparatively cheaper for SMEs located in countries with more restrictions on nonbank financial firms owning banks, less foreign bank ownership, and relatively more developed banking systems. More developed institutional environments help reduce SMEs' cost of finance. This may be attributed to the fact that better institutional development is treated as implicit collateral, which may mitigate risks encountered by credit lenders.

Higher stock market capitalization can only ease SMEs' access to finance. It cannot benefit SMEs by reducing the costs of finance. It is also noted that restrictions on nonfinancial firms owning banks influence firms' access to finance only, and have no effects on firms' cost of finance. However, restrictions on nonbank financial firms owning banks can only affect SMEs' costs of finance and have no impact on firms' access to credit.

5.2 Financing Patterns

As robust tests, how different financing sources are affected by the factors influencing SMEs' financing situations are further tested. Results are reported in Tables 31 and 36.

SMEs using the International Financial Standards have a higher percentage of financing for fixed investments as well as working capital from foreign banks. The results showing that using transparent accounting standards allows SMEs to benefit more from foreign entry compared with SMEs that fail to disclose transparent accounting information, were supported by prior investigations. Dell'Ariccia and Marquez (2004) found that foreign entry is concentrated in market segments characterized by less severe information asymmetries. However, the comparative advantages of foreign banks allowed themselves to become dominant in lending to borrowers with relatively better accounting and reporting standards. Rueda Maurer (2008) found that rather than benefiting the majority of firms, as has apparently been the case in middle income countries, in transition economies only the most transparent firms, i.e. firms that use international accounting standards, benefit from foreign bank entry.

The external auditor variable only influences SMEs' working capital financing, but has no impact on fixed investment financing. Specifically, a firm that uses external auditors finances more of its working capital from domestic bank loans. However, using external auditors plays little role in SMEs' long term financing. This verifies what is found from financing obstacle regressions, that having external auditors mitigates SMEs' financing obstacles. This may further indicate that having external auditors' only benefits SMEs receiving from larger domestic banks that are more comparatively advantageous in providing transaction lending based on hard information. However, this study fails to find the same benefits from foreign entrants.

A firm's cost efficiency has a tiny effect on its working capital financing. However, no cost efficiency effect on the firm's fixed investment financing is found. Fixed investment financing corresponds to relatively long term financing, while

working capital financing corresponds to short term financing. Usually, the credit line for working capital is not extended for longer than 2 years. However, the credit line for fixed investments can extend from 2 to 10 years (Kumar and Francisco, 2005). Thus, working capital financing may focus more on keeping business running and the firm's short term performance. By comparison, fixed investment financing may focus more on firms' long run growth and expansion. This may explain why cost efficiency is less important for firms' fixed investment financing and relatively more important for firm's working capital financing. Another consideration is that, as foreign banks tend to finance working capital, they may be relied on in their short-term engagements with domestic markets. The negative coefficient may indicate an adverse selection problem due to foreign banks' informational disadvantages compared to domestic banks. On the other hand, it may indicate that domestic banks more prefer opaque and less risky borrowers, while foreign banks tend to select transparent borrowers and emphasize less firms' profitability. This also verifies the previous finding that firm performance is not an important factor in determining SMEs' financing obstacles.

How long a firm has been in operation is not an important determinant for SMEs' external financing because of lack of a significant impact of first operating year on SMEs' overall financing obstacles, access to finance, or cost of finance. However, it does matter for SMEs' financing patterns. The results show that older firms finance a higher percentage of the fixed investments from government loans. For working capital, the longer a firm has been in operation, the more it will get in finance from the government and the less it will get finance from equity markets and domestic banks. According to Beck, Demirguc-Kunt, Laeven, and Maksimovic (2006), older firms in some developing and developed countries tend to be larger, in manufacturing rather than in the service or construction industries, are more likely to

be listed, and are part of a business group, a multinational enterprise, and a foreign or government-owned firm. Also according to Sayuri Shirai (2002), newly corporatized or established firms have generally been better performers than old firms in China. Old firms tend to be large firms, largely state-owned, protected, and unprofitable. No matter its origin as a government-owned enterprise, or its relatively large size, or its specific industry orientation, the older firm has an advantage in getting policy lending compared to the younger firm. For short term working capital financing, the firm's performance is relatively more important. This may explain why older firms have a lower percentage of external financing from equity markets and domestic banks.

Robust verification for the effects of some firm level variables on SMEs' financing situations is found. Specifically, firm size, ownership and industry all influence firms' external financing patterns.

Larger SMEs raise both their short term and long term credit more from the formal financing sources such as equity markets, banks and government loans, and largely reduce their borrowing from expensive money lenders. This indicates the importance of size in mitigating SMEs' financing obstacles and reducing their cost of finance.

Firms in the manufacturing industry finance more of their fixed investments via foreign or domestic bank loans and finance more of their working capital via domestic bank loans. Dell'Ariccia and Marquez (2004) have already shown that foreign banks lend significantly more to the manufacturing sector, where the availability of collateral has likely reduced the importance of problems associated with an information disadvantage.

Foreign owned FMEs obtain a larger percentage of both their short term and long term funding from foreign banks but a smaller percentage of their long term funding

from domestic banks and government lending, and a smaller percentage of their short term funding from government lending. Foreign banks' tendency to serve foreign firms may be due to fewer information asymmetries. Dell'Ariccia and Marquez (2004) found that Western banks entered emerging and transition economies by serving multinationals that were expanding into these markets.

A robust effect on SMEs' financing for some country level variables are also found. More foreign bank ownership fosters more long term financing for SMEs from equity markets and domestic banks and less from government lending. SMEs located in countries with more foreign bank ownership also finance their working capital more from equity markets, domestic and foreign banks, but less from government lending. These results may supplement what is found from financing obstacle regressions, in that foreign bank entry may help ease SMEs' financing obstacles in the short run but not in the long run. The correct interpretation may be that longer duration exacerbates a foreign entrant's disadvantage in information asymmetry. Foreign bank entry is also found to divert domestic banks to SMEs, which may be due to foreign banks' bias toward large and transparent firms. The only financing source that is inhibited by foreign bank entry is government lending. This may indicate that the negative impact of foreign bank entry on SMEs' financing status found from financing obstacle regressions may be attributable only to the reductions in government policy lending due to the intensification of banking sector privatization.

SMEs located in countries with more concentrated banking sectors are less financed by foreign bank loans and government lending. They also have a relatively higher percentage of working capital financed by money lenders. Nonperforming loans only affect SMEs' financing through the equity market. Firms from countries with a higher percentage of nonperforming loans in the banking sector have a smaller

percentage of external financing from equity markets.

More restrictions on bank activities and the formation of financial conglomerates raise the percentage of firms' financing for working capital from domestic banks. More restrictions also lead to a higher percentage of credit from equity markets. According to Stijn Claessens (2003), the dis-intermediation problem that firms may bypass banks to raise money directly from public markets will affect an integrated financial institution less. The findings from this study may verify his in that an increased percentage of equity financing for long term fixed investments is found when encountering more restrictions on overall financial conglomerates, which shows that the dis-intermediation problem exists in countries imposing more restrictions on financial service integration. The results from this study also show that the dis-intermediation problem is less acute in the short run.

More capitalized stock markets restrain SMEs located in domestic countries from financing by equity markets, foreign banks, and government lending both in the short term and long term. More capitalized stock markets also adversely affect firms' financing for working capital from domestic banks. On the contrary, more advanced banking systems foster SMEs' financing for both fixed investments and working capital from formal financing sources such as equity markets and domestic banks, while reducing SMEs' financing from informal financing sources such as money lenders. The robust results from this study showing that a developed banking system improves SMEs' financing status indicate that a bank-based financial system facilitates small and medium enterprises' external financing in transition economies at the current stage. At the same time, more capitalization of the stock market may weaken the desirable impact that a bank-based financial system may bring to small business lending.

In countries with better law enforcement, SMEs have a relatively higher percentage of external financing for fixed investments from government lending. Better law enforcement also results in a relatively higher percentage of external financing for working capitals from government lending and equity markets and a lower percentage of external financing from money lenders. The results are the same for other institutional variables such as government effectiveness, control of corruption, and regulatory quality. It is surprisingly shown that for those transition economies with relatively more developed institutional environments; ease of small business financing relies on more government lending. Better institutional development comes with more government supports to small and medium enterprises. The desirable mechanism through which a better institutional environment mitigates information asymmetry and fosters small business financing from private sectors fails to play the proper role.

Based on the robust tests, financial pattern regressions are estimated using multinomial fractional logit models (Tables 33, 34, 35, 39 and 40).

5.3 Bank Loan Structure

In transition economies, financial systems are still highly bank-based, while stock and bond markets play a small though increasingly important role. In this subsection, the focus is on analyzing those factors influencing SMEs' credits from banks. To what extent different factors affect the structures of bank loans to SMEs is examined. The previous models are enhanced by adding more variables measuring countries' regulatory practices on the banking sector.

Table 40 reports the summary statistics for short term loan and long term loan analyses in order. It is noted that the maximum government bank ownership share is 41.8%, while the maximum foreign bank ownership share is 98.9%. It may be

concluded that the banking sectors in most transition economies are now highly privatized. Table 41 reports the correlation matrix. The ordered logit estimation results are reported in Table 42. Table 45 reports tobit estimation results for the loan structure analysis.

The only firm specific factor influencing SMEs' access to bank loans is foreign ownership share. SMEs that have a larger foreign ownership share have an easier time accessing both short-term and long-term loans. The robustly significant effects of firm ownership confirm the conclusions above. Foreign firms are less risky compared to domestic firms; this causes domestic firms to be crowded out of domestic credit markets (Harrison and McMillan, 2003). The informational disadvantage of foreign banks, compared to domestic banks, causes the foreign banks to favor foreign firms that are more transparent (Dell'Ariccia and Marquez, 2004). Both effects lead to foreign firms having better access to bank loans relative to domestic firms.

SMEs from countries with a higher rate of nonperforming loans are in an unfavorable position regarding access to both short-term and long-term loans, which also confirm the conclusions above. A higher percentage of nonperforming loans indicates that a country's default risk is higher. Banks will be more prudent when making their lending decisions, especially when lending to small and medium-sized firms, that have been proven to cause more nonperforming loans (Martinez Peria and MoAy, 2002; De la Torre, Martinez Peria, and Schmukler, 2008). This is further verified by the loan structure regressions, that the durations of loans for SMEs from countries with a higher percentage of nonperforming loans are on average shorter.

The more independent the domestic banking sector supervisory agencies are from political influences, the more difficult it becomes for the domestic SMEs to access long-term loans. However, this factor has no impact on SMEs' access to

short-term loans. Moreover, the annual interest rate and value of collateral are, on average, higher for loans to SMEs in countries where banking sector supervisory agencies are more independent from political influence. The undesirable outcome seems evident. Political intervention in banking sector supervision seems to have a positive effect. However, it may indicate that loans to SMEs in transition economies are highly policy directed, thus verifying the conclusion above that the desirable mechanism through which a better institutional environment mitigates information asymmetry and fosters small business financing from private sectors fails to play the proper role and that better institutional development comes with more government support for small and medium-sized firms. Without policy support, SMEs' access to long-term credit would be seriously in jeopardy and the cost of loans for SMEs would be significantly increased.

The results from this study support the view that a banking sector supervisory structure fostering small and medium-sized firm financing in transition economies should involve multiple bank regulators. It is found that while a multiple bank regulators regime makes it tougher for SMEs to acquire short term loans, a multiple bank regulators regime helps reduce the annual interest rate of loans and extends the duration of loans for SMEs. It seems that multiple bank regulators foster prudent lending practices on the part of banks and benefit some SMEs by reducing financing costs. However, a multiple bank regulators regime also harms other SMEs by exacerbating the difficulty in accessing bank loans. In turn, a single bank regulator regime, though possibly easing SMEs' access to loans, will raise the average cost of financing for SMEs. The overall impact will be deterioration in the loan structure.

According to Barth, Nolle, Phumiwasana, and Yago (2002), arguments that support multiple bank regulators address safety and soundness, costs to supervisory

authorities, and costs to market participants. Multiple supervisory authorities may be more well-informed by utilizing different approaches to supervision; a multiple bank regulators regime may prevent excessive powers from accumulating to one regulator, reduce bureaucracy, and enhance efficiency; and a multiple supervisors regime may encourage competition among supervisors and induce innovations in bank regulation. The results from this study add to Barth, Nolle, Phumiwasana, and Yago (2002) in that, a multiple bank regulators regime that fosters informative, efficient and innovative regulations is found to stimulate prudential lending practices. Masciandaro (2009) also believed that a single authority regime may reduce the incentive for the supervised parties to have an operating system based on prudence and would relax the caution of consumers or investors toward the financial services offered.

A supervisory regime that has a single regulator for all of the main financial institutions will seriously impede SMEs' access to both short-term and long-term loans. However, such a regime benefits some firms by reducing the annual loan rate and by shortening approval time.

One approach to analyzing the effects of bank capital requirements is to regard banks primarily as managers of asset portfolios, which is the portfolio selection view (David VanHoose, 2007). From this point of view, the primary effect of capital requirements to alter banks' leverage ratio will be a change in the composition of the optimal asset portfolio. Banks take asset prices and yields as given and determine their optimal portfolio with an aim to maximize the expected utility, which in turn depends on the degree of the banks' risk aversion. Banks that are sufficiently non-risk-averse will respond to the tightening capital requirements by choosing a riskier asset mix than before, thereby creating a perverse effect. As a consequence, more stringent capital requirements could make some banks safer, some banks riskier,

and the banking system as a whole either more or less safe.

Keeping foreign bank ownership constant, a higher minimum capital to asset ratio reduces SMEs' access to short-term and long-term loans. However, keeping private bank ownership constant, the minimum capital ratio effect vanishes. The minimum capital ratio requirement affects loan structures by influencing bank behavior. One interpretation is that the minimum capital ratio requirement may have a greater impact on domestic private banks than on foreign banks. Keeping foreign bank ownership constant, a higher minimum capital ratio requirement causes domestic private banks to modify their loan structures to be more risky. According to Repullo and Suarez (2004), regulations intended to discourage banks from selecting high-risk portfolios are more likely to be successful when banks' market power is greatest, so that banks have less incentive to gamble. Since domestic private banks are smaller banks, especially in transition economies, it can be assumed that they have a greater incentive to take risky actions. Furthermore, it is also found that in countries with higher minimum capital ratio requirements, banks tend to charge higher annual interest rates, reduce the time to approve loans, and shorten the duration of loans. It can be concluded that a higher minimum capital ratio requirement stimulates banks' risky behavior and deteriorates loan quality.

In countries imposing more stringent requirements on capital compositions, it is found that SMEs have greater difficulty in obtaining both short term and long term loans. Further, more stringent capital regulation causes a longer approval time and higher requirement for collateral. To summarize, regulatory restrictions on minimum capital ratio may induce risky behavior in banks but ease firms' access to credit at a higher cost. However, regulatory restrictions on capital compositions induce prudent behavior on the part of banks, though exacerbating firms' obstacles to obtaining loans.

Neither the firm's application of the International Accounting Standards or the country's regulation stringency as to what extent banks should release information to the public is found to influence firms' access to loans. However, these two factors both significantly affect the structure of loans. Firms using the International Accounting Standards obtain loans of longer duration, lower annual interest rates, and require a lower value of collateral. The failure to discover a significant effect of the transparent accounting standard may be explained based on the findings from financing pattern regressions; firms that use International Accounting Standards obtain a higher percentage of their credit from foreign banks. Domestic banks, however, tend to serve opaque and small firms. The comparative advantage of firms having more transparent accounting standards is mainly in obtaining loans at a lower cost. This result also confirms that foreign banks in transition countries provide better quality loans relative to domestic banks in cost and duration.

More stringent requirements as to the extent to which banks should release information to the public also result in lower annual rates, lower values of collateral and shorter approval times. The result also indicates the effect of market discipline in improving the loan structure of banks, as well as the market discipline effect in allowing SMEs to access loans of a better structure. This result is consistent with the private interest view.

Evidence is found against overall regulatory restrictions on bank activities and ownership and against regulatory practices restricting nonfinancial firms from owning banks; as such restrictions affect SMEs' overall status with respect to bank loan financing.

The results also show that more stringent restrictions on nonfinancial firms owning banks contribute negatively to SMEs' access to long-term loans, though it has

no effect on the firms' access to short-term loans. Thus, fewer restrictions on nonfinancial firms owning banks will facilitate SMEs' access to loans in transition economies. The negative effect is further verified while exploring its impact on different loan structures. More restrictions on nonfinancial firms owning banks impel banks to charge higher annual rates for loans or to require higher value of collateral for backing loans. In turn, fewer restrictions on nonfinancial firms owning banks will facilitate SMEs' access to long term loans, as well as reduce loan rates and required collateral values. Nonfinancial firms that own banks, e.g., industry loan companies in the U.S., can be important supplemental sources to firms' external finance, especially at a time of financial crisis. Such nonfinancial firms may be expected to suffer fewer detrimental impacts during financial crises compared to financial institutions and may contribute to mitigating a credit crunch during a crisis. However, one concern with these nonfinancial firms is that they are included in the same safety net in terms of deposit insurance regimes, while facing greater regulatory oversight compared with other banks or bank holding companies.

Raskovich (2008) proposed that the hypothetic net effect of vertical integration on financial system stability is not clear. Allowing banking and commerce to mix could subject banks to greater risks from the activities of their commercial affiliates and exacerbate informational burdens facing consolidated supervisors. However, vertical integration also affords banks greater opportunities to diversify risk and by lessening moral hazard problems via encouraging private monitoring of bank risks by their commercial affiliates. Hao, Nandy, and Roberts (2007) use loan-level data to show that a country's level of banking-commerce integration is an important determinant of loan spreads. However, the results they show are rather nuanced. They found that in low concentration countries, an increase in integration from a low to a

medium level leads to a decrease in loan spreads; however, a further increase in integration from medium to high does not affect loan spreads significantly. In high concentration countries, an increase in integration from low to medium levels decreases loan spreads, however, a further increase in integration leads to a significant increase in domestic loan spreads. Their explanation for this last positive impact is that the creation of even larger conglomerates combining banks and nonfinancial institutions reduces efficiency in an already concentrated market. The findings in this study also suggest that more restrictions on banking-commerce integration cause increases in loan rates. Since the sample markets in this study are highly concentrated, characterized by the five largest banks holding on average more than 65% of the banking sector assets on average, it seems that the results of this study verify Hao, Nandy, and Roberts (2007).

More restrictions on bank activities and ownership help mitigate firms' access to loans both in the short run and the long run. However, more bank restrictions also result in higher annual rates for loans. This may indicate that banks seek to compensate for missing potential gains that may be expected from engaging in mix business scopes by expanding lending and meanwhile charging higher rates, which may be considered a riskier loan structure than before imposing restrictions. Therefore it can be concluded that more restrictions on banks may benefit firms by facilitating their access to loans; it may, however, induce more risky behavior on the part of banks and increase average financing costs for SMEs. The finding from this study is consistent with Barth, Caprio, and Levine (2004), in that they also found regulatory restrictions on banking activities increase banking-system fragility, especially in countries with more developed nonbank financial sectors. Their explanation is that fewer regulatory restrictions may increase the franchise value of banks and thereby

augment incentives for more prudent behavior. Still, banks that engage in a broad array of activities may find it easier to diversify income streams and thereby become more resilient to shocks. One argument is that more restrictions on overall bank activities and ownerships induce risk taking behaviors by firms in loosening credit standards and charging higher payments for loans and overall destabilize the banking sector in transition economies with more developed banking sectors whereas nonbank financial sectors are underdeveloped. Lepetit, Nys, Rous, and Tarazi (2008) also found that a higher share of income from fee based activities reduces the risk premium charged by banks.

Restrictions on financial firms owning banks are less relevant to SMEs' access to bank loans and loan structures. This may be attributed to the fact that banks in transition countries are still the most important creditors for SMEs, and financial systems in transition economies are still highly bank-based, while stock and bond markets play only a small role in the financial systems.

These results also explain why the dis-intermediation problem[11] exists. Since financing costs for bank loans go up with increasing restrictions on overall financing service integration, firms may instead reduce borrowings from banks and substitute with another financing source, e.g., equity market credits.

A more concentrated banking sector mitigates firms' access to both short-term and long-term loans. The effect of creditors' market power on SMEs' access to financial credit has been a disputed topic for a long time. The information-based hypothesis presumes that a more concentrated banking sector fosters banks' long-term relationships with firms. As a result, firms are less likely to suffer credit constraints. An opposing view takes the position that more concentrated markets are filled with big banks, who are less inclined to lend to SMEs and small businesses; lending only

occupies very tiny percentage of their portfolios. The results of this study provide evidence for the information-based hypothesis. It is also shown that banks from more concentrated banking systems take a shorter time to approve loans, charge lower interest rates, and require lower value of collateral.

It is again found that more a developed banking sector contributes positively to SMEs' access to both short-term and long-term loans. Banks from more developed banking systems provide loans with average longer duration and lower annual interest rate.

Higher private bank ownership reduces SMEs' access to both short-term and long-term loans. Higher foreign bank ownership increases SMEs' access to loans. The information based hypothesis is verified again. Private banks tend to lend to SMEs' due to informational advantages. Foreign banks are more inclined to lend to large enterprises that are more transparent or to foreign enterprises.

Banks from countries with higher foreign bank ownership take a longer time to approve SMEs' loans, charge higher interest rates and require higher value of backed collateral. However, the duration of a loan is longer. SMEs from countries with less privatized banking system enjoy on average shorter approval days for loans and are required to put up a lower value of collateral backing for loans. However, the duration of loans is on average shorter, and annual interest rates are on average higher.

Government bank ownership in the countries studied is low, with a maximum share lower than 50%. This indicates that the transition economies included in this study have high privatization in banking sector. This confirms the hypothesis above that policy lending is an important source for SMEs in transition economies. Therefore, further privatization will increase SMEs access to loans when privatization proceeds to certain extent.

6. CONCLUSION

In this study, different empirical specifications are used to analyze the relevance of different firm specific informational and performance factors, banking sector specific regulatory and structural factors, and financial and legal institutional factors to small and medium enterprises' financing status in transition economies.

The results find robust evidence to support the information based hypothesis. First, those factors that contributed to more transparent firms are all relevant and positively related to SMEs' financing status. Compared to firms' accounting practices, firm performance is relatively less relevant. Firms that use the International Accounting Standards find it easier to access cheaper credit. This reflects these firms' advantage in competing for foreign bank loans. Likewise, firms that have external auditors also encounter fewer financing obstacles. Moreover, large firms and firms with more foreign ownership all benefit from informational advantages and have eased financing compared to smaller firms and firms with less foreign ownership.

Second, factors that contribute to neutralizing the negative impact of information asymmetries all help improve SMEs' financing status. Instead, factors resulting in more concerns with information asymmetries exacerbate SMEs' financing status. It is found that a more concentrated banking sector contributes to fewer financing obstacles facing SMEs. SMEs in more concentrated markets have greater access to both long term and short term bank loans and are charged lower costs. The results are due to the fact that creditors with greater market powers are more informative and have more incentive to invest in obtaining private firm information. SMEs located in countries with more foreign bank ownership suffer more access obstacles and bear higher costs of financing. These also result from foreign banks' disadvantages in relationship lending targeted at opaque small businesses based on soft information.

It is shown that in countries with greater market potential, SMEs are more likely to suffer financing obstacles. One explanation is that larger markets are more attractive to foreign investment. According to the previous statements, foreign investments do not necessarily lead to more credit. If these foreign investments are financed locally, the consequence may be a natural crowding out of domestic investments, especially in transition economies where information asymmetries are more acute and banking sectors are strongly foreign owned. As confirmation, the results show that firms with more foreign ownership have greater ease of credit. Further, in countries with more foreign bank ownership, SMEs encounter more credit constraints.

An interdependent effect of institutional development on market potential is further found. The results show that only if countries' institutional development is enhanced to a certain level can the negative impact of market potentials be offset. That is, only if the institutional development is sufficient to be weighted against information asymmetries, so that foreign owned enterprises or large and transparent firms' informational advantages can be neutralized, can larger market potentials, which in this study equals more foreign entry, benefit SMEs equally.

A bank based financial system is hereby proved to outweigh a market based financial system at the current stage for transition markets. More developed banking sectors contribute to easier access to financing and reduced financing costs. SMEs' from more developed banking sectors finance a higher percentage of their credit from formal sources. Indeed, a higher stock market capitalization ratio does not contribute to improving a firm's financing access or costs, but reduces firms' percentage of financing from formal sources.

The results show a significant impact of bank regulatory practices on SMEs'

access to both short term and long term bank loans as well as on loan structures and, thus, on firms' financing status and financing patterns. More specifically, it is shown that the overall regulatory restrictions on banks and the formation of financial conglomerates cause firms to bypass banks and raise capital directly from equity markets. More restrictions on bank activities and on owning nonfinancial firms induce banks to risk taking in that banks loosen the credit standards and, as compensation, charge higher interest premiums. Restricting nonfinancial firms from owning banks exacerbates SMEs' difficulties in accessing long term credit from banks and raises interest rates and required collateral values.

A multiple bank regulators regime fosters prudent lending on the part of banks and benefits some SMEs by reducing financing costs. However, a multiple bank regulators regime harms other SMEs by exacerbating their difficulty accessing bank loans.

Bank regulatory practices that impose more stringent requirements on to what extent banks should release information to the public contribute to SMEs' easy access to loans with better structure, in consistent with the private interest view. It is also found that bank supervisory agencies that are more independent from political influences cause SMEs to suffer both greater obstacles to access bank loans and also higher costs for obtaining bank loans.

It is also found that regulatory restrictions on minimum capital ratio may induce risky behavior on the part of banks, but ease firms' access to credit at a higher cost. However, regulatory restrictions on capital composition may induce prudential behavior on the part of banks; although it may exacerbate firms' difficulties to obtain loans.

Table 1: Definition and Source of Variables

Variable	Description	Definition	Source
OVER3AR	Overall Activities Restrictiveness	This variable measures the degree to which banks can engage in securities, insurance and real estate activities. It ranges from 4 to 16; 4 is unrestricted and 16 is prohibited.	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision".
BONF	Bank Owning Nonfinancial Firms	This variable measures the degree to which banks can own voting shares in nonfinancial firms. The index ranges from 1 to 4; 1 is unrestricted and 4 is prohibited.	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision".
NFOB	Nonfinancial Firm Owning Banks	This variable measures the degree to which nonfinancial firms can own voting shares in banks. The index ranges from 1 to 4; 1 is unrestricted and 4 is prohibited.	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision".
CRINDEX	Capital Regulatory Index	The variable measures both the amount of capital and verifiable sources of capital that a bank is required to possess. It ranges from 3 to 10; higher values indicate greater stringency.	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision".

