

# Legal Origin, Creditor Protection and Bank Lending Around the World

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## Abstract:

In this study, we investigate whether bankers make more loans when they enjoy superior creditor protection. We formulate a number of hypotheses, which we test using bank-level data from 31 developed countries and 96 developing countries over the period 2000-2006 and using a random-effects model that controls for bank heterogeneity as well as a between-effects model. We find that bankers allocate a significantly lower portion of their assets to risky loans: (i) when they enjoy French civil-law legal origin rather than English common-law legal origin; (ii) when creditors' rights are stronger; (iii) when their banks are smaller and better capitalized; and (iv) when the controlling shareholder is a State or foreign entity. We also find that bankers in developing countries, but not in developed countries, allocate a significantly larger portion of their assets to risky loans when legal enforcement of creditor rights is more efficient. Overall, these results provide strong support for the theory of legal origin but provide only mixed support for the "power" theories of credit.

**Keywords:** banking, bank loans, bank risk-taking, creditor protection, creditors' rights, emerging markets, investor protection, judicial enforcement, law and finance, legal origin, legal rights

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# Legal Origin, Creditor Protection and Bank Lending Around the World

## 1. Introduction

During the past decade, financial researchers have established that legal origin and investor protection are important determinants of financial development. The “law-and-finance” literature, which grew out of the seminal works of La Porta, Lopez-de-Silanes, Shleifer and Vishny, hereafter “LLSV” (1997, 1998), has demonstrated that differences in the legal protection of investors explain much of the cross-country variation in financial sector development and that legal origin explains much of the cross-country variation in legal protection of investors.<sup>1</sup> The “finance and growth” literature, which is most closely associated with King and Levine (1993), Levine and Zervos (1998) and Rajan and Zingales (1995, 1998), has established that financial sector development is positively related to economic growth. Together, these two literatures tie legal protection to economic development through financial sector development.

Most studies in these two areas have analyzed country-level data, usually focusing on how investor protection affects the amount of private-sector credit, which King and Levine (1993) and many other studies have linked to future economic growth. One question left unanswered by this literature is how individual lenders respond to differences in governance regimes. More specifically, do bankers take on more risk by making more loans when they enjoy stronger creditor protection? This question is especially important to emerging market economies, where bond markets are often non-existent and bank debt is the primary source of business and consumer credit.

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<sup>1</sup> See LLSV (1997, 1998 and 2002); Levine (1999), Demirguc-Kunt and Maksimovic (1998); Djankov, La Porta, Lopez-de-Silanes and Shleifer (2003); Qian and Strahan (2006); Djankov, McLiesh and Shleifer (2007); John, Litov and Yeung (2008); Acharya, Amihud and Litov (2011); and Houston *et al.* (2010).

Our study is an empirical test of the “power” theory of credit, which posits that lenders will grant more credit when they can more easily force repayment by borrowers. This theory is generally attributed to Townsend (1979), Aghion and Bolton (1992), and Hart and Moore (1994, 1998). We test whether bankers make more loans when they are better protected by strong creditor rights and by efficient judicial enforcement. Djankov, McLiesh and Shleifer, hereafter DMS, (2007) analyze this issue at the country level, looking at the volume of private sector credit.

In this article, we extend “the law-and-finance” literature by using firm-level data from banks in 96 developing and 31 developed countries to analyze how individual lenders respond to country-level differences in legal origin and creditor protection. Following LLSV (1998) and DMS (2007), we distinguish between creditors’ rights and efficiency of enforcement. Our analysis rests on a panel data set of 5,164 commercial banks from 127 countries over the period 2000-2006.<sup>2</sup> We are especially interested in our results for developing countries for at least three reasons: first, there is wide variation in legal origin across these countries; second, banks are the primary source of credit in most of these countries; and third, banking in these parts of the world has received scant attention in the academic literature.

Using a random-effects model that controls for bank heterogeneity, we find that lenders allocate a significantly higher portion of their assets to loans: (i) when they enjoy English common-law legal origin rather than French civil-law legal origin; (ii) when creditors’ rights are weaker; (iii) when their banks are larger; and (iv) when the largest shareholder has a lower percentage ownership. We also find that bankers in developing countries, but not in developed countries, allocate a significantly larger portion of their assets to risky loans when legal

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<sup>2</sup> We stop our analysis period at the year 2006 in order to avoid contamination from the effects of the financial crisis, which began in 2007.

enforcement of creditor rights is more efficient. Overall, these results provide strong support for the theory of legal origin but provide mixed support for the “power” theory of credit. Our finding that banks make fewer loans when creditors’ rights are stronger is supportive of a “dark side” to creditors’ rights, as proposed by Acharya, Amihud and Litov (2011), but contradicts the results reported by Houston *et al.* (2010), who find that stronger creditor rights are associated with greater bank risk-taking. Our opposing findings regarding the effects of creditors’ rights and the effects of judicial enforcement also highlight the importance of distinguishing between strong legal rights and efficient judicial enforcement of those rights, as pointed out by LLSV (1998).

Our primary contribution to the literature is new evidence from bank-level data of a bank-lending channel by which better legal protection, especially in developing countries, leads to more credit and, consequently, to better financial sector development. With better judicial enforcement, bankers increase the portion of their asset portfolios allocated to loans. In aggregate, this should lead to higher levels of private sector credit, which the “finance and growth” literature has shown to be positively related to economic growth.

We also contribute to the growing literature on the relation between investor protection and corporate risk-taking (John, Litov and Yeung (2008); Laeven and Levine (2009); Acharya, Amihud and Litov (2011); and Houston *et al.* (2010)). Here, we provide new firm-level evidence that banking firms take on more operating risk (in the form of credit risk) when their interests are better protected by the judiciary.

The rest of the paper is organized as follows. Section 2 provides a brief review of the most relevant literature. In Section 3, we develop our hypotheses regarding creditor protection and bank lending. In Section 4, we discuss our data and methodology. Section 5 presents our results, followed, in Section 6, by a summary and conclusions.

## **2. A brief review of the relevant literature**

The “law and finance” literature essentially begins with LLSV (1997, 1998), who argue and provide empirical evidence at the country level that the most important determinant of capital markets development is the degree of legal protection provided to investors. Corporate finance flourishes in countries with legal systems that better protect investors’ rights and support contract enforcement. In addition, the authors find that a country’s “legal origin” is a fundamental determinant of investor protection. “Legal origin” refers to the legal family from which a country’s legal system evolved.

In their 1998 article, LLSV distinguish among two broad legal traditions: English common law and Roman civil law. Within the broad civil law tradition, they distinguish three families—French, German and Scandinavian. LLSV find that countries with English common law tradition enjoy the best investor protection while countries with French civil law tradition suffer the worst investor protection. They attribute these findings to differences in the legal protection from institutions left behind by the colonial powers. Also in this article, LLSV develop an index of creditor rights, which they show is higher in common law countries than in civil law countries.

In a 1999 follow-up article, LLSV expand the four families to five—with the addition of the Socialist civil law tradition, which enables them to better categorize eastern European countries that emerged following the breakup of the Soviet Union. They find that countries with Socialist civil law tradition suffer from poor legal protection similar to countries with French civil law tradition.

Beck, Demirguc-Kunt and Levine (2003) analyze a sample of 70 countries for evidence regarding how well legal origins can explain financial development. Among other findings, but

most relevant to this study, they find that credit from financial intermediaries to the private sector as a share of GDP is higher in countries of British legal origin.

Djankov, La Porta, Lopez-de-Silanes and Shleifer (2003) construct two indices of procedural formalism in the legal resolution of disputes—how many days it takes to collect a bounced check and how many days it takes to evict a tenant for nonpayment of rent. They find considerable variation in these measures and that procedural formalism is greater in civil-law countries than common law countries and in poor countries than in rich countries.

DMS (2007) extend previous work on legal protection of creditors to a panel analysis of 129 countries over 25 years. They find that the creditors' rights index developed by LLSV (1998) is associated with higher levels of private sector credit, but that this relationship does not hold in poorer countries. They also find that procedural formalism is associated with lower levels of private sector credit but, again, this relationship does not hold in poorer countries.

Qian and Strahan (2007) examine data on individual bank loans for evidence on how differences in legal systems affect the terms of bank loans. Like DMS (2007), they focus on the LLSV (1998) index of creditor rights rather than legal origin, and find that stronger creditor rights are associated with lower interest rates and longer maturities. However, they also report that loans in countries of English legal origin carry higher rates, and that higher rates are associated with greater financial development, which they attribute to higher loan demand for loans in more developed economies.

John, Litov and Yeung (2008) examine the relationship between investor protection and the choice of risk in corporate investment decisions. They argue that, when investors are better protected, the value of private benefits to insiders is lower, leading them to take on more risky positive net present value projects. Using data both from an international panel of 39 countries,

they find that a positive relationship between investor protection and both firm-level riskiness and firm growth rates. However, the authors also make the case for a negative relationship between investor protection and risk-taking. In an environment where creditors' rights are strong, there is less fear of expropriation by managers, thus reducing the likelihood of a dominant shareholder. The resulting reduction in ownership concentration may lead to greater managerial discretion in implementing conservative investment strategies to protect their own private benefits.

Laeven and Levine (2009) investigate how corporate governance influences bank risk-taking at a sample of 288 large, publicly traded banks in 48 countries. They use the Z-score, defined as the sum of return on assets and equity to assets divided by the standard deviation of return on assets, as an inverse measure of risk, but also analyze the volatility of accounting earnings and stock market returns. Their primary finding is that the bank risk-taking increases with the ownership of the bank's largest block holder. They also find that two pillars of banking supervision—capital requirements and official supervisory oversight of banks—do not appear to reduce bank risk-taking, calling into question much of the bank regulatory framework used by supervisors around the world.

Acharya, Amihud and Litov (2011) propose a “dark side” to strong creditors' rights, whereby these rights lead managers to reduce corporate risk-taking. Managers do so to avoid inefficient liquidation of assets and to preserve their private benefits of control. The authors provide empirical evidence supportive of their hypothesis in that firms in countries with strong creditors' rights engage in diversifying mergers and choose operating policies that reduce the standard deviation of return on assets. Further, the authors find that these results are strongest in countries where there is no automatic stay on debtor's assets in bankruptcy, and where

management does not stay in bankruptcy (two of the four component that comprise the LLSV creditors' rights index).

