Governance and Bank Valuation

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Abstract: Which public policies and ownership structures enhance the governance of banks? Is the governance of banks different from other corporations? This paper constructs a new database on the ownership of banks internationally and then assesses the ramifications of ownership, shareholder protection laws, and supervisory/regulatory policies on bank valuations. Except in a few countries with very strong shareholder protection laws, banks are not widely held, but rather families or the State tend to control banks. We find that (i) larger cash-flow rights by the controlling owner boosts valuations, (ii) stronger shareholder protection laws increase valuations, and (iii) greater cash-flow rights mitigate the adverse effects of weak shareholder protection laws on bank valuations. These results are consistent with the views that expropriation of minority shareholders is important internationally, that laws can restrain this expropriation, and concentrated cash-flow rights represent an important mechanism for governing banks. Finally, the evidence does not support the view that empowering official supervisory and regulatory agencies will increase the market valuation of banks.

I. Introduction

Research suggests that well-functioning banks promote growth.[1] When banks efficiently

mobilize and allocate funds, this lowers the cost of capital to firms and accelerates capital

accumulation and productivity growth. Furthermore, banks, as major creditors and in some countries as

major equity holders, play an important role in governing firms. Thus, if bank managers face sound

governance mechanisms, this enhances the likelihood that banks will raise capital inexpensively,

allocate society's savings efficiently, and exert sound governance over the firms they fund.

Nevertheless, little is known about which laws, bank supervisory strategies, and bank

regulations enhance the governance of banks. Virtually all countries adopted the Basle Committee's

original recommendations on capital regulations and official supervision, and most have indicated their

intention to adopt the much more detailed set of recommendations contained in Basel II. Yet, there

exists no cross-country evidence regarding the impact of capital standards and bank supervision and

regulation on the market value of banks. Regarding shareholder protection laws, La Porta, Lopez-de-

Silanes, Shleifer, and Vishny (2002, henceforth LLSV) examine the impact of these laws on corporate

valuations. Yet, there is no evidence on whether shareholder protection laws influence the corporate

governance of opaque, heavily regulated banks differently from other industries.[2] Are banks different

(Fama, 1985)? Or, do the same corporate control mechanisms that work in non-financial corporations

also work in banks? Given the importance of banks in the economy, it is crucial to understand which

laws and regulations improve the governance of banks.

This paper assesses the impact of shareholder protection laws, bank supervision and regulation,

and the ownership structure of banks on bank valuations. By examining valuations, we directly analyze

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[1] See, King and Levine (1993a,b), Demirgüç-Kunt and Maksimovic (1998), Levine and Zervos (1998), Rajan and Zingales (1998), Beck, Levine, and Loayza (2000), Levine, Loayza, and Beck (2000), Wurgler (2000), Claessens and Laeven (2003), and reviews by Levine (1997, 2004).

[2] Akerlof and Romer (1993) and La Porta, Lopez-de-Silanes, and Zamarripa (2003) examine the expropriation of bank resources by bank insiders in the United States and Mexico respectively.

banks' cost of capital and indirectly assess the market's assessment of the governance of banks. That is, holding other things constant, governance mechanisms that both reduce the ability of insiders to expropriate bank resources and promote bank efficiency tend to boost the market value of banks.

In terms of shareholder protection laws, research suggests that strong legal protection of small investors increases firm valuations (Claessens et al., 2000; LLSV, 2002). In short, investors pay more for equity when legal institutions effectively protect their rights. From this perspective, investor protection laws may provide the tools for small shareholders to stop large shareholders from expropriating bank resources. We define expropriation broadly to include theft, transfer pricing, asset stripping, the hiring of family members, the allocation of credit in a manner that enriches bank insiders but hurts the bank as a whole, and other "perquisites" that benefit bank insiders but hurt the bank.

In the particular case of banks, however, not everyone agrees that shareholder protection laws will effectively thwart expropriation.[3] Many view banks as extraordinarily complex and opaque (Morgan, 2003). Thus, investor protection laws alone may not provide a sufficiently powerful corporate governance mechanism to small shareholders. Put differently, even with strong investor protection laws, small stakeholders may lack the means to monitor and govern complex banks. Furthermore, bank regulations may be sufficiently pervasive that they render shareholder protection laws superfluous, or bank regulations may supersede standard investor protection laws. Thus, the impact of investor protection laws on banks may differ from their impact on non-bank corporations. This paper provides the first examination of the impact of shareholder protection laws on bank valuations under different bank supervisory and regulatory regimes.

In terms of bank supervision and regulation, official oversight of banks may arise in part to stop bank insiders from expropriating bank resources (Caprio and Levine 2002). Thus, effective supervision

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[3] Coasians argue that legal systems that effectively enforce private contracts will allow sophisticated financial market participants to custom design a vast array of private contracts to ameliorate complex agency problems better than standardized shareholder protection laws (Coase, 1960; Glaeser et al., 2001).

and regulation may increase investor confidence regarding expropriation and boost market valuations. Of course, bank supervision and regulation arise for reasons other than reducing expropriation. Especially in the presence of deposit insurance, supervision and regulation may arise to reduce excessive risk-taking by bank owners and protect depositors. In this context, supervision and regulation could actually reduce bank valuations by forcing bank risk below what equity holders would choose in the presence of government insurance. In this paper, we provide the first cross-country assessment of the impact of supervision and regulation on bank valuations.

While not mutually exclusive, shareholder protection laws and official supervision/regulation emphasize very different roles for the government, and our analysis, therefore, speaks directly to ongoing debates regarding the Basel Committee's recommendations on bank supervision/regulation. The official supervision/regulation mechanism focuses on capital regulations and empowering official supervision and regulation of banks, which compose the first two pillars of Basel II. In contrast, the shareholder protection mechanism focuses on empowering the private sector, which is related to Basel II's third pillar on private monitoring. We provide some evidence on the influence of each of these corporate governance mechanisms on bank valuations.

To draw precise inferences regarding the impact of legal protection and regulations on bank valuations, we need to consider ownership structure since ownership structure is an additional, and perhaps interrelated, mechanism for exerting corporate control. A crucial agency problem is the ability of controlling owners to expropriate – often legally -- corporate resources. The incentives of the controlling shareholders to expropriate resources from the corporation, however, depend on their cash-flow rights. As their cash-flow rights rise, expropriation involves a greater reduction in their own cash flow. Since expropriation is costly, increases in the cash-flow rights of the controlling owner will reduce incentives to expropriate resources from the corporation holding other factors constant (Jensen

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and Meckling, 1976; and Burkart, Gromb, Panunzi, 1998). Besides the direct impact of concentrated ownership on bank values, concentration may also influence the impact of legal protection on bank valuations (LLSV, 2002; Shleifer and Wolfenzon, 2002). These models suggest that a marginal improvement in legal protection may have less of an impact on bank valuations when there is a controlling shareholder. Or, put differently, these models predict that with effective legal protection of minority shareholders, having a controlling shareholder is less important for stemming the expropriation of the minority shareholders' wealth.

One contribution of this paper is to assemble and analyze detailed data on the ownership of banks around the world. Are banks widely held, or do they tend to have controlling owners? If they have a controlling owner, who tends to control banks? LaPorta, Lopez-de-Silanes, and Shleifer (1999, henceforth LLS) show that the widely held corporation is the exception rather than the norm internationally. Rather, they show that families or the State typically control firms. While there are financial institutions in LLS's (1999) sample, they do not focus on detailing the ownership structure of banks in each country and their coverage of commercial banks is limited.[4] In this paper, we construct a new database covering 244 banks across 44 countries and trace the ownership of banks to identify the ultimate owners of bank capital and the degree of voting rights and cash-flow rights concentration. As defined in greater detail below, an owner's voting rights will exceed the owner's cash-flow rights when the owner controls votes through various affiliated parties without having the rights to all cash flows received by those affiliated parties.

Thus, we provide information on three questions concerning ownership. First, we assess whether banks are widely held or whether they have a controlling owner with significant control and cash-flow rights. We find that banks are generally not widely held. In our average country, only about

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[4] Similarly, while LLS (2002) and Barth et al. (2001, 2003) provide statistics on the degree of State ownership of banks, these papers do not provide detailed information on the ownership structure of banks.

25 percent of the banks are widely held, i.e., they do not have a shareholder that owns at least 10 percent of the voting rights. Second, we provide information on the identity of the controlling shareholder. For banks with a controlling shareholder, we find that the controlling owner is a family more than half of the time in the average country, while we identify the State as the controlling owner of banks 19 percent of the time. Finally, we assess whether laws regarding the protection of minority shareholders and bank supervisory and regulatory practices are associated with the degree of control rights and cash-flow rights concentration. The data indicate that stronger legal protection of shareholders is positively connected with countries having more widely held banks.

Given this information on bank ownership, we examine the legal and regulatory determinants of bank valuations. Specifically, using bank-level data, we evaluate the impact of the legal protection of minority shareholders, bank supervisory and regulatory policies, and ownership structure on bank valuations. To measure valuation, we use both Tobin's Q and the ratio of the market value of equity to the book value of equity. We also test whether ownership concentration affects the impact of laws on bank valuations.

There are four key results on the governance of banks. First, stronger legal protection of minority shareholders is associated with more highly valued banks. This suggests both that expropriation of minority shareholders is important in many countries and that legal mechanisms can restrict expropriation of bank resources.

Second, bank regulations and supervisory practices have little impact on bank valuations. Specifically, empowering the public sector through strong supervisory agencies does not influence bank valuations and regulatory restrictions on bank capital, the entry of new banks, and bank activities in securities markets, insurance, and real estate do not boost bank values. Also, even when we dissect the different channels through which supervision/regulation may influence the governance of banks,

we find no evidence that supervision/regulation induces a positive impact of bank valuations by reducing expropriation and a countervailing negative impact on bank valuations by reducing bank risk below the level desired by shareholders. The findings on laws and supervision/regulation are consistent with the view that legal empowerment of small, private investors is a more efficacious governance mechanism that boosts bank valuations than official supervision and regulation of banks.