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Table 1 (continued)

Variable	Description	Definition	Source
OSPOWER	Official Supervisory Power	Official Supervisory Power measures the extent to which supervisory authorities have the power to take actions to correct problems. It ranges from 4 to 14; higher values indicate greater power.	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision". (see, Barth, Caprio and Levine, 2006)
BCASSET	Bank Concentration - Assets	Percent of the largest five banks' assets to country's total bank assets (%).	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision". (see, Barth, Caprio and Levine, 2006)
GOVBANK	Government-Owned Banks	Percent of government-owned bank assets to country's total bank assets. (%)	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision". (see, Barth, Caprio and Levine, 2006)
FORBANK	Foreign-Owned Banks	Percent of foreign-owned bank assets to country's total bank assets. (%)	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision". (see, Barth, Caprio and Levine, 2006)
CTIR	Cost to Income Ratio	This variable measures banks' cost efficiency. It is the ratio of banks' non-interest expenses divided by sum of banks' net interest revenues and other operating incomes.	BankScope

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Table 1 (continued)

Variable	Description	Definition	Source
ROA	Return on Average Assets	This variable measures banks' efficiency and operating performance. It is the ratio of banks' net incomes divided by total assets.	BankScope
TA	Total Assets	This variable measures banks' size.	BankScope
E_TA	Equity to Total Assets	This variable measures banks' leverage level and capital adequacy. It is the percentage of banks' total assets funded by permanent equity.	BankScope
NIM	Net Interest Margin	This variable measures banks' profitability. It is the ratio of banks' net interest income divided by earning assets.	BankScope
GDPPC	Real GDP Per Capita	This variable measures countries' market potential. It is per capital GDP in constant 2000 US$.	World Development Indicator
OPEN	International Trade Shares	This variable measures countries' openness in real economy. It is sum of import and export divided by GDP.	World Development Indicator
INF	Inflation Rate	This variable measures countries' macroeconomic stability.	World Development Indicator

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Table 1 (continued)

Variable	Description	Definition	Source
STMKTCAP	Security Market Development	This variable measures countries' financial development. It is computed as stock market capitalization to GDP ratio.	IFS
MSHARE	Market Share Variables	Market share variables measure individual bank's market power in domestic market. MSHARE1 measures bank's assets in country's aggregate banking assets; MSHARE2 measures bank's deposits and other short term funding in country's financial system deposits; MSHARE3 measures bank's loans in country's private credits from banks and other financial institutions.	Authors' calculation uses data from IFS and BankScope.
ZSCORE	Z-score	This variable measures countries' banking sector stability. Bank's z-score is computed as sum of ROA plus E_TA divided by standard deviation of ROA.	World Bank Project "Financial Development and Structure" (see, Beck, Demirguc-Kunt and Levine, 1999; Laeven and Levine, 2008).

Table 2: Bank Distribution across Country

Panel A: Target Banks

Country	Bank	Ave. Assets (Million$)	Country	Bank	Ave. Assets (Million$)
Argentina	7	1965.61	Kenya	1	74.20
Armenia	2	32.55	Kuwait	1	3378.70
Austria	1	191.10	Latvia	3	316.23
Bahrain	1	1138.80	Lithuania	1	510.40
Bangladesh	1	1103.90	Luxembourg	5	30674.88
Belarus	2	325.15	Mauritius	1	152.70
Bolivia	2	703.70	Morocco	2	5583.20
Brazil	12	14282.19	New Zealand	1	27688.00
Bulgaria	5	502.18	Nicaragua	2	499.85
Canada	3	172736.13	Norway	1	1250.90
Chile	1	819.08	Oman	1	2174.80
Colombia	1	3914.90	Pakistan	2	5763.50
Costa Rica	1	38.60	Panama	2	1833.65
Croatia	10	931.99	Paraguay	1	35.40
Cyprus	1	1965.50	Peru	2	791.35
Czech Republic	5	6505.40	Philippines	2	1828.39
Denmark	2	187748.25	Poland	3	2561.40
Egypt	5	3792.66	Portugal	2	42040.90
El Salvador	1	52.70	Romania	4	127.70
Estonia	2	1165.85	Russian Federation	1	581.20
Finland	1	59195.90	Slovenia	1	1236.20
Germany	15	164083.11	South Africa	2	30088.75
Ghana	1	236.10	South Korea	3	46621.60
Greece	1	6231.00	Spain	6	132130.60
Hungary	7	3156.82	Tanzania	1	592.30
India	5	10313.52	Thailand	3	4970.21
Italy	3	40845.07	Uganda	1	64.10
Japan	2	3970.06	United Kingdom	2	34.70
Kazakhstan	1	104.20	United States	7	55666.54
Total Banks				165	
Ave. Asset					18746.97
Panel B: Acquirer Banks					
Argentina	1	2482.20	Kenya	2	68.75
Australia	1	1198.80	Kuwait	1	13398.40

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Table 2 (continued)

Country	Bank	Ave. Assets (Million$)	Country	Bank	Ave. Assets (Million$)
Austria	3	64010.47	Latvia	1	898.40
Bahrain	2	1037.10	Lithuania	2	207.75
Belgium	3	442579.07	Luxembourg	1	33083.60
Brazil	3	38740.47	Oman	1	7685.00
Canada	6	148053.60	Pakistan	1	9689.90
Croatia	2	2890.40	Panama	2	3163.75
Denmark	2	203726.20	Portugal	2	81512.40
Estonia	1	2201.00	Russian Federation	1	1750.70
Finland	1	21635.80	Slovenia	1	5037.20
Germany	8	271863.06	South Africa	1	56138.00
Honduras	1	515.40	Spain	3	229078.37
Hungary	2	17421.96	Switzerland	3	408106.30
Iceland	2	35845.15	Thailand	2	29272.02
India	3	70219.20	Trinidad and Tobago	2	4263.35
Israel	1	59846.80	Turkey	2	8392.20
Italy	1	121520.90	United States	17	139201.04
Japan	2	414122.50	Venezuela	1	4291.30
Kazakhstan	1	4756.20			
Total Banks				92	
Ave. Assets					75894.99
Panel C: Control Banks					
Algeria	14	2057.76	Latvia	23	301.68
Antigua and Barbuda	5	245.78	Lebanon	56	595.58
Argentina	109	1590.79	Lesotho	1	81.30
Armenia	16	32.05	Liechtenstein	10	1647.45
Aruba	1	337.50	Lithuania	13	376.75
Australia	20	2923.64	Luxembourg	142	4358.16
Austria	69	4568.68	Malawi	6	85.83
Azerbaijan	19	23.56	Malaysia	29	5142.97
Bahrain	15	3688.06	Mali	5	76.18
Bangladesh	33	468.02	Malta	14	970.82
Belarus	16	299.18	Mauritius	15	590.12
Belgium	34	46292.91	Mexico	35	3555.41
Belize	5	162.54	Morocco	14	4290.82
Benin	6	104.10	Nepal	2	264.05

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Table 2 (continued)

Country	Bank	Ave. Assets (Million$)	Country	Bank	Ave. Assets (Million$)
Bhutan	2	126.40	Netherlands	23	2070.22
Bolivia	14	396.14	New Zealand	13	15360.18
Botswana	8	296.10	Nicaragua	6	355.22
Brazil	186	2704.58	Niger	4	49.28
Bulgaria	29	178.11	Nigeria	70	276.02
Burkina Faso	7	87.19	Norway	14	9414.89
Burundi	2	35.45	Oman	10	1163.41
Cambodia	1	12.20	Pakistan	28	1464.50
Canada	58	18288.19	Panama	95	449.76
Chile	36	2076.69	Paraguay	20	143.03
Colombia	25	964.24	Peru	27	805.09
Costa Rica	23	339.43	Philippines	18	860.05
Croatia	59	418.22	Poland	38	600.33
Cyprus	17	1689.14	Portugal	32	9645.45
Czech Republic	30	2002.53	Qatar	2	400.10
Denmark	64	9793.47	Romania	26	923.15
Dominica	1	190.00	Russian Federation	160	240.42
Ecuador	25	135.11	Rwanda	4	46.53
Egypt	31	2667.70	Saudi Arabia	10	8707.83
El Salvador	14	478.11	Senegal	9	155.11
Estonia	11	527.60	Seychelles	3	184.13
Fiji	1	159.50	Slovenia	24	570.52
Finland	11	27097.02	South Africa	38	6725.86
Gambia	2	53.50	Spain	108	20906.58
Germany	278	12586.21	St. Kitts and Nevis	2	222.65
Ghana	19	101.72	Sudan	12	82.15
Gibraltar	5	1094.73	Suriname	2	85.70
Greece	12	1631.55	Swaziland	5	79.36
Grenada	2	129.65	Switzerland	196	7356.32
Guatemala	35	164.79	Tanzania	18	172.71
Guyana	2	72.95	Thailand	25	6684.99
Honduras	21	232.28	Togo	3	80.47

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Table 2 (continued)

Country	Bank	Ave. Assets (Million$)	Country	Bank	Ave. Assets (Million$)
Hungary	32	1113.83	Trinidad and Tobago	10	860.34
India	72	4817.96	Turkey	48	6183.54
Indonesia	89	1015.82	Turkmenistan	1	1827.40
Israel	17	10763.20	Uganda	12	121.91
Italy	74	7375.16	Ukraine	35	112.65
Jamaica	9	774.66	United Arab Emirates	17	2791.59
Japan	167	60438.25	United Kingdom	93	3227.15
Jordan	11	4048.47	Uruguay	41	485.90
Kazakhstan	28	90.55	Vanuatu	1	23.10
Kenya	39	123.32	Venezuela	54	506.75
Kuwait	5	6462.18	Zimbabwe	14	263.75
Total Banks				3686	
Ave. Assets					3446.97

Source: BankScope. This table displays observation banks' distribution across observation countries. Panel A includes 165 banks in the pull regression sample. Panel B includes the 92 banks in the push regression sample. Panel C includes 3686 banks used as control banks in both regressions. Average bank assets over each observation country and panel are also reported. From the table, target banks are relatively small and acquirer banks are relatively large measured by average bank assets.

Table 3 Correlation Analysis: Per Capita GDP and Bank Regulatory Variables

Pearson Correlation Coefficients, N = 15257 Prob > |r| under H0: Rho=0									
	GDPPC	OVER3AR	BONF	NFOB	CRINDEX	OSPOWER	BCASSET	GOVBANK	FORBANK
GDPPC	1	-0.47 (0.000)	-0.12 (0.000)	0.03 (0.000)	0.05 (0.000)	-0.07 (0.000)	-0.25 (0.000)	-0.32 (0.000)	0.09 (0.000)
OVER3AR	-0.47 (0.000)	1	0.44 (0.000)	0.31 (0.000)	-0.09 (0.000)	0.06 (0.000)	0.27 (0.000)	0.07 (0.000)	-0.01 (0.215)
BONF	-0.12 (0.000)	0.44 (0.000)	1	0.24 (0.000)	-0.16 (0.000)	0.15 (0.000)	0.15 (0.000)	0.11 (0.000)	-0.06 (0.000)
NFOB	0.03 (0.000)	0.31 (0.000)	0.24 (0.000)	1	-0.07 (0.000)	-0.21 (0.000)	0.09 (0.000)	-0.12 (0.000)	0.08 (0.000)
CRINDEX	0.05 (0.000)	-0.09 (0.000)	-0.16 (0.000)	-0.07 (0.000)	1	0.04 (0.000)	-0.03 (0.001)	-0.05 (0.000)	-0.02 (0.003)
OSPOWER	-0.07 (0.000)	0.06 (0.000)	0.15 (0.000)	-0.21 (0.000)	0.04 (0.000)	1	-0.11 (0.000)	-0.05 (0.000)	0.24 (0.000)
BCASSET	-0.25 (0.000)	0.27 (0.000)	0.15 (0.000)	0.09 (0.000)	-0.03 (0.001)	-0.11 (0.000)	1	-0.20 (0.000)	0.01 (0.446)
GOVBANK	-0.32 (0.000)	0.07 (0.000)	0.11 (0.000)	-0.12 (0.000)	-0.05 (0.000)	-0.05 (0.000)	-0.20 (0.000)	1	-0.36 (0.000)
FORBANK	0.09 (0.000)	-0.01 (0.215)	-0.06 (0.000)	0.08 (0.000)	-0.02 (0.003)	0.24 (0.000)	0.01 (0.446)	-0.36 (0.000)	1

Table 4 Pull Regression: Summary Statistics for All Banks

	Target Banks					Control Banks				
Variable	N	Mean	Std Dev	Minimum	Maximum	N	Mean	Std Dev	Minimum	Maximum
E_TA	219	11.31	10.8	0.43	90.34	15000	14.42	19.83	-812.37	100
NIM	219	4.77	4.96	-1.07	47.29	15000	5.23	10.45	-266.67	918.31
ROAA	219	0.98	2.18	-14.97	13.29	15000	1.04	4.22	-111.13	73.17
CTIR	219	75.2	56.12	14.46	655	15000	71.45	55.53	0	982.54
TA(Million$)	219	49629.2	150174	8.5	1014920.4	15000	8158.51	53647.2	0.5	1483247.7
OVER3AR	219	6.89	1.75	3	11	15000	6.68	2.04	3	12
BONF	219	2.32	0.77	1	4	15000	2.37	0.76	1	4
NFOB	219	2.03	0.64	1	4	15000	2.01	0.7	1	4
CRINDEX	219	6.3	1.67	3	10	15000	6.45	1.58	2	10
OSPOWER	219	11.03	2.16	4	14	15000	10.94	2.24	4	14
BCASSET	219	56.87	20.14	11.8	98.9	15000	53.2	22.12	11.8	100
GOVBANK	219	20.62	21.2	0	75.27	15000	21.15	21.5	0	97.1
FORBANK	219	35.78	32.72	0	99.3	15000	28.22	28.64	0	100
GDPPC($)	219	10695.8	11941.2	325.55	53489.99	15000	13445	13874.1	100.49	53489.99
MSHARE1	212	0.15	0.33	0	2.77	14287	0.09	1.07	0	74.72
MSHARE2	211	0.13	0.29	0	2.3	14158	0.06	0.45	0	30.5
MSHARE3	211	0.08	0.2	0	1.72	14063	0.05	0.67	-0.02	54.84
MSHARE4	211	0.11	0.24	0	1.97	13988	0.05	0.5	0	34.74
STMKTCAP	215	0.46	0.4	0.01	2.12	14324	0.55	0.51	0	2.69
OPEN	215	80.78	51.02	15.86	326.6	14827	79.84	58.7	14.93	326.6
INF	219	5.26	5.77	-8.18	44.25	15000	6.89	18.96	-13.97	948.55

Table 5(a) Pull Regression

Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	CTIR	ROAA	E_TA	logTA	NIM	OVER3AR	BONF	NFOB	CRINDEX	OSPOWER	BCASSET	OPEN
	1.00	-0.40	0.06	-0.16	-0.04	-0.01	-0.02	-0.04	0.01	-0.06	0.00	-0.09
CTIR		(0.00)	(0.00)	(0.00)	(0.00)	(0.19)	(0.03)	(0.00)	(0.11)	(0.00)	(0.70)	(0.00)
	-0.40	1.00	0.14	-0.03	0.16	0.03	-0.02	-0.02	-0.01	0.06	0.04	0.01
ROAA	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.06)	(0.53)	(0.00)	(0.00)	(0.48)
	0.06	0.14	1.00	-0.38	0.16	-0.03	-0.09	-0.08	-0.02	0.00	0.01	-0.09
E_TA	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.06)	(0.87)	(0.09)	(0.00)
	-0.16	-0.03	-0.38	1.00	-0.17	0.01	0.07	0.11	-0.01	0.01	-0.06	0.02
logTA	(0.00)	(0.00)	(0.00)		(0.00)	(0.45)	(0.00)	(0.00)	(0.52)	(0.16)	(0.00)	(0.01)
	-0.04	0.16	0.16	-0.17	1.00	0.08	0.01	-0.05	0.00	0.06	0.03	-0.14
NIM	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)	(0.11)	(0.00)	(0.56)	(0.00)	(0.00)	(0.00)
	-0.01	0.03	-0.03	0.01	0.08	1.00	0.44	0.31	-0.09	0.06	0.27	-0.18
OVER3AR	0.19	0.00	0.00	0.45	0.00		0.00	0.00	0.00	0.00	0.00	0.00
	-0.02	-0.02	-0.09	0.07	0.01	0.44	1.00	0.24	-0.16	0.15	0.15	-0.01
BONF	(0.03)	(0.01)	(0.00)	(0.00)	(0.11)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.28)
	-0.04	-0.02	-0.08	0.11	-0.05	0.31	0.24	1.00	-0.07	-0.21	0.09	0.20
NFOB	(0.00)	(0.06)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)
	0.01	-0.01	-0.02	-0.01	0.00	-0.09	-0.16	-0.07	1.00	0.05	-0.03	-0.06
CRINDEX	(0.11)	(0.53)	(0.06)	(0.52)	(0.56)	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)
	-0.06	0.06	0.00	0.01	0.06	0.06	0.15	-0.21	0.05	1.00	-0.11	0.08
OSPOWER	(0.00)	(0.00)	(0.87)	(0.16)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)
	0.00	0.04	0.01	-0.06	0.03	0.27	0.15	0.09	-0.03	-0.11	1.00	-0.06
BCASSET	(0.70)	(0.00)	(0.09)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)

Table 5(b) Pull Regression

Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	GOVBANK	FORBANK	LLAGGDPPC	STMKTCAP	INF	MSHARE1	MSHARE2	MSHARE3	MSHARE4
	0.02	-0.03	0.01	-0.06	-0.01	-0.01	-0.02	-0.01	-0.02
CTIR	(0.05)	(0.00)	(0.53)	(0.00)	(0.31)	(0.09)	(0.01)	(0.14)	(0.04)
	-0.02	0.02	-0.08	-0.01	0.09	0.00	0.01	0.00	0.01
ROAA	(0.03)	(0.02)	(0.00)	(0.26)	(0.00)	(0.58)	(0.28)	(0.61)	(0.38)
	0.03	-0.02	-0.03	-0.03	0.03	-0.02	-0.04	-0.02	-0.03
E_TA	(0.00)	(0.06)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)
	-0.04	-0.07	0.31	0.20	-0.11	0.03	0.07	0.03	0.05
logTA	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	0.06	-0.01	-0.18	-0.14	0.23	-0.01	-0.01	-0.01	-0.02
NIM	(0.00)	(0.15)	(0.00)	(0.00)	(0.00)	(0.20)	(0.22)	(0.12)	(0.06)
	0.07	-0.01	-0.51	-0.39	0.10	0.03	0.05	0.03	0.04
OVER3AR	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.11	-0.06	-0.22	-0.17	0.10	0.03	0.04	0.03	0.04
BONF	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.12	0.08	-0.12	0.00	0.02	0.01	0.02	0.01	0.02
NFOB	(0.00)	(0.00)	(0.00)	(0.64)	(0.03)	(0.07)	(0.05)	(0.18)	(0.07)
	-0.05	-0.02	0.00	-0.02	-0.04	0.00	0.00	0.00	0.00
CRINDEX	(0.00)	(0.00)	(0.88)	(0.04)	(0.00)	(0.64)	(0.64)	(0.92)	(0.91)
	-0.05	0.25	-0.13	-0.02	0.07	0.05	0.05	0.04	0.05
OSPOWER	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.20	0.00	-0.20	-0.06	0.06	0.03	0.07	0.03	0.05
BCASSET	(0.00)	(0.57)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 5(c) Pull Regression

Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	CTIR	ROAA	E_TA	logTA	NIM	OVER3AR	BONF	NFOB	CRINDEX	OSPOWER	BCASSET	OPEN
	0.02	-0.02	0.03	-0.04	0.06	0.07	0.11	-0.12	-0.05	-0.05	-0.20	-0.33
GOVBANK	(0.05)	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.03	0.02	-0.02	-0.07	-0.01	-0.01	-0.06	0.08	-0.02	0.25	0.00	0.61
FORBANK	(0.00)	(0.02)	(0.06)	(0.00)	(0.15)	(0.16)	(0.00)	(0.00)	(0.00)	(0.00)	(0.57)	(0.00)
	0.01	-0.08	-0.03	0.31	-0.18	-0.51	-0.22	-0.12	0.00	-0.13	-0.20	0.26
LLAGGDPPC	(0.53)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.88)	(0.00)	(0.00)	(0.00)
	-0.09	0.01	-0.09	0.02	-0.14	-0.18	-0.01	0.20	-0.06	0.08	-0.06	1.00
OPEN	0.00	0.48	0.00	0.01	0.00	0.00	0.28	0.00	0.00	0.00	0.00	
	-0.06	-0.01	-0.03	0.20	-0.14	-0.39	-0.17	0.00	-0.02	-0.02	-0.06	0.38
STMKTCAP	(0.00)	(0.26)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.64)	(0.04)	(0.01)	(0.00)	(0.00)
	-0.01	0.09	0.03	-0.11	0.23	0.10	0.10	0.02	-0.04	0.07	0.06	-0.04
INF	(0.31)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.01	0.00	-0.02	0.03	-0.01	0.03	0.03	0.01	0.00	0.05	0.03	0.02
MSHARE1	(0.09)	(0.58)	(0.00)	(0.00)	(0.20)	(0.00)	(0.00)	(0.07)	(0.64)	(0.00)	(0.00)	(0.05)
	-0.02	0.01	-0.04	0.07	-0.01	0.05	0.04	0.02	0.00	0.05	0.07	0.02
MSHARE2	(0.01)	(0.28)	(0.00)	(0.00)	(0.22)	(0.00)	(0.00)	(0.05)	(0.64)	(0.00)	(0.00)	(0.02)
	-0.01	0.00	-0.02	0.03	-0.01	0.03	0.03	0.01	0.00	0.04	0.03	0.00
MSHARE3	(0.14)	(0.61)	(0.02)	(0.00)	(0.12)	(0.00)	(0.00)	(0.18)	(0.92)	(0.00)	(0.00)	(0.76)
	-0.02	0.01	-0.03	0.05	-0.02	0.04	0.04	0.02	0.00	0.05	0.05	0.01
MSHARE4	(0.04)	(0.38)	(0.00)	(0.00)	(0.06)	(0.00)	(0.00)	(0.07)	(0.91)	(0.00)	(0.00)	(0.14)

Table 5(d) Pull Regression

Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	GOVBANK	FORBANK	LLAGGDPPC	STMKTCAP	INF	MSHARE1	MSHARE2	MSHARE3	MSHARE4
	1.00	-0.36	-0.30	-0.29	0.06	-0.03	-0.05	-0.02	-0.04
GOVBANK		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
	-0.36	1.00	0.03	0.15	0.00	0.02	0.03	0.01	0.02
FORBANK	(0.00)		(0.00)	(0.00)	(0.74)	(0.04)	(0.00)	(0.23)	(0.00)
	-0.30	0.03	1.00	0.54	-0.24	-0.06	-0.08	-0.06	-0.07
LLAGGDPPC	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.33	0.61	0.26	0.38	-0.04	0.02	0.02	0.00	0.01
OPEN	0.00	0.00	0.00	0.00	0.00	0.05	0.02	0.76	0.14
	-0.29	0.15	0.54	1.00	-0.10	0.04	-0.02	-0.03	-0.03
STMKTCAP	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
	0.06	0.00	-0.24	-0.10	1.00	0.01	0.01	0.01	0.01
INF	(0.00)	(0.74)	(0.00)	(0.00)		(0.28)	(0.21)	(0.32)	(0.23)
	-0.03	0.02	-0.06	0.04	0.01	1.00	0.88	0.97	0.97
MSHARE1	(0.00)	(0.04)	(0.00)	(0.00)	(0.28)		(0.00)	(0.00)	(0.00)
	-0.05	0.03	-0.08	-0.02	0.01	0.88	1.00	0.81	0.96
MSHARE2	(0.00)	(0.00)	(0.00)	(0.01)	(0.21)	(0.00)		(0.00)	(0.00)
	-0.02	0.01	-0.06	-0.03	0.01	0.97	0.81	1.00	0.94
MSHARE3	(0.01)	(0.23)	(0.00)	(0.00)	(0.32)	(0.00)	(0.00)		(0.00)
	-0.04	0.02	-0.07	-0.03	0.01	0.97	0.96	0.94	1.00
MSHARE4	(0.00)	(0.00)	(0.00)	(0.00)	(0.23)	(0.00)	(0.00)	(0.00)	

Table 6(a) Pull Regression: All Samples

Parameter	Model 1 Coeff. (Std. Err.)	Model 2 Coeff. (Std. Err.)	Model 3 Coeff. (Std. Err.)	Model 4 Coeff. (Std. Err.)	Model 5 Coeff. (Std. Err.)	Model 6 Coeff. (Std. Err.)
Intercept	-6.397***	-8.640***	-7.438***	-10.546***	-10.239***	-7.390***
	(0.269)	(0.787)	(0.698)	(1.580)	(1.592)	(1.799)
CTIR	0.002***	0.003***	0.003***	0.003***	0.002**	0.002**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ROAA	0.008	0.016	0.017	0.018	0.012	0.006
	(0.018)	(0.021)	(0.021)	(0.021)	(0.022)	(0.022)
logTA	0.266***	0.397***	0.335***	0.341***	0.389***	0.432***
	(0.024)	(0.036)	(0.033)	(0.033)	(0.035)	(0.038)
E_TA	0.001	0.008	0.004	0.004	0.007	0.008
	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
NIM	0.003	0.001	0.001	0.001	0.001	-0.001
	(0.002)	(0.003)	(0.004)	(0.004)	(0.005)	(0.008)
OVER3AR		0.102**	0.084*	0.089**	0.023	-0.024
		(0.042)	(0.043)	(0.044)	(0.047)	(0.048)
BONF		-0.261**	-0.333***	-0.358***	-0.342***	-0.290***
		(0.106)	(0.109)	(0.110)	(0.111)	(0.111)
NFOB		-0.052	-0.032	-0.045	-0.033	-0.114
		(0.110)	(0.112)	(0.112)	(0.118)	(0.116)
CRINDEX		-0.049	-0.06	0.434*	0.546**	0.513**
		(0.043)	(0.042)	(0.226)	(0.228)	(0.223)
OSPOWER		0.005	0.054	0.334**	0.384***	0.338**
		(0.034)	(0.035)	(0.131)	(0.132)	(0.131)

Table 6(b) Pull Regression: All Samples

Parameter	Model 1 Coeff. (Std. Err.)	Model 2 Coeff. (Std. Err.)	Model 3 Coeff. (Std. Err.)	Model 4 Coeff. (Std. Err.)	Model 5 Coeff. (Std. Err.)	Model 6 Coeff. (Std. Err.)
BCASSET		0.012***	0.010***	0.010***	0.009***	0.007
		(0.004)	(0.003)	(0.003)	(0.003)	(0.004)
GOVBANK		0.011***	0.004	0.003	-0.003	-0.009**
		(0.004)	(0.003)	(0.003)	(0.004)	(0.004)
FORBANK		0.016***				
		(0.003)				
CRINDEX*OSPOWER				-0.044**	-0.055***	-0.053***
				(0.020)	(0.020)	(0.020)
STMKTCAP					-1.127***	-0.880***
					(0.230)	(0.228)
LLAGGDPPC						-0.250***
						(0.076)
Observations	33007	15219	15219	15219	14539	14539
Pseudo R2	0.05	0.09	0.06	0.06	0.08	0.08
HL Statistics	0.015	0.285	0.547	0.034	0.581	0.456

Model (1) through (6) are estimated using binomial logistic regressions, where the dependent variable equals one if the bank has been cross-border acquired and zero otherwise. CTIR, ROA, logTA, E_TA and NIM are bank specific variables. OVER3AR, BONF, NFOB, CRINDEX, OSPOWER, BCASSET, GOVBANK and FORBANK are country specific bank regulatory variables. Data on bank specific variables are from BankScope. Bank regulatory variables are computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent. Pseudo R2 is reported as reference for prediction power of the models. Hosmer-Lemeshow (HL) statistic is reported as reference for goodness of fit of the models.