Houston *et al.* (2010) examine the relation between creditor rights as defined by the LLSV (1998) index and bank risk-taking as measured by the Z-score, which is also used by Laeven and Levine (2009). They find that banks in countries with stronger creditor rights take on more risk, and that countries with stronger creditors rights are more prone to financial crises, but also enjoy higher growth.

The literature on “finance and economic growth” examines how economic growth is related to financial development. There now exists a wide empirical strand of the literature establishing a positive relationship between financial sector development and economic growth, although the direction of causality remains an issue of debate.

Levine and Zervos (1998) document that stock-market liquidity and banking development are both positively and robustly correlated with future economic growth, capital accumulation and productivity growth.

Rajan and Zingales (1998) examine the channels through which financial development promotes growth. They find that industrial sectors more dependent upon external finance develop disproportionately faster in countries with more developed financial markets. Hence, banks promote economic growth by reducing the cost of external finance of firms.

Beck, Levine and Loayza (2000) find that financial development boosts economic growth primarily by improving resource allocation and accelerating total factor productivity growth.

This positive effect of financial development on growth is found to be robust to different econometric methods, from the cross-country regressions, cross-country instrumental variable

studies and time-series analyses to the dynamic panel GMM estimations. Levine (2004) provides an excellent review on the research in this area.

Demirguc-Kunt and Maksimovic (1998, 2002) and Levine (1999) tie these two strands of the literature together. Demirguc-Kunt and Maksimovic (1998) use firm level data to investigate how differences in legal systems affect use of external financing. They find that a greater portion of firms in countries with more efficient legal systems use external financing to fund growth.

Levine (1999) uses country-level data to examine how legal environment affects financial development and subsequent long-run economic growth. He finds that financial intermediaries are better developed in countries with better legal protection and that the portion of financial intermediary development explained by the legal environment is positively related to economic growth.

Demirguc-Kunt and Maksimovic (2002) use firm-level data from 40 countries to analyze how a country's legal and financial systems affect a firm's ability to access external finance to fund growth opportunities. They find that the access to external finance is primarily a function of the efficiency of a country's legal system.

### **3. Creditor Protection and Bank Lending: Hypotheses**

In this section, we separate creditor protection into two components—rights and enforcement—and we set forth our hypotheses regarding how creditor protection influences bank lending.

### *3.1 Creditor Protection Variables*

Creditor protection encompasses both the legal rights of creditors and the ability of creditors to enforce those rights through the judiciary. Hence, we decompose creditor protection into two measurable components: creditors' rights and judicial enforcement. We measure creditors' rights (*Creditors' Rights*) using the index developed by LLSV (1998), and we also consider its four components (*CR1* through *CR4*), which we enumerate below. We measure judicial enforcement using the index of legal formalism developed by DMS (2007), where *Legal Formalism* is a country-level estimate of the number of days necessary to collect an unpaid debt equal to 50% of the country's GDP per capita.

### *3.2 Hypotheses Regarding Legal Origin, Creditor Protection and Bank Lending*

Our primary hypotheses focus on how legal origin and creditor protection affect bank lending. Consistent with the "law-and-finance" literature and the "power" theory of credit, we hypothesize that the loan-to-asset ratio of a bank is a function of its country's legal tradition and how well that country's legal and judicial systems protect creditors. We expect credit from financial intermediaries as a share of assets to be higher in countries of English common law legal origin and lower in countries of French civil law legal origin. Also, better creditor protection in the form of stronger legal rights or more efficient judicial enforcement has the effect of reducing the expected loss rate on the bad-loan portfolio, which should lead to a higher loan-to-asset ratio.

We hypothesize that a bank adjusts its overall credit risk exposure to account for cross-country differences in creditor protection by changing the size of its total loan portfolio, which changes the size of the expected bad loan portfolio. In other words, when better creditor

protection exists, the bank expects a lower loss rate on bad loans so it is willing to increase the amount it lends. Therefore, we expect that the loan-to-asset ratio is a positive function of the creditors' rights index and the dummy variable indicating English legal origin (or, alternatively, a negative function of dummy variables for French, German, Scandinavian and Socialist legal origin, as English legal origin is our omitted category), but also a negative function of the legal formalism index.

Acharya, Amihud and Litov (2011) offer an alternative hypothesis, which they refer to as the "dark side" of creditors' rights. They focus on the incentives of the borrower rather than those of the lender. When creditors have stronger rights, the management and controlling shareholder of a debtor firm have incentives to reduce operating risk so that they reduce the probability that they will lose their private benefits of control. If this hypothesis is true, then stronger creditors' rights should lead firms to borrow less, so that lenders' loan-to-asset ratios would be inversely related to creditors' rights.

### *3.3 Other Hypotheses*

We posit five secondary hypotheses that may impact the lending behavior of banks. First, large banks that have access to large pools of deposits and money market funding are able to extend more loans compared to their smaller competitors. In addition, large banks are likely to be more diversified than small banks. For both reasons, we expect bank risk to increase with bank size so that the loan-to-asset ratio will be positively related to bank size, which we measure by the natural logarithm of bank assets.

Second, the State play a key role in shaping the credit risk profile of domestic banks that it controls. When the State is the controlling shareholder in a bank, it often directs the bank to help

finance government spending by investing more of its assets in government bonds and less in loans. Consequently, we expect that State-controlled banks will have lower loan-to-asset ratios.

Third, foreign-controlled banks often operate to collect funds for the home office and to serve multinational customers who operate in a country rather than to make loans to domestic borrowers. Consequently, we expect foreign-controlled banks to have lower loan-to-asset ratios.

Fourth, banks operating in countries with better developed banking systems, as measured by the number of banks, are likely to allocate more of their assets to lending than to safer activities, such as investing in government bonds. Consequently, we expect that banks operating in countries with better developed banking systems (as proxied by the number of banks in the country) will have higher loan-to-asset ratios.

Finally, banks that operate in countries with higher income per capita face stronger loan demand from borrowers. Therefore, we expect a positive relation between our measure of economic development (the natural logarithm of GDP per capita) and the loan-to-asset ratio.

## **4. Data and Methodology**

### *4.1 Data*

We retrieve bank-level financial data for the years 2000-2006 from the BankScope database provided by Fitch-IBCA (International Bank Credit Analysis Ltd). We focus on this period for at least two reasons. First, several of our country-level governance indices are measured as of 2003, which is the middle of our 2000 – 2006 sample period. Second, we want to avoid contamination from the 1998 Asian financial crisis and the 2008 U.S. financial crisis.

Our sample includes 24,531 bank-year observations on 5,164 commercial banks located in 127 countries, including 12,083 bank-year observations on 2,245 banks in 31 developed

countries and 12,448 bank-year observations on 2,919 banks in 96 developing countries. The Appendix lists the number of banks per year across all countries.

We collect financial information from the banks' annual balance sheets and profit-and-loss statements. We use these financial data to create the ratio of total loans to total assets (*Loans to Assets*) and create a measure of bank size as measured by  $\ln(\text{Assets})$ —the natural logarithm of total assets. We also use the financial data to compute the ratio of *Equity to Assets* and return on assets (*ROA*), which is the ratio of net income to total assets. We also calculate the *Number of Banks* operating in each country during each year, which we use as a proxy for the level of development of the banking system.

We also retrieve data on bank ownership from BankScope, which we use to construct ownership variables. We include a dummy variable *Foreign*, which is equal to one if the bank's largest block holder owns at least ten percent of the bank's shares and is identified as residing in a country other than the one in which the bank is located; and a dummy variable *State*, which is equal to one if the bank's largest block holder is the State in which the bank is located and owns at least ten percent of the bank's shares.

We retrieve GDP per capita data from the International Financial Statistics, which we transform by taking its natural logarithm ( $\ln(\text{GDP per Capita})$ ) to control for the effects of economic development on bank lending.

Finally, we collect information on legal origin, creditors' rights, legal formalism (efficiency of enforcement), and information sharing (public registry and private credit bureau) from Professor Andrei Shleifer's Harvard web pages.<sup>3</sup> Legal origin is coded as a set of five dummy variables, one each for *English*, *French*, *Germanic*, *Scandinavian* and *Socialist* legal systems. In

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<sup>3</sup> We are extremely grateful to Prof. Shleifer for sharing these data with us. At the time this manuscript was prepared, the dataset for the paper "Private Credit in 129 Countries" was available for download at: <http://www.economics.harvard.edu/faculty/shleifer/dataset>

our sample of developing countries, we have no *Scandinavian* countries, while, in our sample of developed countries, we have no *Socialist* countries.

*Creditors' Rights* is an index first proposed by LLSV (1998) that consists of four rights components. Each component gets a value of one if the creditors' right exists in a country and zero otherwise; the index is the sum of these four values. The four rights are: *CR1*, restrictions, such as creditors' consent, when a debtor files for reorganization; *CR2*, the ability of a secured creditor to seize pledged collateral after a court approves a debtor's petition for reorganization; *CR3*, the right of creditors to be paid first out of the proceeds from liquidation; and *CR4*, the right to replace management with an administrator during reorganization. Higher values imply stronger creditors' rights. Creditor rights are measured as of 2003.

*Legal Formalism* is an estimate of the number of days necessary to collect an unpaid debt equal to 50% of the country's GDP per capita, which was first introduced and used by DMS (2007). It was calculated as of January 2003. As such, it can be viewed as an index of the inefficiency of legal enforcement because higher values are associated with less efficient judicial enforcement.

*Public Credit Registry* and *Private Credit Bureau* are dummy variables to account for information sharing in each country, as the presence of such financial infrastructure acts as an enabler to bank lending. Both are measured as of 2003.

We then merge these country-level data with our bank-level data. A description of the country-level governance and other variables appears in Table 1.