Third, the degree of cash-flow rights of the largest owner enters the bank valuation equation positively. The evidence is consistent with theoretical predictions that concentrated ownership reduces incentives for insiders to expropriate bank resources, and this boosts valuations.

Fourth, large cash-flow rights reduce the impact of legal protection on valuations. Thus, a marginal improvement in legal protection has less of an impact on a bank's valuation as the controlling owner's cash-flow rights increases. Put differently, a marginal increase in ownership concentration has a particularly large impact on valuations when legal protection of minority shareholders is weak. These last two findings shed a skeptical light on regulatory strategies that seek to minimize ownership concentration, especially in environments with weak legal protection of minority shareholders.

This paper is related to a number of influential bodies of research. First, there is a large literature on the impact of ownership structure on valuations. Some explicitly model the expropriation of minority shareholders by those exploiting "benefits of control" (Grossman and Hart, 1988; Stulz, 1988; Burkart, Gromb, and Panunzi, 1997, 1998; and Bennedsen and Wolfenzon, 2000). Others seek to explain the equilibrium structure of ownership and firm valuation under different shareholder protection environments (Zingales, 1995; Shleifer and Wolfenzon, 2002). Empirically, researchers examine the impact of managerial ownership on corporate valuations (Demsetz and Lehn, 1985; Morck, Shleifer, and Vishny, 1988; McConnell and Servaes, 1990; and Holderness, Kroszner, and Sheehan, 1999). Work also finds that weaker shareholder protection increases the premium associated

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with corporate control (Lease, McConnell, and Mikkelson, 1983; DeAngelo and DeAngelo, 1985; Zingales, 1994). In this paper, we focus on how legal protection of minority shareholders, bank supervisory and regulatory practices, and ownership concentration interact to influence bank valuations. Most directly, our paper extends LLS's (1999) examination of corporate ownership around the world and LLSV's (2000) examination of corporate valuations to the case of commercial banks while also assessing the impact of bank supervisory and regulatory policies on bank valuations

The paper also contributes to the debate on banking sector policies. Basic theories of regulation suggest that if small stakeholders lack the means to monitor banks, then government supervision can improve welfare (Atkinson and Stiglitz, 1980). But theory also suggests that government agencies will act in their own interests, not necessarily in the interests of society (Becker and Stigler, 1974; Stigler, 1972, 1975). Empirically, Barth, Caprio, and Levine (2004) find that bank development is (a) positively associated with policies that empower private monitoring and (b) negatively associated with powerful supervisory agencies. They also find no evidence that powerful supervisors promote bank stability. Furthermore, Beck, Demirgüç-Kunt, and Levine (2003) find that (a) firms in countries with powerful supervisory agencies tend to face greater external financing obstacles, but (b) national policies that empower private monitoring of banks ease corporate financing obstacles.[5] This paper contributes to the debate on which public policies enhance the governance of banks.

Section 2 discusses the data. Section 3 analyses bank ownership around the world. Section 4 examines bank valuations. Section 5 provides extensions and robustness tests and Section 6 concludes.

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[5] LLSV (2003) find that securities laws that empower private agents work better than official disciplinary powers.

II. Data and Variables

A. Sample

To conduct our analyses, we build a database on bank ownership, bank valuations, and other bank-specific and country characteristics. As discussed below, information on bank ownership is particularly difficult to construct. Data permitting, we collect data on the 10 largest publicly listed banks (as defined by total assets at the end of 2001) in those countries for which LLSV (1998) assembled data on shareholder rights.[6] Since some countries have fewer than 10 publicly listed banks with stock market valuations, this yields 281 banks. Then, we lose 25 banks because of missing information on the book value of assets and 12 banks because of missing ownership data. The final sample consists of 244 banks across 44 countries.[7]

Focusing on the largest banks enhances comparability across countries. Also, the largest banks tend to have the most liquid shares, reducing concerns that liquidity differences drive the results. As noted by LLSV (2002), focusing on the largest corporations should bias the results against finding a relationship between the formal legal protection of minority shareholders and valuations because larger corporations face alternative governance mechanisms, such as public scrutiny, foreign shareholders, and listings on international exchanges.[8]

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[6] There are five countries for which LLSV (1998) collected data on shareholder protection laws but which do not have sufficient information on bank ownership or the market valuation of banks to be included in our analyses (Belgium, Ecuador, New Zealand, Nigeria, and Uruguay). We examine the ownership of the bank holding company, not the bank itself, because bank holding company shares are publicly traded and bank holding companies control virtually all of the shares of their banks. For example, we examine Citigroup, not Citibank. If a bank is cross-listed in more than one exchange, we use market valuations from the exchange where the bank (or bank holding company) is registered.

[7] The sample accounts for on average 83 percent of total banking system assets across the 44 countries. In only five countries, does our sample cover less than 50 percent of the total banking assets of the country reported by the country's supervisory agency (Argentina, Japan, Mexico, Pakistan, and Venezuela). When we eliminate these countries, the results are unchanged.

[8] Recent work on the ownership of non-financial corporations has focused on the 10 or 20 largest firms for the same reasons (LLS, 1999; LLSV, 2002). Since there are significantly fewer banks than non-financial firms, our 10-banks-per-country criterion is comparable to this research.

B. Sources

Banking data come from two major sources. BANKSCOPE, maintained by Bureau Van Dijk, contains financial and ownership information for about 4,000 major banks. BANKERS ALMANAC, published since 1847, also contains a wealth of data, including detailed ownership data.[9]

To obtain ownership information of banks, we also use annual reports, 20-F filings for companies with American Depositary Receipts, proxy statements, and country-specific publications. Also, many individual banks and national institutions (e.g., Central Banks, regulatory authorities) maintain websites that we used to compile ownership data.

Since (1) non-financial institutions own bank shares, (2) BANKSCOPE and the BANKERS ALMANAC only have information on financial institutions, and (3) we seek to trace bank ownership through corporations back to individuals, we need information on the ownership of non-financial institutions. WORLDSCOPE contains ownership data of firms. Thus, we use WORLDSCOPE along with 20-F filings, company reports, and filings with national stock exchanges and securities regulations to identify the ultimate owners of corporations that own shares in banks. The ownership data are from 2001 except in a few cases, where we use 2000 data. Because ownership patterns are very stable, this should neither induce problems, nor bias the results.

C. Control rights

We classify a bank as having a controlling owner if the shareholder has direct and indirect voting rights that sum to 10 percent or more. If no shareholder holds 10 percent of the voting rights, we classify the bank as widely held. Since 10 percent voting rights is frequently sufficient to exert control, this cut-off is used extensively (e.g., LLS, 1999; LLSV, 2002). When we use a 20 percent criterion, however, we obtain the same conclusions as those discussed below.

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[9] Reed Business Information, which is part of Anglo-Dutch Reed Elsevier, maintains Bankers Almanac.

While direct ownership involves shares registered in the shareholder's name, indirect ownership involves bank shares held by entities that the ultimate shareholder controls. Since the principal shareholders of banks are frequently themselves financial institutions or corporate entities, we find the major shareholders in these financial institutions or corporate entities. Often, we need to trace this indirect ownership chain backwards through numerous corporations to identify the ultimate controllers of the votes. Thus, to construct data on control rights of banks, we follow LLS's (1999) and LLSV's (2002) procedure for examining the ownership of firms. Lang and So (2002) also construct data on bank ownership. They do not, however, examine the impact of shareholder protection laws, bank supervision and regulation, and cash-flow rights on bank valuations.

Mechanically, we first identify all major shareholders who control over 5 percent of the votes. We use 5 percent because (1) it provides a significant threshold and (2) most countries do not mandate disclosure of ownership shares below 5 percent. Given these major shareholders, we then begin our search for indirect chains of control.

Next, if these major shareholders are themselves (financial or non-financial) corporations, we find the major shareholders of these financial or non-financial corporations. We continue this search until we find the ultimate owners of the votes. For example, a shareholder has x percent indirect control over bank A if she controls directly firm B (i.e., if she holds at least 10 percent of the voting rights of firm B) that, in turn, directly controls x percent of the votes of bank A. As another example, a shareholder has x percent indirect control over bank A if she controls directly firm C that, in turn, controls directly firm B, which directly controls x percent of the votes of bank A. The control chain from bank A to firm C can be a long sequence of firms, each of which has control (greater than 10 percent voting rights) over the next one. If there are several chains of ownership between a shareholder

and the bank, we sum the control rights across all of these chains. When multiple shareholders have over 10 percent of the votes, we pick the largest controlling owner.[10]

After going through this search process, we divide banks into six categories. First, widely held banks do not have a controlling owner, i.e., no legal entity owns 10 percent or more of the voting rights. Second, there are then five distinct categories of controlling owners who own a minimum of 10 percent of the voting rights of the bank: (1) a family (or individual), (2) the State, (3) a voting trust, foundation, etc. (4) a widely held (non-financial) corporation, and (5) a widely held financial institution. We use separate categories for widely held corporations and financial institutions since these two ownership forms may be of separate interest.

It is not entirely clear whether banks controlled by widely held (financial or non-financial) corporations should be classified as having a controlling owner, which is what we do. A bank controlled by a widely held corporation can either be considered as controlled by the corporation's management or widely held since the management of the corporation is not accountable to an ultimate owner. We follow LLSV (2002) and classify banks as having a controlling owner if the ultimate owner is a widely held financial or non-financial corporation. Moreover, we confirm the results when using alternative classifications of a controlling owner as reported below.