Table 7(a) Market Power Hypothesis

	Asset	Deposit	Loan	Deposit and Loan
Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
Intercept	-7.365*** (1.821)	-7.506*** (1.824)	-7.500*** (1.823)	-7.556*** (1.824)
CTIR	0.002** (0.001)	0.003** (0.001)	0.003** (0.001)	0.002** (0.001)
ROAA	0.007 (0.022)	0.009 (0.023)	0.005 (0.023)	0.005 (0.023)
logTA	0.420*** (0.040)	0.415*** (0.041)	0.427*** (0.041)	0.423*** (0.041)
E_TA	0.009 (0.006)	0.01 (0.006)	0.011* (0.006)	0.012* (0.007)
NIM	0 (0.006)	0 (0.006)	0.004 (0.014)	0.004 (0.014)
OVER3AR	-0.017 (0.050)	-0.015 (0.050)	-0.016 (0.050)	-0.015 (0.050)
BONF	-0.277** (0.111)	-0.297*** (0.112)	-0.295*** (0.112)	-0.293*** (0.112)
NFOB	-0.121 (0.120)	-0.09 (0.121)	-0.1 (0.121)	-0.094 (0.121)
CRINDEX	0.510 ** (0.226)	0.496** (0.226)	0.492** (0.225)	0.490** (0.226)
OSPOWER	0.329** (0.132)	0.327** (0.132)	0.323** (0.132)	0.321** (0.132)
BCASSET	0.006 (0.004)	0.006 (0.004)	0.006 (0.004)	0.006 (0.004)
GOVBANK	-0.008* (0.004)	-0.007* (0.004)	-0.008* (0.004)	-0.007* (0.004)
CRINDEX* OSPOWER	-0.052*** (0.020)	-0.051** (0.020)	-0.051* (0.020)	-0.051** (0.020)
STMKTCAP	-0.881*** (0.232)	-0.863*** (0.232)	-0.852*** (0.233)	-0.856*** (0.233)
LLAGGDPPC	-0.237*** (0.078)	-0.221*** (0.079)	-0.227*** (0.079)	-0.219*** (0.079)

Table 7(b) Market Power Hypothesis

	Asset	Deposit	Loan	Deposit and Loan
Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
MSHARE1	0.350 * (0.205)			
MSHARE2		0.501* (0.263)		
MSHARE3			0.505 (0.385)	
MSHARE4				0.529* (0.319)
Observations	13990	13873	13766	13704
Pseudo R2	0.08	0.08	0.08	0.08
HL Statistics	0.42	0.265	0.107	0.228

Models are estimated using binomial logistic regressions, where the dependent variable equals one if the bank has been cross-border acquired and zero otherwise. CTIR, ROA, logTA, E_TA and NIM are bank specific variables. OVER3AR, BONF, NFOB, CRINDEX, OSPOWER, BCASSET, GOVBANK and FORBANK are country specific bank regulatory variables. MSHARE1 through 4 are market share variables calculated using data from Bankscope and IFS. Data on bank specific variables are from BankScope. Bank regulatory variables are computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent. Pseudo R2 is reported as reference for prediction power of the models. Hosmer-Lemeshow(HL) statistic is reported as reference for goodness of fit of the models.

Table 8 Pull Regression: Percentile Statistics:

Target Banks						
Percentile	100%	99%	95%	90%	75%	50%
TA(Million$)	1014920.40	829540.90	422867.10	121520.90	12856.90	2148.80
GOVBABK	75.27	75.27	66.60	46.84	39.97	12.30
GDPPC($)	53489.99	51590.18	37227.27	25966.62	16027.24	5022.60
Control Banks						
TA(Million$)	1483247.70	155283.80	22212.93	9848.21	2159.20	477.10
GOVBABK	97.10	75.27	64.70	45.20	39.99	13.30
GDPPC($)	53489.99	49996.10	40413.01	35947.37	23560.36	5489.60

Target Banks						
Percentile	50%	25%	10%	5%	1%	0%
TA(Million$)	2148.80	336.30	66.60	33.40	10.50	8.50
GOVBABK	12.30	0.30	0.00	0.00	0.00	0.00
GDPPC($)	5022.60	2122.32	1022.31	636.53	425.30	325.55
Control Banks						
TA(Million$)	477.10	131.50	46.40	24.80	7.87	0.50
GOVBABK	13.30	1.10	0.00	0.00	0.00	0.00
GDPPC($)	5489.60	2118.37	636.12	419.41	270.86	100.49

Table 9: Pull Regression: Total Asset above US $1 Billion

	Target Banks					Control Banks				
Variable	N	Mean	Std Dev	Minimum	Maximum	N	Mean	Std Dev	Minimum	Maximum
E_TA	137	7.54	3.67	0.43	21.12	5408	7.72	7.08	-35.16	99.22
NIM	137	3.78	2.98	0.52	14.37	5408	3.58	13.16	-17.32	918.31
ROAA	137	0.98	1.37	-7.15	6.13	5408	0.80	2.86	-111.13	73.01
CTIR	137	66.24	26.44	14.46	233.12	5408	63.30	35.94	0.16	936.91
TA(Million$)	137	79160.48	183857.76	1033.10	1014920.40	5408	22127.37	87625.94	1001.50	1483247.70
OVER3AR	137	7.00	1.73	3.00	10.00	5408	6.75	1.95	3.00	11.00
BONF	137	2.42	0.72	1.00	4.00	5408	2.44	0.72	1.00	4.00
NFOB	137	2.06	0.64	1.00	3.00	5408	2.12	0.69	1.00	4.00
CRINDEX	137	6.42	1.67	3.00	10.00	5408	6.47	1.56	2.00	10.00
OSPOWER	137	11.11	2.21	6.00	14.00	5408	10.97	2.18	4.00	14.00
BCASSET	137	56.63	20.74	11.80	98.90	5408	52.01	22.44	11.80	100.00
GOVBANK	137	21.95	22.01	0.00	75.27	5408	20.66	23.41	0.00	97.10
FORBANK	137	33.72	33.88	0.00	99.30	5408	25.99	29.83	0.00	100.00
GDPPC($)	137	12664.55	12936.24	419.41	53489.99	5408	18091.81	15256.55	325.06	53489.99
MSHARE2	136	0.19	0.34	0.00	2.30	5230	0.08	0.19	0.00	3.71
MSHARE3	136	0.12	0.24	0.00	1.72	5204	0.06	0.14	0.00	3.25
MSHARE1	136	0.22	0.40	0.00	2.77	5234	0.11	0.26	0.00	6.02
MSHARE4	136	0.15	0.28	0.00	1.97	5204	0.07	0.16	0.00	3.52
STMKTCAP	137	0.52	0.39	0.05	2.12	5374	0.66	0.46	0.00	2.69
OPEN	133	81.63	58.56	15.86	326.60	5320	80.90	70.55	14.93	326.60
INF	137	4.26	4.09	-8.18	20.53	5408	4.69	10.53	-13.97	377.78

Table 10: Pull Regression: Per Capita GDP between US $1000 and $10000

	Target Banks					Control Banks				
Variable	N	Mean	Std Dev	Minimum	Maximum	N	Mean	Std Dev	Minimum	Maximum
E_TA	123	12.66	10.92	2.79	90.34	6794	16.85	23.51	-812.37	100.00
NIM	123	6.20	5.91	0.64	47.29	6794	7.34	14.03	-266.67	918.31
ROAA	123	1.03	2.61	-14.97	13.29	6794	1.23	4.89	-111.13	62.56
CTIR	123	82.08	69.46	14.46	655.00	6794	74.37	61.42	0.00	960.53
TA(Million$)	123	5610.51	12158.18	10.30	92580.80	6794	1997.21	6305.67	0.50	138665.70
OVER3AR	123	7.27	1.58	3.00	11.00	6794	7.40	1.65	3.00	12.00
BONF	123	2.35	0.82	1.00	4.00	6794	2.45	0.83	1.00	4.00
NFOB	123	1.79	0.53	1.00	3.00	6794	1.89	0.65	1.00	4.00
CRINDEX	123	6.05	1.61	3.00	10.00	6794	6.21	1.70	2.00	10.00
OSPOWER	123	11.62	2.07	4.00	14.00	6794	11.35	2.28	4.00	14.00
BCASSET	123	62.37	14.97	11.80	98.90	6794	57.25	19.18	11.80	100.00
GOVBANK	123	21.27	20.08	0.00	75.20	6794	23.68	20.01	0.00	95.78
FORBANK	123	49.45	31.90	0.00	99.30	6794	34.64	25.69	0.00	100.00
GDPPC($)	123	3930.96	1894.46	1022.31	9929.88	6794	3946.59	2048.11	1000.25	9980.81
MSHARE2	121	0.14	0.34	0.00	2.30	6553	0.06	0.14	0.00	3.06
MSHARE3	121	0.10	0.25	0.00	1.72	6524	0.04	0.11	0.00	2.01
MSHARE1	122	0.16	0.40	0.00	2.77	6621	0.06	0.17	0.00	2.91
MSHARE4	121	0.12	0.29	0.00	1.97	6487	0.05	0.12	0.00	2.33
STMKTCAP	121	0.29	0.27	0.01	2.12	6428	0.34	0.34	0.00	2.53
OPEN	123	85.50	44.65	15.86	174.40	6756	73.41	44.00	14.93	244.47
INF	123	6.98	6.47	-1.84	44.25	6794	9.73	16.60	-13.97	948.55

Table 11: Pull Regression: Government Bank Ownership Below 20%

	Target Banks					Control Banks				
Variable	N	Mean	Std Dev	Minimum	Maximum	N	Mean	Std Dev	Minimum	Maximum
E_TA	130	10.89	8.17	2.79	51.58	8741	13.25	21.16	-812.37	100.00
NIM	130	3.92	2.67	-1.07	18.99	8741	4.48	6.69	-266.67	139.13
ROAA	130	1.10	1.50	-4.49	7.89	8741	1.15	3.62	-83.41	73.17
CTIR	130	72.33	41.11	16.09	412.68	8741	69.02	47.58	0.00	982.54
TA(Million$)	130	39944.47	124964.36	10.50	927696.10	8741	9721.75	58021.00	0.50	1471132.30
OVER3AR	130	6.94	1.78	3.00	11.00	8741	6.74	2.14	3.00	12.00
BONF	130	2.42	0.72	1.00	4.00	8741	2.38	0.72	1.00	4.00
NFOB	130	2.21	0.57	1.00	4.00	8741	2.16	0.69	1.00	4.00
CRINDEX	130	6.39	1.62	3.00	10.00	8741	6.45	1.71	2.00	10.00
OSPOWER	130	11.14	2.20	4.00	14.00	8741	11.07	2.31	4.00	14.00
BCASSET	130	60.02	20.03	20.80	98.90	8741	56.41	21.99	13.60	100.00
GOVBANK	130	5.32	6.19	0.00	19.80	8741	5.17	5.98	0.00	20.00
FORBANK	130	46.65	36.40	0.00	99.30	8741	36.75	32.87	0.00	100.00
GDPPC($)	130	12397.94	13619.71	425.30	53489.99	8741	16659.50	15714.12	100.49	53489.99
MSHARE2	124	0.17	0.36	0.00	2.30	8120	0.08	0.58	0.00	30.50
MSHARE3	124	0.11	0.25	0.00	1.72	8047	0.07	0.89	-0.02	54.84
MSHARE1	125	0.20	0.42	0.00	2.77	8184	0.13	1.41	0.00	74.72
MSHARE4	124	0.14	0.30	0.00	1.97	8016	0.07	0.66	0.00	34.74
STMKTCAP	128	0.52	0.48	0.01	2.12	8280	0.69	0.62	0.00	2.69
OPEN	126	99.09	56.84	20.49	326.60	8605	98.13	68.27	18.97	326.60
INF	130	4.84	4.18	-8.18	21.55	8741	5.83	22.45	-13.97	948.55

Table 12(a) Pull Regression: Robust Tests

	Large Banks	Emerging Markets	More Privatized	Stability
Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
Intercept	-8.530***	-6.631**	-11.021***	-6.880***
	(2.462)	(2.908)	(2.386)	(1.820)
CTIR	0.003	0.003**	0.003	0.003**
	(0.002)	(0.001)	(0.002)	(0.001)
ROAA	0.045	-0.005	0.021	0.009
	(0.040)	(0.022)	(0.033)	(0.023)
logTA	0.516***	0.440***	0.421***	0.432***
	(0.059)	(0.062)	(0.050)	(0.038)
E_TA	0.003	0.005	0.01	0.009
	(0.015)	(0.008)	(0.007)	(0.006)
NIM	-0.003	0	-0.040*	0.001
	(0.017)	(0.008)	(0.022)	(0.005)
OVER3AR	-0.013	-0.011	-0.101*	-0.031
	(0.068)	(0.066)	(0.057)	(0.048)
BONF	-0.202	-0.260*	-0.08	-0.289***
	(0.158)	(0.138)	(0.154)	(0.110)
NFOB	-0.148	-0.478***	0.035	-0.135
	(0.156)	(0.173)	(0.148)	(0.117)
CRINDEX	0.665**	0.546	1.001***	0.490**
	(0.299)	(0.336)	(0.285)	(0.223)
OSPOWER	0.403**	0.346*	0.607***	0.331**
	(0.173)	(0.193)	(0.172)	(0.131)
BCASSET	0.009*	0.018***	0.011**	0.008**
	(0.005)	(0.006)	(0.005)	(0.004)
GOVBANK	-0.010*	-0.012*	0.027	-0.009**
	(0.005)	(0.006)	(0.017)	(0.004)
CRINDEX* OSPOWER	-0.062**	-0.057**	-0.090***	-0.051***
	(0.026)	(0.028)	(0.025)	(0.020)
STMKTCAP	-0.887***	-1.356***	-0.852**	-0.893***
	(0.290)	(0.418)	(0.246)	(0.229)

Table 12(b) Pull Regression: Robust Tests

	Large Banks	Emerging Markets	Less Privatized	Stability
Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
LLAGGDPPC	-0.355***	-0.321*	-0.288***	-0.284***
	(0.105)	(0.182)	(0.100)	(0.077)
INF				-0.016*
				(0.009)
ZSCORE				0.008
				(0.018)
Observations	5511	6549	8408	14499
Pseudo R2	0.08	0.09	0.08	0.08
HL Statistics	0.467	0.746	0.776	0.442

Models are estimated using binomial logistic regressions, where the dependent variable equals one if the bank has been cross-border acquired and zero otherwise. CTIR, ROA, logTA, E_TA and NIM are bank specific variables. OVER3AR, BONF, NFOB, CRINDEX, OSPOWER, BCASSET, GOVBANK and FORBANK are country specific bank regulatory variables. Data on bank specific variables are from BankScope. Bank regulatory variables are computed from World Bank Survey I/II/III under project “Bank Regulation and Supervision”. Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent. Pseudo R2 is reported as reference for prediction power of the models. Hosmer-Lemeshow (HL) statistic is reported as reference for goodness of fit of the models.

Table 13(a) Push Regression

Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	CTIR	ROAA	E_TA	logTA	NIM	OVER3AR	BONF	NFOB	CRINDEX	OSPOWER	BCASSET	OPEN
	1.00	-0.39	0.08	-0.16	-0.04	-0.02	-0.02	-0.05	0.01	-0.06	0.00	-0.09
CTIR		(0.00)	(0.00)	(0.00)	(0.00)	(0.06)	(0.03)	(0.00)	(0.17)	(0.00)	(0.60)	(0.00)
	-0.39	1.00	0.15	-0.03	0.15	0.03	-0.02	-0.01	-0.01	0.06	0.02	0.00
ROAA	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.20)	(0.33)	(0.00)	(0.00)	(0.57)
	0.08	0.15	1.00	-0.45	0.15	-0.02	-0.08	-0.10	-0.01	0.01	0.02	-0.11
E_TA	(0.00)	(0.00)		(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.27)	(0.15)	(0.01)	(0.00)
	-0.16	-0.03	-0.45	1.00	-0.17	0.00	0.07	0.13	0.01	-0.01	-0.06	0.03
logTA	(0.00)	(0.00)	(0.00)		(0.00)	(0.76)	(0.00)	(0.00)	(0.12)	(0.24)	(0.00)	(0.00)
	-0.04	0.15	0.15	-0.17	1.00	0.08	0.02	-0.06	-0.01	0.08	0.01	-0.14
NIM	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)	(0.01)	(0.00)	(0.22)	(0.00)	(0.08)	(0.00)
	-0.02	0.03	-0.02	0.00	0.08	1.00	0.44	0.32	-0.08	0.09	0.24	-0.16
OVER3AR	(0.06)	(0.00)	(0.01)	(0.76)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.02	-0.02	-0.08	0.07	0.02	0.44	1.00	0.23	-0.14	0.14	0.14	-0.04
BONF	(0.03)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.05	-0.01	-0.10	0.13	-0.06	0.32	0.23	1.00	-0.03	-0.19	0.08	0.21
NFOB	(0.00)	(0.20)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)
	0.01	-0.01	-0.01	0.01	-0.01	-0.08	-0.14	-0.03	1.00	0.03	-0.03	-0.04
CRINDEX	(0.17)	(0.33)	(0.27)	(0.12)	(0.22)	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)
	-0.06	0.06	0.01	-0.01	0.08	0.09	0.14	-0.19	0.03	1.00	-0.16	0.06
OSPOWER	(0.00)	(0.00)	(0.15)	(0.24)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)
	0.00	0.02	0.02	-0.06	0.01	0.24	0.14	0.08	-0.03	-0.16	1.00	-0.06
BCASSET	(0.60)	(0.00)	(0.01)	(0.00)	(0.08)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)		(0.00)

Table 13(b)
Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	GOVBANK	FORBANK	LLAGGDPPC	STMKTCAP	INF	MSHARE1	MSHARE2	MSHARE3	MSHARE4
	0.02	-0.04	0.01	-0.06	-0.01	-0.02	-0.02	-0.02	-0.02
CTIR	(0.04)	(0.00)	(0.53)	(0.00)	(0.29)	(0.06)	(0.01)	(0.08)	(0.02)
	-0.02	0.02	-0.08	-0.01	0.08	0.01	0.01	0.01	0.01
ROAA	(0.02)	(0.02)	(0.00)	(0.55)	(0.00)	(0.49)	(0.24)	(0.46)	(0.30)
	0.04	-0.03	-0.04	-0.04	0.03	-0.03	-0.05	-0.03	-0.04
E_TA	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.03	-0.06	0.29	0.19	-0.10	0.05	0.09	0.05	0.07
logTA	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	0.06	-0.02	-0.18	-0.14	0.23	-0.01	-0.01	-0.01	-0.02
NIM	(0.00)	(0.07)	(0.00)	(0.00)	(0.00)	(0.20)	(0.21)	(0.10)	(0.05)
	0.04	0.03	-0.53	-0.39	0.11	0.03	0.05	0.04	0.04
OVER3AR	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	0.13	-0.08	-0.24	-0.17	0.11	0.03	0.04	0.03	0.03
BONF	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.12	0.13	-0.11	0.01	0.02	0.02	0.02	0.02	0.02
NFOB	(0.00)	(0.00)	(0.00)	(0.14)	(0.03)	(0.02)	(0.04)	(0.05)	(0.03)
	-0.05	-0.01	0.00	0.00	-0.02	0.00	-0.01	0.00	0.00
CRINDEX	(0.00)	(0.25)	(0.80)	(0.89)	(0.01)	(0.89)	(0.42)	(0.74)	(0.60)
	-0.05	0.24	-0.17	-0.02	0.07	0.04	0.04	0.04	0.04
OSPOWER	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.20	0.00	-0.16	-0.06	0.04	0.04	0.07	0.05	0.06
BCASSET	(0.00)	(0.90)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 13(c)

Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	CTIR	ROAA	E_TA	logTA	NIM	OVER3AR	BONF	NFOB	CRINDEX	OSPOWER	BCASSET	OPEN
	0.02	-0.02	0.04	-0.03	0.06	0.04	0.13	-0.12	-0.05	-0.05	-0.20	-0.35
GOVBANK	(0.04)	(0.02)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.04	0.02	-0.03	-0.06	-0.02	0.03	-0.08	0.13	-0.01	0.24	0.00	0.63
FORBANK	(0.00)	(0.02)	(0.00)	(0.00)	(0.07)	(0.00)	(0.00)	(0.00)	(0.25)	(0.00)	(0.90)	(0.00)
	0.01	-0.08	-0.04	0.29	-0.18	-0.53	-0.24	-0.11	0.00	-0.17	-0.16	0.29
LLAGGDPPC	(0.53)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.80)	(0.00)	(0.00)	(0.00)
	-0.09	0.00	-0.11	0.03	-0.14	-0.16	-0.04	0.21	-0.04	0.06	-0.06	1.00
OPEN	(0.00)	(0.57)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	
	-0.06	-0.01	-0.04	0.19	-0.14	-0.39	-0.17	0.01	0.00	-0.02	-0.06	0.39
STMKTCAP	(0.00)	(0.55)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.14)	(0.89)	(0.01)	(0.00)	(0.00)
	-0.01	0.08	0.03	-0.10	0.23	0.11	0.11	0.02	-0.02	0.07	0.04	-0.04
INF	(0.29)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.03)	(0.01)	(0.00)	(0.00)	(0.00)
	-0.02	0.01	-0.03	0.05	-0.01	0.03	0.03	0.02	0.00	0.04	0.04	0.03
MSHARE1	(0.06)	(0.49)	(0.00)	(0.00)	(0.20)	(0.00)	(0.00)	(0.02)	(0.89)	(0.00)	(0.00)	(0.00)
	-0.02	0.01	-0.05	0.09	-0.01	0.05	0.04	0.02	-0.01	0.04	0.07	0.03
MSHARE2	(0.01)	(0.24)	(0.00)	(0.00)	(0.21)	(0.00)	(0.00)	(0.04)	(0.42)	(0.00)	(0.00)	(0.00)
	-0.02	0.01	-0.03	0.05	-0.01	0.04	0.03	0.02	0.00	0.04	0.05	0.01
MSHARE3	(0.08)	(0.46)	(0.00)	(0.00)	(0.10)	(0.00)	(0.00)	(0.05)	(0.74)	(0.00)	(0.00)	(0.09)
	-0.02	0.01	-0.04	0.07	-0.02	0.04	0.03	0.02	0.00	0.04	0.06	0.03
MSHARE4	(0.02)	(0.30)	(0.00)	(0.00)	(0.05)	(0.00)	(0.00)	(0.03)	(0.60)	(0.00)	(0.00)	(0.00)

Table 13(d)
Pearson Correlation Coefficients, Prob > |r| under Ho: Rho=0

	GOVBANK	FORBANK	LLAGGDPPC	STMKTCAP	INF	MSHARE1	MSHARE2	MSHARE3	MSHARE4
	1.00	-0.38	-0.30	-0.28	0.06	-0.04	-0.05	-0.03	-0.04
GOVBANK		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.38	1.00	0.04	0.15	0.00	0.03	0.05	0.03	0.04
FORBANK	(0.00)		(0.00)	(0.00)	(0.79)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.30	0.04	1.00	0.54	-0.23	-0.05	-0.07	-0.06	-0.06
LLAGGDPPC	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
	-0.35	0.63	0.29	0.39	-0.04	0.03	0.03	0.01	0.03
OPEN	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.09)	(0.00)
	-0.28	0.15	0.54	1.00	-0.09	0.04	-0.02	-0.03	-0.02
STMKTCAP	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.03)	(0.00)	(0.01)
	0.06	0.00	-0.23	-0.09	1.00	0.01	0.01	0.01	0.01
INF	(0.00)	(0.79)	(0.00)	(0.00)		(0.35)	(0.26)	(0.33)	(0.28)
	-0.04	0.03	-0.05	0.04	0.01	1.00	0.94	0.97	0.97
MSHARE1	(0.00)	(0.00)	(0.00)	(0.00)	(0.35)		(0.00)	(0.00)	(0.00)
	-0.05	0.05	-0.07	-0.02	0.01	0.94	1.00	0.92	0.99
MSHARE2	(0.00)	(0.00)	(0.00)	(0.03)	(0.26)	(0.00)		(0.00)	(0.00)
	-0.03	0.03	-0.06	-0.03	0.01	0.97	0.92	1.00	0.97
MSHARE3	(0.00)	(0.00)	(0.00)	(0.00)	(0.33)	(0.00)	(0.00)		(0.00)
	-0.04	0.04	-0.06	-0.02	0.01	0.97	0.99	0.97	1.00
MSHARE4	(0.00)	(0.00)	(0.00)	(0.01)	(0.28)	(0.00)	(0.00)	(0.00)	

Table 14 Push Regression: Percentile Statistics:

Acquirer Banks						
Percentile	100%	99%	95%	90%	75%	50%
TA(Million$)	1483247.70	1179390.00	829540.90	631216.20	371134.20	90268.26
GOVBANK	75.27	74.00	45.20	42.20	31.82	0.18
GDPPC($)	51590.18	37791.50	37084.45	35959.76	25451.71	23559.57
Control Banks						
TA(Million$)	1379706.20	85633.40	19086.80	8725.40	2015.70	467.05
GOVBANK	97.10	80.00	66.70	46.10	39.99	13.30
GDPPC($)	53489.99	51590.18	40413.01	35828.41	23365.95	5370.25

Acquirer Banks						
Percentile	50%	25%	10%	5%	1%	0%
TA(Million$)	90268.26	8013.84	1111.40	545.70	61.90	44.00
GOVBANK	0.18	0.00	0.00	0.00	0.00	0.00
GDPPC($)	23559.57	9854.56	3497.90	1204.53	439.50	402.27
Control Banks						
TA(Million$)	467.05	128.95	46.40	24.79	7.80	0.50
GOVBANK	13.30	1.10	0.00	0.00	0.00	0.00
GDPPC($)	5370.25	2049.06	588.37	403.44	263.77	100.49

Table 15: Push Regression: Total Asset Above US $10 Billion

	Acquirer Banks					Control Banks				
Variable	N	Mean	Std Dev	Minimum	Maximum	N	Mean	Std Dev	Minimum	Maximum
E_TA	136	5.49	2.28	2.39	11.47	1290	5.91	5.34	-16.48	91.69
NIM	136	2.30	1.96	0.62	11.40	1290	3.43	25.74	-6.00	918.31
ROAA	136	0.80	0.74	-0.99	3.37	1290	0.42	1.83	-27.90	13.87
CTIR	136	65.97	11.78	29.14	116.83	1290	60.89	23.29	7.01	404.64
TA(Million$)	136	301870.49	302345.36	10422.62	1483247.70	1290	55408.35	126136.72	10009.02	1379706.20
OVER3AR	136	6.15	1.73	3.00	10.00	1290	7.02	1.67	3.00	10.00
BONF	136	2.24	0.53	1.00	3.00	1290	2.54	0.63	1.00	4.00
NFOB	136	2.24	0.67	1.00	3.00	1290	2.24	0.67	1.00	4.00
CRINDEX	136	6.32	1.84	3.00	10.00	1290	6.46	1.47	2.00	10.00
OSPOWER	136	10.10	2.45	6.00	14.00	1290	10.89	2.13	5.00	14.00
BCASSET	136	57.83	26.29	11.80	100.00	1290	50.25	22.11	11.80	100.00
GOVBANK	136	15.96	21.64	0.00	75.27	1290	16.34	22.24	0.00	90.00
FORBANK	136	11.93	17.56	0.00	99.30	1290	23.49	30.66	0.00	99.30
GDPPC($)	136	22553.89	10524.43	468.96	51590.18	1290	23669.72	15771.88	392.92	53489.99
MSHARE2	117	0.31	0.35	0.01	2.30	1264	0.14	0.30	0.00	3.71
MSHARE3	117	0.18	0.24	0.00	1.72	1258	0.09	0.19	0.00	3.25
MSHARE1	117	0.32	0.37	0.01	2.26	1264	0.19	0.41	0.00	6.02
MSHARE4	117	0.24	0.28	0.00	1.97	1258	0.11	0.24	0.00	3.52
STMKTCAP	118	0.78	0.47	0.14	2.62	1285	0.74	0.41	0.14	2.69
OPEN	113	77.87	40.19	18.97	297.24	1263	76.45	79.49	14.93	326.60
INF	118	2.99	5.50	-8.18	49.23	1287	3.15	7.56	-4.90	54.18