## 4.2 Methodology

With these data, we estimate a series of multivariate regression models to test the hypotheses laid out in the previous section. Specifically, we analyze different versions of the following regression model:

$$Y_{i,t} = \alpha \mathbf{X}_j + \beta \mathbf{G}_j + \delta \mathbf{O}_i + \eta \mathbf{Z}_{j,t} + \varepsilon_{i,t} \quad (1)$$

where:

$Y_{i,t}$  is our key variable of interest for bank  $i$  during time  $t$ . It measures the quantity of credit by the ratio of total loans to total assets (where higher values indicate more credit risk);

$\mathbf{X}_j$  is a vector of dummy variables describing the legal origin of country  $j$ ;

$\mathbf{G}_j$  is a vector of structural variables describing the country  $j$ , including governance indices that measure creditor protection;

$\mathbf{O}_i$  is a vector of bank ownership variables, including whether the bank is State or foreign controlled,

$\mathbf{Z}_{j,t}$  is a vector of bank-level (bank capitalization, profitability, and loan quality) and country-level controls (level of economic development, level of banking sector development, and credit information sharing (public credit bureau and private credit registry)); and

$\varepsilon_{i,t}$  is a random error term for bank  $i$  during year  $t$ .

Because we analyze panel data, we cannot rely upon ordinary-least-squares regression techniques, as our error terms would be serially correlated. Generally, one must choose between a fixed-effects model and a random-effects model when analyzing panel data such as ours; however, we are constrained to using a random-effects model because our primary variables of

interest—indicators for legal origin and creditors’ rights—are invariant at both the bank and country levels. Therefore, we cannot estimate our models using the fixed-effects methodology since these governance variables would be collinear with the fixed-effects dummy variables. Consequently, we estimate our models using bank-level random effects.

We deem it unlikely that errors terms are independent across banks and, possibly, countries. Consequently, we calculate robust standard errors clustered first at the country level and second at the bank level. Because clustering at the country level reduces the degrees of freedom in our sample to only 126, this may lead us to accept null hypotheses even when there are significant economic effects. Consequently, we present results based upon both types of clustering.

Another methodological issue arises because our key variables of interest (legal origin, legal formalism, and creditors’ rights) are time-invariant. Running random effects panel estimations would appear to comprise unnecessary repetitions in time-series values. One solution to this issue is to estimate the ‘between-effects’ model, which uses the average values of variables across time for each bank rather than panel data (See Houston *et al.* (2010)).<sup>4</sup>

## **5. Empirical Findings**

Our primary hypotheses are that: (1) banks in countries with English legal origin enjoy superior institutions that enable them to make more loans; (2) banks in countries with stronger creditors’ rights enjoy superior legal protection that enables them to make more loans; and (3) banks in countries with less legal formalism or, alternatively, more efficient judicial enforcement, enjoy superior legal protection that enables them to make more loans. The logic behind our hypotheses is that bankers are concerned about the total risk exposure of their loan

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<sup>4</sup> We plan to conduct between-effects regressions in a revised version of this paper.

portfolio. When banks enjoy better creditor protection, the lower expected losses on bad loans enables them to increase credit risk by making more loans per dollar of assets.

### *5.1 Univariate Descriptive Statistics*

Overall, the average loan-to-asset ratio is 0.54 and is significantly higher in developed countries than in developing countries (0.567 vs. 0.514). The average bank size in the entire sample is \$11.0 billion and it is significantly larger in developed than in developing countries (\$19.3 billion vs. \$2.9 billion). The average bank equity-to-asset ratio is 13.5%, and it is significantly lower for developed than in developing countries (12.3% vs. 14.7%). The average bank profitability (as measured by return on assets) for the entire sample is 0.91%, and it is significantly lower in developed countries compared to developed countries (0.77% vs. 1.05%).

Among the ownership variables, the State is the controlling shareholder for only 3.1% of the banks, and this percentage is significantly lower in developed than in developing countries (2.2% vs. 4.0%). The controlling shareholder is foreign for 23.6% of the banks, and this percentage is significantly lower in developed than in developing countries (19.6% vs. 27.6%).

Among the governance variables, the average number of enforcement days (*Legal Formalism*) is 362, and is significantly shorter in developed than in developing countries (291 vs. 430). The average value of the creditors' rights index is 1.85 and is significantly lower in developed than in developing countries (1.78 vs. 1.91). In the developed sample, 41.2% of the banks are in countries of English legal origin, 25.9% in French legal origin, 27.5% in German legal origin, 5.3% are in countries of Scandinavian legal origin, and none are in countries of Socialist legal origin. In the developing sample, 19.2%, 46.2%, 20.5%, and 14.1% of banks are

in countries of English, French, Socialist, and Germanic legal origins, respectively, and none are in countries of Scandinavian legal origin.

Among the information sharing and macroeconomic development variables, 61.5% and 43.1% of bank operate in countries with a public registry and private bureau, respectively, and these figures vary significantly among developed (88.5% and 35.1%) and developing countries (35.4% and 50.8%). The average GDP per capita is \$14,962 and is significantly higher in developed than in developing countries (\$28,011 vs. \$2,284).

## 5.2 Multivariate Regression Analysis: Loans to Assets

The results of the multivariate analyses of equation (1) explaining the loan-to-asset ratio appear in Tables 3 – 5 for the full sample, developed countries, and developing countries, respectively. The A tables present results where standard errors are clustered by country while the B tables present results where standard errors are clustered by bank.

In each of these six tables, we present seven specifications that we estimate using a bank random-effects model with robust standard errors. We begin, in specification (1), with four dummy variables indicating legal origin (*French*, *Socialist*, *German* and *Scandinavian*, with *English* being the omitted category) controlling for differences in economic development (*ln (GDP per capita)*) and for the number of banks per country per year. Across all estimations, we assess the effect of legal origin relative to the omitted category, which is *English* legal origin. Hence, the coefficients on *French*, *Socialist*, *German* and *Scandinavian* measure the difference in the loan-to-asset ratio of these groups from that of the excluded *English* group of banks. In specification (2), we add our measure of *Legal Formalism* and in specification (3) we incorporate our index of *Creditors' Rights*; in specification (4), we replace the index of

*Creditors' Rights* with its four components (*CR1 – CR4*); in specification (5), we add our three time-varying bank-specific variables for bank size ( $\ln(\text{Total Assets})$ ), capitalization (equity to assets), and profitability (return on assets); in specification (6), we account for bank ownership structure (*State* and *Foreign*); and finally, in (7), we add two control variables for credit information sharing (*Private Credit Bureau* and *Public Credit Registry*).

### 5.2.1 Full Sample of Developed and Developing Countries

In Table 3 are the results where the dependent variable is the ratio of total loans to total assets and we consider our full sample of banks in both developed and developing countries. Panel A is based upon standard errors clustered at the country level, whereas Panel B is based upon standard errors clustered at the bank level. We note that changing the clustering level of the robust standard errors from country to bank does not affect the magnitudes of the estimated coefficients, but reduces their standard errors, thereby influencing their levels of significance.

In specification (1) of Panel A, none of the four legal-origin variables are statistically significant but in Panel B, *French*, *Socialist*, and *Scandinavian* are all significant at the 0.01 level. The -0.0274 coefficient on *French* indicates that the loan-to-asset ratio is 2.74 percentage points lower at banks in countries of French legal origin than at banks in countries of English legal origin. Given the full sample's average loan-to-asset ratio of 0.55, this represents a five-percent decrease in the amount of credit that banks are injecting into economies of French legal origin. The coefficient on *German* is negative, but not significant. The coefficients on *Socialist* and *Scandinavian* are positive and significant but banks in these two groups account for only 10% and 3% of our sample, respectively. In general, these results at least partially support one of our primary hypotheses—that, in countries of English legal origin, better legal protection enables

banks to take on more portfolio risk as compared to banks in countries of French (or German) legal origin.

Our control variable for differences in the level of economic development—the natural logarithm of GDP per capita—is positive and highly significant ( $t$ -statistic = 2.8 and 9.9 in Panels A and B, respectively), indicating that banks in countries with higher GDP per capita have higher loan-to-asset ratios. This finding supports our prediction that banks in better developed economies allocate a larger portion of their assets to risky loans because of higher loan demand than in lesser developed economies. Moreover, this control variable remains positive and highly significant in all seven specifications, underlining the importance of its inclusion in this analysis. Similarly, the estimated parameter for the number of banks is positive and highly significant ( $t$  statistic = 3.8 in both Panels A and B), suggesting that the presence of a large number of lenders encourages banks to allocate greater proportions of their assets to loans.

In specification (2), we incorporate the DMS (2007) measure of *Legal Formalism*—the natural logarithm of the number of days needed to recover a debt equal to half of a country's GDP per capita; its coefficient is negative, but is not statistically significant.

In specification (3), we add LLSV's index of *Creditors' Rights*. The coefficient is negative and statistically significant at the 0.01 level both in Tables Panels A and B, indicating that, in countries with stronger creditor rights, banks have lower, rather than higher, ratios of loans to assets. This is consistent with the “dark side of creditors' rights” as laid out by Acharya, Amihud and Litov (2011). However, it is contrary to the findings of Houston *et al.* (2010), who find that stronger creditors' rights are associated with increased bank risk-taking. Our results suggest that stronger creditors' rights reduce, rather than increase, risk-taking. In the presence of the creditors' rights index and unlike other legal origin variables, the coefficient on our indicator for

banks in countries of French legal origin increases in absolute magnitude to 0.0468 and becomes statistically significant in Panel A.

In specification (4), we seek a better understanding of the relation between creditors' rights and bank lending by decomposing the index into indicator variables for its four components. Here, we find that *CR2*, which indicates that "creditors can seize collateral after a debtor's filing for reorganization is approved by the courts," is negative and significant at the 0.01 level in both Panels A and B. Of the remaining three components to creditors' rights, "restrictions, such as creditors' consent, when a debtor files for reorganization" becomes significant at the 0.01 percent level when clustering robust standard errors at the bank level, but the other creditors' rights components lack statistical significance at even the 0.10 level. These findings suggest that borrowers seek less credit when creditors enjoy the first two particular legal rights. Again, our findings fit well with those of Acharya, Amihud and Litov (2011), who find that companies reduce operating risk in countries granting this right to creditors. However, our findings conflict with Houston *et al.* (2010), who report that banks take on more, rather than less, risk when they receive this creditor right.