We now define the specific variables associated with control as follows, which are also described in Table I. Table II provides summary statistics.

WIDELY is a dummy variable that equals one if no legal entity owns 10 percent or more of the voting rights, and zero otherwise.

CONTROL equals the fraction of the bank's voting rights, if any, owned by its controlling shareholder.

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[10] As a sensitivity check, we did the analyses while also including an indicator of whether a bank has multiple controlling owners. This does not change this paper's results.

FAMILY is a dummy variable that equals one if an individual or family is the controlling shareholder, and zero otherwise.

STATE is a dummy variable that equals one if the state (or a foreign state) is the controlling shareholder, and zero otherwise.

FIN is a dummy variable that equals one if a widely held financial corporation is the controlling shareholder, and zero otherwise.

CORP is a dummy variable that equals one if a widely held non-financial corporation is the controlling shareholder, and zero otherwise. Note, "widely-held" means that there is no owner with 10 percent or more of the voting rights.

OTHER is a dummy variable that equals one if the controlling owner is a trust, foundation, etc. For example, the largest Dutch bank, ABN AMRO Bank N.V., falls into the category OTHER because the majority of its voting rights are held by a foundation ("Stichting" in Dutch).

D. Cash-flow rights

We also compute the direct and indirect cash-flow rights of the controlling shareholder (CF). The shareholder may hold cash-flow rights directly and indirectly. For example, if the controlling shareholder of bank A holds the fraction y of cash-flow rights in firm B and firm B in turn holds the fraction x of the cash-flow rights in Bank A, then the controlling shareholder's indirect cash-flow rights in bank A are equal to the product of x and y. If there is a chain of controlling ownership, then we use the products of the cash-flow rights along the chain. To compute the controlling shareholder's total cash-flow rights we sum direct and all indirect cash-flow rights.

CF equals the fraction of the bank's cash-flow rights owned directly and indirectly by its controlling shareholder. CF equals zero if the bank is widely held.

Note, there can be important differences between cash-flow rights and control rights when there are indirect chains of control. As a simple example, consider a shareholder who owns 10 percent of the voting rights and cash-flow rights of firm A, and firm A in turn holds 20 percent of the voting rights and cash-flow rights of bank B. Assume that this shareholder (i) does not own direct shares in bank B and does not have control or cash-flow rights of bank B through other indirect chains of control and (ii) is the largest equity holder of firm A. In our calculations, this shareholder has 20 percent control rights of bank B because the shareholder controls firm A and firm A has 20 percent of the voting rights of the bank. This shareholder's cash-flow rights, however, equals 2 percent because the shareholder only receives 2 percent of the bank's dividends (20% * 10%). As robustness check we also computed the wedge, which equals the difference between control rights and cash-flow rights, and included this in the regressions. The wedge does not enter significantly, nor does it change any of the results reported below.

E. Bank valuations and loan growth

We use two indicators of bank valuation. Table II provides summary statistics and Table III lists the averages for each country's banks.

TOBIN'S Q is the traditional measure of valuation and is calculated as the ratio of the market value of equity plus the book value of liabilities to the book value of assets.

MARKET-TO-BOOK equals the ratio of the market value of equity to the book value of equity. We use this because banks are highly leveraged.

LOAN GROWTH equals the growth rate of the bank's loan portfolio over the last three years. As discussed below, we use this to control for cross-bank differences in growth, which may influence bank valuations. As robustness checks, we also include contemporaneous loan growth, as well as lagged and contemporaneous growth of assets and revenues.

F. Shareholder rights, supervision, and regulation

This paper examines the impact of the legal protection of shareholders and official bank supervisory and regulatory practices on bank valuations.

RIGHTS is the LLSV (1998) index of the legal protection of shareholders across countries. This index ranges from zero to six, where larger values indicate greater legal protection of shareholder rights. Table I gives a detailed definition and Table II provides summary statistics.

To study the supervisory and regulatory environment, we use an assortment of indicators from the Barth, Caprio, and Levine (2001, 2004) database. A growing number of papers use the information contained in this dataset to examine the impact of bank supervision and regulatory policies on bank performance, stability, and corporate finance (e.g., Beck, Demirgüç-Kunt, and Levine, 2003a,b; Demirgüç-Kunt, Laeven, and Levine, 2003, and citations therein). Table II gives summary statistics and the values for each country are reported in Table III.

OFFICIAL is an index of the power of the commercial bank supervisory agency. As specified in Table I, OFFICIAL includes information on the rights of the supervisory agency to meet with, demand information from, and take legal action against auditors; to force a bank to change its internal organizational structure, management, directors, etc.; to oblige the bank to provision against potential losses and suspend dividends, bonuses, and management fees; and to supersede the rights of shareholders and intervene in a bank and/or declare a bank insolvent. We include this variable since greater bank supervisory/regulatory power may reduce insiders from exploiting minority investors in the bank.[11]

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[11] We also conduct the analyses using components of OFFICIAL that focus only on the disciplinary powers of the supervisory agency. That is, we include information on the power of the supervisory agency to force a bank to change its internal organizational structure, management, directors, etc.; to oblige the bank to provision against potential losses, and suspend dividends, bonuses, and management fees; and to supersede the rights of shareholders and intervene in a bank and/or declare a bank insolvent. We confirm all of our findings with this alternative indicator.

RESTRICT is an index of regulatory restrictions on the activities of banks. This index measures regulatory impediments to banks engaging in (1) securities market activities (e.g., underwriting, brokering, dealing, and all aspects of the mutual fund industry), (2) Insurance activities (e.g., insurance underwriting and selling), (3) Real estate Activities (e.g., real estate investment, development, and management), and (4) the ownership of nonfinancial firms. Limiting the range of activities in which banks can participate is one potential mechanism for limiting the ability of insiders to expropriate bank resources (Boyd, Chang, and Smith, 1998).

CAPITAL is an index of regulatory oversight of bank capital. As described in Table I, this index includes information on whether the source of funds that count as regulatory capital can include assets other than cash, government securities, or borrowed funds, and whether the authorities verify the sources of capital. CAPITAL also includes information on the extent of regulatory requirements regarding the amount of capital banks must hold. One rationale for imposing strict capital regulations is to improve governance.

INDEPENDENCE is an index of the independence of the supervisory authority. Beck, Demirgüç-Kunt, and Levine (2003) find that an independent supervisory agency reduces political capture of the regulatory authority. This may enhance the governance of banks. We assess this hypothesis below.

III. Bank Ownership around the World

A. *Ownership of publicly traded banks*

Table III provides information on (1) the extent to which banks are widely held and (2) the identity of the controlling owner if the banks is not widely held. Panel A provides country averages. Thus, the data indicate that although more than 90 percent of the banks in Canada, Ireland, and the United States (in our sample) are widely held, 21 out of 44 countries do not have a single widely held bank (among their largest banks). Overall, the cross-country average for widely held is only 25 percent, so that in the average country, 75 percent of the largest, listed banks have a controlling shareholder.

Besides indicating that widely held banks are the exception rather than the rule, the data also suggest that family ownership of banks is very important across countries (Table III). In the average country, a family is the controlling owner in 52 percent of those banks with a controlling owner. In 17 countries, families (FAMILY) control 50 percent or more of the banks in our sample.

Further, note that the State is an important owner of banks in some countries. While the State is not a controlling owner in any bank in 29 countries, the State is the controlling owner in more than half of the sampled banks in Egypt, Greece, India, Indonesia, and Thailand. Given the potentially enormous impact of state ownership, we examine this specifically below.

Panels B and C of Table III provide information on the ownership patterns of banks across (i) national differences in the legal protection of shareholders and (ii) cross-country differences in bank supervision and regulation. Specifically, for shareholder rights, we split the sample into countries with above-median shareholder rights and below-median shareholder rights. Then Panel B provides means for these sub-groups, while Panel C tests whether the ownership patterns differ between high and low shareholder rights countries. We follow the same pattern for the regulatory variables: we first split the

sample according to each supervisory/regulatory variable and then test for cross-median differences in bank ownership patterns.

The Panel C results in Table III indicate that countries with below-median legal protection of shareholders have a significantly lower fraction of widely held banks than countries with above-median legal protection. This is consistent with the view that greater legal protection of shareholders makes potential investors confident that insiders will not exploit them and hence facilitates more dispersed ownership of banks. These same patterns emerge when using a 20 percent cut-off for classifying a bank as having a controlling owner.

The results also indicate that countries with above-median official supervisory power and capital restrictions do not have a larger fraction of widely held banks. This does not support the notion that greater supervisory power and stricter capital regulations make small investors confident that insiders will not exploit them.

B. Control rights and cash flows of banks

Table III also provides summary statistics on the control and cash-flow rights of banks around the world. The control rights variable (CONTROL) equals the percentage of voting rights held by the controlling owner. Cash-flow rights equals the cash-flow rights of the controlling owner.

Panel A of Table III advertises the importance of incorporating the degree of ownership concentration in our analyses of the governance of banks. There is enormous cross-country variation in the average degree of control rights and cash-flow rights in our sample of 244 banks. In 14 out of 44 countries, the controlling owner averages more than 50 percent of the voting shares. But, in Australia, Canada, Ireland, the United Kingdom, and the United States, there either is no bank with a controlling owner or the average degree of voting rights control is less than five percent. In terms of cash-flow

rights, half of the countries have bank systems where the controlling owner, if any, holds 25 percent or more on average of the bank's cash-flow rights.

Table III's Panels B and C provide information on the how control rights and cash-flow rights differ across different legal and regulatory regimes. The results indicate that countries with below-median legal protection of shareholders have banks where, on average, the controlling owner holds a significantly larger fraction of the voting and the cash-flow rights than in countries with above the median legal protection of shareholders. Indeed, the voting rates of the controlling owners are nearly twice as large in countries with below-median shareholder rights. This is consistent with the view that weak legal protection of shareholders makes potential small investors insecure about their rights and hence fosters more concentrated ownership of banks.