Table 16(a): Push Regression: Total Asset Above US $10 Billion

Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
Intercept	-13.606***	-19.070***	-19.799***	-15.511***	-14.637***	-8.869***	-8.881***
	(0.725)	(2.082)	(2.317)	(3.104)	(3.073)	(3.411)	(3.415)
CTIR	0.005*	0.007	0.008	0.007	0.007	0.01	0.01
	(0.003)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
ROAA	0.412***	0.422***	0.404***	0.408***	0.416***	0.376***	0.377***
	(0.085)	(0.104)	(0.102)	(0.103)	(0.103)	(0.111)	(0.112)
E_TA	-0.023	0.026	0.036	0.043	0.043	0.038	0.036
	(0.025)	(0.041)	(0.036)	(0.034)	(0.035)	(0.040)	(0.042)
logTA	0.973***	1.342***	1.375***	1.373***	1.395***	1.502***	1.505***
	(0.056)	(0.115)	(0.123)	(0.122)	(0.124)	(0.134)	(0.135)
NIM	-0.079	-0.003	0	0	0	-0.002	-0.002
	(0.048)	(0.030)	(0.011)	(0.011)	(0.011)	(0.020)	(0.026)
OVER3AR		-0.206*	-0.184*	-0.840**	-0.998***	-0.979***	-0.984***
		(0.106)	(0.104)	(0.367)	(0.376)	(0.359)	(0.361)
BONF		-0.875***	-0.889***	-0.874***	-0.850***	-0.615*	-0.605*
		(0.314)	(0.311)	(0.318)	(0.318)	(0.316)	(0.321)
NFOB		0.717***	0.671***	0.678***	0.718***	0.564**	0.558**
		(0.238)	(0.245)	(0.249)	(0.254)	(0.256)	(0.257)
CRINDEX		0.054	0.054	-0.503*	-0.621**	-0.539*	-0.543*
		(0.068)	(0.071)	(0.303)	(0.305)	(0.292)	(0.293)
OSPOWER		0.07	0.059	0.035	0.035	-0.038	-0.042
		(0.076)	(0.077)	(0.078)	(0.078)	(0.079)	(0.081)

Table 16(b): Push Regression: Total Asset Above US $10 Billion

Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
BCASSET		0.024***	0.024***	0.021***	0.021***	0.016**	0.016**
		(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)
GOVBANK		0.020***	0.023***	0.020***	0.016**	-0.004	-0.005
		(0.006)	(0.007)	(0.007)	(0.007)	(0.010)	(0.010)
OPEN			0.004*	0.003	0.005**	0.007***	0.007***
			(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
OVER3AR*CRINDEX				0.095*	0.116**	0.099**	0.099**
				(0.051)	(0.052)	(0.049)	(0.050)
STMKTCAP					-0.526	-0.681*	-0.680*
					(0.353)	(0.347)	(0.347)
LLAGGDPPC						-0.617***	-0.611***
						(0.193)	(0.195)
INF							0.005
							(0.021)
Observations	3662	1405	1376	1376	1374	1374	1374
Pseudo R2	0.26	0.46	0.46	0.46	0.48	0.48	0.48
HL Statistics	0.453	0.151	0.386	0.836	0.443	0.371	0.358

Models are estimated using binomial logistic regressions, where the dependent variable equals one if the bank is cross-border acquirer and zero otherwise. CTIR, ROA, logTA, E_TA and NIM are bank specific variables. OVER3AR, BONF, NFOB, CRINDEX, OSPOWER, BCASSET, GOVBANK and FORBANK are country specific bank regulatory variables. Data on bank specific variables are from BankScope. Bank regulatory variables are computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 17: Push Regression: Total Asset Above US $35 Billion

	Acquirer Banks					Control Banks				
Variable	N	Mean	Std Dev	Minimum	Maximum	N	Mean	Std Dev	Minimum	Maximum
E_TA	111	4.98	1.97	2.39	11.11	366	5.02	2.41	-16.48	17.62
NIM	111	1.97	1.57	0.71	11.40	366	2.49	3.20	-0.30	30.81
ROAA	111	0.65	0.66	-0.99	3.07	366	0.32	1.32	-18.74	3.28
CTIR	111	67.97	10.34	34.61	116.83	366	61.51	15.04	14.05	149.45
TA(Million$)	111	364878.60	300634.73	37039.07	1483247.70	366	149458.49	209035.76	35067.70	1379706.20
OVER3AR	111	5.84	1.62	3.00	10.00	366	6.84	1.58	3.00	10.00
BONF	111	2.18	0.53	1.00	3.00	366	2.46	0.59	1.00	3.00
NFOB	111	2.22	0.68	1.00	3.00	366	2.26	0.65	1.00	3.00
CRINDEX	111	6.22	1.93	3.00	10.00	366	6.58	1.63	2.00	10.00
OSPOWER	111	9.84	2.45	6.00	14.00	366	10.63	2.20	6.00	14.00
BCASSET	111	57.93	26.07	11.80	100.00	366	50.03	23.79	11.80	100.00
GOVBANK	111	15.46	20.73	0.00	74.00	366	12.52	18.99	0.00	75.27
FORBANK	111	9.51	10.08	0.00	96.06	366	15.05	22.02	0.00	98.00
GDPPC($)	111	23902.39	8420.00	588.37	37791.50	366	26391.71	13134.27	468.96	53489.99
MSHARE2	97	0.31	0.31	0.01	1.58	364	0.16	0.24	0.00	1.67
MSHARE3	97	0.16	0.20	0.00	1.23	364	0.10	0.15	0.00	0.87
MSHARE1	97	0.31	0.35	0.01	2.14	364	0.21	0.37	0.00	2.21
MSHARE4	97	0.23	0.25	0.00	1.43	364	0.12	0.18	0.00	0.93
STMKTCAP	98	0.80	0.46	0.14	2.62	365	0.76	0.41	0.14	2.69
OPEN	93	73.86	31.59	18.97	172.77	360	59.71	64.11	18.97	326.60
INF	98	1.99	1.82	-1.73	8.96	365	2.82	8.56	-2.88	54.18

Table 18(a): Push Regression: Total Asset Above US $35 Billion

Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
Intercept	-13.562***	-19.836***	-19.715***	-13.301***	-10.985**	-6.913	-5.843
	(1.126)	(3.191)	(3.476)	(4.537)	(4.754)	(5.459)	(5.649)
CTIR	0.012**	0.026*	0.022	0.017	0.017	0.021	0.021
	(0.006)	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)
ROAA	0.713***	1.388***	1.046**	0.874**	1.038**	0.949**	0.907*
	(0.155)	(0.386)	(0.420)	(0.422)	(0.443)	(0.457)	(0.477)
E_TA	-0.062*	-0.023	0.013	0.018	0	0.006	-0.002
	(0.032)	(0.131)	(0.142)	(0.144)	(0.148)	(0.147)	(0.151)
logTA	0.942***	1.370***	1.378***	1.431***	1.454***	1.480***	1.477***
	(0.084)	(0.190)	(0.198)	(0.203)	(0.204)	(0.207)	(0.206)
NIM	-0.111	-0.154	-0.083	-0.021	-0.044	-0.078	0.015
	(0.072)	(0.131)	(0.144)	(0.148)	(0.153)	(0.156)	(0.182)
OVER3AR		-0.392**	-0.382**	-1.396**	-1.748***	-1.670***	-1.685***
		(0.161)	(0.158)	(0.540)	(0.587)	(0.592)	(0.593)
BONF		-0.531	-0.621	-0.763	-0.75	-0.571	-0.561
		(0.573)	(0.593)	(0.594)	(0.582)	(0.583)	(0.596)
NFOB		0.810**	0.812**	0.872***	0.891***	0.792**	0.795**
		(0.320)	(0.324)	(0.331)	(0.337)	(0.340)	(0.339)
CRINDEX		0.019	0.032	-0.777*	-1.068**	-0.995**	-0.976**
		(0.088)	(0.095)	(0.413)	(0.450)	(0.453)	(0.453)
OSPOWER		0.083	0.055	-0.004	-0.003	-0.024	-0.045
		(0.105)	(0.108)	(0.112)	(0.109)	(0.108)	(0.112)

Table 18(b): Push Regression: Total Asset Above US $35 Billion

Parameter	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)	Coeff. (Std. Err.)
BCASSET		0.014*	0.015**	0.01	0.01	0.008	0.008
		(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)
GOVBANK		0.018*	0.019*	0.014	0.006	-0.006	-0.009
		(0.010)	(0.010)	(0.010)	(0.011)	(0.014)	(0.014)
OPEN			0.002	0.002	0.003	0.005	0.007
			(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
OVER3AR*CRINDEX				0.145**	0.195**	0.177**	0.177**
				(0.072)	(0.079)	(0.081)	(0.081)
STMKTCAP					-0.741*	-0.901**	-0.857*
					(0.444)	(0.458)	(0.460)
LLAGGDPPC						-0.445	-0.546*
						(0.295)	(0.319)
INF							-0.088
							(0.102)
Observations	1343	463	453	453	453	453	453
Pseudo R2	0.24	0.47	0.46	0.47	0.48	0.48	0.49
HL Statistics	0.129	0.57	0.484	0.36	0.617	0.745	0.433

Models have been estimated using binomial logistic regressions, where the dependent variable equals one if the bank is cross-border acquirer and zero otherwise. CTIR, ROA, logTA, E_TA and NIM are bank specific variables. OVER3AR, BONF, NFOB, CRINDEX, OSPOWER, BCASSET, GOVBANK and FORBANK are country specific bank regulatory variables. Data on bank specific variables are from BankScope. Bank regulatory variables are computed from World Bank Survey I/II/III under project “Bank Regulation and Supervision”. Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percentage.

Table 19(a) Variable Defination and Source

Note: Please refer to Appendix A and B for survey questions.

Variable	Definition	Description	Source
Financing Obstacle Variable			
Financing	An index ranging from 1 to 4 measuring firm's financing obstacle	Can you tell me how problematic are these different factors for the operation and growth of your Business: (1) no obstacle, (2) minor obstacle, (3) moderate obstacle, (4) major obstacle ?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 1999, 2002, 2005,
Access	An index ranging from 1 to 4 measuring firm's access to finance obstacle		
Cost	An index ranging from 1 to 4 measuring firm's cost of finance obstacle		
Financing Pattern Variable			
Finequ_f	Percentage of firm's financing for new fixed investment over the last year from sale of stocks	What proportion of your firm's and new fixed investment has been financed from each of the following sources, over the last 12 months?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 1999, 2002, 2005
Findom_f	Percentage of firm's financing for new fixed investment over the last year from domestic bank loans		
Finfor_f	Percentage of firm's financing for new fixed investment over the last year from foreign bank loans		

Table 19(b) Variable Defination and Source

Finmon_f	Percentage of firm's financing for new fixed investment over the last year from money lenders		
Finsta_f	Percentage of firm's financing for new fixed investment over the last year from the government		
Finequ_w	Percentage of firm's financing for working capital over the last year from sale of stocks	What proportion of your firm's working capital has been financed from each of the following sources, over the last 12 months?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 2002, 2005
Findom_w	Percentage of firm's financing for working capital over the last year from domestic bank loans		
Finfor_w	Percentage of firm's financing for working capital over the last year from foreign bank loans		
Finsta2_w	Percentage of firm's financing for working capital over the last year from state-owned bank loans		
Finmon_w	Percentage of firm's financing for working capital over the last year from money lenders		
Fingov_w	Percentage of firm's financing for working capital over the last year from the government other than state-owned banks		

Table 19(c) Variable Defination and Source

Access to Loan Variable			
Collateral	Percentage of loan value required in collateral value	Thinking of the most recent loan you obtained from a financial institution: (1) what was the approximate value of the collateral required as a percentage of the loan value? (2) what is the loan's annual cost (i.e., rate of interest)? (3) what is the duration of the loan in months? (4) how many days did it take to agree the loan with the bank from the date of application?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 2002, 2005
Interestrate	Percentage rate of interest for the loan		
Duration	Duration of the loan in months		
Approvalday	Days the bank takes to agree the loan from the date of application.		
Stloan	An index ranging from 1 to 5 measuring firm's easiness to obtain short- term working capital loan	How easy would it be for your firm to obtain a short-term working capital loan on commercial terms. And how easy would it be for your firm to obtain a longer term banking loan for new investment: (1) impossible, (2) very difficult, (3) fairly difficult, (4) fairly easy, (5) very easy?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 2002
Ltloan	An index ranging from 1 to 5 measuring firm's easiness to obtain long- term new investment loan		
Firm Characteristic Variable			
Costeffi	Percentage of firm's sales price exceeding operating costs	Considering your main product line or main line of services in the domestic market, by what margin does your sales price exceed your operating costs (i.e., the cost material inputs plus wage costs but not overheads and depreciation) ?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 1999, 2002, 2005

Table 19(d) Variable Defination and Source

Transparency	An indicator valued 1 if firm's accounting practices are transparent, and 0 otherwise	Does your firm use international accounting standards (IAS): (1) yes, (2) no?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 1999, 2002, 2005
Audit	An indicator valued 1 if firm's financial statement is checked by an external auditor, and 0 otherwise	Does your firm have its annual financial statement checked and certified by an external auditor: (1) yes, (2) no?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 1999, 2002, 2005
Size	An indicator ranging from 1 to 3, measuring if firm's full-time employees are less than 50, 250 or more	How many full-time employees work for this company: (1) 2-49, (2) 50-249, (3) 250 or more?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 2002, 2005
Foreign	The percentage of firm's total assets that are hold by private foreign company or organization	What percentage of your firm is owned by: (1) private foreign company/organisation, (2) private domestic company/organisation, (3) government/State?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 2002, 2005
Manufacturing	Percentage of sales from manufacturing	What percentage of your sales comes from the following sectors in which your establishment operates: (1) mining and quarrying, (2) construction, (3) manufacturing, (4) transport storage and communication, (5) wholesale, retail, repairs, (6) real estate, renting and business services, (7) hotels and restaurants?	EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), 2002, 2005

Table 19(e) Variable Defination and Source

Institutional Quality Variable			
Accountability	An index ranging from -2.5 to 2.5 measuring voice and accountability, higher value indicating better outcome	The extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media	World Bank Governance Indicators, Kaufmann, Kraay and Mastruzzi (2008)
Political	An index ranging from -2.5 to 2.5 measuring political stability and absence of violence, higher value indicating better outcome	Perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including political violence and terrorism	
Egovernment	An index ranging from -2.5 to 2.5 measuring government effectiveness, higher value indicating better outcome	The quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies	
Regulatory	An index ranging from -2.5 to 2.5 measuring regulatory quality, higher value indicating better outcome	The ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development	
Law	An index ranging from -2.5 to 2.5 measuring rule of law, higher value indicating better outcome	The extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence	

Table 19(f) Variable Defination and Source

Ccorruption	An index ranging from -2.5 to 2.5 measuring control of corruption, higher value indicating better outcome	The extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests	
Polity2	An index ranging from -10 (strongly autocratic) to 10 (strongly democratic) measuring country's authority pattern		Polity IV Project: Political Regime Characteristics and Transitions, 1800-2007, Marshall and Jaggers (2007)
Financial Sector Variable			
Stmktcap	Ratio of country's stock market capitalization to total GDP measuring equity market development		International Financial Statistics, 2008
Llgdp	Ratio of country's liquidity liability to total GDP measuring financial development		
Pcrdbgdp	Ratio fo country's private credit by deposit money bank to GDP measuring banking sector development		
Npl_ta	Percentage of country' non-performing loans to total banking assets		World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision", Barth, Caprio and Levine (2006)

Table 19(g) Variable Defination and Source

Bank Regulatory Variable			
Crindex	Capital regulatory index measuring stringency of capital requirment, higher value indicating greater stringency	(a) + (b) (a) Overall capital stringency: WBG3.1.1+3.2+3.3+3.9.1+3.9.2+3.9.3+(1 if 3.7<0.75); Yes=1; No=0 (b) Initial capital stringency: WBG1.5+1.6+1.7; WBG1.5: Yes=0, No=1; WBG1.6&1.7: Yes=1, No=0 (see appendix a)	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision", Barth, Caprio and Levine (2006)
Mcar	Minimum Capital-Asset Ratio	WBG3.1: What is the minimum capital-asset ratio requirement?	
Overbank	Overall restrictiveness on bank activities and bank owning nonfinancial firms, higher values indicating more restrictiveness	WBG 4.1-4.4: What is the level of regulatory restrictiveness for bank participation in securities, insurance and real estate activities, and for bank ownership of nonfinancial firms: (1) Unrestricted, (2) Permitted, (3) Restricted, (4) Prohibited?	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision", Barth, Caprio and Levine (2006)
Nbffob	The extent to which nonbank financial firms may own and control commercial banks, higher values indicating more restrictiveness	WBG2.5: What is the level of regulatory restrictiveness for nonbank financial firms ownership of banks: (1) Unrestricted, (2) Permitted, (3) Restricted, (4) Prohibited?	
Nfob	The extent to which nonfinancial firms may own and control commercial banks, higher values indicating more restrictiveness	WBG2.3: What is the level of regulatory restrictiveness for nonfinancial firms ownership of banks: (1) Unrestricted, (2) Permitted, (3) Restricted, (4) Prohibited?	

Table 19(h) Variable Defination and Source

Fstrans	The transparency of bank financial statement practices, higher values indicate better transparency	WBG 10.1+10.3+10.4.1+10.5+10.6+(10.1.1-1)*(-1); Yes=1, No=0 (see appendix a)	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision", Barth, Caprio and Levine (2006)
Bcdepo	The percentage of deposits that are held by the five largest banks, measuring banking sector concentration in deposits	WBG 2.6.1: of commercial banks in your country, what fraction of deposits is held by the five largest banks?	
Forbank	The fraction of the banking assets is in banks that are 50% or more foreign owned	WBG 3.8.1-3.8.2: What fraction of the banking system's assets is in banks that are 50% or more government owned? 50% or more foreign owned?	
Govbank	The fraction of the banking assets is in banks that are 50% or more government owned		
Mulsup	An indicator equals 1 if there are multiple bank regulators and 0 if there is only one regulators	WBG 12.1: Is there more than one supervisory body supervises banks?	World Bank Survey I/II/III under World Bank Project "Bank Regulation and Supervision", Barth, Caprio and Levine (2006)
Singlefsa	An indicator equals 1 if there is only one regulators for all main financial institutions and zero if there are multiple regulators.	WBG 12.1.4: Is there a single financial supervisory agency for all of the main financial institutions (insurance companies, contractual savings institutions, savings banks)?	
Indpoli	The degree to which supervisory authority is independent within the government from political influence	WBG 12.2: To whom are the supervisory bodies responsible or accountable? If (c) then equal 1, others then equals 0.	

Table 20(a) Financing Obstacle Analysis by Order

	Variable	Cost					Access					Financing			
		N	Mean	Min	Max		N	Mean	Min	Max		N	Mean	Min	Max
1	transparency	1883	0.321	0.000	1.000	1	2639	0.315	0.000	1.000	1	1662	0.318	0.000	1.000
	audit	1883	0.504	0.000	1.000		2639	0.519	0.000	1.000		1662	0.511	0.000	1.000
	costeffi	1883	21.202	0.000	100.000		2639	20.861	0.000	400.000		1662	20.945	0.000	100.000
	operationyear	1883	15.695	3.000	138.000		2639	15.429	3.000	180.000		1662	15.658	3.000	138.000
	size	1883	1.442	1.000	3.000		2639	1.471	1.000	3.000		1662	1.452	1.000	3.000
	foreign	1883	12.099	0.000	100.000		2639	13.114	0.000	100.000		1662	12.895	0.000	100.000
	manufacturing	1883	0.292	0.000	1.000		2639	0.324	0.000	1.000		1662	0.298	0.000	1.000
	npl_ta	1883	5.962	0.100	30.000		2639	6.484	0.100	30.000		1662	6.035	0.100	30.000
	egovernment	1883	0.251	-0.894	1.109		2639	0.231	-0.894	1.109		1662	0.247	-0.894	1.109
	overafc	1883	13.378	9.000	19.000		2639	13.410	9.000	19.000		1662	13.351	9.000	19.000
	bcdepo	1883	68.169	35.500	99.400		2639	67.688	35.500	99.400		1662	68.175	35.500	99.400
	forbank	1883	51.954	3.470	99.300		2639	51.437	3.470	99.300		1662	52.182	3.470	99.300
	stmktcap	1883	0.202	0.004	0.534		2639	0.204	0.004	0.534		1662	0.206	0.004	0.534
	llgdp	1883	0.378	0.128	0.681		2639	0.379	0.128	0.681		1662	0.377	0.128	0.681
	pcrdbgdp	1883	0.272	0.039	0.564		2639	0.274	0.039	0.564		1662	0.272	0.039	0.564
2	transparency	1594	0.321	0.000	1.000	2	1463	0.314	0.000	1.000	2	1381	0.331	0.000	1.000
	audit	1594	0.537	0.000	1.000		1463	0.483	0.000	1.000		1381	0.529	0.000	1.000
	costeffi	1594	21.282	0.000	400.000		1463	21.280	1.000	100.000		1381	21.567	0.000	400.000
	operationyear	1594	15.147	3.000	180.000		1463	15.176	3.000	202.000		1381	15.233	3.000	180.000
	size	1594	1.456	1.000	3.000		1463	1.402	1.000	3.000		1381	1.469	1.000	3.000

Table 20(b) Financing Obstacle Analysis by Order

Variable		Cost				Access				Financing			
		N	Mean	Min	Max	N	Mean	Min	Max	N	Mean	Min	Max
	foreign	1594	11.695	0.000	100.000	1463	10.076	0.000	100.000	1381	11.851	0.000	100.000
	manufacturing	1594	0.364	0.000	1.000	1463	0.393	0.000	1.000	1381	0.360	0.000	1.000
	npl_ta	1594	6.928	0.100	30.000	1463	7.292	0.100	30.000	1381	7.025	0.100	30.000
	egovernment	1594	0.247	-0.894	1.109	1463	0.208	-0.894	1.109	1381	0.208	-0.894	1.109
	overafc	1594	13.428	9.000	19.000	1463	13.398	9.000	19.000	1381	13.505	9.000	19.000
	bcdepo	1594	67.295	35.500	99.400	1463	65.741	35.500	99.400	1381	67.171	35.500	99.400
	forbank	1594	51.119	3.470	99.300	1463	49.379	3.470	99.300	1381	48.061	3.470	99.300
	stmktcap	1594	0.204	0.004	0.534	1463	0.196	0.004	0.534	1381	0.199	0.004	0.534
	llgdp	1594	0.391	0.128	0.681	1463	0.386	0.128	0.681	1381	0.384	0.128	0.681
	pcrdbgdp	1594	0.275	0.039	0.564	1463	0.261	0.039	0.564	1381	0.271	0.039	0.564
	transparency	2071	0.263	0.000	1.000	1777	0.259	0.000	1.000	2127	0.277	0.000	1.000
	audit	2071	0.455	0.000	1.000	1777	0.450	0.000	1.000	2127	0.463	0.000	1.000
	costeffi	2071	20.824	0.000	170.000	1777	21.538	0.000	170.000	2127	21.215	0.000	170.000
	operationyear	2071	15.315	3.000	202.000	1777	14.929	3.000	202.000	2127	15.047	3.000	202.000
	size	2071	1.394	1.000	3.000	1777	1.365	1.000	3.000	2127	1.390	1.000	3.000
3	foreign	2071	9.556	0.000	100.000	1777	8.112	0.000	100.000	2127	9.813	0.000	100.000
	manufacturing	2071	0.407	0.000	1.000	1777	0.403	0.000	1.000	2127	0.394	0.000	1.000
	npl_ta	2071	6.848	0.100	30.000	1777	6.508	0.100	30.000	2127	6.685	0.100	30.000
	egovernment	2071	0.237	-0.894	1.109	1777	0.223	-0.894	1.109	2127	0.234	-0.894	1.109
	overafc	2071	13.404	9.000	19.000	1777	13.287	9.000	19.000	2127	13.388	9.000	19.000
	bcdepo	2071	65.933	35.500	99.400	1777	65.086	35.500	99.400	2127	66.285	35.500	99.400
	forbank	2071	53.216	3.470	99.300	1777	52.570	3.470	99.300	2127	52.330	3.470	99.300

Table 20(c) Financing Obstacle Analysis by Order

	Variable	Cost					Access					Financing			
		N	Mean	Min	Max		N	Mean	Min	Max		N	Mean	Min	Max
	stmktcap	2071	0.197	0.004	0.534		1777	0.197	0.004	0.534		2127	0.199	0.004	0.534
	llgdp	2071	0.386	0.128	0.681		1777	0.382	0.128	0.681		2127	0.383	0.128	0.681
	pcrdbgdp	2071	0.259	0.039	0.564		1777	0.254	0.039	0.564		2127	0.260	0.039	0.564
	transparency	1881	0.211	0.000	1.000		1481	0.196	0.000	1.000		2362	0.215	0.000	1.000
	audit	1881	0.407	0.000	1.000		1481	0.406	0.000	1.000		2362	0.418	0.000	1.000
	costeffi	1881	20.949	1.000	200.000		1481	20.632	1.000	200.000		2362	20.694	1.000	200.000
	operationyear	1881	14.859	3.000	202.000		1481	15.022	3.000	167.000		2362	15.043	3.000	202.000
	size	1881	1.325	1.000	3.000		1481	1.314	1.000	3.000		2362	1.334	1.000	3.000
	foreign	1881	5.982	0.000	100.000		1481	5.311	0.000	100.000		2362	6.122	0.000	100.000
	manufacturing	1881	0.435	0.000	1.000		1481	0.418	0.000	1.000		2362	0.418	0.000	1.000
4	npl_ta	1881	7.540	0.100	30.000	4	1481	7.206	0.100	30.000	4	2362	7.253	0.100	30.000
	egovernment	1881	0.218	-0.894	1.109		1481	0.262	-0.894	1.109		2362	0.238	-0.894	1.109
	overafc	1881	13.128	9.000	19.000		1481	13.163	9.000	19.000		2362	13.169	9.000	19.000
	bcdepo	1881	63.292	35.500	99.400		1481	64.037	35.500	99.400		2362	63.842	35.500	99.400
	forbank	1881	55.761	3.470	99.300		1481	58.027	3.470	99.300		2362	56.612	3.470	99.300
	stmktcap	1881	0.192	0.004	0.534		1481	0.197	0.004	0.534		2362	0.195	0.004	0.534
	llgdp	1881	0.385	0.128	0.681		1481	0.394	0.128	0.681		2362	0.390	0.128	0.681
	pcrdbgdp	1881	0.253	0.039	0.564		1481	0.258	0.039	0.564		2362	0.256	0.039	0.564