In specification (5), we add our three bank-specific variables measuring size, capitalization, and profitability. In line with our expectations, we find that bank size as measured by the log of total assets is positive and highly significant ( $t$ -statistic = 3.5 and 5.3, respectively for Panels A and B). Also, when banks hold more equity capital, they allocate a lower fraction of their assets to loans, as equity is a more expensive source of capital relative to debt. The sign on return on assets is also negative and significant, supporting the charter value hypothesis whereby more profitable banks are more risk averse and thereby are less willing to extend more loans and assume greater risk.

In specification (6), each of the indicator variables for banks with the State as a controlling blockholder and with a foreign entity as the controlling blockholder is negative and significant. Consistent with our hypothesis, we find that, when the State is the majority shareholder, a bank makes fewer loans in proportion to its assets. The negative sign on *Foreign* also is in line with our expectations.

Finally, in specification (7), neither of the credit information sharing indicators is significant, and their inclusion does not qualitatively affect the results in specification (6).

### 5.2.2 *Developed Countries Only*

In Table 4 are the results where the dependent variable is the ratio of total loans to total assets and we only include in the analysis our sub-sample of banks in developed countries. We present the results for the same seven specifications that we tested in Table 4 for the full sample.

In specifications (1) and (2) of panel A, only our control for economic development is statistically significant. In panel B, our indicator for Scandinavian legal origin becomes highly significant. None of the remaining variables are statistically significant at even the 0.10 level.

In specification (3), we add the index of creditors' rights, and find that its negative coefficient is highly significant in both panels. This result shows that creditor protection plays a role in the decision of banks in developed countries to choose their loan-to-assets ratios, albeit to reduce, rather than increase this ratio. Also, when clustering standard errors by bank in Panel B, the positive coefficient on *Legal Formalism* becomes highly significant. This is contrary to our hypothesis.

In specification (4), we replace the creditors' rights index with indicator variables for its four components. We find that *CR3* (the right of creditors to be paid first out of the proceeds of a

liquidating firm) is negative and significant at the 0.05 level in Panel A. In Panel B, the significance of this coefficient increases; similar to other rights of *CRI* (restrictions on filing for bankruptcy) and *CR2* (the right of creditors to seize collateral). In addition, we now find that the coefficient of the indicator for French legal origin becomes much larger in magnitude and statistically significant at better than the 0.05 level.

In specification (5), we add our three bank-level variables As in Table 3; we find that the loan-to-asset ratio is positively and significantly related to bank size and negatively and significantly related to the equity-to-asset ratio. The coefficient of ROA is consistently negative, as in Table 3, but lacks statistical significance.

In specification (6), we add our two ownership variables. As in Table 3, we find that both are consistently negative, but only *Foreign* is consistently significant. The -0.049 coefficient on *Foreign* indicates that the loan-to-asset ratio is lower by 4.9 percentage points when the controlling block holder is foreign. Foreign banks do not generally serve a large retail base as compared to domestic banks, and their parent firms usually impose limits on their credit risk exposure to the local market. The coefficient on *State* is -0.0757, but is only significant at even the 0.10 level when we cluster standard errors at the bank level.

In specification (7), we add our two controls for information sharing. Neither coefficient is significant at even the 0.10 level when we cluster standard errors at the country level (Panel A), but the 0.0534 coefficient on the indicator for private credit bureaus is significant at the 0.05 level when we cluster standard errors at the bank level (Panel B), indicating that banks located in developed countries that have private credit bureaus increase their allocation of assets to loans by 5.34 percentage points, or about 10%. The coefficient on our control for economic development is highly significant in the first four specifications, but becomes insignificant when we add the

three bank-level financial variables. Our control for the number of banks in a country is not significant in any of the specifications.

### 5.2.3 *Developing Countries Only*

In Table 5 are the results where the dependent variable is the loan-to-asset ratio and where we only include our sub-sample of banks in developing countries. Again, we present the results for the same seven specifications tested in Table 3 for our full sample.

In specification (1), the -0.0205 coefficient on French is not significant in Panel A, but is significant at the 0.10 level in Panel B, indicating that banks in developing countries of French legal origin have loan-to-asset ratios that are 2.05 percentage points lower than are banks in developing countries of English legal origin. The positive coefficient on *Socialist* also is significant in Panel B, but not in Panel A.

In specification (2), we add our measure of *Legal Formalism* and find that its -0.0443 coefficient is negative and significant at better than the 0.10 level in Panel A and at better than the 0.001 level in Panel B. This indicates that the loan-to-asset ratio is significantly lower when it takes longer for creditors to reach a legal resolution on recovering bad debts.

In specification (3), we add the index of *Creditors Rights* and find that its -0.0256 coefficient is significant at the 0.05 level in Panel A and at the 0.001 level in Panel B. As for our full sample and our subsample of developed countries, this finding is supportive of the “dark side” of creditor protection, in that firms borrow less when creditors are better protected.

In specification (4), we replace the index of creditors’ rights with indicators for its four components. In Panel A, we find a negative coefficient on CR1 (restrictions on filing for bankruptcy) that is significant at the 0.10 level, and a negative coefficient on CR2 (right to seize

collateral) that is significant at the 0.001 level. We also find a positive coefficient on CR3 (right to be paid first) that is significant at the 0.10 level. In Panel B, the coefficients on each of these three indicators are significant at the 0.001 level.

In specification (5), we add our three bank-level financial variables. In Panel A, we find negative coefficient on bank capitalization and profitability that are significant at the 0.001 and 0.10 levels, respectively. The coefficient on bank size is positive, but lacks statistical significance. In Panel B, however, the coefficient on bank size is significant at the 0.10 level, and the coefficient on profitability is significant at the 0.05 level.

In specification (6), we add our two ownership variables. In both Panels A and B, we find that the negative coefficients on both *State* and *Foreign* are negative and significant at least at the 0.10 level, indicating that both State-owned and Foreign-owned banks allocate less of their assets to loans in developing countries.

Finally, in specification (6), we add our two controls for information sharing. Coefficients on both variables are positive, but lack statistical significance in Panel A. In Panel B, however, the 0.0230 coefficient on Private Credit Bureaus is significant at the 0.05 level, indicating that banks in developing countries that have private credit bureaus allocate 2.3 percentage points more of their assets to loans.

In general, the coefficients on our control variables for economic and banking development are positive and significant in most specifications.

#### 5.4 Discussion

From the results in Tables 3 – 5, we find similarities and differences in lending for banks located in developed and in developing countries. With respect to legal origin, banks of French legal origin have lower loan-to-asset ratios than banks of English legal origin. This result holds for the full sample, for the developed-country sub-sample and for the developing-country sub-sample, but is larger in magnitude and more precisely measured at banks in developed countries.

With respect to the legal rights of creditors, we find that stronger creditor rights are associated with lower loan-to-asset ratios. When we measure creditors' rights using the LLSV index, this result is statistically significant for the full sample, and for both the developed and developing-country sub-samples. When we decompose the LLSV index into its four components, we find that the results for the index are driven primarily by only one component and that this component is different in developed and in developing countries. In developed countries, it is the right to be paid first out of the proceeds of a liquidating firm that is driving down the loan-to-asset ratio whereas in developing countries, it is the right to seize collateral in reorganization that is reducing the loan-to-asset ratio. To the extent that the loan-to-asset ratio is a measure of bank risk-taking, our results are consistent with Acharya, Amihud and Litov (2011), who posit that borrowers reduce risk when creditors are better protected, but are in striking contrast to those of Houston *et al.* (2010), who find that better creditor rights are associated with increased risk-taking. We think that this discrepancy is attributable to their measure of risk, which is largely a function of the standard deviation of returns calculated over 2000-2007. When measured over such a short period of time, we think that the standard deviation may be inversely related to ex-ante risk, reflecting variability in returns associated with financial crises that occurred during the measurement period rather than reflecting ex-ante risk.

To the extent that crises only occur once every decade, banks in countries that have already suffered a crisis may actually be ex-ante less risky than banks in countries that did not experience a crisis during 2000-2007, but did in 2008-2009.

With respect to the efficiency of enforcement as proxied by the DMS (2007) legal-formalism measure of the number of days needed to collect a debt equal to 50% of GDP per capita, we find no evidence that efficiency of enforcement is important in developed countries, but do find evidence that it is important in developing countries, where other governance institutions are much weaker than in developed countries. This finding suggests that efficiency of enforcement is an important substitute for those underdeveloped institutions in protecting creditors. With more efficient judicial enforcement, bankers in developing countries allocate a significantly larger portion of the asset portfolio to risky loans.

We also find that the loan-to-asset ratio is a positive function of bank size and a negative function of bank capitalization. Larger banks, which are more diversified than smaller banks, allocate a significantly higher portion of the asset portfolio to risky loans. Better capitalized banks, which have greater franchise value, allocate a significantly smaller portion of their asset portfolios to risky loans.

With respect to ownership, we find that both foreign-owned and State-owned banks allocate significantly less of their asset portfolios to risky loans. For foreign-owned banks, this is consistent with the observation that such banks often operate to collect funds for the home office and to serve multinational customers who operate in a country rather than to make loans to domestic borrowers. For State-owned banks, this is consistent with the observation that the State often directs domestic banks to help finance government spending by investing more of its assets in government bonds and less in loans.

With respect to our two control variables, we find that it is most important to control for differences in levels of economic and banking-sector development in developing countries. This is not surprising, but we had expected our control variable—the log of GDP per capita—to be important even in the developed sub-sample.

## **6. Summary and Conclusions**

In this article, we extend the law-and-finance literature by using bank-level data from 31 developed and 96 developing countries to analyze how bank lending behavior responds to differences in legal origin and creditor protection. Using a random-effects model that controls for bank heterogeneity, we find that bankers allocate a significantly lower portion of their assets to loans: (i) when they enjoy French civil law legal origin rather than English common law legal origin; (ii) when creditors' rights are stronger; (iii) when their banks are smaller and better capitalized; and (iv) when the controlling shareholder is the State or a foreign entity. We also find that bankers in developing countries, but not in developed countries, allocate a significantly larger portion of their assets to risky loans when legal enforcement of creditor rights is more efficient. These results strongly support the theory of legal origin but provide only mixed support for the “power” theories of credit.