The results in Table III Panel C further show that countries with above-median official supervisory power and capital restrictions do not have lower control and cash-flow rights, which does not support the view that supervisory power and capital requirements reduce the ability of insiders to exploit outsiders. The data do, however, indicate that regulatory restrictions on banks and low supervisory independence are associated with greater control and cash-flow rights. These results certainly do not support the view that tighter government regulation of banks will increase the confidence of small investors in the governance of banks.

IV. Legal Protection, Supervision, Ownership and Bank Valuation

A. *Preliminary results on bank valuation*

Before turning to the regression results, we first summarize the association between measures of the market valuation of banks and indicators of (i) the legal protection of minority shareholders and (ii) bank regulation and supervision. Table IV Panel A presents country averages of these key

variables. Panels B and C provide information on the how the bank valuation measures differ across different legal and regulatory regimes. As discussed above, we split the sample into countries with above-median shareholder rights and below-median shareholder rights and analyze bank valuations. Similarly, for each bank regulatory and supervisory indicator, we split the sample into countries with above-median values and below-median values for these indicators. Panel B provides summary statistics and Panel C tests whether bank valuation differs significantly across these legal and regulatory characteristics.

Table IV Panel C indicates that countries with low levels of shareholder rights have significantly lower bank valuations as measured by both market-to-book value and by Tobin's Q. This is consistent with the view that investors in countries with weak shareholder rights are willing to pay less for banks than potential shareholders in countries with strong shareholder rights.

The tests in Table IV Panel C indicate that bank valuations do not differ significantly across high and low levels of both official supervisory power and capital restrictions. These summary statistics do not indicate that investors in countries with powerful supervisory agencies or stringent capital requirements are willing to pay more for banks than countries with weaker supervisory agencies and less stringent capital requirements. This initial look at the data also does not support the view that powerful official supervision increases fears that the government will expropriate bank resources with adverse implications on bank valuations. Interestingly, countries with fewer restrictions on bank activities tend to have higher bank valuations than countries that impose greater regulatory restrictions on bank activities. Also, supervisory independence is positively associated with bank valuations. Finally, while unreported, reduced form regressions of bank valuations on shareholder rights and the bank supervisory/regulatory variables indicate a strong positive relationship between bank valuations and shareholder rights, but no link between bank valuations and the supervisory/regulatory indicators.

B. Regression results

To assess the impact of governance mechanisms on bank valuations, we regress bank valuation on the legal protection of minority shareholders, bank supervision and regulation policies, the cash flow and control rights of controlling shareholders, bank-specific traits, and various interaction terms.

We estimate all regressions using country random effects. Fixed effects are not feasible in our setup given that there is no within-country variation in the shareholder rights and bank supervision/regulation variables. Below, however, we control for an array of country-specific characteristics such as the level of economic and institutional development, differences in legal system design, the level of corruption, and differences in deposit insurance policies. The random effects specification is supported by Breusch and Pagan (1980) Lagrange multiplier tests, which strongly reject the null hypothesis that errors are independent within countries. The random effects estimator does not treat banks within a country as independent observations and therefore adjusts the standard errors to reflect the cross-correlation produced by common country components.

We control for net loan growth (LOAN GROWTH), the degree of state ownership of banks, and a wide-array of control variables in the regressions. LOAN GROWTH proxies for a bank's growth opportunities. In many countries, government owned banks play a large role in the banking sector. If the state controls the bank, it may exert different influences over the bank from those exerted by a private controlling owner (LLS, 2002). We therefore add a dummy variable that equals one if the state is the controlling owner of the bank, and zero otherwise. In robustness tests, we also control for the competitiveness of the banking market by using measures of regulatory impediments to new bank

entry from the Barth, Caprio, and Levine (2004) database.[12] Furthermore, as described below, we

include an assortment of other bank-specific and country-specific controls.

Table V examines the relationship between bank valuation (MARKET-TO-BOOK) and

shareholder rights (RIGHTS), cash-flow rights (CF), and the interaction between shareholder rights

and cash-flow rights (CF*RIGHTS), while controlling for net loan growth (LOAN GROWTH) and

whether the state is the controlling shareholder (STATE).[13] Due to missing observations on LOAN

GROWTH, we have a maximum of 42 countries and 213 banks in the Table V regressions.

The Table V regressions provide three key results on the links between bank valuation, bank

ownership, and the legal protection of minority shareholders. First, higher levels of cash-flow rights by

a controlling shareholder boost bank valuations. This is consistent with theories predicting that the

incentives for controlling owners to exploit the benefits of control diminish as cash-flow rights

increase. Second, greater legal protection of minority shareholders rights improves the valuation of

banks. This is consistent with the view that weak protection of minority shareholders will induce the

marginal small investor to pay less for bank equity. Third, greater cash-flow rights by a controlling

shareholder is particularly positive for the valuation of banks in countries with weak legal protection of

minority shareholder rights. Thus, the interaction term (CF*RIGHTS) enters negatively and highly

significantly. Put differently, high levels of cash-flow rights are less important for the valuation of

banks in countries with strong minority shareholder rights. While the first two results are consistent

with LLSV's (2002) finding on non-financial corporations, the strong, robust results on the interaction

term are consistent with the theory in LLSV (2002) but more robust than their empirical findings for

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[12] Specifically, we include (i) an index of the number of regulatory procedures required to obtain a banking license and (ii) an indicator of the fraction of bank entry applications that the country's regulatory agency denies. Including these variables does not alter any of this paper's findings.

[13] Some suggest that the State controls banks when the State owns more than 50 percent of the shares (LLS, 2002; Barth, et al., 2003). Thus, we conducted the analyses using this definition as a control variable in the regressions. This does not change the results.

non-financial corporations. The loan growth and state ownership variables do not enter significantly, and we obtain qualitatively very similar results if we exclude LOAN GROWTH or STATE from the regressions.

Economically, the direct impact of cash flow concentration and shareholder protection on bank valuations can be very large. For instance, using regression 4 in Table V, the direct (i.e., excluding the interaction term) impact of a one-standard deviation increase in shareholder protection laws (1.25) equals 0.28, which is 21 percent of the mean value of the market-to-book value in our sample of banks. Similarly, the direct impact of a one-standard deviation increase in cash-flow rights (0.27) equals 0.42, which is 31 percent of the mean value of the market-to-book value. When accounting for the interaction term, there exist circumstances when a marginal increase in shareholder protection laws or cash-flow rights will decrease the market-to-book value. For example, if shareholder protection laws are high (4), then a one-standard deviation increase in CF will induce a drop in the market-to-book value of 0.21, which is 15 percent of the mean value of the market-to-book value in our sample of banks.

In Table VI, we also include the supervision/regulation variables. Thus, we assess whether commercial bank regulations and supervisory strategies influence bank valuations. By adding the supervision/regulation variables, we also test the robustness of the earlier findings on the legal rights of minority shareholders, cash-flow rights, and the interaction between cash-flow rights and shareholder rights.

First, the Table VI results indicate that the earlier findings on shareholder rights and cash-flow rights are robust to including indicators of bank supervision and regulation. Including supervision and regulation indicators does not change the earlier results at all.

Second, the bank supervision and regulation variables do not enter significantly (Table VI). That is, the power of the supervisory agency to discipline and monitor banks, the stringency of capital requirements, regulatory restrictions on bank activities, and independence of the supervisory authority do not influence bank valuations. These findings are inconsistent with the view that powerful supervisory authorities, stringent capital standards, and regulations on bank activities reduce the fears that investors have about buying bank equity. Looked at differently, the findings are also inconsistent with (i) the view that powerful supervision provides mechanisms for governments to expropriate bank resources with negative ramifications on bank valuations and (ii) the argument that powerful supervision creates such an excessive burden on banks that it lowers their valuations. Rather, the Table VI results emphasize the importance of shareholder protection laws in boosting the confidence of shareholders.

V. Extensions and Robustness

A. Supervision/Regulation: Expropriation, Risk Reduction, and Institutions

This sub-section presents three extensions of the results on official supervision and regulation of banks to examine whether bank supervision and regulation influence bank valuations under specific conditions.

First, as discussed in the Introduction, supervision and regulation may influence bank valuations through at least two channels. Effective supervision/regulation may reduce fears of expropriation and thereby exert a positive influence on bank valuations. A second channel may also operate, however. Especially in the presence of deposit insurance, supervision/regulation may reduce bank risk below the level desired by shareholders and thereby exert a negative influence on bank valuations. Put differently, with government sponsored deposit insurance, bank shareholders will tend to want banks to assume greater risk than depositors or official supervisors/regulators do. Under these

conditions, effective supervision/regulation will push bank risk below the level sought by shareholders with adverse implications on bank valuations.

Although empirically Section IV found that the net impact of supervision/regulation on bank values is negligible, the net results may hide the separate impacts of supervision/regulation on expropriation and risk taking. Thus, supervision/regulation might effectively impede expropriation and reduce risk-taking but empirically we may be aggregating away these positive and negative effects on valuations.

To address this concern, we examine an alternative econometric specification that allows supervision/regulation to exert a direct positive impact on valuations (to capture the expropriation channel) and an indirect negative impact on bank valuations (to capture the risk-reducing channel). In particular, we include an indicator of the generosity of the deposit insurance regime that was constructed by Demirgüç-Kunt and Detragiache (2003) and is termed MORAL HAZARD. Plus, we include the interaction term of MORAL HAZARD with the supervision/regulation variables. If the risk-reducing channel is important, then effective supervision/regulation should exert a more negative impact on valuations in the presence of a more generous, government-sponsored deposit insurance regime. Thus, if the risk-reducing channel is important, then the interaction term of MORAL HAZARD with the supervision/regulation variables should enter negatively. At the same time, if supervision/regulation effectively impedes expropriation, then the supervision/regulation variables should enter positively. Thus, we allow for both channels to operate.