Table 21(a) Correlation Matrix for Financing Obstacle Analysis

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0

	transparency	audit	costeffi	operationyear	size	foreign	manufacturing	npl_ta	overafc	bcdepo
transparency	1.000	0.251	-0.041	0.073	0.211	0.210	-0.013	-0.163	-0.059	0.167
		(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.257)	(0.000)	(0.000)	(0.000)
audit	0.251	1.000	-0.047	0.190	0.345	0.187	0.062	-0.098	-0.046	0.100
	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
costeffi	-0.041	-0.047	1.000	-0.030	-0.045	0.021	-0.012	-0.029	0.003	-0.032
	(0.001)	(0.000)		(0.010)	(0.000)	(0.074)	(0.319)	(0.012)	(0.806)	(0.005)
operationyear	0.073	0.190	-0.030	1.000	0.375	-0.027	0.127	-0.045	-0.054	-0.055
	(0.000)	(0.000)	(0.010)		(0.000)	(0.018)	(0.000)	(0.000)	(0.000)	(0.000)
size	0.211	0.345	-0.045	0.375	1.000	0.165	0.156	-0.023	0.005	0.010
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.049)	(0.685)	(0.367)
foreign	0.210	0.187	0.021	-0.027	0.165	1.000	0.041	-0.025	0.004	0.056
	(0.000)	(0.000)	(0.074)	(0.018)	(0.000)		(0.000)	(0.030)	(0.731)	(0.000)
manufacturing	-0.013	0.062	-0.012	0.127	0.156	0.041	1.000	0.149	0.047	-0.052
	(0.257)	(0.000)	(0.319)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
npl_ta	-0.163	-0.098	-0.029	-0.045	-0.023	-0.025	0.149	1.000	0.214	0.190
	(0.000)	(0.000)	(0.012)	(0.000)	(0.049)	(0.030)	(0.000)		(0.000)	(0.000)
overafc	-0.059	-0.046	0.003	-0.054	0.005	0.004	0.047	0.214	1.000	0.195
	(0.000)	(0.000)	(0.806)	(0.000)	(0.685)	(0.731)	(0.000)	(0.000)		(0.000)

Table 21(b) Correlation Matrix for Financing Obstacle Analysis

	transparency	audit	costeffi	operationyear	size	foreign	manufacturing	npl_ta	overafc	bcdepo
bcdepo	0.167	0.100	-0.032	-0.055	0.010	0.056	-0.052	0.190	0.195	1.000
	(0.000)	(0.000)	(0.005)	(0.000)	(0.367)	(0.000)	(0.000)	(0.000)	(0.000)	
forbank	0.010	0.099	0.004	0.066	-0.019	0.047	-0.030	-0.205	-0.028	0.304
	(0.366)	(0.000)	(0.714)	(0.000)	(0.099)	(0.000)	(0.009)	(0.000)	(0.014)	(0.000)
stmktcap	-0.122	0.036	0.066	-0.003	0.001	-0.023	-0.030	-0.184	-0.229	-0.130
	(0.000)	(0.002)	(0.000)	(0.765)	(0.905)	(0.050)	(0.011)	(0.000)	(0.000)	(0.000)
llgdp	-0.042	0.053	0.024	0.071	-0.003	0.029	-0.080	-0.042	0.016	0.066
	(0.000)	(0.000)	(0.037)	(0.000)	(0.775)	(0.013)	(0.000)	(0.000)	(0.170)	(0.000)
pcrdbgdp	-0.074	0.078	0.049	0.074	-0.014	0.022	-0.013	0.063	0.092	0.240
	(0.000)	(0.000)	(0.000)	(0.000)	(0.216)	(0.056)	(0.279)	(0.000)	(0.000)	(0.000)
egovernment	-0.027	0.114	0.038	0.070	-0.023	0.040	-0.057	-0.202	-0.151	0.283
	(0.018)	(0.000)	(0.001)	(0.000)	(0.051)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
law	-0.006	0.121	0.034	0.072	-0.021	0.044	-0.041	-0.129	-0.094	0.312
	(0.576)	(0.000)	(0.004)	(0.000)	(0.072)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ccorruption	-0.006	0.124	0.043	0.088	-0.020	0.043	-0.051	-0.196	-0.133	0.293
	(0.581)	(0.000)	(0.000)	(0.000)	(0.080)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
polity2	-0.026	0.045	0.013	0.099	-0.006	0.021	-0.088	-0.474	-0.388	-0.124
	(0.028)	(0.000)	(0.275)	(0.000)	(0.631)	(0.069)	(0.000)	(0.000)	(0.000)	(0.000)
institution	-0.021	0.115	0.031	0.072	-0.021	0.045	-0.046	-0.147	-0.085	0.324
	(0.070)	(0.000)	(0.009)	(0.000)	(0.067)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
lgdp	-0.228	-0.012	0.039	-0.001	0.008	-0.030	0.014	0.043	-0.301	-0.391
	(0.000)	(0.300)	(0.001)	(0.935)	(0.493)	(0.010)	(0.213)	(0.000)	(0.000)	(0.000)

Table 21(c) Correlation Matrix for Financing Obstacle Analysis

Pearson Correlation Coefficients
Prob > |r| under H0: Rho=0

	forbank	stmktcap	llgdp	pcrdbgdp	egovernment	law	ccorruption	polity2	institution	lgdp
transparency	0.010	-0.122	-0.042	-0.074	-0.027	-0.006	-0.006	-0.026	-0.021	-0.228
	(0.366)	(0.000)	(0.000)	(0.000)	(0.018)	(0.576)	(0.581)	(0.028)	(0.070)	(0.000)
audit	0.099	0.036	0.053	0.078	0.114	0.121	0.124	0.045	0.115	-0.012
	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.300)
costeffi	0.004	0.066	0.024	0.049	0.038	0.034	0.043	0.013	0.031	0.039
	(0.714)	(0.000)	(0.037)	(0.000)	(0.001)	(0.004)	(0.000)	(0.275)	(0.009)	(0.001)
operationyear	0.066	-0.003	0.071	0.074	0.070	0.072	0.088	0.099	0.072	-0.001
	(0.000)	(0.765)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.935)
size	-0.019	0.001	-0.003	-0.014	-0.023	-0.021	-0.020	-0.006	-0.021	0.008
	(0.099)	(0.905)	(0.775)	(0.216)	(0.051)	(0.072)	(0.080)	(0.631)	(0.067)	(0.493)
foreign	0.047	-0.023	0.029	0.022	0.040	0.044	0.043	0.021	0.045	-0.030
	(0.000)	(0.050)	(0.013)	(0.056)	(0.001)	(0.000)	(0.000)	(0.069)	(0.000)	(0.010)
manufacturing	-0.030	-0.030	-0.080	-0.013	-0.057	-0.041	-0.051	-0.088	-0.046	0.014
	(0.009)	(0.011)	(0.000)	(0.279)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.213)
npl_ta	-0.205	-0.184	-0.042	0.063	-0.202	-0.129	-0.196	-0.474	-0.147	0.043
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
overafc	-0.028	-0.229	0.016	0.092	-0.151	-0.094	-0.133	-0.388	-0.085	-0.301
	(0.014)	(0.000)	(0.170)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table 21(d) Correlation Matrix for Financing Obstacle Analysis

	forbank	stmktcap	llgdp	pcrdbgdp	egovernment	law	ccorruption	polity2	institution	lgdp
bcdepo	0.304	-0.130	0.066	0.240	0.283	0.312	0.293	-0.124	0.324	-0.391
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
forbank	1.000	-0.095	0.536	0.441	0.724	0.721	0.739	0.560	0.781	-0.195
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
stmktcap	-0.095	1.000	0.219	0.328	0.173	0.069	0.139	0.288	0.075	0.640
	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
llgdp	0.536	0.219	1.000	0.708	0.732	0.710	0.718	0.563	0.694	0.250
	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
pcrdbgdp	0.441	0.328	0.708	1.000	0.622	0.598	0.683	0.281	0.630	0.111
	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
egovernment	0.724	0.173	0.732	0.622	1.000	0.968	0.968	0.677	0.976	0.163
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
law	0.721	0.069	0.710	0.598	0.968	1.000	0.976	0.642	0.981	0.112
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
ccorruption	0.739	0.139	0.718	0.683	0.968	0.976	1.000	0.656	0.981	0.093
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
polity2	0.560	0.288	0.563	0.281	0.677	0.642	0.656	1.000	0.647	0.245
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)
institution	0.781	0.075	0.694	0.630	0.976	0.981	0.981	0.647	1.000	0.088
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)
lgdp	-0.195	0.640	0.250	0.111	0.163	0.112	0.093	0.245	0.088	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	

Table 22 Financing Obstacle Analysis: without interaction term

financing	egovernment	law	ccorruption	polity2	institution
transparency	-0.102*	-0.076	-0.080	-0.067	-0.079
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
audit	-0.126**	-0.144**	-0.138**	-0.110*	-0.136**
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
costeffi	-0.002	-0.002	-0.002	-0.002	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
operationyear	-0.001	-0.001	-0.001	-0.002	-0.001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
size	-0.136***	-0.128***	-0.130***	-0.136***	-0.132***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
foreign	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.336***	0.322***	0.326***	0.327***	0.328***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
npl_ta	0.027***	0.030***	0.031***	0.038***	0.029***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
overafc	-0.024*	-0.008	-0.008	0.015	-0.012
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
bcdepo	-0.026***	-0.030***	-0.029***	-0.025***	-0.029***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
forbank	0.011***	0.009***	0.009***	0.007***	0.009***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 22 (continued)

financing	egovernment	law	ccorruption	polity2	institution
stmktcap	0.170	0.263	0.229	-0.174	0.215
	(0.20)	(0.20)	(0.20)	(0.21)	(0.20)
llgdp	0.895***	0.185	0.380	-0.204	0.438
	(0.26)	(0.26)	(0.24)	(0.26)	(0.24)
pcrdbgdp	-1.913***	-2.144***	-2.323***	-1.547***	-2.169***
	(0.27)	(0.27)	(0.28)	(0.27)	(0.27)
egovernment	-0.120				
	(0.07)				
law		0.256***			
		(0.06)			
ccorruption			0.230**		
			(0.07)		
polity2				0.059***	
				(0.01)	
institution					0.030**
					(0.01)
cut1	-3.054***	-3.494***	-3.420***	-2.546***	-3.353***
	(0.21)	(0.22)	(0.22)	(0.22)	(0.22)
cut2	-2.137***	-2.577***	-2.504***	-1.626***	-2.436***
	(0.21)	(0.22)	(0.22)	(0.22)	(0.21)
cut3	-0.888***	-1.325***	-1.253***	-0.371	-1.187***
	(0.21)	(0.21)	(0.22)	(0.22)	(0.21)

Table 22 (continued)

financing	egovernment	law	ccorruption	polity2	institution
N	7532	7532	7532	7532	7532
pseudo R^2	0.028	0.029	0.029	0.031	0.029
chi2	585.823	600.112	592.824	633.433	590.032

Note: Models are estimated using ordered logit regressions, where the dependent variable equals one to four. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 23 Financing Obstacle Analysis: with interaction term

obstacle	egovernment	law	ccorruption	Polity2	institution
transparency	-0.092	-0.096	-0.082	-0.017	-0.067
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
audit	-0.138**	-0.150**	-0.146**	-0.131**	-0.137**
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
costeffi	-0.001	-0.002	-0.002	-0.002	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
operationyear	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
size	-0.143***	-0.131***	-0.132***	-0.142***	-0.136***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
foreign	-0.005***	-0.005***	-0.005***	-0.005***	-0.005***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.348***	0.323***	0.323***	0.324***	0.327***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
npl_ta	-0.004	0.002	0.001	0.029***	-0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
nfob	-0.091	-0.099	-0.075	-0.035	-0.079
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
nbffob	-0.477***	-0.347***	-0.306***	-0.238*	-0.405***
	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)
overbnk	-0.004	-0.002	-0.017	0.061***	-0.000
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

Table 23 (continued)

obstacle	egovernment	law	ccorruption	Polity2	institution
bcdepo	-0.003	-0.007*	-0.006	-0.017***	-0.006
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
forbank	0.008***	0.006***	0.005***	0.005***	0.005***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
stmktcap	-0.673*	-0.117	-0.383	-0.791**	-0.252
	(0.26)	(0.27)	(0.27)	(0.27)	(0.27)
llgdp	0.234	-0.007	0.230	-0.688*	0.252
	(0.29)	(0.28)	(0.28)	(0.30)	(0.27)
pcrdbgdp	-0.527	-0.962**	-0.907**	-1.051***	-1.063***
	(0.30)	(0.31)	(0.33)	(0.29)	(0.31)
loggdp	0.180***	0.212***	0.274***	-0.103*	0.176***
	(0.02)	(0.03)	(0.03)	(0.05)	(0.03)
egovernment	-9.363***				
	(0.95)				
loggdpegovernment	0.373***				
	(0.04)				
law		-8.019***			
		(1.00)			
loggdplaw		0.327***			
		(0.04)			
ccorruption			-9.158***		
			(1.04)		
loggdpccorruption			0.376***		
			(0.04)		

Table 23 (continued)

obstacle	egovernment	law	ccorruption	Polity2	institution
polity2				-0.625***	
				(0.14)	
loggdppolity2				0.029***	
				(0.01)	
institution					-1.398***
					(0.15)
loggdpinstitution					0.057***
					(0.01)
cut1	1.625*	2.270**	3.840***	-4.846***	1.393
	(0.71)	(0.86)	(0.92)	(1.12)	(0.76)
cut2	2.552***	3.194***	4.765***	-3.922***	2.319**
	(0.71)	(0.86)	(0.92)	(1.12)	(0.76)
cut3	3.822***	4.458***	6.030***	-2.661*	3.585***
	(0.71)	(0.86)	(0.92)	(1.12)	(0.76)
N	7532	7532	7532	7532	7532
pseudo R^2	0.036	0.034	0.034	0.033	0.035
chi2	733.571	693.101	704.270	678.778	710.760

Note: Models are estimated using ordered logit regressions, where the dependent variable equals one to four. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project “Bank Regulation and Supervision”. Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 24(a) Marginal Effects for Financing Obstacle Analysis

egovernment	mfx1	mfx2	mfx3	mfx4
transparency (d)	0.015	0.007	-0.003	-0.019
audit (d)	0.022**	0.011**	-0.004**	-0.029**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.023***	0.011***	-0.004***	-0.030***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.055***	-0.027***	0.007***	0.075***
npl_ta	0.001	0.000	-0.000	-0.001
egovernment	1.519***	0.714***	-0.256***	-1.977***
loggdpegovernment	-0.061***	-0.028***	0.010***	0.079***
nfob	0.015	0.007	-0.002	-0.019
nbffob	0.077***	0.036***	-0.013***	-0.101***
overbnk	0.001	0.000	-0.000	-0.001
bcdepo	0.000	0.000	-0.000	-0.001
forbank	-0.001***	-0.001***	0.000***	0.002***
stmktcap	0.109*	0.051*	-0.018*	-0.142*
llgdp	-0.038	-0.018	0.006	0.049
pcrdbgdp	0.085	0.040	-0.014	-0.111
loggdp	-0.029***	-0.014***	0.005***	0.038***
N	7532	7532	7532	7532

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 24(b) Marginal Effects for Financing Obstacle Analysis

law	mfx1	mfx2	mfx3	mfx4
transparency (d)	0.016	0.007	-0.003	-0.020
audit (d)	0.024**	0.011**	-0.004**	-0.032**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.021***	0.010***	-0.004***	-0.028***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.051***	-0.025***	0.007***	0.069***
npl_ta	-0.000	-0.000	0.000	0.000
law	1.306***	0.608***	-0.219***	-1.695***
loggdplaw	-0.053***	-0.025***	0.009***	0.069***
nfob	0.016	0.008	-0.003	-0.021
nbffob	0.057***	0.026***	-0.009***	-0.073***
overbnk	0.000	0.000	-0.000	-0.001
bcdepo	0.001*	0.001*	-0.000*	-0.002*
forbank	-0.001***	-0.000***	0.000***	0.001***

Table 24(b) (continued)

law	mfx1	mfx2	mfx3	mfx4
stmktcap	0.019	0.009	-0.003	-0.025
llgdp	0.001	0.000	-0.000	-0.001
pcrdbgdp	0.157**	0.073**	-0.026**	-0.203**
loggdp	-0.035***	-0.016***	0.006***	0.045***
N	7532	7532	7532	7532

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 24(c) Marginal Effects for Financing Obstacle Analysis

ccorruption	mfx1	mfx2	mfx3	mfx4
transparency (d)	0.014	0.006	-0.002	-0.017
audit (d)	0.024**	0.011**	-0.004**	-0.031**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.022***	0.010***	-0.004***	-0.028***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.051***	-0.025***	0.007***	0.069***
npl_ta	-0.000	-0.000	0.000	0.000
nfob	0.012	0.006	-0.002	-0.016
nbffob	0.050***	0.023***	-0.008***	-0.065***
overbnk	0.003	0.001	-0.000	-0.004
bcdepo	0.001	0.000	-0.000	-0.001
forbank	-0.001***	-0.000***	0.000***	0.001***
stmktcap	0.062	0.029	-0.011	-0.081
llgdp	-0.037	-0.017	0.006	0.048
pcrdbgdp	0.148**	0.069**	-0.025**	-0.192**
loggdp	-0.045***	-0.021***	0.008***	0.058***
ccorruption	1.491***	0.695***	-0.251***	-1.935***
loggdpccorruption	-0.061***	-0.029***	0.010***	0.079***
N	7532	7532	7532	7532

Table 24(d) Marginal Effects for Financing Obstacle Analysis

polity2	mfx1	mfx2	mfx3	mfx4
transparency (d)	0.003	0.001	-0.000	-0.004
audit (d)	0.021**	0.010**	-0.004**	-0.028**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.023***	0.011***	-0.004***	-0.030***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.052***	-0.025***	0.007***	0.070***

Table 24(d) (continued)

polity2	mfx1	mfx2	mfx3	mfx4
npl_ta	-0.005***	-0.002***	0.001***	0.006***
polity2	0.102***	0.047***	-0.017***	-0.132***
loggdppolity2	-0.005***	-0.002***	0.001***	0.006***
nfob	0.006	0.003	-0.001	-0.007
nbffob	0.039*	0.018*	-0.007*	-0.050*
overbnk	-0.010***	-0.005***	0.002***	0.013***
bcdepo	0.003***	0.001***	-0.000***	-0.004***
forbank	-0.001***	-0.000***	0.000***	0.001***
stmktcap	0.129**	0.060**	-0.022**	-0.167**
llgdp	0.112*	0.052*	-0.019*	-0.145*
pcrdbgdp	0.171***	0.079***	-0.029***	-0.222***
loggdp	0.017*	0.008*	-0.003*	-0.022*
N	7532	7532	7532	7532

Table 24(e) Marginal Effects for Financing Obstacle Analysis

institution	mfx1	mfx2	mfx3	mfx4
transparency (d)	0.011	0.005	-0.002	-0.014
audit (d)	0.022**	0.010**	-0.004**	-0.029**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.022***	0.010***	-0.004***	-0.029***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.052***	-0.025***	0.007***	0.070***
npl_ta	0.000	0.000	-0.000	-0.000
nfob	0.013	0.006	-0.002	-0.017
nbffob	0.066***	0.031***	-0.011***	-0.086***
overbnk	0.000	0.000	-0.000	-0.000
bcdepo	0.001	0.000	-0.000	-0.001
forbank	-0.001***	-0.000***	0.000***	0.001***
stmktcap	0.041	0.019	-0.007	-0.053
llgdp	-0.041	-0.019	0.007	0.053
pcrdbgdp	0.173***	0.081***	-0.029**	-0.224***
loggdp	-0.029***	-0.013***	0.005***	0.037***
institution	0.227***	0.106***	-0.038***	-0.295***
loggdpinstitution	-0.009***	-0.004***	0.002***	0.012***
N	7532	7532	7532	7532

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 25 Cost of Finance Analysis: with Interaction Term

cost	egovernment	law	ccorruption	polity2	institution
transparency	-0.100	-0.111*	-0.092	-0.028	-0.075
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
audit	-0.140**	-0.153**	-0.149**	-0.136**	-0.137**
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
costeffi	-0.001	-0.002	-0.002	-0.002	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
operationyear	-0.002	-0.002	-0.002	-0.002	-0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
size	-0.132***	-0.117**	-0.119***	-0.131***	-0.125***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
foreign	-0.004***	-0.004***	-0.004***	-0.004***	-0.004***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.408***	0.380***	0.381***	0.387***	0.387***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
npl_ta	0.000	0.004	0.004	0.033***	0.002
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
nfob	-0.126*	-0.147*	-0.114	-0.073	-0.117*
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
nbffob	-0.538***	-0.409***	-0.356***	-0.390***	-0.477***
	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)
overbnk	-0.007	-0.009	-0.024	0.061***	-0.005
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
bcdepo	-0.005	-0.007*	-0.006	-0.020***	-0.006*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
forbank	0.007***	0.005***	0.003**	0.005***	0.004**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 25 (continued)

cost	egovernment	law	ccorruption	polity2	institution
stmktcap	-0.311	0.319	0.004	-0.311	0.135
	(0.27)	(0.28)	(0.27)	(0.27)	(0.28)
llgdp	0.101	-0.119	0.153	-0.581	0.215
	(0.29)	(0.28)	(0.28)	(0.30)	(0.27)
pcrdbgdp	-0.540	-0.889**	-0.912**	-1.195***	-1.057***
	(0.31)	(0.31)	(0.33)	(0.30)	(0.31)
lgdp	0.143***	0.198***	0.262***	-0.187***	0.147***
	(0.03)	(0.03)	(0.03)	(0.05)	(0.03)
egovernment	-10.359***				
	(0.95)				
lgdpegovernment	0.416***				
	(0.04)				
law		-9.853***			
		(1.00)			
lgdplaw		0.402***			
		(0.04)			
ccorruption			-10.762***		
			(1.05)		
lgdpccorruption			0.443***		
			(0.04)		
polity2				-0.762***	
				(0.15)	
lgdppolity2				0.034***	
				(0.01)	

Table 25 (continued)

cost	egovernment	law	ccorruption	polity2	institution
institution					-1.620***
					(0.15)
lgdpinstitution					0.066***
					(0.01)
cut1	0.592	1.861*	3.465***	-7.175***	0.614
	(0.73)	(0.88)	(0.94)	(1.15)	(0.77)
cut2	1.612*	2.880**	4.484***	-6.160***	1.634*
	(0.73)	(0.88)	(0.94)	(1.15)	(0.77)
cut3	2.926***	4.192***	5.797***	-4.859***	2.947***
	(0.73)	(0.88)	(0.94)	(1.15)	(0.78)
N	7429	7429	7429	7429	7429
pseudo R^2	0.038	0.037	0.037	0.034	0.038
chi2	781.887	760.518	767.563	703.732	770.708

Note: Models are estimated using ordered logit regressions, where the dependent variable equals one to four. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 26 (a) Marginal Effects for Cost of Finance Analysis

cost	mfx1	mfx2	mfx3	mfx4
transparency (d)	0.018	0.007	-0.007	-0.018
audit (d)	0.025**	0.010**	-0.009**	-0.025**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.024***	0.009***	-0.009***	-0.024***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.071***	-0.029***	0.024***	0.076***
npl_ta	-0.000	-0.000	0.000	0.000
egovernment	1.864***	0.710***	-0.687***	-1.886***
lgdpegovernment	-0.075***	-0.028***	0.028***	0.076***
nfob	0.023*	0.009*	-0.008*	-0.023*
nbffob	0.097***	0.037***	-0.036***	-0.098***
overbnk	0.001	0.000	-0.000	-0.001
bcdepo	0.001	0.000	-0.000	-0.001
forbank	-0.001***	-0.000***	0.000***	0.001***
stmktcap	0.056	0.021	-0.021	-0.057
llgdp	-0.018	-0.007	0.007	0.018
pcrdbgdp	0.097	0.037	-0.036	-0.098
lgdp	-0.026***	-0.010***	0.009***	0.026***
N	7429	7429	7429	7429

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 26 (b) Marginal Effects for Cost of Finance Analysis

cost	mfx1f5	mfx2f5	mfx3f5	mfx4f5
transparency (d)	0.020*	0.007*	-0.008*	-0.020*
audit (d)	0.028**	0.010**	-0.010**	-0.028**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.021**	0.008**	-0.008**	-0.021**
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.067***	-0.027***	0.023***	0.071***
npl_ta	-0.001	-0.000	0.000	0.001
law	1.776***	0.672***	-0.653***	-1.795***
lgdplaw	-0.072***	-0.027***	0.027***	0.073***
nfob	0.027*	0.010*	-0.010*	-0.027*
nbffob	0.074***	0.028***	-0.027***	-0.075***
overbnk	0.002	0.001	-0.001	-0.002
bcdepo	0.001*	0.000*	-0.000*	-0.001*
forbank	-0.001***	-0.000***	0.000***	0.001***

Table 26 (b) (continued)

cost	mfx1f5	mfx2f5	mfx3f5	mfx4f5
stmktcap	-0.058	-0.022	0.021	0.058
llgdp	0.021	0.008	-0.008	-0.022
pcrdbgdp	0.160**	0.061**	-0.059**	-0.162**
lgdp	-0.036***	-0.013***	0.013***	0.036***
N	7429	7429	7429	7429

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 26(c) Marginal Effects for Cost of Finance Analysis

Cost	mfx1f6	mfx2f6	mfx3f6	mfx4f6
transparency (d)	0.017	0.006	-0.006	-0.017
audit (d)	0.027**	0.010**	-0.010**	-0.027**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.022***	0.008***	-0.008**	-0.022***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.067***	-0.027***	0.023***	0.071***
npl_ta	-0.001	-0.000	0.000	0.001
ccorruption	1.940***	0.734***	-0.715***	-1.959***
lgdpccorruption	-0.080***	-0.030***	0.029***	0.081***
nfob	0.020	0.008	-0.008	-0.021
nbffob	0.064***	0.024***	-0.024***	-0.065***
overbnk	0.004	0.002	-0.002	-0.004
bcdepo	0.001	0.000	-0.000	-0.001
forbank	-0.001**	-0.000**	0.000**	0.001**
stmktcap	-0.001	-0.000	0.000	0.001
llgdp	-0.028	-0.010	0.010	0.028
pcrdbgdp	0.164**	0.062**	-0.061**	-0.166**
lgdp	-0.047***	-0.018***	0.017***	0.048***
N	7429	7429	7429	7429

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 26 (d) Marginal Effects for Cost of Finance Analysis

cost	mfx1f7	mfx2f7	mfx3f7	mfx4f7
transparency (d)	0.005	0.002	-0.002	-0.005
audit (d)	0.025**	0.009**	-0.009**	-0.025**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.024***	0.009***	-0.009***	-0.024***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.068***	-0.027***	0.023***	0.072***
npl_ta	-0.006***	-0.002***	0.002***	0.006***
polity2	0.138***	0.051***	-0.050***	-0.139***
lgdppolity2	-0.006***	-0.002***	0.002***	0.006***
nfob	0.013	0.005	-0.005	-0.013
nbffob	0.071***	0.026***	-0.026***	-0.071***
overbnk	-0.011***	-0.004***	0.004***	0.011***
bcdepo	0.004***	0.001***	-0.001***	-0.004***
forbank	-0.001***	-0.000***	0.000***	0.001***
stmktcap	0.056	0.021	-0.021	-0.057
llgdp	0.105	0.039	-0.038	-0.106
pcrdbgdp	0.217***	0.081***	-0.079***	-0.218***
lgdp	0.034***	0.013***	-0.012***	-0.034***
N	7429	7429	7429	7429

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 26 (e) Marginal Effects for Cost of Finance Analysis

cost	mfx1f8	mfx2f8	mfx3f8	mfx4f8
transparency (d)	0.014	0.005	-0.005	-0.014
audit (d)	0.025**	0.009**	-0.009**	-0.025**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.022***	0.009***	-0.008***	-0.023***
foreign	0.001***	0.000***	-0.000***	-0.001***
manufacturing (d)	-0.068***	-0.028***	0.023***	0.072***
npl_ta	-0.000	-0.000	0.000	0.000
institution	0.292***	0.111***	-0.108***	-0.295***
lgdpinstitution	-0.012***	-0.005***	0.004***	0.012***
nfob	0.021*	0.008*	-0.008*	-0.021*
nbffob	0.086***	0.033***	-0.032***	-0.087***
overbnk	0.001	0.000	-0.000	-0.001
bcdepo	0.001*	0.000*	-0.000*	-0.001*
forbank	-0.001**	-0.000**	0.000**	0.001**