Our finding that banks make fewer loans when creditors' rights are stronger is supportive of a “dark side” to creditors' rights, as proposed by Acharya, Amihud and Litov (2011), but it contradicts the results reported by Houston *et al.* (2010) who find that stronger creditor rights are associated with greater bank risk-taking. Our opposing findings regarding the effects of creditors' rights and the effects of judicial enforcement also highlight the importance of distinguishing between strong legal rights and efficient judicial enforcement of those rights, as

pointed out by LLSV (1998). We do not address how the financial crisis that began in 2007 affected bank lending; we leave that most interesting topic to future research.

In summary, our results provide new evidence on the importance of legal origin and creditor protection to the provision of bank credit, which has implications for financial sector development and economic growth. Researchers in the “finance and growth” literature have established that better financial sector development as measured by aggregate domestic private credit leads to higher levels of economic growth. We extend the literature by documenting one channel through which creditor protection leads to financial sector development. With better creditor protection, bankers increase the portion of their assets allocated to loans. In aggregate, this should lead to higher levels of private-sector credit, which the “finance and growth” literature has shown to be positively related to economic growth.

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**Table 1:**  
**Definitions of Country and Firm Level Governance and Macroeconomic Variables**

Variable Name	Description
Legal Origin	Identifies the legal origin of the company law or commercial code of each country (English, French, Socialist, German, Scandinavian). Source: Djankov <i>et al.</i> (2003, 2007).
Legal Formalism	An estimate of the number of days necessary to collect an unpaid debt equal to 50% of the country's GDP per capita. Higher values indicate greater procedural formalism and greater inefficiency in judicial enforcement. Source: Djankov <i>et al.</i> (2007)
Creditors' Rights Component 1	Restrictions, such as creditors' consent, when a debtor files for reorganization. This component gets a weight of one if a country's legal system grants that creditors' right and zero otherwise. Source: LLSV (1998)
Creditors' Rights Component 2	Right of creditors to seize collateral after a debtor's filing for reorganization is approved by the court. This component gets a weight of one if a country's legal system grants that creditors' right and zero otherwise. Source: LLSV (1998)
Creditors' Rights Component 3	Right of creditors to be paid first out of the proceeds of a liquidating firm. This component gets a weight of one if a country's legal system grants that creditors' right and zero otherwise. Source: LLSV (1998)
Creditors' Rights Component 4	An administrator, rather than management, takes responsibility for running a firm during reorganization. This component gets a weight of one if a country's legal system grants that creditors' right and zero otherwise. Source: LLSV (1998)
Creditors' Rights Index	Index of components 1 through 4, where each component gets a weight of one if a country's legal system grants that creditors' right and zero otherwise. Ranges from zero to four, with higher values indicating stronger creditors' rights. Source: LLSV (1998)
Largest Shareholder	Percentage of ownership of the largest shareholder. Source: Authors' calculation from BankScope.
State Shareholder	Largest shareholder is a state or public authority. Source: Authors' calculation from BankScope.
Foreign Shareholder	Largest shareholder is foreign. Source: Authors' calculation from BankScope.
Public Credit Registry	Identifies if a public credit registry operates in the country in 2003. A public registry is defined as a database owned by public authorities (usually the Central Bank or Banking Supervisory Authority), that collects information on the standing of borrowers in the financial system and makes it available to financial institutions. Source: Djankov <i>et al.</i> (2007).
Private Credit Bureau	Identifies if a private credit bureau operates in the country in 2003. A private bureau is defined as a private commercial firm or nonprofit organization that maintains a database on the standing of borrowers in the financial system, and its primary role is to facilitate exchange of information amongst banks and financial institutions. Source: Djankov <i>et al.</i> (2007) .
Per Capita GDP	Logarithm of per capita GDP. Source: <i>International Financial Statistics</i>

**Table 2:  
Descriptive Statistics**

Based upon an unbalanced panel of 12,347 bank-year observations on 2,245 banks in 31 developed countries and 12,653 bank-year observations on 2,919 banks in 96 developing countries over the years 2000-2006. Loans to Assets is the ratio of total loans to total assets; Total Assets are measured in USD millions. Each of these two variables is measured at the bank level in each year. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the State or a foreign entity, respectively. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating English, French, Socialist, German or Scandinavian legal origin as first defined by LLSV 1998. Legal Formalism is the number of days needed to enforce a contract; higher values indicate less efficient judicial enforcement. *Creditors' Rights Index* is an index defined by LLSV (1998) where higher values indicate stronger rights; its components are labeled Creditor Right 1 – 4. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists in the country; *ln(GDP per capita)* is the per capita Gross Domestic Product expressed in USD. *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. The final two columns show the difference in means between the developed and developing countries, followed by the results of a t-test for significant differences in means. Table 1 provides more details on each variable.

	All			Developed			Developing			Diff.	t-Stat.
	Median	Mean	Std.Err.	Median	Mean	Std.Err.	Median	Mean	Std.Err.		
<i>Bank Financials</i>											
Loans to Assets	0.570	0.540	0.001	0.622	0.567	0.002	0.528	0.514	0.002	0.053	26.0
Assets (\$Mil)	542	10,976	389	1,511	19,315	747	233	2,881	225	16,434	40.1
Equity to Assets	0.096	0.135	0.001	0.084	0.123	0.001	0.111	0.147	0.002	-0.024	-17.3
ROA	0.009	0.009	0.000	0.007	0.008	0.000	0.012	0.010	0.000	-0.003	-7.9
<i>Bank Ownership:</i>											
State	0.000	0.031	0.001	0.000	0.022	0.001	0.000	0.040	0.002	-0.018	-11.8
Foreign	0.000	0.236	0.003	0.000	0.196	0.004	0.000	0.276	0.004	-0.080	-21.1
<i>Country-Level Governance:</i>											
English	0.000	0.301	0.003	0.000	0.412	0.004	0.000	0.192	0.004	0.220	55.3
French	0.000	0.362	0.003	0.000	0.259	0.004	0.000	0.462	0.004	-0.202	-47.9
Socialist	0.000	0.104	0.002	0.000	0.000	0.000	0.000	0.205	0.004	<b>n/m</b>	
German	0.000	0.207	0.003	0.000	0.275	0.004	0.000	0.141	0.003	0.134	37.7
Scandinavian	0.000	0.026	0.001	0.000	0.053	0.002	0.000	0.000	0.000	<b>n/m</b>	
Enforcement Days	305	361.7	1.7	250	290.9	2.8	375	430.3	1.9	-139.4	-60.6
Creditors' Rights Index	2.000	1.847	0.007	1.000	1.779	0.010	2.000	1.913	0.009	-0.134	-13.8
Creditor Right 1	0.000	0.331	0.003	0.000	0.213	0.004	0.000	0.447	0.004	-0.234	-57.5
Creditor Right 2	0.000	0.334	0.003	0.000	0.325	0.004	0.000	0.344	0.004	-0.018	-4.3
Creditor Right 3	1.000	0.684	0.003	1.000	0.811	0.004	1.000	0.561	0.004	0.250	62.8
Creditor Right 4	0.000	0.498	0.003	0.000	0.431	0.005	1.000	0.562	0.004	-0.131	-29.4
Public Credit Registry	1.000	0.615	0.003	1.000	0.885	0.003	0.000	0.354	0.004	0.531	150.7
Private Credit Bureau	0.000	0.431	0.003	0.000	0.351	0.004	1.000	0.508	0.004	-0.158	-35.7
GDP per Capital	6,428	14,956	91	28,146	28,011	79	1,870	2,284	16	25,726	729
Number of Banks	60	135.3	1.1	122	178.6	1.5	28.0	93.3	1.6	85.3	55.6

**Table 3: All Countries**  
**Random-Effects Regressions to Explain the Ratio Total Loans to Total Assets-**  
**Panel A: Clustering by Country**

Based upon an unbalanced panel of 24,531 bank-year observations on 5,164 commercial banks located in 127 countries over the years 2000-2006. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating the country's legal origin as first defined by LLSV (1998). *English* is the omitted category. *Legal Formalism* is the natural logarithm of the number of days needed to recover a debt equal to half of the country's GDP per capita, as defined by Djankov *et al.* (2007). *Creditors' Rights* is an index of four creditors' rights as first defined by LLSV (1998).  $\ln(\text{GDP per capita})$  is the natural logarithm of the country's per capita Gross Domestic Product in each year.  $\ln(\text{Total Assets})$  is the natural logarithm of total assets. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the *State* or a *Foreign* entity, respectively. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists,  $\ln(\text{GDP per capita})$  is the natural logarithm of per capita Gross Domestic Product. *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. Table 1 provides more details on each variable. Robust standard errors are clustered by country. \*\*\*, \*\*, and \* indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
French	-0.0274 (0.031)	-0.0269 (0.031)	-0.0468 (0.024)*	-0.0296 (0.025)	-0.0271 (0.024)	-0.0263 (0.023)	-0.0190 (0.024)
Socialist	0.0346 (0.025)	0.0341 (0.025)	0.0358 (0.023)	0.0261 (0.032)	0.0786 (0.031)**	0.0768 (0.031)**	0.0794 (0.033)**
German	-0.0060 (0.038)	-0.0067 (0.037)	-0.0037 (0.030)	-0.0064 (0.028)	-0.0021 (0.024)	-0.0011 (0.023)	0.0037 (0.024)
Scandinavian	0.0772 (0.054)	0.0749 (0.055)	0.0868 (0.045)*	0.0910 (0.042)**	0.1023 (0.042)**	0.0979 (0.041)**	0.0969 (0.041)**
Legal Formalism		-0.0032 (0.015)	0.0035 (0.016)	0.0055 (0.014)	0.0108 (0.012)	0.0110 (0.012)	0.0100 (0.012)
CR- Creditors Rights			-0.0297 (0.011)***				
CR1- Restrictions on filing				-0.0257 (0.020)	-0.0314 (0.020)	-0.0325 (0.019)*	-0.0309 (0.019)
CR2- Right to seize collateral				-0.0805 (0.020)***	-0.0666 (0.019)***	-0.0641 (0.019)***	-0.0635 (0.020)***
CR3- Right to be paid first				0.0061 (0.021)	0.0041 (0.020)	0.0038 (0.020)	0.0026 (0.019)
CR4- Right to run a firm				0.0049 (0.019)	-0.0022 (0.018)	-0.0012 (0.017)	-0.0018 (0.017)
$\ln(\text{Total Assets})$					0.0106 (0.003)***	0.0109 (0.003)***	0.0110 (0.003)***
Equity to Assets					-0.1507 (0.035)***	-0.1497 (0.035)***	-0.1501 (0.035)***
Return on Assets					-0.1046 (0.062)*	-0.1043 (0.062)*	-0.1040 (0.062)*
State						-0.0593 (0.019)***	-0.0583 (0.019)***
Foreign						-0.0331 (0.012)***	-0.0335 (0.011)***
Private Credit Bureau							0.0103 (0.025)
Public Credit Registry							-0.0101 (0.021)
$\ln(\text{GDP per capita})$	0.0198 (0.007)***	0.0192 (0.008)**	0.0186 (0.006)***	0.0189 (0.006)***	0.0121 (0.006)*	0.0110 (0.006)*	0.0086 (0.008)
Number of Banks	0.0076 (0.002)***	0.0076 (0.002)***	0.0061 (0.002)**	0.0059 (0.003)**	0.0051 (0.002)***	0.0048 (0.002)***	0.0048 (0.002)***
Constant	0.3540 (0.053)***	0.3765 (0.117)***	0.4083 (0.121)***	0.3639 (0.111)***	0.2718 (0.108)**	0.2848 (0.106)***	0.3046 (0.120)**
Number of Observations	24,531	24,531	24,531	24,531	24,531	24,531	24,531
Number of Banks	5,164	5,164	5,164	5,164	5,164	5,164	5,164
Overall R2	0.0344	0.0351	0.0537	0.0624	0.0864	0.0921	0.0941