As shown in Table VII, even when we allow supervision/regulation to operate through both the expropriation and risk-reduction channels, we find no evidence that supervision/regulation induces a positive impact on bank valuations by reducing expropriation, nor do we find any evidence that the supervision/regulation exerts a negative impact on bank valuations by reducing bank risk below the

level desired by shareholders. Moreover, we continue to obtain the same conclusions on shareholder protection laws, cash-flow rights, and the interaction between shareholder protection laws and cash-flow rights. While not capturing all mechanisms through which supervision/regulation may positively and negatively influence bank valuations, these results confirm and extend the paper's initial results.

The second extension of the results on bank supervision and regulation focuses on broad, national institutions. Perhaps supervision and regulation only improve the corporate governance of banks when there are good national institutions, such as low levels of government corruption, efficiently operating bureaucracies, or responsive political systems. To assess this possibility, we added an institutional indicator along with the interaction between the institutional indicator and the relevant supervisory/regulatory variable to the regressions in Table VI. As an institutional indicator, we used Kaufman, Kraay, and Zoido-Lobaton's (1999) aggregate institutional development index, which is calculated as the average of six indicators: voice and accountability in the political system, political stability, government effectiveness, regulatory quality, rule of law, and the absence of official corruption. In no case did the bank supervision/regulation variables or the interaction term between institutional development and the bank supervision/ regulation variables enter significantly. Moreover, in no case did adding these variables alter the results on cash-flow rights, shareholder rights, or the interaction of shareholder rights and cash-flow rights.

Third, it might be suggested that supervisory power, supervisory independence, regulatory restrictions on bank activities, and capital restrictions enhance the corporate governance of banks and thereby boost bank valuations only when shareholder protection laws (SRIGHTS) are weak. We tested this by adding the interaction term SRIGHTS multiplied by the relevant supervisory/regulatory variable to each regression in Table VI. In no case do we find that the supervisory/regulatory variable

or the interaction term enters significantly. Moreover, adding these interaction terms did not alter this paper's other findings.

B. Endogeneity

We have assumed that cash-flow rights are exogenous. As argued by LLSV (2002), ownership patterns are very stable and largely determined by the particular histories of the corporations. Nevertheless, as shown, cash-flow rights vary systematically across countries, depending on national legal and regulatory systems. We address potential concerns about the endogeneity of cash-flow rights in two ways.

First, we use bank-level instrumental variables for cash-flow rights (CF). It is difficult to construct instruments that both explain a bank's cash-flow rights and are not affected by innovations in bank valuations. For each bank, we use the average cash-flow rights of the other banks in the country as an instrument for cash-flow rights. Thus, to the extent that there are industry and country factors that explain cash-flow rights, this instrument will capture these influences. At the same time, an innovation in the valuation of a particular bank will not necessarily influence the cash-flow rights of other banks. In practice, this instrument enters the first-stage regression for cash-flow rights significantly at the five percent level. Since the standard regressions also include the interaction term, CF*Rights, we instrument for this term as well. We include the interaction term Rights with the average cash flow of the other banks in the instrument set. This interaction term enters the first-stage regression for CF*Rights significantly at the five percent level. We conduct the instrumental variables analyses without loan growth in the regressions since loan growth is a bank-level variable and may also be subject to endogeneity concerns. Moreover, adding loan growth to the regressions does not qualitatively alter our conclusions, and as above, loan growth does not enter the regressions significantly. We also exclude countries with only one bank from the instrumental variable regressions,

because we can only compute the cash flow instruments for countries with more than one bank. The instrumental variables results are based on the Baltagi (1981) two-stage least square random-effects estimator.

The instrumental variable results in Table VIII confirm our earlier results: (i) the cash-flow rights variable enters positively and significantly, (ii) the shareholder rights variable enters positively and significantly, (iii) the interaction term between cash-flow rights and shareholder rights enters negatively and significantly, and (iv) the supervision/regulation variables do not enter significantly.

As a second approach to endogeneity concerns, we can reduce potential endogeneity problems by focusing only on within-country variation in cash-flow rights. Thus, we de-mean the cash-flow rights variable by the country mean to focus only on cross-bank differences in cash-flow rights and abstract from cross-country differences in cash-flow rights. Using de-meaned cash flow, we confirm our earlier findings. De-meaned CF (CFD) and the interaction term (CFD*RIGHTS) continue to enter with significantly positive and negative coefficients, respectively. When using CFD, the results on RIGHTS weaken somewhat, implying that the inclusion of the cross-country component of CF is important for the significance of RIGHTS when including the interaction term between CFD and RIGHTS. In sum, these results with de-meaned CF suggest that our earlier findings – that (i) greater cash-flow rights boost bank valuations and (ii) stronger shareholder protection laws mitigate the need for concentrated cash-flow rights – do not seem to be driven by simultaneity bias since the findings hold when focusing solely on the within-country variation.

Finally, we examine whether endogeneity is biasing the results on RIGHTS. We were concerned that a country-specific factor could be driving both the country-specific component of banks' market valuations and the country's shareholder protection laws. Consequently, we follow

LLSV (1998) in using the legal origin of each country's Commercial/Company law as an instrumental variable for RIGHTS. These instrumental variable results, however, confirm the paper's findings.

C. Controlling for other country-level and bank-level factors

To assess whether the shareholder rights variable is proxying for some other country trait, we assess the robustness of the results to controlling for other country specific characteristics. Specifically, we include each country's level of real per capita Gross Domestic Product (PER CAPITA INCOME), an index of contract enforcement (ENFORCE), an index of the degree of official corruption in the economy (where higher values indicate less corruption) (CORRUPT), an index of the law and order tradition of the country (LAW), and dummy variables for whether the country has a French legal origin (FRENCH LO) or an English legal origin (ENGLISH LO). We include these indicators to control for the level of economic and institutional development and the design and operation of the legal system beyond specific shareholder protection laws. If RIGHTS is simply proxying for "good" country-specific traits that boost bank valuations, then these control variables should drive out the significance of RIGHTS in the valuation regressions. As shown in Table IX, we obtain the same results when including these country-specific characteristics.

We further assess the robustness of the results to controlling for additional bank-specific characteristics. In particular, bank size may influence valuations, so we include the logarithm of each bank's total assets (SIZE). Furthermore, while we have controlled for average net loan growth over the three years prior to the valuation date (LOAN GROWTH), we also assess the robustness to including net loan growth during the year in which bank valuation is measured as well as current and lagged values of asset growth and revenue growth. Including these additional bank-level traits does not change any of this paper's results.

D. Re-defining variables and altering the sample

In this subsection, we examine the sensitivity of the results to altering the definition of some of the key variables and to changing the sample of countries and banks.

First, as noted above, some may argue the banks controlled by widely held financial or non-financial corporations should be classified as widely held, not as having a controlling shareholder. Thus, as a robustness check, we reclassified banks. Banks were classified as having a controlling owner only if the controlling owner is a family or the state. Then, we use a dummy variable for state control in the regressions. This alternative definition of a controlling owner confirms the paper's findings.

Second, we examine control rights instead of cash-flow rights. Note theory focuses on cash-flow rights. As cash-flow rights increase, expropriation by the controlling owner increasingly involves self-theft, so that stronger shareholder rights will exert less of a positive impact on bank valuations as the cash-flow rights of the controlling owner rises (Shleifer and Wolfenzon, 2002; and LLSV, 2002). Due to differences in control rights and cash-flow rights, control rights per se are logically not as directly linked to valuations. The results are consistent with these concepts. While shareholder rights, control rights, and the interaction term continue to enter with the same signs as the earlier results with cash-flow rights, the significance level is now weaker, especially on the interaction term between control rights and shareholder rights. Thus, as expected, the relationships among valuations, shareholder rights, and cash-flow rights are stronger than those with control rights.

Third, instead of using ten percent of a bank's voting rights as the minimum level necessary to be classified as having a controlling owner, we use twenty percent. This classifies more banks as widely held. The results with this alternative minimum control limit confirm the paper's findings.

Fourth, we examine Tobin's Q as an alternative dependent variable instead of the simple market-to-book value of banks and obtain similar results.

Fifth, we test whether the results hold when restricting the sample to only those banks with a controlling owner. Thus, we eliminate widely held banks from the analysis; we eliminate banks where CF equals zero. We confirm all conclusions using this sub-sample of banks.

Sixth, we were concerned that some countries have many banks while others have few banks. Thus, we did the analyses excluding countries with only one bank. This did not change any of the results. Also, we did the analyses using weighted least squares, where we weighted observations by the inverse of the number of banks from the country in the sample. Again, this did not alter this paper's findings.

VI. Conclusions

Although a growing body of work examines the impact of ownership and shareholder protection laws on nonfinancial corporations, we examine banks. Some argue that banks are exceptionally complex and opaque so that ownership concentration and investor protection laws will not influence the governance of banks as effectively. Others hold that the array of bank supervisory and regulatory policies impedes the effectiveness of standard corporate governance mechanisms in banks. We examine the impact of ownership, investor protection laws, and bank supervision and regulation on bank valuations and thereby shed additional empirical light on the question, are banks different?

This paper first constructed new data on the ownership of 244 banks in 44 countries and then (1) documented the ownership structure of banks around the world and (2) assessed different theories about the ramifications of ownership, shareholder protection laws, and bank supervisory and regulatory policies for bank valuations.

On ownership, we find that except in a few countries with very strong shareholder protection laws, banks are not widely held. Rather, banks tend to be controlled by a family or the State.