Table 26 (e) (continued)

cost	mfx1f8	mfx2f8	mfx3f8	mfx4f8
stmktcap	-0.024	-0.009	0.009	0.025
llgdp	-0.039	-0.015	0.014	0.039
pcrdbgdp	0.190***	0.072***	-0.070***	-0.192***
lgdp	-0.026***	-0.010***	0.010***	0.027***
N	7429	7429	7429	7429

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 27 Access to Finance Analysis: with Interaction Term

access	egovernment	law	ccorruption	polity2	institution
transparency	-0.093	-0.099	-0.091	-0.034	-0.076
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
audit	-0.137**	-0.145**	-0.141**	-0.128**	-0.134**
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
costeffi	-0.000	-0.000	-0.000	-0.001	-0.001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
operationyear	0.000	0.000	0.000	-0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
size	-0.192***	-0.183***	-0.184***	-0.191***	-0.188***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
foreign	-0.006***	-0.006***	-0.006***	-0.006***	-0.006***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.310***	0.291***	0.292***	0.290***	0.296***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
npl_ta	-0.006	-0.003	-0.005	0.021***	-0.005
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
nfob	-0.327***	-0.322***	-0.303***	-0.254***	-0.312***
	(0.07)	(0.07)	(0.06)	(0.06)	(0.06)
nbffob	-0.039	0.037	0.063	0.100	-0.016
	(0.09)	(0.09)	(0.09)	(0.10)	(0.09)
overbnk	-0.014	-0.013	-0.027	0.045**	-0.011
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
bcdepo	-0.003	-0.005	-0.003	-0.012***	-0.003
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
forbank	0.008***	0.007***	0.006***	0.005***	0.006***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 27 (continued)

access	egovernment	law	ccorruption	polity2	institution
stmktcap	-0.872**	-0.429	-0.702*	-0.972***	-0.579*
	(0.27)	(0.28)	(0.28)	(0.28)	(0.28)
llgdp	0.139	0.018	0.275	-0.575	0.252
	(0.29)	(0.29)	(0.28)	(0.30)	(0.28)
pcrdbgdp	-0.806*	-1.107***	-0.921**	-1.192***	-1.119***
	(0.32)	(0.32)	(0.34)	(0.30)	(0.32)
lgdp	0.184***	0.216***	0.275***	-0.071	0.192***
	(0.03)	(0.03)	(0.03)	(0.05)	(0.03)
egovernment	-7.531***				
	(0.95)				
lgdpegovernment	0.301***				
	(0.04)				
law		-6.679***			
		(1.01)			
lgdplaw		0.271***			
		(0.04)			
ccorruption			-7.887***		
			(1.05)		
lgdpccorruption			0.320***		
			(0.04)		
polity2				-0.587***	
				(0.14)	
lgdppolity2				0.027***	
				(0.01)	

Table 27 (continued)

access	egovernment	law	ccorruption	polity2	institution
institution					-1.200***
					(0.15)
lgdpinstitution					0.049***
					(0.01)
cut1	2.559***	3.324***	4.893***	-3.148**	2.768***
	(0.72)	(0.88)	(0.94)	(1.13)	(0.78)
cut2	3.424***	4.187***	5.757***	-2.286*	3.632***
	(0.72)	(0.88)	(0.94)	(1.13)	(0.78)
cut3	4.637***	5.397***	6.968***	-1.075	4.844***
	(0.73)	(0.88)	(0.94)	(1.13)	(0.78)
N	7360	7360	7360	7360	7360
pseudo R^2	0.031	0.029	0.030	0.029	0.030
chi2	609.177	587.746	597.808	585.022	604.535

Note: Models are estimated using ordered logit regressions, where the dependent variable equals one to four. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 28(a) Marginal Effects for Access to Finance Analysis

access	mfx1f3	mfx2f3	mfx3f3	mfx4f3
transparency (d)	0.021	0.002	-0.009	-0.014
audit (d)	0.031**	0.003**	-0.013**	-0.021**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	-0.000	-0.000	0.000	0.000
size	0.044***	0.004***	-0.018***	-0.029***
foreign	0.001***	0.000***	-0.001***	-0.001***
manufacturing (d)	-0.070***	-0.007***	0.028***	0.049***
npl_ta	0.001	0.000	-0.001	-0.001
egovernment	1.713***	0.142***	-0.701***	-1.154***
lgdpegovernment	-0.068***	-0.006***	0.028***	0.046***
nfob	0.074***	0.006***	-0.030***	-0.050***
nbffob	0.009	0.001	-0.004	-0.006
overbnk	0.003	0.000	-0.001	-0.002
bcdepo	0.001	0.000	-0.000	-0.000
forbank	-0.002***	-0.000***	0.001***	0.001***
stmktcap	0.198**	0.016**	-0.081**	-0.134**
llgdp	-0.032	-0.003	0.013	0.021
pcrdbgdp	0.183*	0.015*	-0.075*	-0.123*
lgdp	-0.042***	-0.003***	0.017***	0.028***
N	7360	7360	7360	7360

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 28(b) Marginal Effects for Access to Finance Analysis

access	mfx1f5	mfx2f5	mfx3f5	mfx4f5
transparency (d)	0.023	0.002*	-0.009	-0.015
audit (d)	0.033**	0.003**	-0.013**	-0.022**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	-0.000	-0.000	0.000	0.000
size	0.042***	0.003***	-0.017***	-0.028***
foreign	0.001***	0.000***	-0.001***	-0.001***
manufacturing (d)	-0.065***	-0.006***	0.026***	0.046***
npl_ta	0.001	0.000	-0.000	-0.000
law	1.520***	0.125***	-0.620***	-1.025***
lgdplaw	-0.062***	-0.005***	0.025***	0.042***
nfob	0.073***	0.006***	-0.030***	-0.049***
nbffob	-0.008	-0.001	0.003	0.006
overbnk	0.003	0.000	-0.001	-0.002
bcdepo	0.001	0.000	-0.000	-0.001
forbank	-0.001***	-0.000***	0.001***	0.001***

Table 28(b) (continued)

access	mfx1f5	mfx2f5	mfx3f5	mfx4f5
stmktcap	0.098	0.008	-0.040	-0.066
llgdp	-0.004	-0.000	0.002	0.003
pcrdbgdp	0.252***	0.021**	-0.103***	-0.170***
lgdp	-0.049***	-0.004***	0.020***	0.033***
N	7360	7360	7360	7360

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 28(c) Marginal Effects for Access to Finance Analysis

access	mfx1f6	mfx2f6	mfx3f6	mfx4f6
transparency (d)	0.021	0.002	-0.009	-0.014
audit (d)	0.032**	0.003**	-0.013**	-0.022**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	-0.000	-0.000	0.000	0.000
size	0.042***	0.003***	-0.017***	-0.028***
foreign	0.001***	0.000***	-0.001***	-0.001***
manufacturing (d)	-0.066***	-0.006***	0.026***	0.046***
npl_ta	0.001	0.000	-0.000	-0.001
ccorruption	1.795***	0.148***	-0.734***	-1.209***
lgdpccorruption	-0.073***	-0.006***	0.030***	0.049***
nfob	0.069***	0.006***	-0.028***	-0.046***
nbffob	-0.014	-0.001	0.006	0.010
overbnk	0.006	0.001	-0.003	-0.004
bcdepo	0.001	0.000	-0.000	-0.000
forbank	-0.001***	-0.000***	0.001***	0.001***
stmktcap	0.160*	0.013*	-0.065*	-0.108*
llgdp	-0.063	-0.005	0.026	0.042
pcrdbgdp	0.210**	0.017*	-0.086**	-0.141**
lgdp	-0.063***	-0.005***	0.026***	0.042***
N	7360	7360	7360	7360

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 28(d) Marginal Effects for Access to Finance Analysis

access	mfx1f7	mfx2f7	mfx3f7	mfx4f7
transparency (d)	0.008	0.001	-0.003	-0.005
audit (d)	0.029**	0.002**	-0.012**	-0.020**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	0.000	0.000	-0.000	-0.000
size	0.043***	0.004***	-0.018***	-0.029***
foreign	0.001***	0.000***	-0.001***	-0.001***
manufacturing (d)	-0.065***	-0.006***	0.026***	0.046***
npl_ta	-0.005***	-0.000***	0.002***	0.003***
polity2	0.134***	0.011***	-0.055***	-0.090***
lgdppolity2	-0.006***	-0.001***	0.002***	0.004***
nfob	0.058***	0.005***	-0.024***	-0.039***
nbffob	-0.023	-0.002	0.009	0.015
overbnk	-0.010**	-0.001**	0.004**	0.007**
bcdepo	0.003***	0.000***	-0.001***	-0.002***
forbank	-0.001***	-0.000***	0.000***	0.001***
stmktcap	0.221***	0.018**	-0.090***	-0.149***
llgdp	0.131	0.011	-0.053	-0.088
pcrdbgdp	0.271***	0.022***	-0.111***	-0.183***
lgdp	0.016	0.001	-0.007	-0.011
N	7360	7360	7360	7360

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 28(e) Marginal Effects for Access to Finance Analysis

access	mfx1f8	mfx2f8	mfx3f8	mfx4f8
transparency (d)	0.017	0.001	-0.007	-0.012
audit (d)	0.031**	0.002**	-0.013**	-0.021**
costeffi	0.000	0.000	-0.000	-0.000
operationyear	-0.000	-0.000	0.000	0.000
size	0.043***	0.004***	-0.018***	-0.029***
foreign	0.001***	0.000***	-0.001***	-0.001***
manufacturing (d)	-0.066***	-0.007***	0.027***	0.046***
npl_ta	0.001	0.000	-0.001	-0.001
institution	0.273***	0.023***	-0.112***	-0.184***
lgdpinstitution	-0.011***	-0.001***	0.005***	0.007***
nfob	0.071***	0.006***	-0.029***	-0.048***
nbffob	0.004	0.000	-0.001	-0.002
overbnk	0.002	0.000	-0.001	-0.002
bcdepo	0.001	0.000	-0.000	-0.000
forbank	-0.001***	-0.000***	0.001***	0.001***

Table 28(e) (continued)

access	mfx1f8	mfx2f8	mfx3f8	mfx4f8
stmktcap	0.132*	0.011*	-0.054*	-0.089*
llgdp	-0.057	-0.005	0.023	0.039
pcrdbgdp	0.255***	0.021**	-0.104***	-0.171***
lgdp	-0.044***	-0.004***	0.018***	0.029***
N	7360	7360	7360	7360

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 29 Fixed Investments Financing Pattern Analysis without Foreign Bank Ownership

variable	equity1	equity2	foreign1	foreign2	domestic1	domestic2	money1	money2	state1	state2
transparency	-0.205	-0.273	0.604**	0.622***	0.029	0.039	-0.043	-0.067	0.305*	0.294*
	(0.19)	(0.19)	(0.19)	(0.19)	(0.09)	(0.09)	(0.25)	(0.25)	(0.13)	(0.13)
audit	0.427**	0.447**	0.141	0.134	0.171*	0.162*	-0.158	-0.155	0.159	0.165
	(0.16)	(0.16)	(0.20)	(0.20)	(0.08)	(0.08)	(0.22)	(0.22)	(0.13)	(0.13)
costeffi	0.003	0.003	-0.003	-0.003	-0.002	-0.002	0.001	0.001	0.000	0.000
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
operationyear	-0.008	-0.009	-0.001	-0.001	-0.002	-0.002	-0.015	-0.013	0.008***	0.008***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
size	-0.034	-0.032	0.346**	0.349**	0.247***	0.253***	-0.519**	-0.531**	0.353***	0.350***
	(0.11)	(0.11)	(0.13)	(0.13)	(0.05)	(0.05)	(0.19)	(0.19)	(0.08)	(0.08)
foreign	0.000	0.001	0.012***	0.011***	-0.004**	-0.004**	0.004	0.004	-0.010***	-0.009***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.089	0.073	0.619***	0.619***	0.497***	0.496***	-0.195	-0.191	-0.095	-0.093
	(0.14)	(0.14)	(0.19)	(0.19)	(0.07)	(0.07)	(0.20)	(0.20)	(0.11)	(0.11)
npl_ta	-0.069**	-0.048*	-0.006	-0.007	0.004	0.007	-0.001	-0.004	0.011	0.015
	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
overafc	0.093*	0.134**	0.015	0.016	0.054**	0.061***	-0.038	-0.047	0.033	0.032
	(0.04)	(0.04)	(0.04)	(0.04)	(0.02)	(0.02)	(0.06)	(0.06)	(0.03)	(0.03)
bcdepo	-0.003	0.001	-0.020*	-0.021**	0.002	0.001	-0.011	-0.011	-0.032***	-0.030***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)
llgdp	1.555**	1.866***	2.346**	2.128**	-0.741*	-0.978**	2.090**	2.547**	-0.348	-0.165
	(0.54)	(0.49)	(0.73)	(0.75)	(0.33)	(0.33)	(0.80)	(0.85)	(0.63)	(0.60)
law	1.596***		-0.102		0.274***		-0.404*		0.614***	
	(0.20)		(0.16)		(0.08)		(0.18)		(0.17)	
ccorruption		1.434***		0.016		0.388***		-0.634**		0.557**
		(0.16)		(0.19)		(0.08)		(0.21)		(0.17)

Table 29 (continued)

variable	equity1	equity2	foreign1	foreign2	domestic1	domestic2	money1	money2	state1	state2
_cons	-5.404***	-6.259***	-5.221***	-5.100***	-3.530***	-3.452***	-3.368***	-3.492***	-2.276***	-2.406***
	(0.82)	(0.75)	(0.72)	(0.73)	(0.33)	(0.33)	(0.90)	(0.87)	(0.55)	(0.54)
N	6251	6251	6251	6251	6251	6251	6251	6251	6251	6251
chi2	197.758	191.265	168.146	170.071	118.073	129.332	26.036	28.963	139.833	139.642
p	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.004	0.000	0.000

Note: Models are estimated using fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project “Bank Regulation and Supervision”. Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 30(a) Marginal Effects for Fixed Investment Financing Analysis without Forbank

Law	mfxequ1	mfxfor1	mfxdom1	mfxmon1	mfxsta1
transparency (d)	-0.003	0.008**	0.002	-0.000	0.011*
audit (d)	0.007*	0.002	0.014*	-0.001	0.005
costeffi	0.000	-0.000	-0.000	0.000	0.000
operationyear	-0.000	-0.000	-0.000	-0.000	0.000***
size	-0.001	0.004**	0.019***	-0.004**	0.011***
foreign	0.000	0.000***	-0.000**	0.000	-0.000***
manufacturing (d)	0.001	0.008**	0.041***	-0.001	-0.003
npl_ta	-0.001***	-0.000	0.000	-0.000	0.000
overafc	0.002*	0.000	0.004**	-0.000	0.001
bcdepo	-0.000	-0.000*	0.000	-0.000	-0.001***
llgdp	0.025**	0.027**	-0.058*	0.016**	-0.011
law	0.026***	-0.001	0.022***	-0.003*	0.020***
N	6251	6251	6251	6251	6251

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 30(b) Marginal Effects for Fixed Investment Financing Analysis without Forbank

Corruption	mfxequ2	mfxfor2	mfxdom2	mfxmon2	mfxsta2
transparency (d)	-0.005	0.008**	0.003	-0.001	0.294*
audit (d)	0.008**	0.002	0.013*	-0.001	0.165
costeffi	0.000	-0.000	-0.000	0.000	0.000
operationyear	-0.000	-0.000	-0.000	-0.000	0.008***
size	-0.001	0.004**	0.020***	-0.004**	0.350***
foreign	0.000	0.000***	-0.000**	0.000	-0.009***
manufacturing (d)	0.001	0.008**	0.041***	-0.001	-0.093
npl_ta	-0.001**	-0.000	0.001	-0.000	0.015
overafc	0.002**	0.000	0.005***	-0.000	0.032
bcdepo	0.000	-0.000*	0.000	-0.000	-0.030***
llgdp	0.033***	0.025**	-0.077**	0.019**	-0.165
ccorruption	0.025***	0.000	0.030***	-0.005**	0.557**
N	6251	6251	6251	6251	6251

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 31 Fixed Investmetn Financing Pattern Analysis: with Foreign Bank Ownership

variable	equity1	equity2	foreign1	foreign2	domestic1	domestic2	money1	money2	state1	state2
transparency	-0.188	-0.261	0.576**	0.585**	-0.006	-0.007	0.004	-0.003	0.196	0.200
	(0.19)	(0.19)	(0.22)	(0.22)	(0.10)	(0.10)	(0.26)	(0.27)	(0.14)	(0.14)
audit	0.230	0.265	0.178	0.175	0.166	0.166	-0.204	-0.206	0.094	0.108
	(0.16)	(0.16)	(0.23)	(0.23)	(0.09)	(0.09)	(0.24)	(0.24)	(0.13)	(0.13)
costeffi	0.005	0.005	-0.014	-0.014	0.000	0.000	0.003	0.003	-0.004	-0.004
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
operationyear	-0.009*	-0.009	-0.004	-0.004	-0.003	-0.003	-0.011	-0.011	0.008**	0.008**
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
size	0.009	0.001	0.438**	0.439**	0.277***	0.277***	-0.509**	-0.506**	0.290***	0.282**
	(0.12)	(0.11)	(0.15)	(0.15)	(0.06)	(0.06)	(0.19)	(0.19)	(0.09)	(0.09)
foreign	0.000	0.000	0.011***	0.011***	-0.005**	-0.005**	0.005	0.005	-0.009**	-0.009**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.083	0.075	0.506*	0.505*	0.446***	0.445***	0.010	-0.001	0.051	0.060
	(0.15)	(0.15)	(0.21)	(0.21)	(0.08)	(0.08)	(0.22)	(0.22)	(0.12)	(0.12)
npl_ta	-0.067**	-0.081***	0.011	0.014	0.007	0.007	-0.007	-0.015	-0.009	-0.006
	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
overafc	0.117**	0.114**	-0.065	-0.062	0.002	0.000	-0.025	-0.042	0.083*	0.088*
	(0.04)	(0.04)	(0.05)	(0.05)	(0.02)	(0.02)	(0.06)	(0.06)	(0.04)	(0.04)
bcdepo	0.016	0.034**	-0.031**	-0.032**	-0.005	-0.005	0.005	0.003	-0.033***	-0.028***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
forbank	0.017***	0.018***	0.002	0.002	0.004*	0.004*	0.008	0.009	-0.011***	-0.011***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)
stmktcap	-8.289***	-8.870***	-3.600*	-3.500*	-0.956	-0.963	0.467	0.483	-2.580**	-2.922***
	(1.45)	(1.41)	(1.42)	(1.39)	(0.54)	(0.52)	(1.34)	(1.36)	(0.79)	(0.77)
llgdp	-0.971	-0.669	1.829	1.791	-1.818***	-1.809***	5.747***	5.229***	-0.998	-0.632
	(0.95)	(0.93)	(1.04)	(1.05)	(0.50)	(0.50)	(1.29)	(1.23)	(0.74)	(0.73)
pcrdbgdp	6.903***	7.821***	2.305*	2.035	3.493***	3.564***	-6.703***	-5.474***	0.875	0.223
	(1.16)	(1.16)	(1.10)	(1.22)	(0.52)	(0.55)	(1.52)	(1.56)	(0.78)	(0.87)

Table 31 (continued)

variable	equity1	equity2	foreign1	foreign2	domestic1	domestic2	money1	money2	state1	state2
lgdp	0.310	0.510***	-0.147	-0.161	-0.099*	-0.098*	0.050	0.042	0.157*	0.199**
	(0.17)	(0.14)	(0.13)	(0.12)	(0.05)	(0.04)	(0.12)	(0.12)	(0.07)	(0.07)
law	0.690*		0.078		-0.045		-0.881*		0.922***	
	(0.29)		(0.32)		(0.12)		(0.39)		(0.20)	
ccorruption		-0.054		0.198		-0.072		-1.062*		0.944***
		(0.22)		(0.40)		(0.14)		(0.50)		(0.22)
_cons	-14.855**	-21.015***	0.198	0.668	-0.530	-0.572	-6.141	-5.864	-5.277**	-6.496***
	(4.71)	(3.86)	(3.59)	(3.48)	(1.25)	(1.20)	(3.81)	(3.80)	(1.91)	(1.89)
N	5523	5523	5523	5523	5523	5523	5523	5523	5523	5523
chi2	178.358	246.259	219.422	217.914	188.167	188.702	40.587	39.961	138.337	136.777
p	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000

Note: Models are estimated using fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 32(a) Marginal Effects for Fixed Investment Analysis with Forbank

Law	mfxequ1	mfxfor1	mfxdom1	mfxmon1	mfxsta1
transparency (d)	-0.002	0.006*	-0.000	0.000	0.007
audit (d)	0.003	0.002	0.013	-0.001	0.003
costeffi	0.000	-0.000	0.000	0.000	-0.000
operationyear	-0.000	-0.000	-0.000	-0.000	0.000**
size	0.000	0.004**	0.021***	-0.004**	0.010***
foreign	0.000	0.000***	-0.000**	0.000	-0.000**
manufacturing (d)	0.001	0.005*	0.035***	0.000	0.002
npl_ta	-0.001*	0.000	0.001	-0.000	-0.000
overafc	0.002**	-0.001	0.000	-0.000	0.003*
bcdepo	0.000	-0.000**	-0.000	0.000	-0.001***
forbank	0.000***	0.000	0.000*	0.000	-0.000***
stmktcap	-0.109***	-0.033*	-0.072	0.003	-0.086**
llgdp	-0.013	0.017	-0.137***	0.042***	-0.033
pcrdbgdp	0.091***	0.021*	0.263***	-0.049***	0.029
lgdp	0.004	-0.001	-0.007*	0.000	0.005*
law	0.009**	0.001	-0.003	-0.006*	0.031***
N	5523	5523	5523	5523	5523

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 32(b) Marginal Effects for Fixed Investment Analysis with Forbank

ccorruption	mfxequ2	mfxfor2	mfxdom2	mfxmon2	mfxsta2
transparency (d)	-0.004	0.006*	-0.001	-0.000	0.200
audit (d)	0.004	0.002	0.013	-0.002	0.108
costeffi	0.000	-0.000	0.000	0.000	-0.004
operationyear	-0.000	-0.000	-0.000	-0.000	0.008**
size	0.000	0.004**	0.021***	-0.004**	0.282**
foreign	0.000	0.000***	-0.000**	0.000	-0.009**
manufacturing (d)	0.001	0.005*	0.035***	-0.000	0.060
npl_ta	-0.001***	0.000	0.001	-0.000	-0.006
overafc	0.002**	-0.001	0.000	-0.000	0.088*
bcdepo	0.000**	-0.000**	-0.000	0.000	-0.028***
forbank	0.000***	0.000	0.000*	0.000	-0.011***
stmktcap	-0.127***	-0.032*	-0.073	0.004	-2.922***
llgdp	-0.010	0.016	-0.136***	0.038***	-0.632
pcrdbgdp	0.112***	0.018	0.269***	-0.040***	0.223
lgdp	0.007***	-0.001	-0.007*	0.000	0.199**
ccorruption	-0.001	0.002	-0.005	-0.008*	0.944***
N	5523	5523	5523	5523	5523

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 33 Robust Tests: Multinomial Fractional Logit for Fixed Inverstment Analsysis (Law)

law	eta_finequ_f	eta_findom_f	eta_finfor_f	eta_finmon_f	eta_finsta_f
transparency	-0.180	0.019	0.575*	-0.017	0.189
	(0.20)	(0.10)	(0.22)	(0.26)	(0.14)
audit	0.262	0.190*	0.184	-0.165	0.142
	(0.17)	(0.09)	(0.23)	(0.24)	(0.14)
costeffi	0.005	0.000	-0.012	0.003	-0.004
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)
operationyear	-0.013*	-0.002	-0.003	-0.012	0.007*
	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)
size	0.089	0.295***	0.489**	-0.445*	0.340***
	(0.12)	(0.06)	(0.15)	(0.20)	(0.09)
foreign	-0.000	-0.005**	0.009***	0.005	-0.009**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.163	0.456***	0.557**	0.046	0.116
	(0.15)	(0.08)	(0.21)	(0.22)	(0.12)
npl_ta	-0.047**	-0.001	-0.001	-0.008	-0.003
	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)
overafc	0.107*	0.018	-0.034	-0.022	0.071*
	(0.04)	(0.02)	(0.05)	(0.06)	(0.04)
bcdepo	-0.006	-0.003	-0.026*	0.001	-0.037***
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
forbank	0.018***	0.005**	0.004	0.006	-0.010***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)

Table 33 (continued)

law	eta_finequ_f	eta_findom_f	eta_finfor_f	eta_finmon_f	eta_finsta_f
stmktcap	-6.961***	-1.938***	-5.211***	0.455	-1.466*
	(1.42)	(0.40)	(1.02)	(1.04)	(0.61)
llgdp	-0.994	-2.074***	1.165	5.551***	-0.757
	(0.95)	(0.49)	(1.02)	(1.26)	(0.74)
pcrdbgdp	6.353***	4.128***	3.690***	-6.135***	0.710
	(1.13)	(0.50)	(1.11)	(1.47)	(0.73)
law	1.070***	-0.088	-0.095	-0.724*	0.998***
	(0.25)	(0.12)	(0.29)	(0.34)	(0.20)
_cons	-6.060***	-3.132***	-3.850***	-4.585***	-1.282*
	(0.81)	(0.41)	(0.97)	(1.04)	(0.57)
N	5506				
chi2	731.734				
p	0.000				

Note: Models are estimated using multinomial fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 34 Robust Tests: Multinomial Fractional Logit for Fixed Inverstment Analsysis (Ccorruption)

ccorruption	eta_finequ_f	eta_findom_f	eta_finfor_f	eta_finmon_f	eta_finsta_f
transparency	-0.294	0.018	0.586**	-0.023	0.183
	(0.20)	(0.10)	(0.22)	(0.26)	(0.14)
audit	0.309	0.191*	0.179	-0.165	0.155
	(0.17)	(0.09)	(0.23)	(0.24)	(0.14)
costeffi	0.005	0.000	-0.012	0.003	-0.004
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)
operationyear	-0.013*	-0.002	-0.003	-0.012	0.006*
	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)
size	0.092	0.294***	0.489**	-0.444*	0.334***
	(0.12)	(0.06)	(0.15)	(0.19)	(0.09)
foreign	0.000	-0.005**	0.009***	0.005	-0.009**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.151	0.456***	0.556**	0.037	0.129
	(0.15)	(0.08)	(0.21)	(0.22)	(0.12)
npl_ta	-0.043**	-0.002	-0.001	-0.015	0.002
	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)
overafc	0.126**	0.015	-0.032	-0.037	0.069
	(0.04)	(0.02)	(0.05)	(0.06)	(0.04)
bcdepo	0.001	-0.003	-0.027*	-0.000	-0.033***
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
forbank	0.019***	0.005**	0.003	0.007	-0.010***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)

Table 34 (continued)

ccorruption	eta_finequ_f	eta_findom_f	eta_finfor_f	eta_finmon_f	eta_finsta_f
stmktcap	-6.110***	-1.935***	-5.287***	0.408	-1.471*
	(1.34)	(0.40)	(1.04)	(1.07)	(0.59)
llgdp	-0.619	-2.029***	1.127	5.114***	-0.123
	(0.96)	(0.48)	(1.01)	(1.17)	(0.72)
pcrdbgdp	6.250***	4.238***	3.731**	-5.016***	-0.214
	(1.13)	(0.52)	(1.15)	(1.47)	(0.84)
ccorruption	0.510*	-0.139	-0.049	-0.911*	0.997***
	(0.25)	(0.14)	(0.39)	(0.43)	(0.21)
_cons	-6.938***	-3.176***	-3.773***	-4.546***	-1.477*
	(0.78)	(0.41)	(1.00)	(1.01)	(0.59)
N	5506				
chi2	784.291				
p	0.000				