**Table 3: All Countries**  
**Random-Effects Regressions to Explain the Ratio Total Loans to Total Assets-**  
**Panel B: Clustering by Bank**

Based upon an unbalanced panel of 24,531 bank-year observations on 5,164 commercial banks located in 127 countries over the years 2000-2006. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating the country's legal origin as first defined by LLSV (1998). *English* is the omitted category. *Legal Formalism* is the natural logarithm of the number of days needed to recover a debt equal to half of the country's GDP per capita, as defined by Djankov *et al.* (2007). *Creditors' Rights* is an index of four creditors' rights as first defined by LLSV (1998).  $\ln(\text{GDP per capita})$  is the natural logarithm of the country's per capita Gross Domestic Product in each year.  $\ln(\text{Total Assets})$  is the natural logarithm of total assets. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the *State* or a *Foreign* entity, respectively. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists, and  $\ln(\text{GDP per capita})$  is the natural logarithm of per capita Gross Domestic Product. *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. Table 1 provides more details on each variable. Robust standard errors are clustered by bank. \*\*\*, \*\*, and \* indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
French	-0.0274 (0.008)***	-0.0269 (0.008)***	-0.0468 (0.009)***	-0.0296 (0.009)***	-0.0271 (0.009)***	-0.0263 (0.009)***	-0.0190 (0.010)*
Socialist	0.0346 (0.010)***	0.0341 (0.010)***	0.0358 (0.010)***	0.0261 (0.012)**	0.0786 (0.013)***	0.0768 (0.013)***	0.0794 (0.014)***
German	-0.0060 (0.010)	-0.0067 (0.010)	-0.0037 (0.010)	-0.0064 (0.010)	-0.0021 (0.010)	-0.0011 (0.010)	0.0037 (0.010)
Scandinavian	0.0772 (0.020)***	0.0749 (0.021)***	0.0868 (0.021)***	0.0910 (0.021)***	0.1023 (0.021)***	0.0979 (0.021)***	0.0969 (0.021)***
Legal Formalism		-0.0032 (0.006)	0.0035 (0.006)	0.0055 (0.006)	0.0108 (0.006)*	0.0110 (0.006)*	0.0100 (0.006)*
CR- Creditors Rights			-0.0297 (0.003)***				
CR1- Restrictions on filing				-0.0257 (0.007)***	-0.0314 (0.007)***	-0.0325 (0.007)***	-0.0309 (0.007)***
CR2- Right to seize collateral				-0.0805 (0.008)***	-0.0666 (0.008)***	-0.0641 (0.008)***	-0.0635 (0.008)***
CR3- Right to be paid first				0.0061 (0.008)	0.0041 (0.008)	0.0038 (0.008)	0.0026 (0.008)
CR4- Right to run a firm				0.0049 (0.008)	-0.0022 (0.007)	-0.0012 (0.007)	-0.0018 (0.008)
$\ln(\text{Total Assets})$					0.0106 (0.002)***	0.0109 (0.002)***	0.0110 (0.002)***
Equity to Assets					-0.1507 (0.023)***	-0.1497 (0.023)***	-0.1501 (0.023)***
Return on Assets					-0.1046 (0.047)**	-0.1043 (0.047)**	-0.1040 (0.047)**
State						-0.0593 (0.019)***	-0.0583 (0.019)***
Foreign						-0.0331 (0.008)***	-0.0335 (0.008)***
Private Credit Bureau							0.0103 (0.010)
Public Credit Registry							-0.0101 (0.009)
$\ln(\text{GDP per capita})$	0.0198 (0.002)***	0.0192 (0.003)***	0.0186 (0.003)***	0.0189 (0.003)***	0.0121 (0.003)***	0.0110 (0.003)***	0.0086 (0.003)***
Number of Banks	0.0076 (0.002)***	0.0076 (0.002)***	0.0061 (0.002)***	0.0059 (0.002)***	0.0051 (0.002)***	0.0048 (0.002)***	0.0048 (0.002)***
Constant	0.3540 (0.020)***	0.3765 (0.045)***	0.4083 (0.045)***	0.3639 (0.046)***	0.2718 (0.051)***	0.2848 (0.051)***	0.3046 (0.053)***
Number of Observations	24,531	24,531	24,531	24,531	24,531	24,531	24,531
Number of Banks	5,164	5,164	5,164	5,164	5,164	5,164	5,164
Overall R2	0.0344	0.0351	0.0537	0.0624	0.0864	0.0921	0.0941

**Table 4: Developed Countries**  
**Random-Effects Regressions to Explain the Ratio Total Loans to Total Assets-**  
**Panel A: Clustering by Country**

Based upon an unbalanced panel of 12,083 bank-year observations on 2,245 banks in 31 developed countries over the years 2000-2006. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating the country's legal origin as first defined by LLSV (1998). *English* is the omitted category. *Legal Formalism* is the natural logarithm of the number of days needed to recover a debt equal to half of the country's GDP per capita, as defined by Djankov *et al.* (2007). *Creditors' Rights* is an index of four creditors' rights as first defined by LLSV (1998).  $\ln(\text{GDP per capita})$  is the natural logarithm of the country's per capita Gross Domestic Product in each year.  $\ln(\text{Total Assets})$  is the natural logarithm of total assets. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the *State* or a *Foreign* entity, respectively. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists,  $\ln(\text{GDP per capita})$  is the natural logarithm of per capita Gross Domestic Product. *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. Table 1 provides more details on each variable. Robust standard errors are clustered by country. \*\*\*, \*\*, and \* indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
French	0.0020 (0.062)	0.0056 (0.060)	-0.0519 (0.042)	-0.1246 (0.054)**	-0.1238 (0.048)**	-0.1168 (0.047)**	-0.1029 (0.050)**
Socialist	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)
German	-0.0153 (0.056)	-0.0089 (0.056)	-0.0132 (0.048)	-0.0297 (0.043)	-0.0132 (0.038)	-0.0134 (0.036)	-0.0084 (0.043)
Scandinavian	0.0716 (0.064)	0.0814 (0.064)	0.0795 (0.049)	0.0716 (0.052)	0.0956 (0.053)*	0.0863 (0.052)*	0.0794 (0.051)
Legal Formalism		0.0117 (0.016)	0.0165 (0.019)	0.0208 (0.023)	0.0247 (0.019)	0.0238 (0.018)	0.0195 (0.024)
CR- Creditors Rights			-0.0384 (0.018)**				
CR1- Restrictions on filing collateral				-0.0734 (0.053)	-0.0671 (0.047)	-0.0615 (0.045)	-0.0670 (0.045)
CR3- Right to be paid first				-0.0773 (0.042)*	-0.0629 (0.035)*	-0.0549 (0.033)*	-0.0440 (0.034)
CR4- Right to run a firm				-0.1014 (0.040)**	-0.0997 (0.036)***	-0.0872 (0.033)***	-0.1158 (0.026)***
$\ln(\text{Total Assets})$					0.0126 (0.005)**	0.0126 (0.005)***	0.0124 (0.005)**
Equity to Assets					-0.1912 (0.047)***	-0.1911 (0.046)***	-0.1927 (0.046)***
Return on Assets					-0.0599 (0.094)	-0.0585 (0.094)	-0.0565 (0.095)
State						-0.0757 (0.043)*	-0.0688 (0.045)
Foreign						-0.0489 (0.018)***	-0.0477 (0.019)**
Private Credit Bureau							0.0534 (0.044)
Public Credit Registry							-0.0185 (0.048)
$\ln(\text{GDP per capita})$	0.1115 (0.035)***	0.1172 (0.036)***	0.0893 (0.028)***	0.0688 (0.037)*	0.0314 (0.033)	0.0279 (0.032)	0.0239 (0.032)
Number of Banks	0.0048 (0.007)	0.0049 (0.007)	-0.0041 (0.004)	-0.0061 (0.004)	-0.0032 (0.005)	-0.0044 (0.005)	-0.0053 (0.005)
Constant	-0.5887 (0.382)	-0.7128 (0.427)*	-0.3541 (0.357)	-0.0926 (0.494)	0.1051 (0.435)	0.1453 (0.425)	0.1929 (0.414)
Number of Observations	12,083	12,083	12,083	12,083	12,083	12,083	12,083
Number of Banks	2,245	2,245	2,245	2,245	2,245	2,245	2,245
Overall R2	0.0344	0.0342	0.0516	0.0663	0.106	0.114	0.118