On valuations, we find that (i) larger cash-flow rights by the controlling owner boosts valuations, (ii) weak shareholder protection laws lower bank valuations, and (iii) greater cash-flow rights mitigate the adverse effects of weak shareholder protection laws on bank valuations. These results are consistent with the views that expropriation of minority shareholders in banks is important internationally, that laws can play a role in restraining this expropriation, and concentrated cash-flow rights also represents an important mechanism for governing banks. However, we find no evidence that official supervisory and regulatory policies influence bank valuations. The results linking ownership, shareholder protection laws, and bank valuations are robust to an array of checks, including controls

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for bank supervision and regulation, as well as controls for numerous country-specific and bank-specific characteristics, the use of different definitions for ownership control and bank valuations, and re-estimation using different samples of countries and banks. Thus, the results indicate that same core corporate control mechanisms that influence the governance of non-financial firms also influence bank operations.

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Table I
Description of Variables

This table describes the variables collected for the 44 countries included in our sample. We present the description and the sources of each variable.

Variable	Description
Rights	Index of anti-director rights for the country. Formed by adding one when: (1) the country allows shareholders to mail their proxy vote, (2) shareholders are not required to deposit their shares prior to the General Shareholders' Meeting, (3) cumulative voting or proportional representation of minorities on the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders' Meeting is less than or equal to 10 percent (the sample median), or (6) when shareholders have preemptive rights that can only be waived by a shareholders meeting. The range for the index is from zero to six. Source: La Porta et al. (1998).
Market-to-book	The ratio of the market value of equity to the book value of equity. Source: Bankscope (2003).
Tobin's Q	The ratio of the market value of equity plus the book value of liabilities to the book value of assets. Source: Bankscope (2003).
Control	Fraction of the bank's voting rights, if any, owned by its controlling shareholder. To measure control, we combine a shareholder's *direct* (i.e., through shares registered in her name) and *indirect* (i.e., through shares held by entities that, in turn, she controls) *voting* rights in the banking firm. A shareholder has an x percent indirect control rights over a bank if (i) she controls directly firm A (i.e., she owns more than 10 percent of the voting rights of firm A) which, in turn, directly controls x percent of the votes of the bank; or (ii) she controls directly firm B which in turn controls firm A (or any sequence of firms forming a control chain) which, in turn, controls x percent of the bank. Thus, the control chain can involve a sequence of companies linking the bank with the ultimate owner. A bank in our sample has a controlling shareholder if the sum of her direct and indirect voting rights exceeds 10 percent. When multiple shareholders meet our criteria for control, we assign control to the shareholder with the largest voting stake. Source: Authors' calculations based on Bankscope, Worldscope, the Bankers Almanac, 20-F filings, and company websites.
CF	Fraction of the firm's ultimate cash-flow rights, if any, owned by its controlling shareholder. CF values are computed as the product of all the equity stakes along the control chain. See "Control" for a description of a control chain. The controlling shareholder may hold cash-flow rights directly (i.e., through shares registered in her name) and indirectly (i.e., through shares held by entities that, in turn, she controls). If there is a control chain, then we use the products of the cash-flow rights along the chain. For example, if the controlling shareholder of bank A holds the fraction *y* of cash-flow rights in firm B and firm B in turn holds the fraction *x* of the cash-flow rights in Bank A, then the controlling shareholder's indirect cash-flow rights in bank A are equal to the product of *x* and y. To compute the controlling shareholder's total cash-flow rights we sum direct and all indirect cash-flow rights. Source: Authors' calculations based on Bankscope, Worldscope, the Bankers Almanac, 20-F filings, and company websites.
Wedge	The difference between control rights and cash-flow rights. Source: Authors' calculations.
Widely	Equals one if there is no controlling shareholder, and zero otherwise. Source: Authors' calculations.
Family	Equals one if an individual or family is the controlling shareholder, and zero otherwise. Source: Authors' calculations.
State	Equals one if a (foreign or domestic) state is the controlling shareholder, and zero otherwise. Source: Authors' calculations.
Fin	Equals one if a widely held financial corporation is the controlling shareholder, and zero otherwise. Source: Authors' calculations.
Corp	Equals one if a widely held non-financial corporation is the controlling shareholder, and

Variable	Description
	zero otherwise. Source: Authors' calculations.
Other	Other equals one if the controlling owner is not widely held, nor family-owned, nor state-owned, or nor widely held by a financial or non-financial corporation, and zero otherwise. Source: Authors' calculations.
Loan growth	The bank's average net loan growth during the last 3 years. Source: Bankscope.
State	Dummy variable that indicates whether the state is a major shareholder in the bank. Source: Authors' calculations
Official	Index of official supervisory power. Adds one for an affirmative response to each for the following 14 questions: 1.Does the supervisory agency have the right to meet with external auditors to discuss their report without the approval of the bank? 2.Are auditors required by law to communicate directly to the supervisory agency any presumed involvement of bank directors or senior managers in elicit activities, fraud, or insider abuse? 3.Can supervisors take legal action against external auditors for negligence? 4.Can the supervisory authority force a bank to change its internal organizational structure? 5.Are off-balance sheet items disclosed to supervisors? 6. Can the supervisory agency order the bank's directors or management to constitute provisions to cover actual or potential losses? 7. Can the supervisory agency suspend the directors' decision to distribute: a) Dividends? b) Bonuses? c) Management fees? 8.Can the supervisory agency legally declare-such that this declaration supersedes the rights of bank shareholders-that a bank is insolvent? 9.Does the Banking Law give authority to the supervisory agency to intervene that is, suspend some or all ownership rights-a problem bank? 10.Regarding bank restructuring and reorganization, can the supervisory agency or any other government agency do the following: a) Supersede shareholder rights? b) Remove and replace management? c) Remove and replace directors? Source: Barth, Caprio, and Levine (2003).
Restrict	Index of regulatory restrictions on banks ability to engage in securities market activities, the insurance business, conduct real estate activities, or own non-financial firms. Source: Barth, Caprio, and Levine (2003).
Independence	The degree to which the supervisory authority is independent from the government and legally protected from the banking system. Source: Barth, Caprio, and Levine (2003).
Capital	Regulatory restricts on bank capital. Index that includes information on the following questions. 1. Is the minimum capital-asset ratio requirement risk weighted in line with the Basel guidelines? 2. Does the minimum ratio vary as a function of market risk? 3. Are market value of loan losses not realized in accounting books deducted from capital? 4. Are unrealized losses in securities portfolios deducted? 5. Are unrealized foreign exchange losses deducted? 6. What fraction of revaluation gains is allowed as part of capital? 7. Are the sources of funds to be used as capital verified by the regulatory/supervisory authorities? 8. Can the initial disbursement or subsequent injections of capital be done with assets other than cash or government securities? 9. Can initial disbursement of capital be done with borrowed funds? Source: Barth, Caprio, and Levine (2003).
Moral hazard	Indicator of the generosity of the deposit insurance regime in the country. Source: Demirguc-Kunt and Detragiache (2003).

Table II
Summary statistics

This table reports summary statistics for the main variables. Market-to-book is the market-to-book value of the bank's equity. Tobin's Q is the bank's Tobin's q. Control is the fraction of the bank's voting rights, if any, owned by its controlling shareholder. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. Widely held is a dummy variable that equals one if there is no controlling shareholder. Family is a dummy variable that equals one if an individual or family is the controlling shareholder. State is a dummy variable that indicates whether the state is the controlling shareholder in the bank. Widely held financial is a dummy variable that equals one if a widely held financial corporation is the controlling shareholder. Widely held non-financial is a dummy variable that equals one if a widely held non-financial corporation is the controlling shareholder. Other is a dummy variable that equals one if the bank has another controlling owner. Rights is an index of anti-director rights for the country. Official is an index of official supervisory power. Restrict is an index of regulatory restrictions on banks ability to engage in non-banking activities or own non-financial firms. Independence is a measure of the degree to which the supervisory authority is independent from the government and legally protected from the banking system. Capital is a measure of regulatory restrictions on capital. Size is the logarithm of the bank's total assets. Loan growth is the bank's average net loan growth during the last 3 years. Current loan growth is the bank's net loan growth during the current year. Panel A reports summary statistics and panel B reports the correlation matrix for the main regression variables. Table I defines and gives the sources of the variables.

Variable	Mean	Standard deviation	Minimum	Maximum	Number of observations
Market-to-book	1.341	0.760	0.216	3.946	244
Tobin's Q	1.020	0.060	0.859	1.373	244
Control	0.326	0.308	0.000	1.000	244
CF	0.260	0.274	0.000	1.000	244
Widely	0.303	0.461	0.000	1.000	244
Family	0.344	0.476	0.000	1.000	244
State	0.180	0.385	0.000	1.000	244
Fin	0.070	0.255	0.000	1.000	244
Corp	0.012	0.110	0.000	1.000	244
Other	0.094	0.293	0.000	1.000	244
Rights	3.156	1.251	1.000	5.000	244
Official	9.833	2.472	3.000	14.000	216
Restrict	9.277	2.404	5.000	14.000	223
Independence	2.579	1.101	1.000	4.000	216
Capital	3.067	1.230	0.000	5.000	223
Size	16.404	1.991	11.161	20.773	244
Loan growth	0.055	0.138	-0.436	0.988	213

Table III
Ownership and Control of Banks

This table reports statistics on the ownership and control of publicly traded banks. Panel A presents country-averages for each ownership variable. We use 10 percent as the criteria for control for a sample of the ten largest publicly traded banks in terms of total assets in each country at the end of December 2001, when available. Control is the fraction of the bank's voting rights, if any, owned by its controlling shareholder. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. We use 10 percent as the criteria for control. Widely held equals one if there is no controlling shareholder, and zero otherwise. Family equals one if an individual or family is the controlling shareholder, and zero otherwise. State equals one if the state is the controlling shareholder, and zero otherwise. Fin equals one if a widely held financial corporation is the controlling shareholder, and zero otherwise. Corp equals one if a widely held non-financial corporation is the controlling shareholder, and zero otherwise. Other equals one if the bank has another controlling owner, and zero otherwise. N indicates for each country the number of banks in our sample. The sample includes the ten largest publicly traded banks in terms of total assets in each country at the end of December 2001, when available. Panel B classifies countries according to their ranking in shareholder rights or the bank supervision variables (above or below the sample median). Panel C reports test of means for low versus high values for shareholder rights and the bank regulatory variables. Table I defines the variables. * Significant at 10 percent level. ** Significant at 5 percent level. *** Significant at 1 percent level.