Note: Models are estimated using multinomial fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 35 Fixed Investmetn Financing Pattern Analysis: Regulatory and Accountability

Fractional Logit	equity1	foreign1	domestic1	money1	state1
accountability	0.634**	-0.177	-0.213*	-0.683*	0.662***
	(0.22)	(0.26)	(0.10)	(0.31)	(0.15)
regulatory	0.971**	-0.328	-0.138	-0.726*	0.972***
	(0.32)	(0.31)	(0.13)	(0.34)	(0.26)
Marginal Effects	mfxequ1	mfxfor1	mfxdom1	mfxmon1	mfxsta1
accountability	0.009***	-0.002	-0.016*	-0.005*	0.023***
regulatory	0.013***	-0.003	-0.010	-0.005*	0.972***
Multinomil Fraction Logit	eta_finequ_f	eta_findom_f	eta_finfor_f	eta_finmon_f	eta_finsta_f
accountability	0.612**	-0.190	-0.217	-0.657*	0.586***
	(0.21)	(0.10)	(0.27)	(0.31)	(0.15)
regulatory	0.968**	-0.083	-0.312	-0.647	0.929***
	(0.32)	(0.13)	(0.31)	(0.34)	(0.26)

Note: Models include variable Regulatory and variable Accountability are estimated seperately using fractional logit and multinomial fractional logit regressions. Marginal effects for Regulatory and Accountability variables are reported. The control variables are the same as in table 34, but are not reported. The dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project “Bank Regulation and Supervision”. Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 36 Working Capital Financing Pattern Analysis

	equity1	equity2	foreign1	foreign2	domestic1	domestic2	state1	state2	money1	money2
transparency	-0.192	-0.308*	0.577**	0.564**	-0.046	-0.043	0.004	0.007	-0.220	-0.227
	(0.14)	(0.14)	(0.20)	(0.20)	(0.08)	(0.08)	(0.12)	(0.12)	(0.20)	(0.20)
audit	0.035	0.098	0.265	0.269	0.268***	0.265***	0.064	0.075	0.104	0.101
	(0.13)	(0.13)	(0.20)	(0.20)	(0.08)	(0.08)	(0.11)	(0.11)	(0.18)	(0.18)
costeffi	-0.001	-0.000	-0.019*	-0.019*	0.002	0.002	-0.004	-0.004	0.005	0.005
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
operationyear	-0.013***	-0.014***	-0.001	-0.001	-0.004*	-0.004*	0.008***	0.008***	-0.006	-0.005
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
size	0.134	0.140	0.432**	0.432**	0.388***	0.389***	0.412***	0.409***	-0.358**	-0.355**
	(0.09)	(0.09)	(0.13)	(0.13)	(0.05)	(0.05)	(0.07)	(0.07)	(0.12)	(0.12)
foreign	-0.001	-0.001	0.012***	0.012***	-0.002	-0.002	-0.008***	-0.008***	0.003	0.004
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.140	0.121	0.276	0.277	0.481***	0.480***	-0.008	-0.005	0.053	0.046
	(0.12)	(0.12)	(0.18)	(0.18)	(0.07)	(0.07)	(0.11)	(0.11)	(0.16)	(0.16)
npl_ta	-0.023	-0.023*	0.015	0.011	-0.005	-0.006	-0.009	-0.004	-0.008	-0.015
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
overafc	0.035	0.040	0.019	0.009	0.049**	0.047**	0.005	0.006	0.002	-0.017
	(0.03)	(0.03)	(0.05)	(0.05)	(0.02)	(0.02)	(0.03)	(0.03)	(0.04)	(0.04)
bcdepo	0.001	0.006	-0.027**	-0.026**	-0.005	-0.005	-0.026***	-0.024***	0.018*	0.017*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
forbank	0.021***	0.023***	0.013**	0.014**	0.007***	0.006***	-0.011***	-0.011***	0.006	0.007
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 36 (continued)

	equity1	equity2	foreign1	foreign2	domestic1	domestic2	state1	state2	money1	money2
stmktcap	-9.125***	-8.210***	-2.433*	-2.419*	-1.352***	-1.351***	-2.867***	-2.835***	0.048	0.051
	(1.07)	(1.06)	(0.97)	(0.97)	(0.33)	(0.33)	(0.53)	(0.52)	(0.72)	(0.73)
llgdp	-2.080*	-1.696	1.263	1.320	-1.688***	-1.750***	0.561	0.889	3.607***	3.194***
	(0.84)	(0.89)	(1.09)	(1.07)	(0.45)	(0.44)	(0.61)	(0.59)	(1.01)	(0.96)
pcrdbgdp	7.217***	7.069***	0.505	0.909	2.834***	2.976***	-0.458	-1.232	-3.424**	-2.304*
	(0.90)	(0.91)	(1.21)	(1.23)	(0.47)	(0.48)	(0.59)	(0.66)	(1.14)	(1.06)
law	1.146***		-0.264		-0.189		0.683***		-0.889***	
	(0.16)		(0.26)		(0.11)		(0.15)		(0.23)	
ccorruption		0.596***		-0.445		-0.197		0.761***		-1.103***
		(0.17)		(0.35)		(0.13)		(0.17)		(0.31)
_cons	-5.143***	-5.721***	-5.181***	-5.317***	-4.052***	-4.026***	-1.319**	-1.320**	-6.270***	-6.254***
	(0.56)	(0.58)	(0.89)	(0.91)	(0.36)	(0.37)	(0.48)	(0.50)	(0.87)	(0.84)
N	7537	7537	7537	7537	7537	7537	7537	7537	7537	7537
chi2	297.288	367.412	171.389	172.180	311.614	311.153	173.831	174.683	41.270	39.419
p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001

Note: Models are estimated using fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 37 Marginal Effects for Working Capital Analysis

	mfxequ1	mfxfor1	mfxdom1	mfxsta1	mfxmon1
audit (d)	0.000	0.002	0.015***	0.002	0.001
bcdepo	0.000	-0.000**	-0.000	-0.001***	0.000*
costeffi	-0.000	-0.000*	0.000	-0.000	0.000
forbank	0.000***	0.000**	0.000***	-0.000***	0.000
foreign	-0.000	0.000***	-0.000	-0.000***	0.000
law	0.013***	-0.002	-0.011	0.019***	-0.008***
llgdp	-0.024**	0.008	-0.094***	0.016	0.031***
manufacturing (d)	0.002	0.002	0.029***	-0.000	0.000
npl_ta	-0.000	0.000	-0.000	-0.000	-0.000
operationyear	-0.000**	-0.000	-0.000*	0.000***	-0.000
overafc	0.000	0.000	0.003**	0.000	0.000
pcrdbgdp	0.085***	0.003	0.158***	-0.013	-0.029**
size	0.002	0.003**	0.022***	0.012***	-0.003**
stmktcap	-0.107***	-0.015**	-0.076***	-0.081***	0.000
transparency (d)	-0.002	0.004*	-0.003	0.000	-0.002
N	7537	7537	7537	7537	7537

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 38 Robust Tests: Multinomial Fractional Logit for Working Capital Analsysis (Law)

	eta_finequ_w	eta_findom_w	eta_finfor_w	eta_finsta_w	eta_finmon_w
transparency	-0.221	-0.045	0.534**	-0.005	-0.232
	(0.14)	(0.08)	(0.20)	(0.12)	(0.20)
audit	0.046	0.284***	0.303	0.110	0.133
	(0.13)	(0.08)	(0.20)	(0.11)	(0.18)
costeffi	-0.000	0.002	-0.018*	-0.003	0.005
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
operationyear	-0.013**	-0.004*	-0.002	0.007**	-0.006
	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
size	0.187*	0.421***	0.500***	0.450***	-0.287*
	(0.09)	(0.05)	(0.14)	(0.07)	(0.12)
foreign	-0.002	-0.002	0.011***	-0.008**	0.003
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.180	0.496***	0.321	0.037	0.088
	(0.12)	(0.07)	(0.18)	(0.11)	(0.16)
npl_ta	-0.024	-0.008	0.011	-0.012	-0.010
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
overafc	0.036	0.049**	0.022	0.013	0.005
	(0.03)	(0.02)	(0.05)	(0.03)	(0.04)
bcdepo	0.001	-0.006	-0.028**	-0.027***	0.017*
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
forbank	0.021***	0.007***	0.013**	-0.010***	0.006
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 38 (continued)

	eta_finequ_w	eta_findom_w	eta_finfor_w	eta_finsta_w	eta_finmon_w
stmktcap	-9.342***	-1.651***	-2.897**	-3.110***	-0.279
	(1.07)	(0.34)	(1.00)	(0.54)	(0.73)
llgdp	-1.951*	-1.777***	1.250	0.455	3.518***
	(0.85)	(0.45)	(1.10)	(0.62)	(1.02)
pcrdbgdp	7.327***	3.209***	0.866	0.003	-2.998**
	(0.91)	(0.47)	(1.24)	(0.59)	(1.15)
law	1.135***	-0.150	-0.236	0.679***	-0.870***
	(0.16)	(0.10)	(0.27)	(0.15)	(0.23)
_cons	-5.137***	-3.900***	-5.106***	-1.345**	-6.187***
	(0.57)	(0.36)	(0.92)	(0.48)	(0.87)
N	7521				
chi2	982.226				
p	0.000				

Note: Models are estimated using multinomial fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 percent; * indicates a significance level between 5 and 10 percent.

Table 39 Robust Tests: Multinomial Fractional Logit for Working Capital Analsysis (Ccorruption)

	eta_finequ_w	eta_findom_w	eta_finfor_w	eta_finsta_w	eta_finmon_w
transparency	-0.336*	-0.044	0.518*	-0.004	-0.241
	(0.14)	(0.08)	(0.20)	(0.12)	(0.20)
audit	0.109	0.283***	0.308	0.121	0.131
	(0.13)	(0.08)	(0.20)	(0.11)	(0.18)
costeffi	0.000	0.002	-0.017*	-0.003	0.005
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
operationyear	-0.014***	-0.004*	-0.002	0.007**	-0.006
	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
size	0.193*	0.421***	0.500***	0.447***	-0.286*
	(0.09)	(0.05)	(0.14)	(0.07)	(0.12)
foreign	-0.001	-0.002	0.011***	-0.008**	0.003
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
manufacturing	0.161	0.496***	0.322	0.042	0.082
	(0.12)	(0.07)	(0.18)	(0.11)	(0.16)
npl_ta	-0.025*	-0.009	0.008	-0.008	-0.017
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
overafc	0.040	0.046**	0.011	0.012	-0.014
	(0.03)	(0.02)	(0.05)	(0.03)	(0.04)
bcdepo	0.006	-0.006	-0.027**	-0.025***	0.016
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
forbank	0.023***	0.007***	0.014**	-0.010***	0.008
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Table 39 (continued)

	eta_finequ_w	eta_findom_w	eta_finfor_w	eta_finsta_w	eta_finmon_w
stmktcap	-8.414***	-1.652***	-2.888**	-3.081***	-0.298
	(1.06)	(0.34)	(1.00)	(0.53)	(0.74)
llgdp	-1.539	-1.768***	1.354	0.839	3.124**
	(0.89)	(0.44)	(1.07)	(0.60)	(0.97)
pcrdbgdp	7.162***	3.357***	1.291	-0.739	-1.828
	(0.91)	(0.48)	(1.26)	(0.66)	(1.07)
ccorruption	0.581***	-0.190	-0.439	0.724***	-1.103***
	(0.18)	(0.13)	(0.35)	(0.17)	(0.31)
_cons	-5.725***	-3.921***	-5.260***	-1.385**	-6.185***
	(0.59)	(0.37)	(0.93)	(0.50)	(0.84)
N	7521				
chi2	1048.742				
p	0.000				

Note: Models are estimated using multinomial fractional logit regressions, where the dependent variable is fraction between 0 and 1. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 percent; * indicates a significance level between 5 and 10 percent.

Table 40 Short Term Loan and Long Term Loan Analysis by Order

stloan	Label	N	Mean	SD	Min	Max	ltloan	Label	N	Mean	SD	Min	Max
	transparency	818	0.402	0.491	0.000	1.000		transparency	1084	0.405	0.491	0.000	1.000
	audit	818	0.498	0.500	0.000	1.000		audit	1084	0.492	0.500	0.000	1.000
	costeffi	818	19.216	12.998	1.000	150.000		costeffi	1084	19.137	12.684	1.000	150.000
	foreign	818	9.744	26.670	0.000	100.000		foreign	1084	10.371	27.819	0.000	100.000
	npl_ta	818	6.010	5.276	0.320	22.000		npl_ta	1084	5.742	5.198	0.320	22.000
	indpoliall	818	1.304	0.774	0.000	2.000		indpoliall	1084	1.346	0.772	0.000	2.000
	mulsup	818	0.289	0.453	0.000	1.000		mulsup	1084	0.271	0.445	0.000	1.000
1	singlefsa	818	0.174	0.379	0.000	1.000	1	singlefsa	1084	0.208	0.406	0.000	1.000
	mcar	818	10.017	1.785	8.000	12.000		mcar	1084	10.098	1.745	8.000	12.000
	crindex	818	6.101	1.716	4.000	10.000		crindex	1084	6.232	1.786	4.000	10.000
	fstrans	818	4.977	0.815	3.000	6.000		fstrans	1084	4.922	0.828	3.000	6.000
	nfob	818	2.059	0.338	1.000	3.000		nfob	1084	2.055	0.337	1.000	3.000
	nbffob	818	1.954	0.470	1.000	3.000		nbffob	1084	1.957	0.462	1.000	3.000
	overbnk	818	9.048	2.052	5.000	13.000		overbnk	1084	9.153	2.184	5.000	13.000
	bcdepo	818	66.983	9.903	57.000	99.400		bcdepo	1084	67.104	9.991	57.000	99.400
	pcrdbgdp	818	0.199	0.092	0.039	0.443		pcrdbgdp	1084	0.197	0.090	0.039	0.443
	govbank	818	18.803	12.715	0.000	41.800		govbank	1084	19.227	12.922	0.000	41.800
	forbank	818	48.532	32.346	3.470	98.900		forbank	1084	46.989	32.313	3.470	98.900
	pribank	818	32.665	26.811	1.100	81.600		pribank	1084	33.784	26.738	1.100	81.600

Table 40 (continued)

stloan	Label	N	Mean	SD	Min	Max	ltloan	Label	N	Mean	SD	Min	Max
	transparency	795	0.389	0.488	0.000	1.000		transparency	872	0.400	0.490	0.000	1.000
	audit	795	0.498	0.500	0.000	1.000		audit	872	0.516	0.500	0.000	1.000
	costeffi	795	19.323	12.473	1.000	100.000		costeffi	872	19.577	13.241	1.000	100.000
	foreign	795	11.107	28.853	0.000	100.000		foreign	872	12.487	30.127	0.000	100.000
	npl_ta	795	5.932	5.526	0.320	22.000		npl_ta	872	6.000	5.506	0.320	22.000
	indpoliall	795	1.270	0.802	0.000	2.000		indpoliall	872	1.287	0.809	0.000	2.000
	mulsup	795	0.313	0.464	0.000	1.000		mulsup	872	0.314	0.464	0.000	1.000
	singlefsa	795	0.208	0.406	0.000	1.000		singlefsa	872	0.192	0.394	0.000	1.000
	mcar	795	10.060	1.749	8.000	12.000		mcar	872	10.106	1.719	8.000	12.000
2	crindex	795	6.170	1.742	4.000	10.000	2	crindex	872	6.135	1.804	4.000	10.000
	fstrans	795	4.919	0.861	3.000	6.000		fstrans	872	4.911	0.843	3.000	6.000
	nfob	795	2.078	0.371	1.000	3.000		nfob	872	2.076	0.360	1.000	3.000
	nbffob	795	1.966	0.504	1.000	3.000		nbffob	872	1.956	0.503	1.000	3.000
	overbnk	795	9.145	2.233	5.000	13.000		overbnk	872	9.117	2.258	5.000	13.000
	bcdepo	795	67.367	9.903	57.000	99.400		bcdepo	872	67.918	10.219	57.000	99.400
	pcrdbgdp	795	0.204	0.094	0.039	0.443		pcrdbgdp	872	0.207	0.097	0.039	0.443
	govbank	795	18.573	13.198	0.000	41.800		govbank	872	18.510	13.290	0.000	41.800
	forbank	795	47.030	32.645	3.470	98.900		forbank	872	48.143	32.325	3.470	98.900
	pribank	795	34.397	27.414	1.100	81.600		pribank	872	33.347	27.171	1.100	81.600

Table 40 (continued)

stloan	Label	N	Mean	SD	Min	Max	ltloan	Label	N	Mean	SD	Min	Max
	transparency	1000	0.418	0.493	0.000	1.000		transparency	733	0.411	0.492	0.000	1.000
	audit	1000	0.500	0.500	0.000	1.000		audit	733	0.492	0.500	0.000	1.000
	costeffi	1000	19.395	12.661	1.000	170.000		costeffi	733	19.982	13.544	1.000	170.000
	foreign	1000	12.551	30.063	0.000	100.000		foreign	733	11.955	29.130	0.000	100.000
	npl_ta	1000	5.480	4.717	0.320	22.000		npl_ta	733	5.524	4.680	0.320	22.000
	indpoliall	1000	1.333	0.788	0.000	2.000		indpoliall	733	1.295	0.777	0.000	2.000
	mulsup	1000	0.282	0.450	0.000	1.000		mulsup	733	0.293	0.456	0.000	1.000
	singlefsa	1000	0.193	0.395	0.000	1.000		singlefsa	733	0.156	0.363	0.000	1.000
	mcar	1000	10.074	1.647	8.000	12.000		mcar	733	9.872	1.689	8.000	12.000
3	crindex	1000	6.143	1.884	4.000	10.000	3	crindex	733	5.944	1.791	4.000	10.000
	fstrans	1000	5.001	0.874	3.000	6.000		fstrans	733	5.142	0.868	3.000	6.000
	nfob	1000	2.045	0.324	1.000	3.000		nfob	733	2.034	0.314	1.000	3.000
	nbffob	1000	1.922	0.473	1.000	3.000		nbffob	733	1.903	0.471	1.000	3.000
	overbnk	1000	9.018	2.408	5.000	13.000		overbnk	733	8.905	2.333	5.000	13.000
	bcdepo	1000	68.809	11.665	57.000	99.400		bcdepo	733	68.865	11.995	57.000	99.400
	pcrdbgdp	1000	0.212	0.095	0.039	0.443		pcrdbgdp	733	0.219	0.096	0.039	0.443
	govbank	1000	18.930	13.583	0.000	41.800		govbank	733	18.701	13.739	0.000	41.800
	forbank	1000	47.219	33.644	3.470	98.900		forbank	733	48.842	34.637	3.470	98.900
	pribank	1000	33.850	27.599	1.100	81.600		pribank	733	32.457	28.240	1.100	81.600

Table 40 (continued)

stloan	Label	N	Mean	SD	Min	Max	ltloan	Label	N	Mean	SD	Min	Max
	transparency	411	0.428	0.495	0.000	1.000		transparency	273	0.465	0.500	0.000	1.000
	audit	411	0.506	0.501	0.000	1.000		audit	273	0.513	0.501	0.000	1.000
	costeffi	411	20.377	23.369	1.000	400.000		costeffi	273	19.571	25.753	1.000	400.000
	foreign	411	16.238	33.791	0.000	100.000		foreign	273	17.026	34.889	0.000	100.000
	npl_ta	411	5.536	4.996	0.320	22.000		npl_ta	273	5.671	4.947	0.320	22.000
	indpoliall	411	1.397	0.740	0.000	2.000		indpoliall	273	1.381	0.713	0.000	2.000
	mulsup	411	0.224	0.417	0.000	1.000		mulsup	273	0.209	0.407	0.000	1.000
	singlefsa	411	0.139	0.346	0.000	1.000		singlefsa	273	0.147	0.354	0.000	1.000
	mcar	411	9.815	1.642	8.000	12.000		mcar	273	9.714	1.624	8.000	12.000
4	crindex	411	5.891	1.929	4.000	10.000	4	crindex	273	5.853	1.904	4.000	10.000
	fstrans	411	5.095	0.825	3.000	6.000		fstrans	273	5.106	0.844	3.000	6.000
	nfob	411	2.024	0.269	1.000	3.000		nfob	273	2.015	0.257	1.000	3.000
	nbffob	411	1.920	0.414	1.000	3.000		nbffob	273	1.919	0.394	1.000	3.000
	overbnk	411	9.002	2.266	5.000	13.000		overbnk	273	8.967	2.210	5.000	13.000
	bcdepo	411	69.837	11.995	57.000	99.400		bcdepo	273	70.099	12.256	57.000	99.400
	pcrdbgdp	411	0.236	0.112	0.039	0.443		pcrdbgdp	273	0.241	0.114	0.039	0.443
	govbank	411	18.082	13.865	0.000	41.800		govbank	273	17.328	13.568	0.000	41.800
	forbank	411	53.191	34.065	3.470	98.900		forbank	273	54.148	34.667	3.470	98.900
	pribank	411	28.726	27.713	1.100	81.600		pribank	273	28.524	28.046	1.100	81.600

Table 41 Correlation Matrix for Short Term Loan and Long Term Loan Analysis

	stloan	ltloan	transparency	audit	costeffi	foreign	npl_ta	indpoliall	mulsup	singlefsa
stloan	1.000	0.772	0.021	0.005	0.020	0.066	-0.042	0.038	-0.040	-0.017
		(0.000)	(0.245)	(0.793)	(0.278)	(0.000)	(0.022)	(0.037)	(0.029)	(0.358)
ltloan	0.772	1.000	0.027	0.007	0.019	0.052	-0.014	-0.004	-0.017	-0.058
	(0.000)		(0.139)	(0.716)	(0.298)	(0.005)	(0.435)	(0.834)	(0.345)	(0.002)
transparency	0.021	0.027	1.000	0.254	-0.026	0.186	-0.133	0.027	-0.200	0.134
	(0.245)	(0.139)		(0.000)	(0.150)	(0.000)	(0.000)	(0.144)	(0.000)	(0.000)
audit	0.005	0.007	0.254	1.000	-0.032	0.179	-0.043	-0.070	-0.058	0.049
	(0.793)	(0.716)	(0.000)		(0.077)	(0.000)	(0.018)	(0.000)	(0.002)	(0.007)
costeffi	0.020	0.019	-0.026	-0.032	1.000	0.021	-0.029	-0.027	0.016	-0.009
	(0.278)	(0.298)	(0.150)	(0.077)		(0.251)	(0.109)	(0.138)	(0.385)	(0.628)
foreign	0.066	0.052	0.186	0.179	0.021	1.000	-0.013	0.034	-0.016	0.029
	(0.000)	(0.005)	(0.000)	(0.000)	(0.251)		(0.462)	(0.064)	(0.382)	(0.107)
npl_ta	-0.042	-0.014	-0.133	-0.043	-0.029	-0.013	1.000	-0.203	0.658	-0.258
	(0.022)	(0.435)	(0.000)	(0.018)	(0.109)	(0.462)		(0.000)	(0.000)	(0.000)
indpoliall	0.038	-0.004	0.027	-0.070	-0.027	0.034	-0.203	1.000	-0.535	0.101
	(0.037)	(0.834)	(0.144)	(0.000)	(0.138)	(0.064)	(0.000)		(0.000)	(0.000)
mulsup	-0.040	-0.017	-0.200	-0.058	0.016	-0.016	0.658	-0.535	1.000	-0.027
	(0.029)	(0.345)	(0.000)	(0.002)	(0.385)	(0.382)	(0.000)	(0.000)		(0.139)
singlefsa	-0.017	-0.058	0.134	0.049	-0.009	0.029	-0.258	0.101	-0.027	1.000
	(0.358)	(0.002)	(0.000)	(0.007)	(0.628)	(0.107)	(0.000)	(0.000)	(0.139)	
mcar	-0.021	-0.071	0.019	-0.059	-0.004	-0.002	-0.289	-0.277	0.088	0.108
	(0.243)	(0.000)	(0.304)	(0.001)	(0.816)	(0.911)	(0.000)	(0.000)	(0.000)	(0.000)

Table 41 (continued)

	stloan	ltloan	transparency	audit	costeffi	foreign	npl_ta	indpoliall	mulsup	singlefsa
crindex	-0.024	-0.073	0.079	-0.060	0.005	-0.018	0.053	0.430	-0.192	0.276
	(0.183)	(0.000)	(0.000)	(0.001)	(0.770)	(0.334)	(0.003)	(0.000)	(0.000)	(0.000)
fstrans	0.043	0.098	0.050	0.102	0.020	0.022	-0.020	0.178	-0.238	-0.336
	(0.018)	(0.000)	(0.006)	(0.000)	(0.282)	(0.231)	(0.263)	(0.000)	(0.000)	(0.000)
nfob	-0.037	-0.037	-0.053	-0.031	0.060	-0.034	-0.085	-0.505	0.213	0.058
	(0.043)	(0.043)	(0.004)	(0.093)	(0.001)	(0.063)	(0.000)	(0.000)	(0.000)	(0.002)
nbffob	-0.033	-0.038	0.061	-0.024	0.043	-0.026	-0.234	0.045	-0.228	0.154
	(0.073)	(0.037)	(0.001)	(0.190)	(0.018)	(0.160)	(0.000)	(0.014)	(0.000)	(0.000)
overbnk	-0.011	-0.039	-0.001	-0.074	0.003	0.005	0.126	0.278	0.154	0.492
	(0.544)	(0.037)	(0.941)	(0.000)	(0.850)	(0.767)	(0.000)	(0.000)	(0.000)	(0.000)
bcdepo	0.092	0.088	0.113	0.084	-0.028	0.040	0.257	-0.045	0.136	0.149
	(0.000)	(0.000)	(0.000)	(0.000)	(0.128)	(0.027)	(0.000)	(0.014)	(0.000)	(0.000)
pcrdbgdp	0.109	0.131	-0.069	0.022	-0.003	0.060	0.477	0.138	0.368	0.063
	(0.000)	(0.000)	(0.000)	(0.224)	(0.868)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
govbank	-0.009	-0.034	-0.077	-0.070	0.012	-0.042	-0.413	0.092	-0.372	-0.416
	(0.640)	(0.066)	(0.000)	(0.000)	(0.527)	(0.021)	(0.000)	(0.000)	(0.000)	(0.000)
forbank	0.027	0.051	-0.063	0.075	-0.035	0.064	0.356	0.077	0.305	0.066
	(0.143)	(0.006)	(0.001)	(0.000)	(0.051)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
pribank	-0.028	-0.046	0.114	-0.056	0.037	-0.058	-0.230	-0.137	-0.189	0.121
	(0.123)	(0.014)	(0.000)	(0.002)	(0.040)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)