**Table 4: Developed Countries**  
**Random-Effects Regressions to Explain the Ratio Total Loans to Total Assets-**  
**Panel B: Clustering by Bank**

Based upon an unbalanced panel of 12,083 bank-year observations on 2,245 banks in 31 developed countries over the years 2000-2006. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating the country's legal origin as first defined by LLSV (1998). *English* is the omitted category. *Legal Formalism* is the natural logarithm of the number of days needed to recover a debt equal to half of the country's GDP per capita, as defined by Djankov *et al.* (2007). *Creditors' Rights* is an index of four creditors' rights as first defined by LLSV (1998).  $\ln(\text{GDP per capita})$  is the natural logarithm of the country's per capita Gross Domestic Product in each year.  $\ln(\text{Total Assets})$  is the natural logarithm of total assets. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the *State* or a *Foreign* entity, respectively. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists, and  $\ln(\text{GDP per capita})$  is the per capita *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. Gross Domestic Product. Table 1 provides more details on each variable. Robust standard errors are clustered by bank. \*\*\*, \*\*, and \* indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
French	0.0020 (0.018)	0.0056 (0.019)	-0.0519 (0.020)**	-0.1246 (0.029)***	-0.1238 (0.028)***	-0.1168 (0.027)***	-0.1029 (0.032)***
Socialist	0.0000 (0.000)						
German	-0.0153 (0.015)	-0.0089 (0.016)	-0.0132 (0.016)	-0.0297 (0.017)*	-0.0132 (0.017)	-0.0134 (0.017)	-0.0084 (0.020)
Scandinavian	0.0716 (0.022)***	0.0814 (0.023)***	0.0795 (0.023)***	0.0716 (0.024)***	0.0956 (0.025)***	0.0863 (0.025)***	0.0794 (0.026)***
Legal Formalism		0.0117 (0.008)	0.0165 (0.008)**	0.0208 (0.009)**	0.0247 (0.009)***	0.0238 (0.009)***	0.0195 (0.011)*
CR- Creditors Rights			-0.0384 (0.006)***				
CR1- Restrictions on filing				-0.0734 (0.019)***	-0.0671 (0.018)***	-0.0615 (0.018)***	-0.0670 (0.018)***
CR2- Right to seize collateral				-0.0773 (0.018)***	-0.0629 (0.018)***	-0.0549 (0.018)***	-0.0440 (0.019)**
CR3- Right to be paid first				-0.1014 (0.022)***	-0.0997 (0.021)***	-0.0872 (0.021)***	-0.1158 (0.023)***
CR4- Right to run a firm				0.0148 (0.014)	-0.0091 (0.015)	-0.0142 (0.015)	-0.0273 (0.015)*
$\ln(\text{Total Assets})$					0.0126 (0.003)***	0.0126 (0.003)***	0.0124 (0.003)***
Equity to Assets					-0.1912 (0.039)***	-0.1911 (0.039)***	-0.1927 (0.039)***
Return on Assets					-0.0599 (0.071)	-0.0585 (0.071)	-0.0565 (0.071)
State						-0.0757 (0.042)*	-0.0688 (0.042)
Foreign						-0.0489 (0.015)***	-0.0477 (0.015)***
Private Credit Bureau							0.0534 (0.023)**
Public Credit Registry							-0.0185 (0.024)
$\ln(\text{GDP per capita})$	0.1115 (0.017)***	0.1172 (0.018)***	0.0893 (0.018)***	0.0688 (0.021)***	0.0314 (0.021)	0.0279 (0.021)	0.0239 (0.021)
Number of Banks	0.0048 (0.004)	0.0049 (0.004)	-0.0041 (0.004)	-0.0061 (0.004)	-0.0032 (0.004)	-0.0044 (0.004)	-0.0053 (0.004)
Constant	-0.5887 (0.172)***	-0.7128 (0.201)***	-0.3541 (0.204)*	-0.0926 (0.257)	0.1051 (0.248)	0.1453 (0.248)	0.1929 (0.249)
Number of Observations	12,083	12,083	12,083	12,083	12,083	12,083	12,083
Number of Banks	2,245	2,245	2,245	2,245	2,245	2,245	2,245
Overall R2	0.0344	0.0342	0.0516	0.0663	0.106	0.114	0.118

**Table 5: Developing Countries**  
**Random-Effects Regressions to Explain the Ratio Total Loans to Total Assets-**  
**Panel A: Clustering by country**

Based upon an unbalanced panel of 12,448 bank-year observations on 2,919 banks in 96 developing countries over the years 2000-2006. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating the country's legal origin as first defined by LLSV (1998). *English* is the omitted category. *Legal Formalism* is the natural logarithm of the number of days needed to recover a debt equal to half of the country's GDP per capita, as defined by Djankov *et al.* (2007). *Creditors' Rights* is an index of four creditors' rights as first defined by LLSV (1998).  $\ln(\text{GDP per capita})$  is the natural logarithm of the country's per capita Gross Domestic Product in each year.  $\ln(\text{Total Assets})$  is the natural logarithm of total assets. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the *State* or a *Foreign* entity, respectively. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists,  $\ln(\text{GDP per capita})$  is the per capita Gross Domestic Product. *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. Table 1 provides more details on each variable. Robust standard errors are clustered by country. \*\*\*, \*\*, and \* indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
French	-0.0205 (0.034)	-0.0127 (0.033)	-0.0404 (0.034)	-0.0340 (0.031)	-0.0255 (0.030)	-0.0237 (0.030)	-0.0160 (0.030)
Socialist	0.0319 (0.035)	0.0243 (0.034)	0.0100 (0.036)	-0.0014 (0.032)	0.0353 (0.033)	0.0338 (0.033)	0.0471 (0.035)
German	0.0082 (0.038)	0.0078 (0.036)	-0.0088 (0.038)	-0.0330 (0.033)	-0.0249 (0.033)	-0.0232 (0.033)	-0.0122 (0.033)
Scandinavian	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)
Legal Formalism		-0.0443 (0.024)*	-0.0399 (0.021)*	-0.0342 (0.018)*	-0.0326 (0.018)*	-0.0336 (0.018)*	-0.0364 (0.019)*
CR- Creditors Rights			-0.0256 (0.012)**				
CR1- Restrictions on filing				-0.0374 (0.021)*	-0.0395 (0.020)*	-0.0415 (0.020)**	-0.0384 (0.020)*
CR2- Right to seize collateral				-0.0999 (0.023)***	-0.0861 (0.023)***	-0.0858 (0.023)***	-0.0873 (0.022)***
CR3- Right to be paid first				0.0363 (0.021)*	0.0323 (0.020)	0.0307 (0.020)	0.0318 (0.020)
CR4- Right to run a firm				-0.0005 (0.022)	0.0041 (0.021)	0.0065 (0.021)	0.0115 (0.021)
$\ln(\text{Total Assets})$					0.0049 (0.004)	0.0053 (0.004)	0.0057 (0.004)
Equity to Assets					-0.1294 (0.044)***	-0.1284 (0.045)***	-0.1293 (0.045)***
Return on Assets					-0.1381 (0.082)*	-0.1382 (0.082)*	-0.1382 (0.082)*
State						-0.0384 (0.017)**	-0.0384 (0.018)**
Foreign						-0.0214 (0.013)*	-0.0218 (0.013)*
Private Credit Bureau							0.0230 (0.032)
Public Credit Registry							0.0004 (0.023)
$\ln(\text{GDP per capita})$	0.0205 (0.013)	0.0208 (0.013)	0.0265 (0.013)**	0.0373 (0.011)***	0.0315 (0.010)***	0.0308 (0.010)***	0.0244 (0.014)*
Number of Banks	0.0071 (0.002)***	0.0073 (0.002)***	0.0068 (0.002)***	0.0074 (0.001)***	0.0067 (0.001)***	0.0065 (0.001)***	0.0068 (0.001)***
Constant	0.3533 (0.087)***	0.6134 (0.183)***	0.6141 (0.168)***	0.4863 (0.150)***	0.4651 (0.160)***	0.4773 (0.157)***	0.5157 (0.179)***
Number of Observations	12,448	12,448	12,448	12,448	12,448	12,448	12,448
Number of Banks	2,919	2,919	2,919	2,919	2,919	2,919	2,919
Overall R2	0.0123	0.0201	0.0332	0.0544	0.0729	0.0753	0.0813

**Table 5: Developing Countries**  
**Random-Effects Regressions to Explain the Ratio Total Loans to Total Assets-**  
**Panel B: Clustering by bank**