Country	Control	CF	Widely	Family	State	Fin	Corp	Other	N
	Panel A:	Means							
Argentina	94.00	47.00	0.00	1.00	0.00	0.00	0.00	0.00	1
Australia	1.11	1.11	0.89	0.11	0.00	0.00	0.00	0.00	9
Austria	55.33	40.00	0.00	0.00	0.00	0.33	0.00	0.67	3
Brazil	82.86	41.86	0.00	0.57	0.29	0.00	0.00	0.14	7
Canada	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	8
Chile	53.00	24.00	0.00	1.00	0.00	0.00	0.00	0.00	4
Colombia	45.50	40.50	0.25	0.50	0.00	0.00	0.25	0.00	4
Denmark	20.22	17.11	0.22	0.11	0.00	0.22	0.00	0.44	9
Egypt	27.00	17.25	0.00	0.25	0.75	0.00	0.00	0.00	4
Finland	57.00	57.00	0.00	0.00	0.00	0.00	0.00	1.00	1
France	40.33	40.33	0.50	0.00	0.00	0.50	0.00	0.00	6
Germany	12.00	8.68	0.33	0.33	0.00	0.33	0.00	0.00	3
Greece	33.00	33.00	0.13	0.38	0.50	0.00	0.00	0.00	8
Hong Kong	52.33	39.50	0.00	0.67	0.33	0.00	0.00	0.00	6
India	66.33	62.33	0.00	0.00	1.00	0.00	0.00	0.00	9
Indonesia	72.63	72.63	0.00	0.25	0.63	0.13	0.00	0.00	8

Country	Control	CF	Widely	Family	State	Fin	Corp	Other	N
Ireland	0.00	0.00	1.00	0.00	0.00	0.00	0.20	0.00	5
Israel	43.00	43.00	0.00	0.63	0.25	0.00	0.00	0.13	8
Italy	15.56	14.44	0.33	0.11	0.00	0.22	0.00	0.33	9
Japan	11.20	11.20	0.80	0.00	0.00	0.20	0.00	0.00	5
Jordan	25.29	23.00	0.00	0.71	0.29	0.00	0.00	0.00	7
Kenya	18.00	18.00	0.25	0.25	0.25	0.00	0.00	0.25	4
Korea Rep. Of	28.63	27.13	0.25	0.13	0.25	0.25	0.00	0.13	8
Malaysia	39.00	30.60	0.00	1.00	0.00	0.00	0.00	0.00	5
Mexico	60.00	58.00	0.00	1.00	0.00	0.00	0.00	0.00	1
Netherlands	56.00	16.50	0.00	0.00	0.00	0.00	0.00	1.00	2
Norway	5.33	5.33	0.89	0.00	0.11	0.00	0.00	0.00	9
Pakistan	40.00	40.00	0.00	1.00	0.00	0.00	0.00	0.00	1
Peru	61.33	55.00	0.33	0.33	0.00	0.00	0.33	0.00	3
Philippines	40.60	29.10	0.10	0.80	0.00	0.10	0.00	0.00	10
Portugal	43.50	17.67	0.17	0.83	0.00	0.00	0.00	0.00	6
Singapore	27.00	27.00	0.00	1.00	0.00	0.00	0.00	0.00	2
South Africa	28.00	9.00	0.00	0.75	0.00	0.25	0.00	0.00	4
Spain	31.60	17.90	0.20	0.40	0.10	0.00	0.00	0.30	10
Sri Lanka	18.60	13.80	0.40	0.00	0.40	0.20	0.00	0.00	5
Sweden	17.67	8.67	0.00	0.33	0.00	0.00	0.00	0.67	3
Switzerland	55.00	31.50	0.25	0.50	0.00	0.25	0.00	0.00	4
Taiwan	24.60	22.50	0.40	0.20	0.40	0.00	0.00	0.00	10
Thailand	52.00	52.00	0.00	0.43	0.57	0.00	0.00	0.00	7
Turkey	62.29	58.71	0.00	0.86	0.00	0.00	0.00	0.14	7
United Kingdom	1.67	0.17	0.83	0.17	0.00	0.00	0.00	0.00	6
United States	1.10	0.40	0.90	0.10	0.00	0.00	0.00	0.00	10
Venezuela	29.00	29.00	0.50	0.50	0.00	0.00	0.00	0.00	2
Zimbabwe	26.00	6.00	0.00	0.00	0.00	0.00	0.00	1.00	1
Country mean	35.79	27.45	0.25	0.39	0.14	0.07	0.02	0.14	244

Country	Control	CF	Widely	Family	State	Fin	Corp	Other	N
	Panel B:	Group means							
Low rights	39.13	32.20	0.17	0.38	0.21	0.10	0.01	0.13	150
High rights	22.01	16.19	0.52	0.29	0.14	0.02	0.01	0.03	94
Low official	30.94	26.21	0.26	0.27	0.22	0.09	0.01	0.15	117
High official	34.08	25.87	0.34	0.41	0.14	0.05	0.02	0.05	127
Low restrict	28.17	21.03	0.35	0.31	0.11	0.11	0.02	0.12	123
High restrict	37.05	31.12	0.26	0.38	0.26	0.03	0.01	0.07	121
Low independence	39.27	31.94	0.15	0.37	0.24	0.10	0.00	0.13	107
High independence	27.34	21.42	0.42	0.32	0.13	0.04	0.02	0.07	137
Low capital	33.42	26.96	0.27	0.37	0.19	0.08	0.01	0.08	139
High capital	31.45	24.80	0.34	0.30	0.17	0.06	0.01	0.11	105
	Panel C:	Test of means							
Low versus high rights	***4.45	***4.83	***-5.90	1.51	1.40	***2.74	0.19	***3.05	244
Low versus high official	-0.80	0.09	-1.25	**-2.26	1.62	1.42	-0.51	***2.60	244
Low versus high restrict	**-2.27	***-2.91	1.59	-1.17	***-3.10	**2.25	0.57	1.50	244
Low versus high independence	***3.07	***3.02	***-5.00	0.85	**2.20	*1.72	*-1.74	*1.67	244
Low versus high capital	0.49	0.60	-1.16	1.13	0.31	0.68	0.35	-0.91	244

Table IV
Valuation, shareholder rights, and bank supervision

This table classifies countries according to their ranking in shareholder rights. Panel A presents medians by country of the index of shareholder rights, the bank regulatory variables, market-to-book value and Tobin's Q ratio. The sample includes the ten largest publicly traded banks in terms of total assets in each country at the end of December 2001, when available. The number of banks is 244. Panel B reports group medians for low and high values for shareholder rights and the bank regulatory variables. Panel C reports test of medians for low versus high values for shareholder rights and the bank supervision variables. Table I defines the variables. * Significant at 10 percent level. ** Significant at 5 percent level. *** Significant at 1 percent level.

Country	Rights	Official	Restrict	Independence	Capital	Market-to-book	Tobin's Q
				Panel A: Medians			
Argentina	4	11	9	1	3	0.94	0.99
Australia	4	11	8	4	3	2.04	1.08
Austria	2	13	5	1	5	1.34	1.02
Brazil	3	14	10	1	5	1.53	1.04
Canada	5	6	7	4	4	1.44	1.02
Chile	5	10	11	1	3	2.28	1.10
Colombia	3					0.97	1.00
Denmark	2	8	8	1	2	0.98	1.00
Egypt	2	12	13	4	3	0.73	0.98
Finland	3	8	7	1	4	1.06	1.00
France	3	7	6	3	2	1.19	1.01
Germany	1	10	5	4	1	0.73	0.99
Greece	2	10	9	1	3	1.84	1.07
Hong Kong	5					0.92	0.99
India	5	8	10	3	3	0.49	0.97
Indonesia	2	12	14	2	5	0.88	0.99
Ireland	4	9	8	4	1	1.69	1.04
Israel	3	8	13	2	3	0.75	0.99
Italy	1	6	10	2	4	1.15	1.01
Japan	4	12	13	3	4	1.30	1.01
Jordan	1		11		5	1.07	1.01
Kenya	3	14	10	2	4	0.51	0.90
Korea Rep. Of	2	9	9	2	3	1.04	1.00
Malaysia	4	11	10	3	3	1.24	1.03
Mexico	1	9	12	1	4	0.97	1.00
Netherlands	2	8	6	4	3	1.73	1.03
Norway	4					0.67	0.97
Pakistan	5					0.66	0.98
Peru	3	12	8	3	3	0.54	0.96
Philippines	3	11	7	1	1	0.73	0.95
Portugal	3	13	9	4	3	1.38	1.02
Singapore	4	3	8	3	1	1.56	1.06
South Africa	5	4	8	2	4	1.62	1.04
Spain	4	9	7	3	4	2.21	1.07
Sri Lanka	3	11	7	2	0	0.39	0.97