Table 41 (continued)

	mcar	crindex	fstrans	nfob	nbffob	overbnk	bcdepo	pcrdbgdp	govbank	forbank	pribank
stloan	-0.021	-0.024	0.043	-0.037	-0.033	-0.011	0.092	0.109	-0.009	0.027	-0.028
	(0.243)	(0.183)	(0.018)	(0.043)	(0.073)	(0.544)	(0.000)	(0.000)	(0.640)	(0.143)	(0.123)
ltloan	-0.071	-0.073	0.098	-0.037	-0.038	-0.039	0.088	0.131	-0.034	0.051	-0.046
	(0.000)	(0.000)	(0.000)	(0.043)	(0.037)	(0.037)	(0.000)	(0.000)	(0.066)	(0.006)	(0.014)
transparency	0.019	0.079	0.050	-0.053	0.061	-0.001	0.113	-0.069	-0.077	-0.063	0.114
	(0.304)	(0.000)	(0.006)	(0.004)	(0.001)	(0.941)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
audit	-0.059	-0.060	0.102	-0.031	-0.024	-0.074	0.084	0.022	-0.070	0.075	-0.056
	(0.001)	(0.001)	(0.000)	(0.093)	(0.190)	(0.000)	(0.000)	(0.224)	(0.000)	(0.000)	(0.002)
costeffi	-0.004	0.005	0.020	0.060	0.043	0.003	-0.028	-0.003	0.012	-0.035	0.037
	(0.816)	(0.770)	(0.282)	(0.001)	(0.018)	(0.850)	(0.128)	(0.868)	(0.527)	(0.051)	(0.040)
foreign	-0.002	-0.018	0.022	-0.034	-0.026	0.005	0.040	0.060	-0.042	0.064	-0.058
	(0.911)	(0.334)	(0.231)	(0.063)	(0.160)	(0.767)	(0.027)	(0.001)	(0.021)	(0.000)	(0.002)
npl_ta	-0.289	0.053	-0.020	-0.085	-0.234	0.126	0.257	0.477	-0.413	0.356	-0.230
	(0.000)	(0.003)	(0.263)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
indpoliall	-0.277	0.430	0.178	-0.505	0.045	0.278	-0.045	0.138	0.092	0.077	-0.137
	(0.000)	(0.000)	(0.000)	(0.000)	(0.014)	(0.000)	(0.014)	(0.000)	(0.000)	(0.000)	(0.000)
mulsup	0.088	-0.192	-0.238	0.213	-0.228	0.154	0.136	0.368	-0.372	0.305	-0.189
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
singlefsa	0.108	0.276	-0.336	0.058	0.154	0.492	0.149	0.063	-0.416	0.066	0.121
	(0.000)	(0.000)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)
mcar	1.000	-0.090	-0.533	0.294	-0.068	0.027	-0.035	-0.379	0.143	0.081	-0.167
		(0.000)	(0.000)	(0.000)	(0.000)	(0.135)	(0.056)	(0.000)	(0.000)	(0.000)	(0.000)

Table 41 (continued)

	mcar	crindex	fstrans	nfob	nbffob	overbnk	bcdepo	pcrdbgdp	govbank	forbank	pribank
crindex	-0.090	1.000	0.087	0.020	0.291	0.416	-0.179	0.086	-0.130	-0.319	0.449
	(0.000)		(0.000)	(0.283)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
fstrans	-0.533	0.087	1.000	-0.439	-0.314	-0.426	-0.232	0.291	0.122	-0.060	0.014
	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.438)
nfob	0.294	0.020	-0.439	1.000	0.745	0.280	0.017	-0.267	-0.112	-0.256	0.364
	(0.000)	(0.283)	(0.000)		(0.000)	(0.000)	(0.357)	(0.000)	(0.000)	(0.000)	(0.000)
nbffob	-0.068	0.291	-0.314	0.745	1.000	0.415	0.114	-0.337	-0.166	-0.327	0.476
	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
overbnk	0.027	0.416	-0.426	0.280	0.415	1.000	0.131	0.093	-0.239	0.070	0.031
	(0.135)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.087)
bcdepo	-0.035	-0.179	-0.232	0.017	0.114	0.131	1.000	0.163	-0.683	0.580	-0.370
	(0.056)	(0.000)	(0.000)	(0.357)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)
pcrdbgdp	-0.379	0.086	0.291	-0.267	-0.337	0.093	0.163	1.000	-0.513	0.540	-0.404
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
govbank	0.143	-0.130	0.122	-0.112	-0.166	-0.239	-0.683	-0.513	1.000	-0.595	0.235
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)	(0.000)
forbank	0.081	-0.319	-0.060	-0.256	-0.327	0.070	0.580	0.540	-0.595	1.000	-0.921
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.000)
pribank	-0.167	0.449	0.014	0.364	0.476	0.031	-0.370	-0.404	0.235	-0.921	1.000
	(0.000)	(0.000)	(0.438)	(0.000)	(0.000)	(0.087)	(0.000)	(0.000)	(0.000)	(0.000)	

Table 42 Short Term Versus Long Term Loan

	stloan2	stloan3	ltloan2	ltloan3
transparency	-0.110	-0.093	-0.052	-0.049
	(0.08)	(0.08)	(0.08)	(0.08)
audit	-0.006	-0.014	-0.060	-0.060
	(0.07)	(0.07)	(0.07)	(0.07)
costeffi	0.003	0.003	0.002	0.002
	(0.00)	(0.00)	(0.00)	(0.00)
foreign	0.003**	0.003**	0.002*	0.002*
	(0.00)	(0.00)	(0.00)	(0.00)
npl_ta	-0.040*	-0.065***	-0.046*	-0.061***
	(0.02)	(0.02)	(0.02)	(0.02)
indpoliall	-0.008	0.038	-0.364**	-0.315*
	(0.12)	(0.12)	(0.12)	(0.13)
mulsup	-0.317*	-0.459**	-0.213	-0.321*
	(0.15)	(0.15)	(0.15)	(0.15)
singlefsa	-0.520**	-0.892***	-0.671***	-0.936***
	(0.16)	(0.15)	(0.17)	(0.15)
mcar	0.183**	0.090	0.156**	0.106
	(0.06)	(0.05)	(0.06)	(0.06)
crindex	-0.118**	-0.092*	-0.150***	-0.146**
	(0.04)	(0.05)	(0.05)	(0.05)
fstrans	0.066	-0.044	0.191*	0.126
	(0.08)	(0.08)	(0.08)	(0.08)
nfob	-0.445	0.156	-1.310**	-0.921*
	(0.45)	(0.44)	(0.46)	(0.45)
nbffob	-0.023	-0.705*	0.645*	0.182
	(0.31)	(0.30)	(0.32)	(0.30)
overbnk	0.086**	0.120***	0.117***	0.144***
	(0.03)	(0.03)	(0.03)	(0.03)
bcdepo	0.047***	0.038***	0.032***	0.027***
	(0.00)	(0.00)	(0.00)	(0.00)
pcrdbgdp	7.122***	5.661***	6.956***	6.075***
	(0.77)	(0.68)	(0.78)	(0.70)
forbank	-0.019***		-0.014***	
	(0.00)		(0.00)	
pribank		0.018***		0.014***
		(0.00)		(0.00)

Table 42 (continued)

	stloan2	stloan3	ltloan2	ltloan3
cut1	3.553***	2.896**	2.711**	2.512*
	(1.02)	(1.02)	(1.04)	(1.04)
cut2	4.736***	4.074***	3.992***	3.792***
	(1.02)	(1.02)	(1.05)	(1.05)
cut3	6.550***	5.884***	5.693***	5.493***
	(1.03)	(1.03)	(1.05)	(1.05)
N	3024	3024	2962	2962
pseudo R^2	0.027	0.025	0.027	0.027
chi2	221.375	206.445	208.934	206.099

Note: Models are estimated using ordered logit regressions, where the dependent variable equals 1 to 4. Data on dependent variable and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

Table 43 Marginal Effects for Short Term Loans and Long Term Loans Analysis: Forbank

	mfx1f3	mfx2f3	mfx3f3	mfx4f3	mfx1f4	mfx2f4	mfx3f4	mfx4f4
transparency (d)	0.021	0.006	-0.015	-0.012	0.012	-0.000	-0.008	-0.004
audit (d)	0.001	0.000	-0.001	-0.001	0.014	-0.000	-0.009	-0.005
costeffi	-0.001	-0.000	0.000	0.000	-0.000	0.000	0.000	0.000
foreign	-0.001**	-0.000**	0.000**	0.000**	-0.001*	0.000	0.000*	0.000*
npl_ta	0.008*	0.002*	-0.006*	-0.004*	0.011*	-0.000	-0.007*	-0.004*
indpoliall	0.001	0.000	-0.001	-0.001	0.083**	-0.002	-0.053**	-0.028**
mulsup (d)	0.063*	0.016*	-0.045*	-0.033*	0.049	-0.003	-0.031	-0.016
singlefsa (d)	0.107**	0.020***	-0.076**	-0.051***	0.160***	-0.023*	-0.094***	-0.044***
mcar	-0.035**	-0.011**	0.026**	0.020**	-0.036**	0.001	0.023*	0.012*
crindex	0.023**	0.007**	-0.016**	-0.013**	0.034***	-0.001	-0.022***	-0.012**
fstrans	-0.013	-0.004	0.009	0.007	-0.044*	0.001	0.028*	0.015*
nfob	0.085	0.026	-0.062	-0.049	0.300**	-0.008	-0.191**	-0.101**
nbffob	0.004	0.001	-0.003	-0.003	-0.148*	0.004	0.094*	0.050*
overbnk	-0.017**	-0.005**	0.012**	0.009**	-0.027***	0.001	0.017***	0.009***
bcdepo	-0.009***	-0.003***	0.006***	0.005***	-0.007***	0.000	0.005***	0.002***
pcrdbgdp	-1.364***	-0.409***	0.992***	0.781***	-1.594***	0.045	1.014***	0.536***
forbank	0.004***	0.001***	-0.003***	-0.002***	0.003***	-0.000	-0.002***	-0.001***
N	3024	3024	3024	3024	2962	2962	2962	2962

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 44 Marginal Effects for Short Term Loans and Long Term Loans Analysis: Pribank

	mfx1f5	mfx2f5	mfx3f5	mfx4f5	mfx1f6	mfx2f6	mfx3f6	mfx4f6
transparency (d)	0.018	0.005	-0.013	-0.010	0.011	-0.000	-0.007	-0.004
audit (d)	0.003	0.001	-0.002	-0.002	0.014	-0.000	-0.009	-0.005
costeffi	-0.001	-0.000	0.000	0.000	-0.000	0.000	0.000	0.000
foreign	-0.001**	-0.000**	0.000**	0.000**	-0.001*	0.000	0.000*	0.000*
npl_ta	0.012***	0.004***	-0.009***	-0.007***	0.014***	-0.000	-0.009***	-0.005***
indpoliall	-0.007	-0.002	0.005	0.004	0.072*	-0.002	-0.046*	-0.024*
mulsup (d)	0.092**	0.021***	-0.066**	-0.047***	0.075*	-0.005	-0.046*	-0.023*
singlefsa (d)	0.191***	0.020***	-0.131***	-0.080***	0.225***	-0.041***	-0.127***	-0.057***
mcar	-0.017	-0.005	0.012	0.010	-0.024	0.001	0.015	0.008
crindex	0.018*	0.005*	-0.013*	-0.010*	0.034**	-0.001	-0.021**	-0.011**
fstrans	0.008	0.002	-0.006	-0.005	-0.029	0.001	0.018	0.010
nfob	-0.030	-0.009	0.022	0.017	0.211*	-0.006	-0.134*	-0.071*
nbffob	0.135*	0.040*	-0.098*	-0.078*	-0.042	0.001	0.026	0.014
overbnk	-0.023***	-0.007***	0.017***	0.013***	-0.033***	0.001	0.021***	0.011***
bcdepo	-0.007***	-0.002***	0.005***	0.004***	-0.006***	0.000	0.004***	0.002***
pcrdbgdp	-1.086***	-0.324***	0.786***	0.624***	-1.392***	0.039	0.885***	0.468***
pribank	-0.003***	-0.001***	0.003***	0.002***	-0.003***	0.000	0.002***	0.001***
N	3024	3024	3024	3024	2962	2962	2962	2962

Note: (d) for discrete change of dummy variable from 0 to 1, * p<0.05, ** p<0.01, *** p<0.001.

Table 45 Bank Loan Structure Analysis

	duration1	duration3	approvalday1	approvalday3	interestrate1	interestrate3	collateral1	collateral3
transparency	4.487***	4.333***	2.325	2.843*	-1.316***	-1.099**	-9.356*	-7.443
	(1.26)	(1.27)	(1.39)	(1.40)	(0.35)	(0.35)	(4.02)	(4.04)
audit	-1.118	-0.860	-0.653	-0.724	0.295	0.148	-1.872	-2.263
	(1.23)	(1.23)	(1.36)	(1.37)	(0.34)	(0.34)	(3.92)	(3.92)
costeffi	-0.028	-0.025	-0.032	-0.034	0.009	0.007	0.083	0.068
	(0.04)	(0.04)	(0.05)	(0.05)	(0.01)	(0.01)	(0.13)	(0.13)
foreign	0.014	0.014	-0.029	-0.030	-0.002	-0.002	0.052	0.050
	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.07)	(0.07)
npl_ta	-0.859***	-0.799**	0.215	0.276	-0.104	-0.122	-1.309	-1.176
	(0.25)	(0.25)	(0.28)	(0.28)	(0.07)	(0.07)	(0.80)	(0.80)
indpoliall	2.189	3.033*	-0.074	0.815	1.380***	1.153***	18.545***	21.137***
	(1.21)	(1.19)	(1.34)	(1.31)	(0.34)	(0.33)	(3.94)	(3.86)
mulsup	6.267**	6.900***	0.586	5.438*	-5.421***	-4.506***	2.967	20.681***
	(1.91)	(1.97)	(2.11)	(2.18)	(0.53)	(0.54)	(6.11)	(6.27)
singlefsa	-1.543	-0.626	-8.093***	-4.194*	-1.656***	-1.150*	9.796	23.410***
	(1.73)	(1.72)	(1.93)	(1.91)	(0.48)	(0.47)	(5.62)	(5.59)
mcar	-1.312*	-1.216*	-1.586**	-1.805**	1.097***	0.993***	2.024	1.084
	(0.52)	(0.53)	(0.58)	(0.59)	(0.15)	(0.14)	(1.65)	(1.66)
crindex	0.342	0.041	1.245*	1.863**	0.182	0.505**	5.850***	8.357***
	(0.54)	(0.58)	(0.61)	(0.64)	(0.15)	(0.16)	(1.71)	(1.81)
fstrans	-1.058	-1.004	-5.145***	-4.716***	-4.004***	-3.943***	-16.181***	-15.166***
	(1.18)	(1.18)	(1.31)	(1.31)	(0.33)	(0.32)	(3.77)	(3.77)
nfob	-2.751	-2.143	2.565	3.543	1.971**	1.898**	21.627**	24.714***
	(2.20)	(2.19)	(2.46)	(2.45)	(0.62)	(0.61)	(7.05)	(7.01)

Table 45 (continued)

	duration1	duration3	approvalday1	approvalday3	interestrate1	interestrate3	collateral1	collateral3
nbffob	-3.545	-4.486	-1.487	1.761	-3.191***	-1.816**	-12.442	0.305
	(2.31)	(2.45)	(2.56)	(2.72)	(0.65)	(0.68)	(7.61)	(8.08)
overbnk	-0.738	-0.687	0.282	-0.392	0.844***	0.632***	-6.008***	-8.732***
	(0.47)	(0.49)	(0.52)	(0.54)	(0.13)	(0.13)	(1.46)	(1.52)
bcdepo	0.228**	0.282***	-0.307***	-0.225**	-0.152***	-0.161***	-0.646**	-0.407
	(0.07)	(0.07)	(0.08)	(0.07)	(0.02)	(0.02)	(0.22)	(0.22)
forbank	0.083**		0.258***		0.021*		0.873***	
	(0.03)		(0.03)		(0.01)		(0.10)	
pcrdbgdp	37.192***	44.452***	-0.225	0.823	-13.139***	-16.955***	-65.848**	-67.685***
	(6.06)	(6.10)	(6.76)	(6.78)	(1.69)	(1.68)	(20.00)	(20.02)
pribank		-0.021		-0.302***		-0.067***		-1.091***
		(0.04)		(0.04)		(0.01)		(0.12)
_cons	30.980*	29.339*	60.256***	67.407***	30.599***	33.473***	188.861***	222.103***
	(12.59)	(12.73)	(14.08)	(14.22)	(3.52)	(3.52)	(40.10)	(40.53)
N	2046	2046	2079	2079	2019	2019	1715	1715
pseudo R^2	0.015	0.015	0.009	0.008	0.070	0.072	0.011	0.011
ll	-9544.154	-9547.589	-9923.311	-9925.584	-6821.067	-6803.954	-9842.071	-9841.103
chi2	294.149	287.279	171.777	167.232	1028.489	1062.715	209.438	211.375
p	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
R^2	0.134	0.131	0.079	0.077	0.399	0.409	0.115	0.116

Note: Models are estimated using tobit regressions, where the dependent variables all have lower bound above 0. Data on dependent variables and firm specific variables are obtained or computed from BEEPS. Bank regulatory variables are obtained or computed from World Bank Survey I/II/III under project "Bank Regulation and Supervision". Standard errors are reported below coefficients. The symbol *** indicates a significance level of 1 percent or less; ** indicates a significance level between 1 and 5 per cent; * indicates a significance level between 5 and 10 percent.

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APPENDIX A: WORLD BANK SURVEY FOR BANK REGULATION AND SUPERVISION

WBG1.5: Are the sources of funds to be used as capital verified by the regulatory/supervisory authorities?

WBG1.6: Can the initial disbursement or subsequent injections of capital be done with assets other than cash or government securities?

WBG1.7: Can initial disbursement of capital be done with borrowed funds?

WBG2.3: What is the level of regulatory restrictiveness for nonfinancial firms ownership of banks: (1) Unrestricted-A nonfinancial firm may own 100 percentage of the equity in a bank, (2) Permitted-Unrestricted with prior authorization or approval, (3) Restricted-Limits are placed on ownership, such as a maximum percentage of a bank's capital or shares (4) Prohibited-No equity investment in a bank?

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WBG2.6: Of commercial banks in your country, what fraction of:
WBG2.6.1: deposits is held by the five largest banks?

WBG3.1: What is the minimum capital-asset ratio requirement?
WBG3.1.1: Is this ratio risk weighted in line with the 1988 Basle guidelines?

WBG3.2: Does the minimum ratio vary as a function of an individual bank's credit risk?

WBG3.3: Does the minimum ratio vary as a function of market risk?

WBG3.7: What fraction of revaluation gains is allowed as part of capital?

WBG3.8: What fraction of the banking system's assets is in banks that are:
WBG3.8.1: 50% or more government owned?
WBG3.8.2: 50% or more foreign owned?

WBG3.9: Before minimum capital adequacy is determined, which of the following are deducted from the book value of capital?
WBG3.9.1: Market value of loan losses not realized in accounting books?

WBG3.9.2: Unrealized losses in securities portfolios
WBG3.9.3: Unrealized foreign exchange losses?

WBG4.1: What are the conditions under which banks can engage in securities activities: (1) Unrestricted-A full range of activities in the given category can be conducted directly in the bank, (2) Permitted-A full range of these activities are offered but all or some of these activities must be conducted in subsidiaries or in another part of a common holding company, (3) Restricted-Less than a full range of activities can be conducted in the bank or subsidiaries, (4) Prohibited-The activity cannot be conducted in either the bank or subsidiaries?

WBG4.2: What are the conditions under which banks can engage in insurance activities: (1) Unrestricted-A full range of activities in the given category can be conducted directly in the bank, (2) Permitted-A full range of these activities are offered but all or some of these activities must be conducted in subsidiaries or in another part of a common holding company, (3) Restricted-Less than a full range of activities can be conducted in the bank or subsidiaries, (4) Prohibited-The activity cannot be conducted in either the bank or subsidiaries?

WBG4.3: What are the conditions under which banks can engage in real estate activities: (1) Unrestricted-A full range of activities in the given category can be conducted directly in the bank, (2) Permitted-A full range of these activities are offered but all or some of these activities must be conducted in subsidiaries or in another part of a common holding company, (3) Restricted-Less than a full range of activities can be conducted in the bank or subsidiaries, (4) Prohibited-The activity cannot be conducted in either the bank or subsidiaries?

WBG4.4: What is the level of regulatory restrictiveness for bank ownership of nonfinancial firms: (1) Unrestricted-A bank may own 100 percentage of the equity in any nonfinancial firm, (2) Permitted-A bank may own 100 percentage of the equity in a nonfinancial firm, but ownership is limited based on a bank's equity capital, (3) A bank can only acquire less than 100 percentage of the equity in a nonfinancial firm (4) A bank may not acquire any equity investment in a nonfinancial firm?

WBG 10.1: Does accrued, though unpaid, interest/principal enter the income statement while the loan is still performing?

WBG10.1.1: Does accrued, though unpaid, interest/principal enter the income statement while the loan is still non-performing?

WBG10.3: Are financial institutions required to produce consolidated accounts covering all bank and any nonk-bank financial subsidiaries (including affiliates of common holding companies)?

WBG10.4.1: Are off-balance sheet items disclosed to the public?

WBG10.5: Must banks disclose their risk management procedures to the public?

WBG10.6: Are bank directors legally liable if information disclosed is erroneous or misleading?

WBG12.1: What body/agency supervises banks?

WBG12.1.1:The central bank?

WBG12.1.2: A Single Bank Supervisory Agency/ Superintendency?

WBG12.1.3: Multiple Bank Supervisory Agencies/Superintendencies?

WBG12.1.4: Is there a single financial supervisory agency for all of the main financial institutions (insurance companies, contractual savings institutions, savings banks)?

WBG12.2: To whom are the supervisory bodies responsible or accountable: (a) the Prime Minister, (b) the Finance Minister or other cabinet level official, (c) a legislative body, such as Parliament or Congress, (d) other?

Note: for more questions of the survey, please refer to Barth, Caprio and Levine (2006).

APPENDIX B: EBRD-WORLD BANK SURVEY FOR BUSINESS ENVIRONMENT AND ENTERPRISE PERFORMANCE (BEEPS)

Q2: What percentage of your sales comes from the following sectors in which your establishment operates?
Q2c: Manufacturing?

Q14: Considering your main product line or main line of services in the domestic market, by what margin does your sales price exceed your operating costs (i.e., the cost material inputs plus wage costs but not overheads and depreciation)?

Q45a: What proportion of your firm's working capital and new fixed investment has been financed from each of the following sources, over the last 12 months?
Working capital (i.e. inventories, accounts receivable, cash):
Q45a2: Equity (i.e. issue new shares)?
Q45a3: Borrowing from local private commercial banks?
Q45a4: Borrowing from foreign banks?
Q45a5: Borrowing from state-owned banks, including state development banks?
Q45a6: Loans from family/friends?
Q45a7: Money lenders or other informal sources (other than family/friends)?
Q45a12: The government (other than state-owned banks)?
New investments (i.e. new land, buildings, machinery, equipment):
Q45a16: Equity (i.e. issue new shares)?
Q45a17: Borrowing from local private commercial banks?
Q45a18: Borrowing from foreign banks?
Q45a19: Borrowing from state-owned banks, including state development banks?
Q45a20: Loans from family/friends?
Q45a21: Money lenders or other informal sources (other than family/friends)?
Q45a26: The government (other than state-owned banks)?

Q46: Thinking of the most recent loan you obtained from a financial institution
Q46a: Did the financing require collateral: (1) Yes, (2) No?
Q46c: What was the approximate value of the collateral required as a percentage of the loan value?
Q46d: What is the loan's annual cost (i.e., rate of interest)?
Q46e: What is the duration of the loan in months?
Q46h: How many days did it take to agree the loan with the bank from the date of application?

Q48: Does your firm use international accounting standards (IAS) as provided by the International Accounting Standards Board or US GAAP or national accounting standards as provided by the Ministry of Finance or securities regulator?
Q48a: International Accounting Standards: (1) Yes, (2) No, (3) Don't know?

Q48b: US GAAP: (1) Yes, (2) No, (3) Don't know?
Q48c: National Accounting Standards: (1) Yes, (2) No, (3) Don't know?

Q49: Does your firm have its annual financial statement checked and certified by an external auditor: (1) Yes, (2) No, (3) Don't know?

Q54: Can you tell me how problematic are these different factors for the operation and growth of your business?
Q54a: Access to financing (e.g., collateral required or financing not available from banks): (1) No obstacle, (2) Minor obstacle, (3) Moderate obstacle, (4) Major obstacle, (5) Don't Know?
Q54b: Cost of financing (e.g., interest rates and charges): (1) No obstacle, (2) Minor obstacle, (3) Moderate obstacle, (4) Major obstacle, (5) Don't Know?

S4: How many full-time employees work for this company today?
S4b1(small size firm): 2-49?
S4b2(medium size firm): 50-249?
S4b3(large size firm): 250-9999?

S5: What percentage of your firm is owned by:
S5b: Private foreign individual(s)/ company(s)/organization(s)?

NOTES:

[1]When a company decides to invest abroad, it can do it in two different ways: i) through the establishment of a new firm (Greenfield investment), ii) or through acquiring a pre-existent foreign firm or merging with a foreign firm.

[2] According to Barth, Phumiwasana, and Yost (2007), there were 154,061 completed mergers and acquisitions with a total deal value of $24.7 trillion in 173 countries during the period of January 1995 through January 2007. Of these transactions, 27% were cross-border and they accounted for 30% of the total value of all deals. However, the role of banks in all the mergers and acquisitions during the past decade is relatively modest. Banks accounted for only 3% of all the unique acquirers and acquired less than 4% of all the firms involved in completed deals. Of these deals, 30% of the firms acquired were cross-border, with 24% of the total deal value also being cross-border.

[3] Berger, Demsetz, and Strahan (1999) categorize the analyses into static analyses and dynamic analyses. The static analyses are based on analyzing the overall performance of banks after mergers and acquisitions. This category of studies tries to determine if mergers and acquisitions promote economies of scale and scope and increase banks' overall performances. The dynamic analyses try to compare banks' specific performances such as changes in organizational structures or management behaviors before and after merger activities.

[4] Both targets and acquirers in horizontal mergers and acquisitions are banks whose products and services are similar. Vertical mergers and acquisitions refer to the deals that one party is bank while another party is nonbank financial firms. Conglomerate mergers and acquisitions have characteristics of both horizontal and vertical mergers and acquisitions. At least one party in conglomerate mergers and acquisitions should be financial group that operates both in traditional banking activities and innovative financial services.

[5] ROA= (Net Income+Interest Expense)/Total Asset= (Net Interest Income+Other Net Income+Interest Expense)/Total Asset=NIM+Other Net Income/Total Asset+ Interest Expense/Total Asset; CTIR=Non-interest Expense/ (Net Interest Income+Non-Interest Income).

[6] The results are not reported in the paper due to paper layout.

[7] We also ran a regression deconstructing the bank activity restriction index into its three components: bank restrictions on security activities, real estate activities, and insurance activities. Only the security component is significantly positive. Restrictions on real estate as well as insurance activities have no influence on acquiring decisions.

[8] Z-score is a measure of bank stability and indicates the distance from insolvency. It indicates the number of standard deviations that a bank's return on assets has to drop below its expected value before equity is depleted and the bank is insolvent. A higher Z-score indicates the bank is more stable. Please see Laeven and Levine (2008). ZSCORE in the robustness test is computed using banking sector ROA and ROE.

[9] FYROM is abbreviation of the former Yugoslav Republic of Macedonia. It is used to be called the Republic of Macedonia. It is one of the successor states of the former Yugoslavia, from which it declared independence in 1991.

[10] For information on the three World Bank surveys and how to compute regulatory indices, refer to chapter 1, section 5 of this dissertation.

[11] According to Clessens (2003), a dis-intermediation problem exists when firms bypass banks and raise money directly from public markets or where they obtain other types of financial products from non-banks, including from insurance companies.