Based upon an unbalanced panel of 12,448 bank-year observations on 2,919 banks in 96 developing countries over the years 2000-2006. *English*, *French*, *Socialist*, *German*, and *Scandinavian* are dummy variables indicating the country's legal origin as first defined by LLSV (1998). *English* is the omitted category. *Legal Formalism* is the natural logarithm of the number of days needed to recover a debt equal to half of the country's GDP per capita, as defined by Djankov *et al.* (2007). *Creditors' Rights* is an index of four creditors' rights as first defined by LLSV (1998).  $\ln(\text{GDP per capita})$  is the natural logarithm of the country's per capita Gross Domestic Product in each year.  $\ln(\text{Total Assets})$  is the natural logarithm of total assets. *State* and *Foreign* are two dummy variables set to 1 if the largest shareholder is the *State* or a *Foreign* entity, respectively. *Public Credit Registry* and *Private Credit Bureau* are dummy variables equal to 1, respectively, if a public credit registry or private credit bureau exists,  $\ln(\text{GDP per capita})$  is the per capita Gross Domestic Product. *Number of Banks* is the number of banks operating in the country during each year as reported by BankScope. Table 1 provides more details on each variable. Robust standard errors are clustered by bank. \*\*\*, \*\*, and \* indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
French	-0.0205 (0.012)*	-0.0127 (0.012)	-0.0404 (0.014)***	-0.0340 (0.014)**	-0.0255 (0.013)*	-0.0237 (0.013)*	-0.0160 (0.014)
Socialist	0.0319 (0.014)**	0.0243 (0.014)*	0.0100 (0.015)	-0.0014 (0.015)	0.0353 (0.016)**	0.0338 (0.016)**	0.0471 (0.018)***
German	0.0082 (0.015)	0.0078 (0.015)	-0.0088 (0.015)	-0.0330 (0.015)**	-0.0249 (0.015)*	-0.0232 (0.015)	-0.0122 (0.016)
Scandinavian	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)	0.0000 (0.000)
Legal Formalism		-0.0443 (0.010)***	-0.0399 (0.009)***	-0.0342 (0.009)***	-0.0326 (0.009)***	-0.0336 (0.009)***	-0.0364 (0.009)***
CR- Creditors Rights			-0.0256 (0.004)***				
CR1- Restrictions on filing				-0.0374 (0.008)***	-0.0395 (0.008)***	-0.0415 (0.008)***	-0.0384 (0.008)***
CR2- Right to seize collateral				-0.0999 (0.009)***	-0.0861 (0.010)***	-0.0858 (0.010)***	-0.0873 (0.010)***
CR3- Right to be paid first				0.0363 (0.009)***	0.0323 (0.009)***	0.0307 (0.009)***	0.0318 (0.009)***
CR4- Right to run a firm				-0.0005 (0.009)	0.0041 (0.009)	0.0065 (0.009)	0.0115 (0.010)
$\ln(\text{Total Assets})$					0.0049 (0.003)*	0.0053 (0.003)*	0.0057 (0.003)**
Equity to Assets					-0.1294 (0.028)***	-0.1284 (0.028)***	-0.1293 (0.027)***
Return on Assets					-0.1381 (0.060)**	-0.1382 (0.060)**	-0.1382 (0.060)**
State						-0.0384 (0.020)*	-0.0384 (0.020)*
Foreign						-0.0214 (0.009)**	-0.0218 (0.009)**
Private Credit Bureau							0.0230 (0.011)**
Public Credit Registry							0.0004 (0.010)
$\ln(\text{GDP per capita})$	0.0205 (0.005)***	0.0208 (0.005)***	0.0265 (0.006)***	0.0373 (0.006)***	0.0315 (0.006)***	0.0308 (0.006)***	0.0244 (0.007)***
Number of Banks	0.0071 (0.002)***	0.0073 (0.002)***	0.0068 (0.002)***	0.0074 (0.002)***	0.0067 (0.002)***	0.0065 (0.002)***	0.0068 (0.002)***
Constant	0.3533 (0.035)***	0.6134 (0.066)***	0.6141 (0.065)***	0.4863 (0.067)***	0.4651 (0.070)***	0.4773 (0.070)***	0.5157 (0.073)***
Number of Observations	12,448	12,448	12,448	12,448	12,448	12,448	12,448
Number of Banks	2,919	2,919	2,919	2,919	2,919	2,919	2,919
Overall R2	0.0123	0.0201	0.0332	0.0544	0.0729	0.0753	0.0813

**Appendix 1:  
Number of Banks per Country per Year**

COUNTRY	2000	2001	2002	2003	2004	2005	2006
ALBANIA	2	3	5	7	8	6	7
ALGERIA	8	9	9	9	13	12	14
ANGOLA	3	5	7	9	9	10	11
ARGENTINA	70	72	67	61	62	59	60
ARMENIA	5	5	6	7	8	13	13
AUSTRALIA	25	26	24	22	20	22	22
AUSTRIA	43	50	52	55	62	60	59
AZERBAIJAN	12	12	15	15	15	16	16
BANGLADESH	28	30	30	30	31	31	31
BELARUS	10	10	10	11	13	9	8
BELGIUM	29	28	34	37	32	29	26
BENIN	4	5	5	6	4	6	6
BOLIVIA	11	11	11	11	11	11	10
BOSNIA AND HERZEGOVINA	15	15	23	24	23	19	18
BOTSWANA	5	5	5	6	6	7	7
BRAZIL	123	130	120	96	87	85	88
BULGARIA	19	20	20	20	19	23	21
BURKINA FASO	7	6	5	5	8	8	8
BURUNDI	4	5	5	4	3	3	3
CAMBODIA	2	2	4	8	8	13	13
CAMEROON	7	6	7	8	9	11	9
CANADA	45	44	45	42	41	40	41
CENTRAL AFRICAN REPUBLIC	1	1	1	1	1	1	1
CHAD	3	3		2	2	3	3
CHILE	28	26	24	26	24	23	23
CHINA	40	38	49	56	68	85	111
COLOMBIA	26	26	27	27	27	20	16
CONGO DEMOCRATIC REPUBLIC	4	4	2	4	5	8	8
COSTA RICA	25	23	23	21	19	19	19
COTE D' IVOIRE	9	8	6	7	7	9	10
CROATIA	36	36	34	33	28	28	27
CZECH REPUBLIC	18	17	17	17	19	19	18
DENMARK	60	58	54	54	54	53	57
DOMINICAN REPUBLIC	28	25	29	26	26	24	24
ECUADOR	31	32	32	31	30	30	29
EGYPT	30	29	28	26	24	24	22
EL SALVADOR	13	12	12	11	12	11	12
ETHIOPIA	6	6	7	7	7	7	7
FINLAND	6	6	6	6	6	6	6
FRANCE	151	147	139	134	116	119	115
GEORGIA	8	5	8	8	8	9	10
GERMANY	141	127	119	112	107	108	112
GHANA	13	14	15	14	15	18	18
GREECE	11	12	15	16	16	17	16

GUATEMALA	32	31	31	29	27	24	21
GUINEA	2	2		1	1	1	1
HAITI	2	2	2	3	3	4	3
HONDURAS	20	21	20	18	18	18	17
HONG KONG	41	40	40	38	33	28	25
HUNGARY	19	17	19	18	20	22	21
INDIA	67	65	63	60	61	61	58
INDONESIA	52	46	44	48	51	56	52
IRELAND	17	19	17	14	15	15	15
ISRAEL	16	16	14	10	10	9	9
ITALY	104	114	106	111	110	108	99
JAMAICA	6	6	7	6	6	6	6
JAPAN	141	138	135	132	130	131	128
JORDAN	10	9	9	9	9	9	8
KAZAKHSTAN	13	13	15	16	18	16	13
KENYA	30	26	28	29	28	28	26
KOREA REPUBLIC OF	16	16	16	17	17	18	17
KUWAIT	6	6	6	6	6	6	6
KYRGYZSTAN	3	6	7	5	4	5	4
LAO PEOPLE'S DEMOCRATIC REP			1	1	2	3	3
LATVIA	19	20	20	21	21	21	20
LEBANON	46	36	35	34	28	28	26
LESOTHO	3	3	3	3	3	2	2
LITHUANIA	10	9	9	9	9	9	10
MACEDONIA (FYROM)	11	12	12	13	14	11	12
MADAGASCAR	5	5	5	5	5	5	5
MALAWI	5	5	5	5	4	4	4
MALI	5	5	4	4	6	6	6
MAURITANIA	4	3	5	6	6	7	5
MEXICO	34	29	30	29	30	15	22
MOLDOVA REPUBLIC OF	9	10	10	12	14	15	15
MONGOLIA	4	5	4	4	5	7	7
MOROCCO	10	9	9	9	9	10	10
MOZAMBIQUE	7	9	9	7	7	9	9
NAMIBIA	5	5	5	5	5	5	5
NEPAL	9	10	12	16	15	14	13
NETHERLANDS	25	28	27	27	26	24	23
NEW ZEALAND	9	8	8	9	8	8	8
NICARAGUA	8	10	9	9	6	4	5
NIGER	3	3	4	4	4	4	5
NIGERIA	52	56	57	52	34	24	19
NORWAY	14	14	14	13	11	10	12
OMAN	7	5	4	4	4	4	4
PAKISTAN	19	18	18	22	23	24	26
PANAMA	64	62	62	65	61	42	27
PAPUA NEW GUINEA	5	3	2	2	3	3	2
PARAGUAY	20	19	17	12	12	12	12
PERU	16	13	13	12	13	11	12

PHILIPPINES	21	23	30	31	26	28	27
POLAND	39	36	37	40	42	40	32
PORTUGAL	23	20	17	17	16	14	16
ROMANIA	24	23	23	20	22	19	17
RUSSIAN FEDERATION	68	84	100	119	129	509	708
RWANDA	4	4	4	5	5	6	6
SAUDI ARABIA	9	9	9	9	9	9	9
SENEGAL	7	8	10	10	11	9	10
SIERRA LEONE	4	4	4	4	4	5	6
SINGAPORE	17	14	12	12	9	12	13
SLOVAKIA	14	12	12	10	10	12	10
SLOVENIA	16	12	10	10	10	13	14
SOUTH AFRICA	23	22	15	15	14	14	14
SPAIN	65	67	65	60	55	49	50
SRI LANKA	9	10	11	11	11	12	12
SWEDEN	10	20	20	20	20	20	19
SWITZERLAND	147	145	143	141	149	150	140
SYRIAN ARAB REPUBLIC	1	1	1	1	4	7	7
TANZANIA UNITED REPUBLIC	16	15	17	15	15	20	22
THAILAND	19	19	19	19	18	20	20
TOGO	1	2	3	3	2	3	4
TUNISIA	15	15	15	13	13	14	15
TURKEY	16	13	13	11	11	7	18
UGANDA	12	13	12	12	12	12	11
UKRAINE	29	28	28	36	38	42	47
UNITED ARAB EMIRATES	15	15	17	17	16	16	17
UNITED KINGDOM	121	118	123	122	114	110	108
UNITED STATES OF AMERICA	500	484	460	439	407	401	379
URUGUAY	34	36	35	27	22	18	22
UZBEKISTAN	9	10	9	11	11	10	9
VENEZUELA	43	41	35	32	33	26	30
VIETNAM	20	21	25	25	26	27	32
YEMEN	5	6	6	6	5	5	5
ZAMBIA	10	10	10	9	9	9	9
ZIMBABWE	7	8	7	3	3	2	2
<b>TOTAL</b>	<b>3,563</b>	<b>3,529</b>	<b>3,505</b>	<b>3,451</b>	<b>3,369</b>	<b>3,710</b>	<b>3,873</b>