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Country	Rights	Official	Restrict	Independence	Capital	Market-to-book	Tobin's Q
				Panel A: Medians			
Sweden	3	6	9	3	3	1.70	1.03
Switzerland	2	13	5	3	3	2.39	1.05
Taiwan	3	8	12	2	2	0.89	0.99
Thailand	2	10	9	2	4	1.24	1.01
Turkey	2	11	12	4	1	1.49	1.03
United Kingdom	5	11	5	4	3	2.34	1.06
United States	5	13	12	4	4	2.14	1.09
Venezuela	1	13	10	3	3	0.86	0.98
Zimbabwe	3					3.60	1.18
Country mean	3.09	9.84	9.03	2.55	3.05	1.30	1.02
				Panel B: Group medians			
Low rights	2					1.00	1.00
High rights	5					1.47	1.03
Low official		8				1.22	1.01
High official		12				1.18	1.01
Low restrict			8			1.43	1.02
High restrict			12			0.98	1.00
Low independence				2		1.00	1.00
High independence				4		1.41	1.02
Low capital					3	1.10	1.01
High capital					4	1.24	1.02
				Panel C: Test of Medians (z-statistic)			
Low versus high rights	***-13.49					***-3.86	***-4.31
Low versus high official		***-12.78				-0.15	0.23
Low versus high restrict			***-12.94			***3.71	***3.14
Low versus high independence				***-13.14		***-3.29	***-3.13
Low versus high capital					***-12.99	-0.94	-1.01

Table V
Investor protection and valuation of banking firms

Sample of 10 largest listed banks in the country in terms of total assets, if available. Dependent variable is market-to-book value of the bank's equity of a bank. Loan growth is the bank's average net loan growth during the last 3 years. Rights is an index of anti-director rights for the country. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. State is a dummy variable that indicates whether the state is the controlling shareholder in the bank. We use 10 percent as the criteria for control. All bank-level data are for the year 2001. Columns (1)-(2) are estimated using OLS. Columns (3)-(4) are estimated using random country-effects. Robust standard errors are in parentheses. The Breusch-Pagan (1980) test is a Lagrange multiplier test of independent errors within countries. * significant at 10%; ** significant at 5%; *** significant at 1%.

	(1)	(2)	(3)	(4)
Loan growth	0.266	0.269	0.086	0.076
	(0.379)	(0.364)	(0.325)	(0.326)
Rights	0.308***	0.304***	0.218***	0.217**
	(0.055)	(0.056)	(0.085)	(0.085)
CF	2.267***	2.318***	1.515***	1.553***
	(0.596)	(0.602)	(0.566)	(0.572)
CF * Rights	-0.889***	-0.864***	-0.580***	-0.577***
	(0.153)	(0.164)	(0.182)	(0.182)
State		-0.165		-0.070
		(0.125)		(0.137)
Breusch-Pagan test: χ^2-statistic			47.25	45.50
Breusch-Pagan test: p-value			0.000	0.000
Observations	213	213	213	213
R-squared	0.20	0.21	0.20	0.20
Number of countries	42	42	42	42

Table VI
Investor protection, bank supervision, and valuation of banking firms

Sample of 10 largest listed banks in the country in terms of total assets, if available. Dependent variable is market-to-book value of the bank's equity of a bank. Loan growth is the bank's average net loan growth during the last 3 years. Rights is an index of anti-director rights for the country. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. State is a dummy variable that indicates whether the state is the controlling shareholder in the bank. We use 10 percent as the criteria for control. Official is an index of official supervisory power. Restrict is an index of activity restrictions. Independence is an index of overall supervisory independence. Capital is an index of capital regulation. All bank-level data are for the year 2001. Regressions are estimated using random country-effects. Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

	(1)	(2)	(3)	(4)
Loan growth	-0.113	-0.043	-0.143	0.001
	(0.349)	(0.335)	(0.348)	(0.336)
State	-0.197	-0.138	-0.200	-0.166
	(0.156)	(0.147)	(0.156)	(0.145)
CF	1.929***	1.893***	1.954***	1.734***
	(0.624)	(0.601)	(0.624)	(0.603)
Rights	0.296***	0.282***	0.279***	0.283***
	(0.085)	(0.080)	(0.089)	(0.077)
CF * Rights	-0.689***	-0.682***	-0.688***	-0.644***
	(0.202)	(0.196)	(0.202)	(0.195)
Official	0.018			
	(0.033)			
Restrict		-0.036		
		(0.035)		
Independence			0.053	
			(0.085)	
Capital				0.100
				(0.067)
Observations	187	194	187	194
Number of countries	36	37	36	37

Table VII
Controlling for moral hazard

Sample of 10 largest listed banks in the country in terms of total assets, if available. Dependent variable is market-to-book value of the bank's equity of a bank. Loan growth is the bank's average net loan growth during the last 3 years. Rights is an index of anti-director rights for the country. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. State is a dummy variable that indicates whether the state is the controlling shareholder in the bank. We use 10 percent as the criteria for control. Official is an index of official supervisory power. Restrict is an index of activity restrictions. Independence is an index of overall supervisory independence. Capital is an index of capital regulation. Moral hazard is an index of the generosity of the deposit insurance regime in the country. All bank-level data are for the year 2001. Regressions are estimated using random country-effects. Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

	(1)	(2)	(3)	(4)
Loan growth	-0.158	-0.190	-0.185	-0.174
	(0.359)	(0.351)	(0.354)	(0.357)
State	-0.136	-0.067	-0.139	-0.131
	(0.186)	(0.187)	(0.186)	(0.186)
CF	1.679***	1.719***	1.711***	1.695***
	(0.630)	(0.624)	(0.627)	(0.639)
Rights	0.272***	0.238***	0.266***	0.268***
	(0.088)	(0.092)	(0.088)	(0.086)
CF * Rights	-0.653***	-0.653***	-0.667***	-0.662***
	(0.207)	(0.205)	(0.205)	(0.209)
Moral hazard	-0.051	-0.245	-0.093	-0.058
	(0.143)	(0.182)	(0.097)	(0.115)
Official	0.025			
	(0.034)			
Official * Moralhazard	0.000			
	(0.014)			
Restrict		-0.059		
		(0.040)		
Restrict * Moralhazard		0.020		
		(0.018)		
Independence			-0.009	
			(0.093)	
Independence * Moralhazard			0.018	
			(0.034)	
Capital				0.018
				(0.090)
Capital * Moralhazard				0.004
				(0.035)
Observations	155	155	155	155
Number of countries	31	31	31	31

Table VIII
Instrumental variables

Sample of 10 largest listed banks in the country in terms of total assets, if available. Dependent variable is market-to-book value of the bank's equity of a bank. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. State is a dummy variable that indicates whether the state is the controlling shareholder in the bank. We use 10 percent as the criteria for control. Official is an index of official supervisory power. Restrict is an index of activity restrictions. Independence is an index of overall supervisory independence. Capital is an index of capital regulation. All bank-level data are for the year 2001. Regressions are estimated with instrumental variables using the Baltagi (1981) error component two-stage least square random-effects estimator. As instrument for CF we use the average CF of other banks in the country. We exclude countries with one bank. Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

	(1)	(2)	(3)	(4)
State	-0.112	-0.078	-0.111	-0.109
	(0.153)	(0.144)	(0.153)	(0.143)
CF	1.719***	1.747***	1.737***	1.673***
	(0.639)	(0.614)	(0.636)	(0.614)
Rights	0.277***	0.264***	0.257***	0.263***
	(0.081)	(0.076)	(0.083)	(0.075)
CF * Rights	-0.636***	-0.646***	-0.634***	-0.628***
	(0.213)	(0.206)	(0.213)	(0.206)
Official	0.022			
	(0.032)			
Restrict		-0.035		
		(0.033)		
Independence			0.054	
			(0.081)	
Capital				0.085
				(0.063)
Observations	213	220	213	220
R-squared	0.22	0.21	0.21	0.23
Number of countries	35	36	35	36

Table IX
Additional country-level controls

Sample of 10 largest listed banks in the country in terms of total assets, if available. Dependent variable is market-to-book value of the bank's equity of a bank. Loan growth is the bank's average net loan growth during the last 3 years. Rights is an index of anti-director rights for the country. CF is the fraction of the bank's ultimate cash-flow rights held by the controlling owners and zero if there is no controlling owner. State is a dummy variable that indicates whether the state is the controlling shareholder in the bank. We use 10 percent as the criteria for control. Per capita income is the log of GDP per capita. Enforce is an index of enforcement of contracts. Corrupt is an index of corruption. Law is a measure of law and order tradition. French legal origin is a dummy variable that takes value of one if the country has a French legal origin, and zero otherwise. English legal origin is a dummy variable that takes value of one if the country has an English legal origin, and zero otherwise. All bank-level data are for the year 2001. Regressions are estimated using random country-effects. Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%.

	(1)	(2)	(3)	(4)	(5)
Loan growth	0.071	0.055	0.093	0.073	0.091
	(0.325)	(0.332)	(0.327)	(0.324)	(0.328)
State	-0.045	-0.077	-0.061	-0.056	-0.063
	(0.137)	(0.143)	(0.137)	(0.136)	(0.138)
CF	1.482***	1.514**	1.535***	1.510***	1.531***
	(0.572)	(0.608)	(0.573)	(0.570)	(0.574)
Rights	0.206**	0.215**	0.216**	0.200**	0.245**
	(0.086)	(0.089)	(0.086)	(0.086)	(0.100)
CF * Rights	-0.544***	-0.545***	-0.561***	-0.547***	-0.577***
	(0.183)	(0.199)	(0.184)	(0.183)	(0.183)
Per capita income	0.098				
	(0.065)				
Enforce		0.070			
		(0.046)			
Corrupt			0.075		
			(0.099)		
Law				0.060*	
				(0.036)	
French legal origin					0.169
					(0.238)
English legal origin					-0.020
					(0.271)
Observations	213	207	213	213	213
Number of countries	42	41	42	42	42